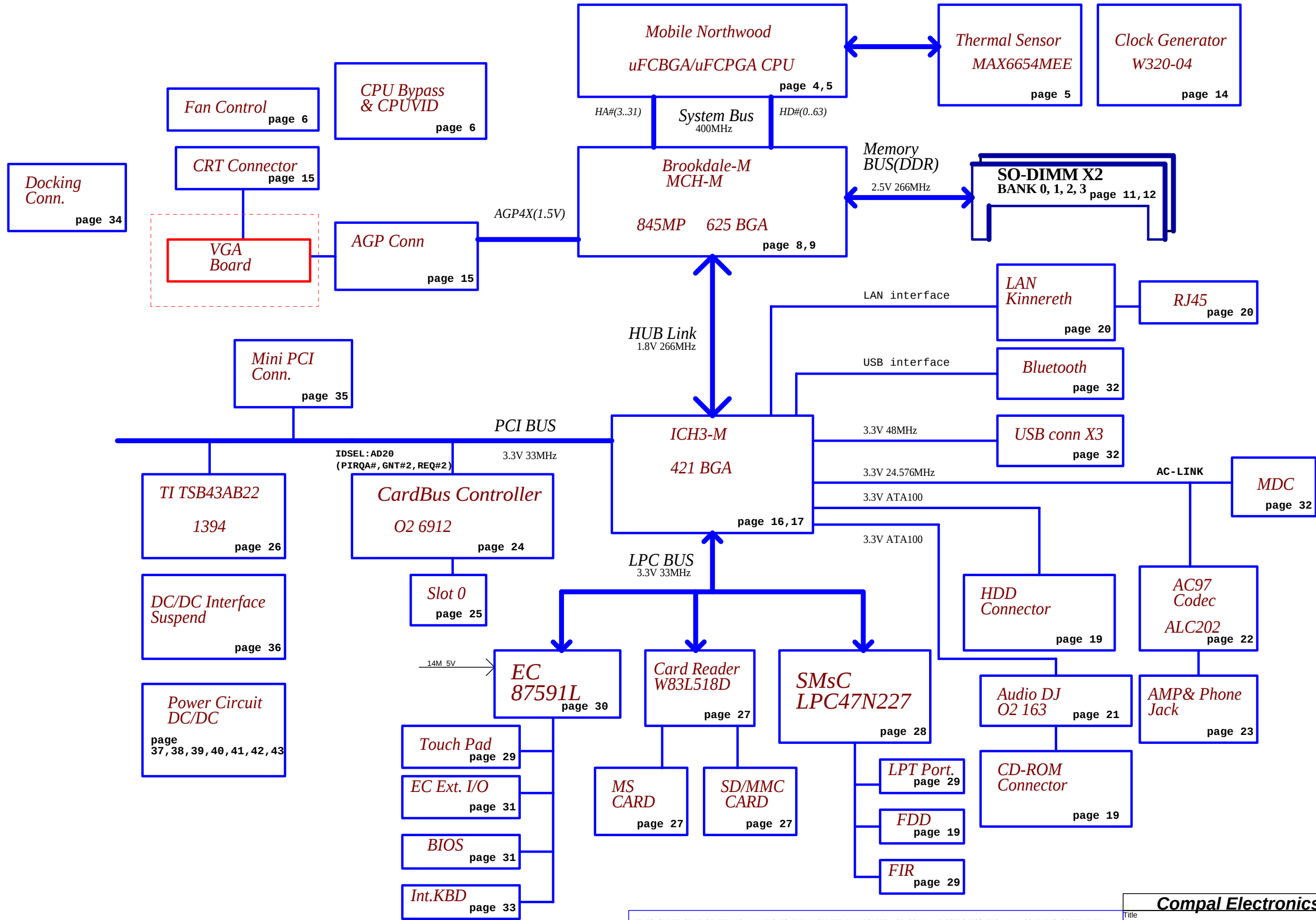


LA-1511 REV1.0 Schematics Document

uFCBGA/uFCPGA Northwood with Brookdale chipset(845MP+ICH3-M)

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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
Custom	401224	0B
Date:	星期三, 八月 21, 2002	Sheet 1 of 43



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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
401224		0B
Custom		
Date:	星期三, 八月 21, 2002	Sheet 2 of 43

Power Managment table

Signal State	+3VALW +5VALW +1.8VALW +12VALW	+3V +5V +2.5V	+12VS +5VS +3VS +2.5VS +1.8VS +1.5VS +1.2VP +CPU_CORE +1.25VS +1.25VS_VGA
S0	ON	ON	ON
S1	ON	ON	ON
S3	ON	ON	OFF
S5 S4/AC	ON	OFF	OFF
S5 S4/AC don't exist	OFF	OFF	OFF

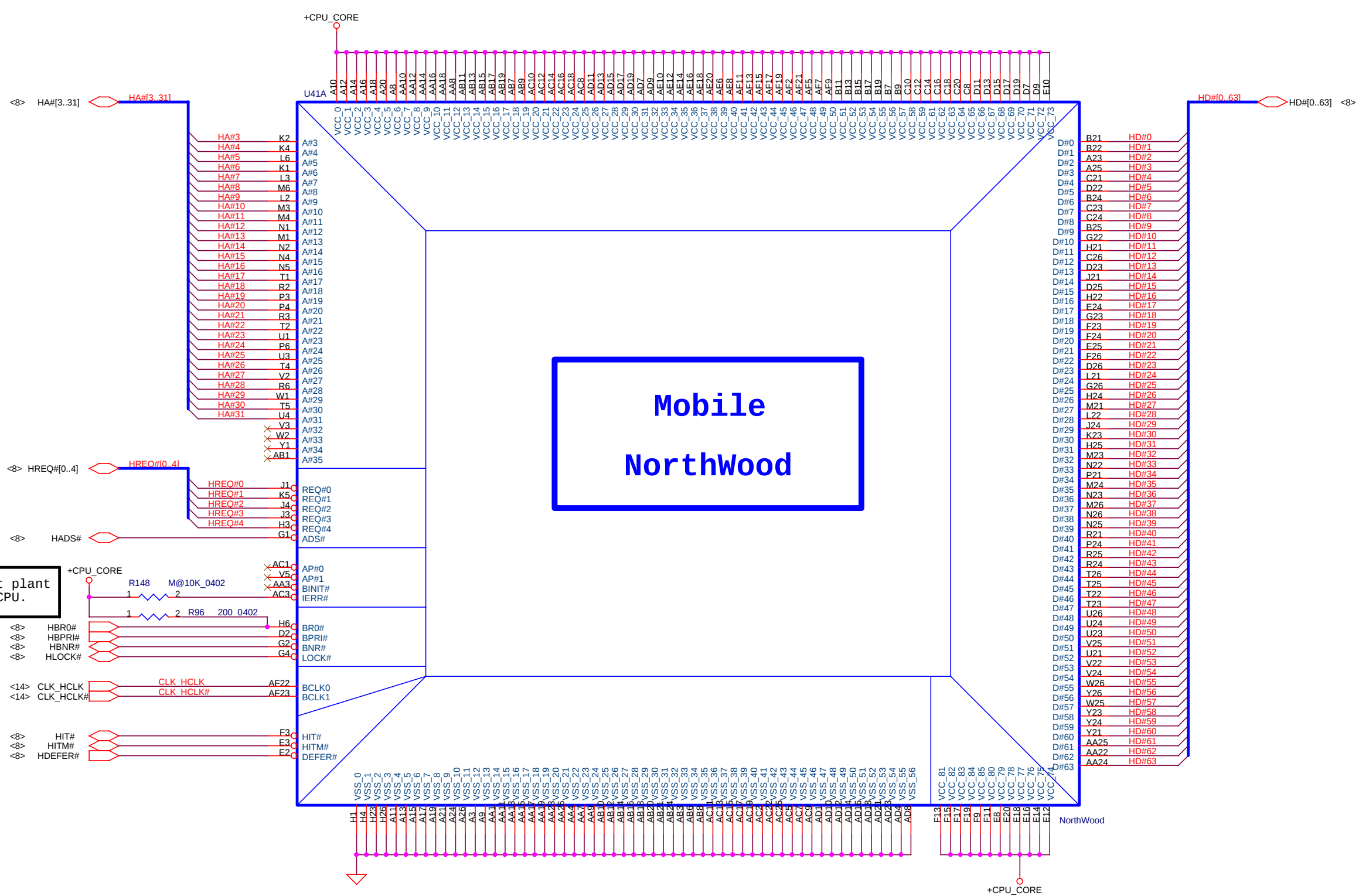
	NB Chip Rev	SB Chip Rev

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

Compal Electronics, Inc.		
Title SCHEMATIC, M/B LA-1511		
Size	Document Number 401224	Rev 0B
Custom Date:	星期三, 八月 21, 2002	Sheet 3 of 43

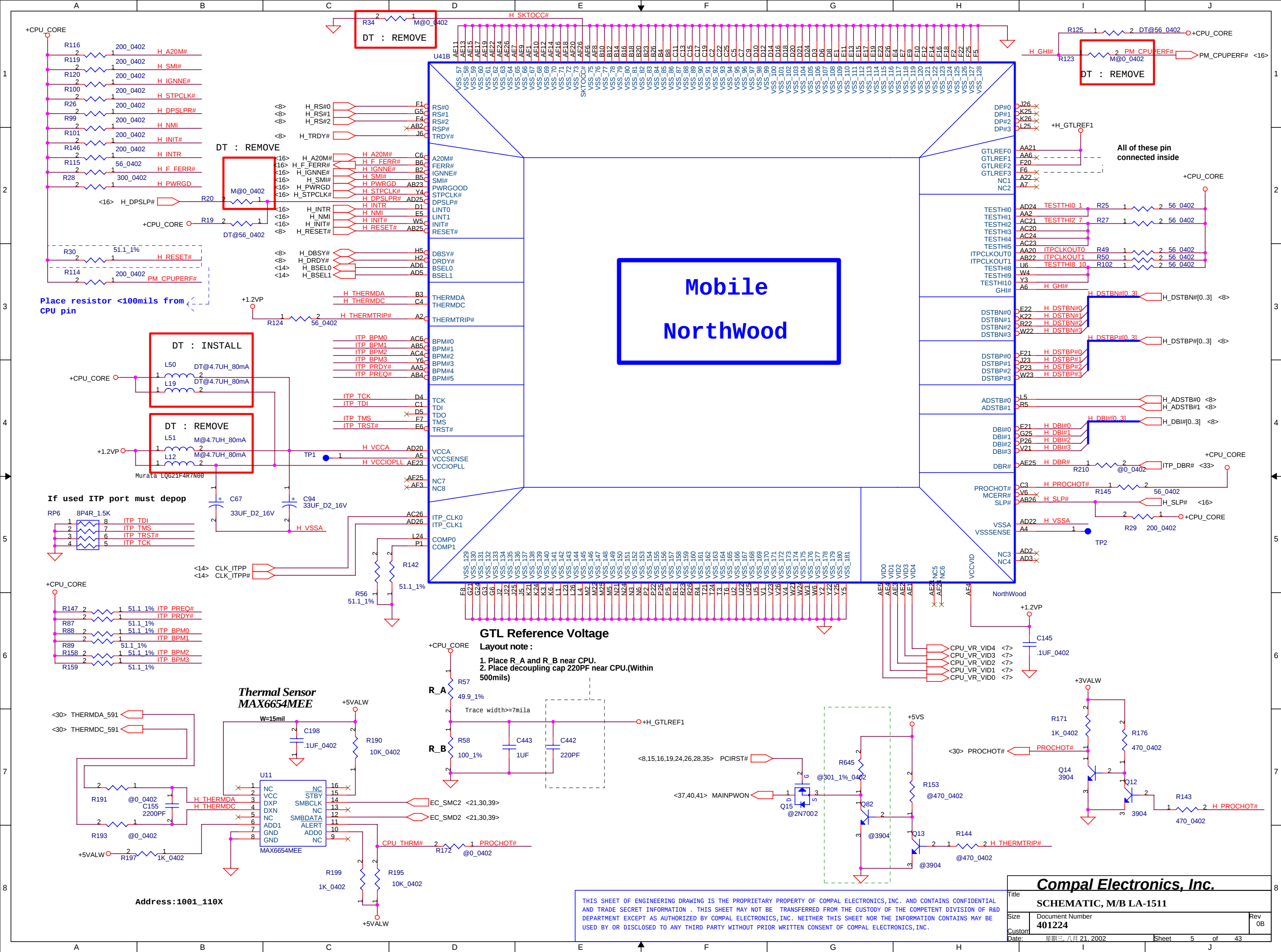
Mobile
NorthWood

R148 not plant
for DT CPU.



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

Compal Electronics, Inc.		
Title SCHEMATIC, M/B LA-1511		
Size 401224	Document Number	Rev 0B
Date: 星期三, 八月 21, 2002	Sheet 4	of 43



Mobile NorthWood

DT : INSTALL

DT : REMOVE

DT : REMOVE

DT : REMOVE

GTL Reference Voltage

Layout note :
1. Place R_A and R_B near CPU.
2. Place decoupling cap 220PF near CPU.(Within 500mils)

Thermal Sensor MAX6654MEE

Compal Electronics, Inc.

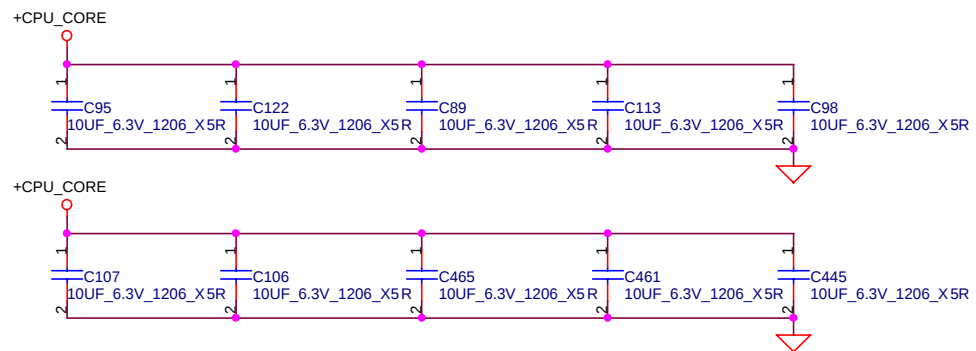
SCHEMATIC, M/B LA-1511

Size Document Number 401224
Date: 星期三, 八月 21, 2002 Sheet 5 of 43 Rev 0B

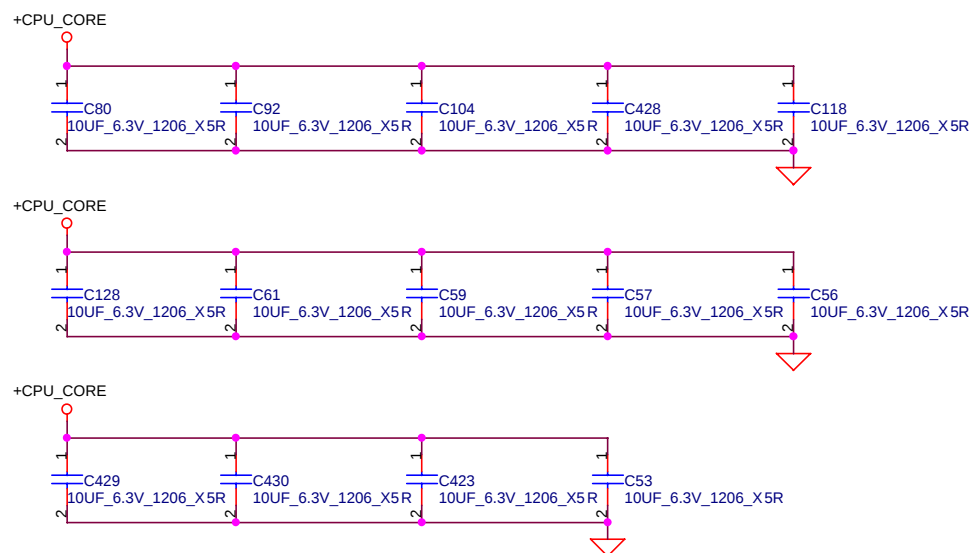
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Layout note :
Place close to CPU, Use 2~3 vias per PAD.
Place .22uF caps underneath balls on solder side.
Place 10uF caps on the peripheral near balls.
Use 2~3 vias per PAD.

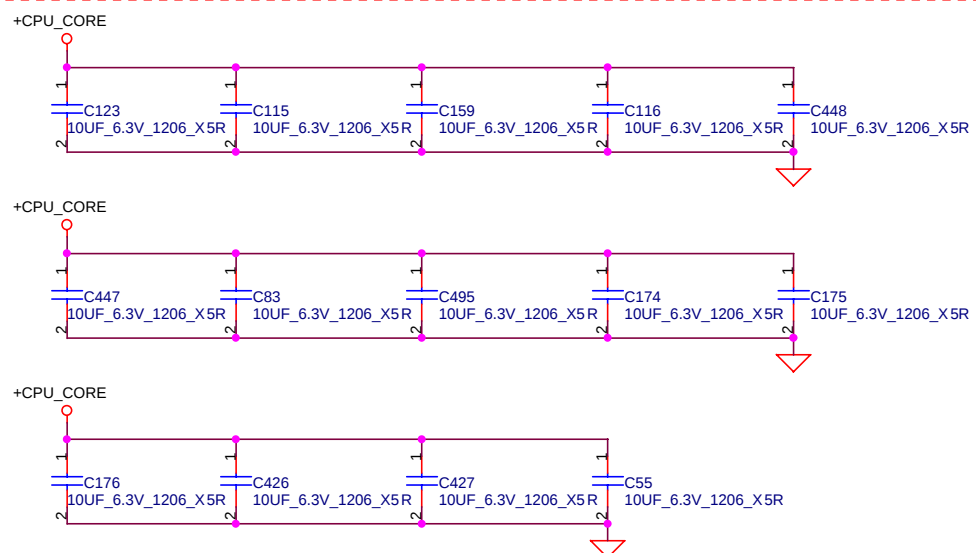
Please place these cap in the socket cavity area



Please place these cap on the socket north side



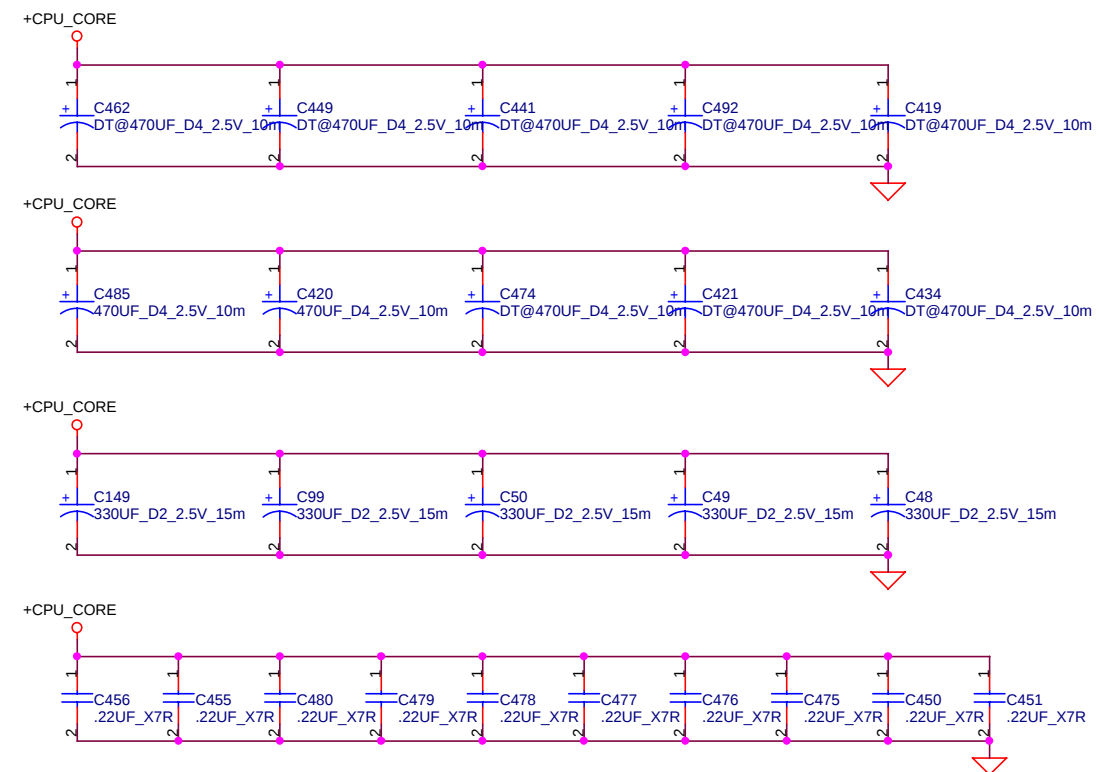
Please place these cap on the socket south side



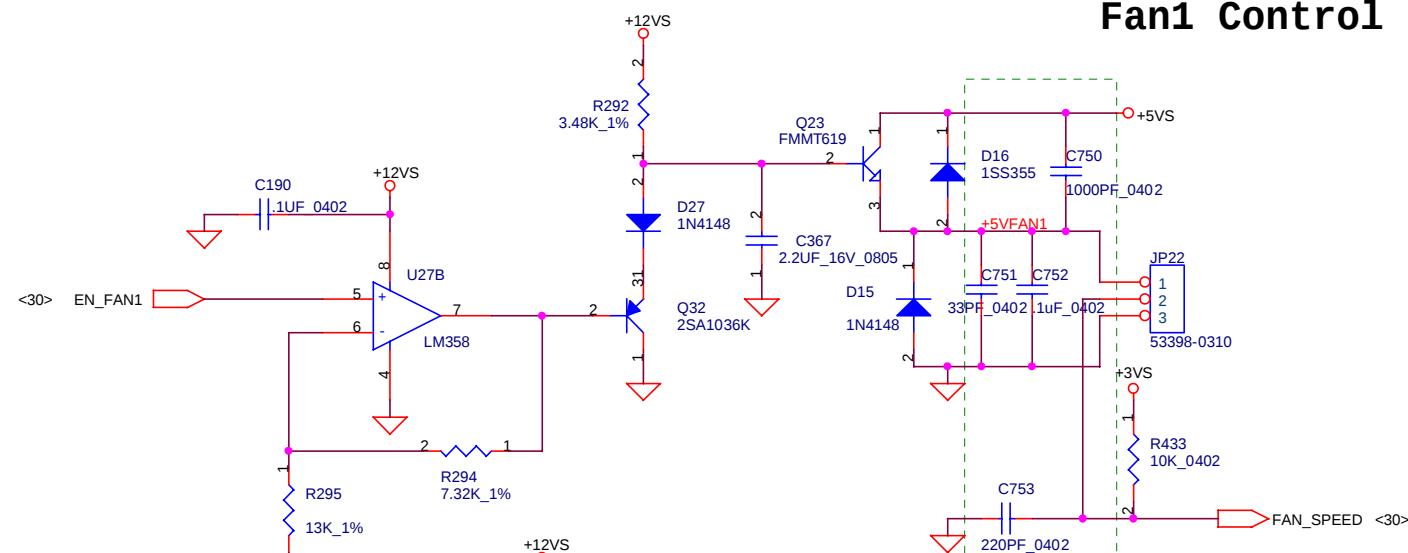
Layout note :
Place close to CPU power and ground pin as possible (<1inch)

For Desktop's CPU:
ESR total=0.75m ohm
C total=6350uF

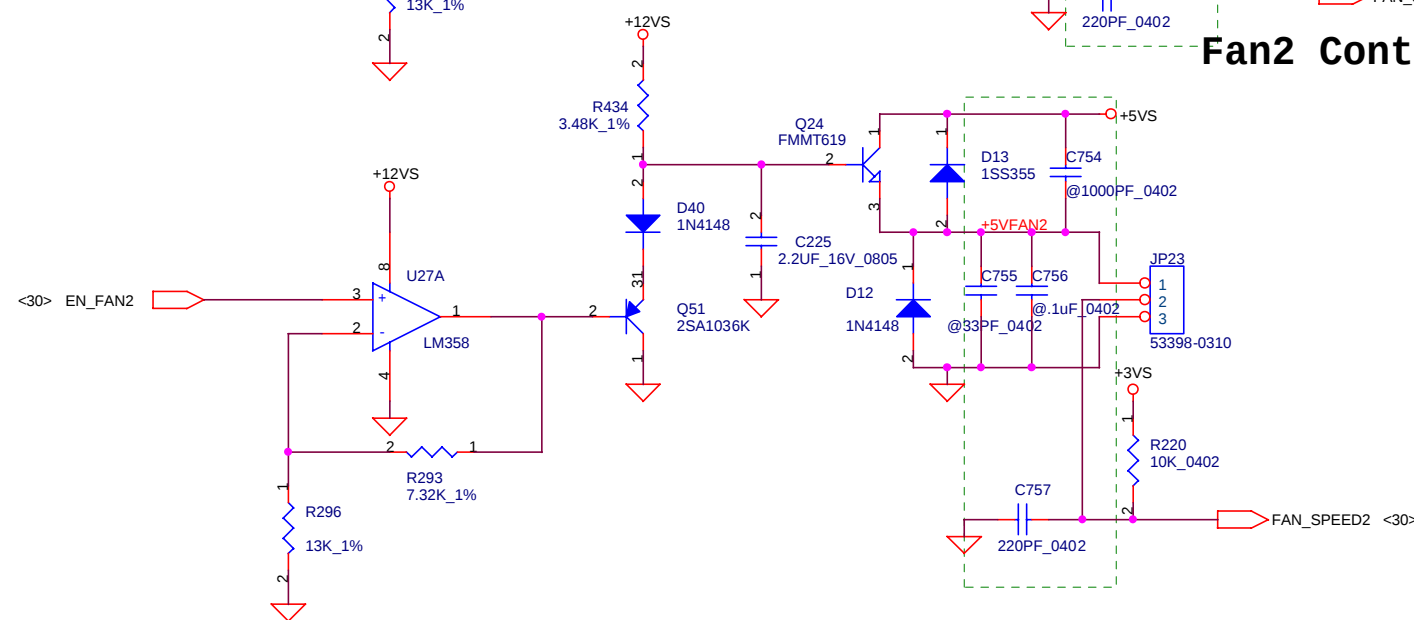
For Mobile's CPU:
ESR total=1.875m ohm
C total=2590uF



Fan1 Control circuit



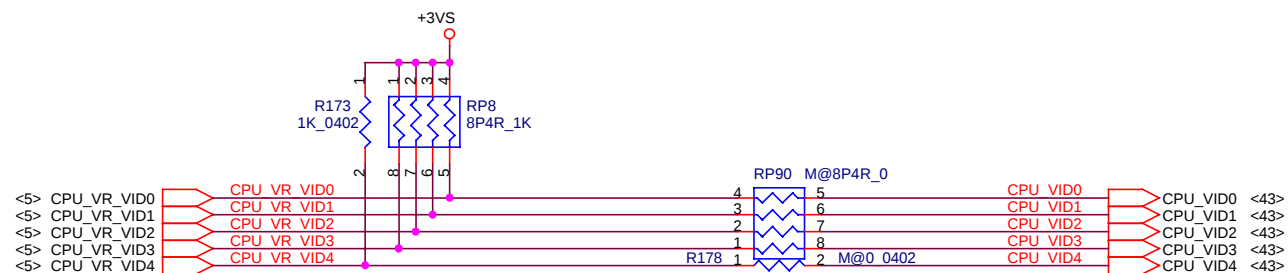
Fan2 Control circuit



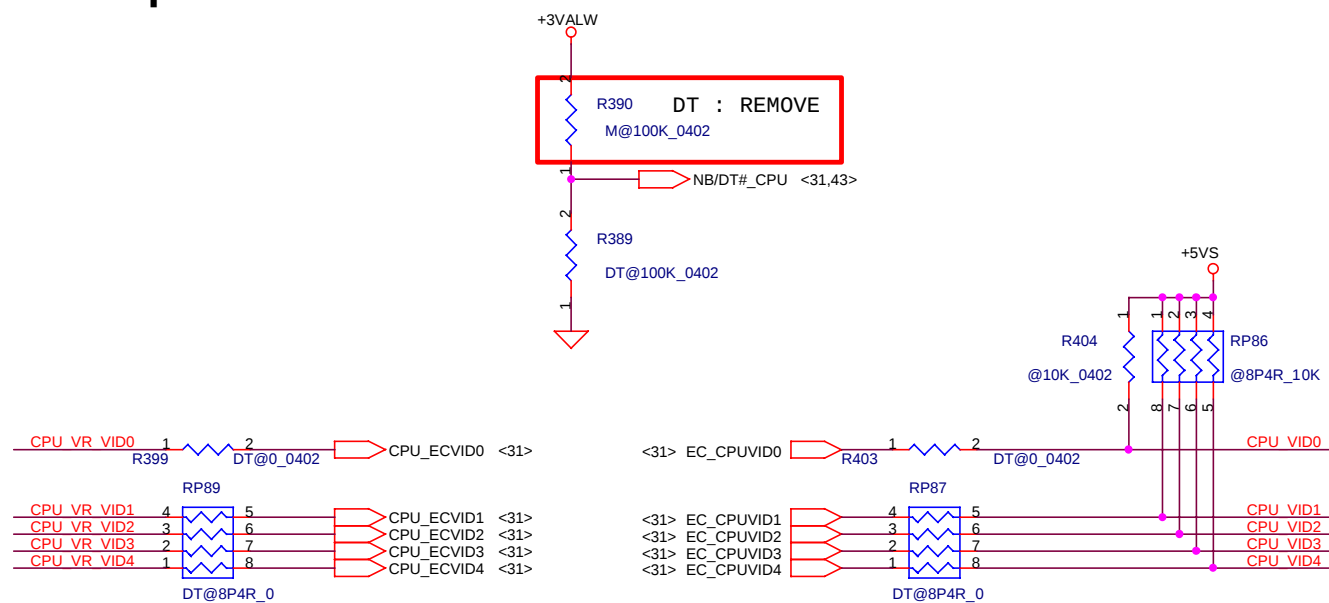
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
Date:	401224	0B
星期三, 八月 21, 2002	Sheet	6 of 43

For Mobile CPU



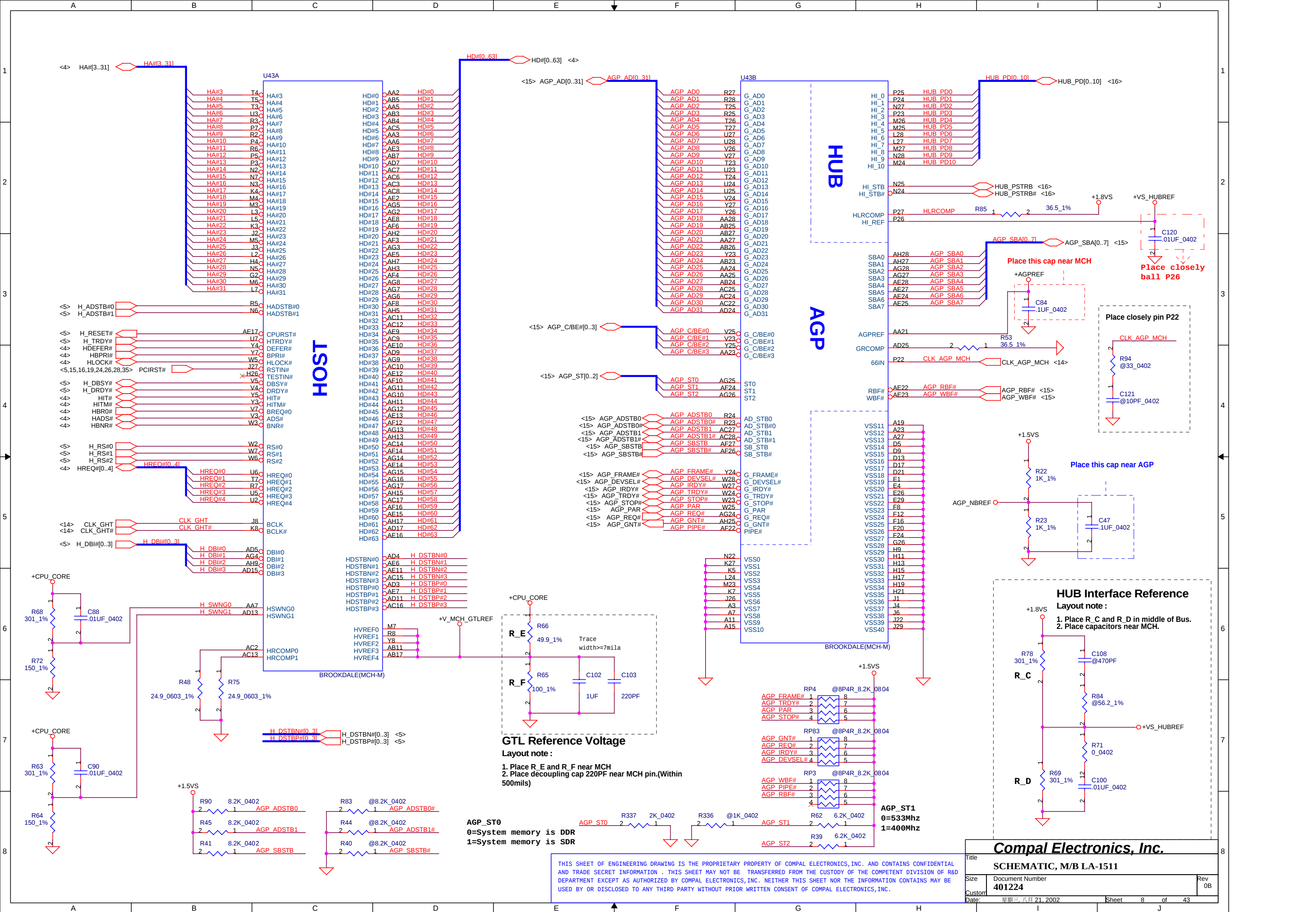
For Desktop CPU

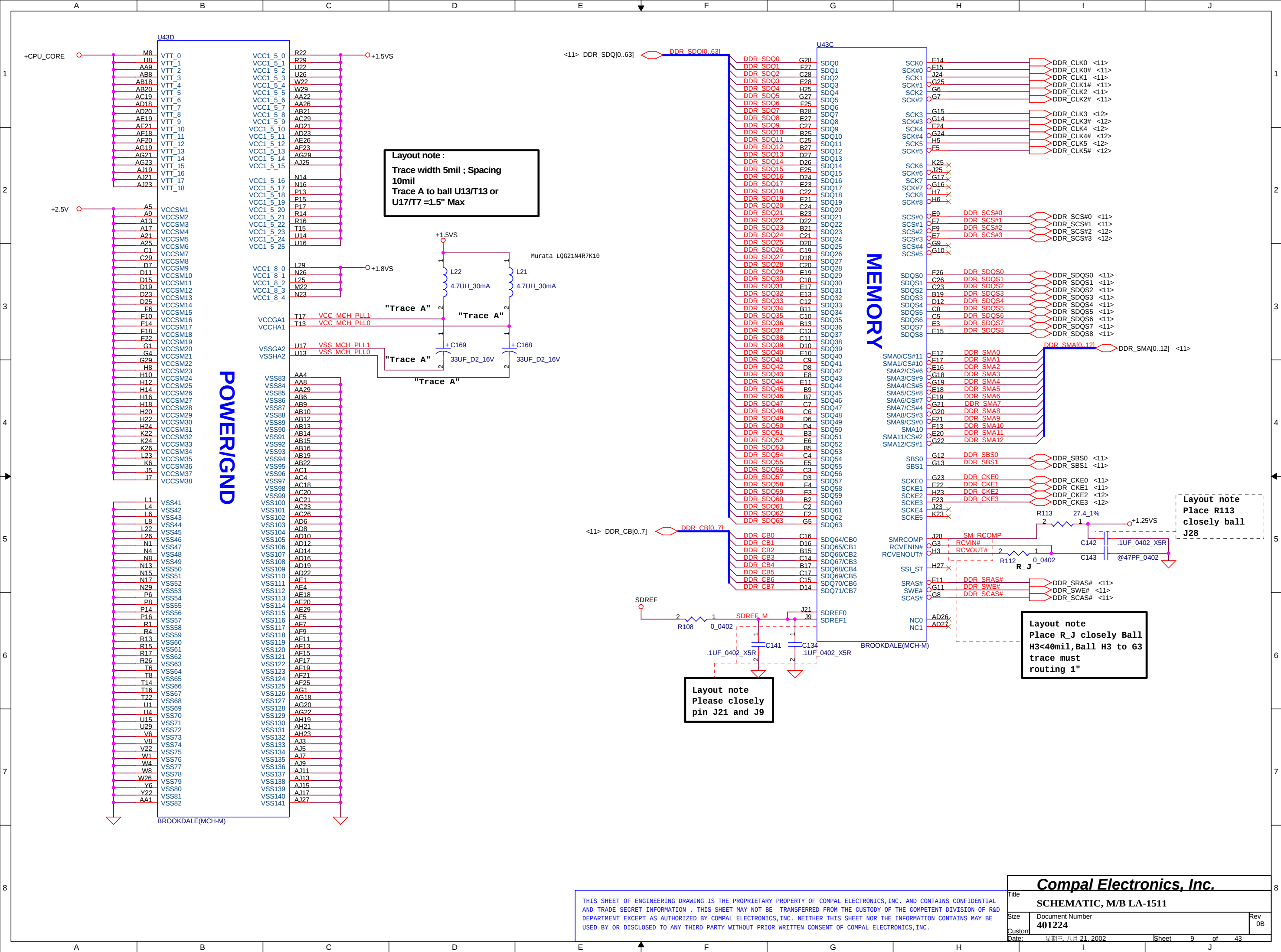


	Mobil CPU					Destop CPU				
NB/DT_CPU	1					0				
VID	4	3	2	1	0	4	3	2	1	0
VCC										
1.750V	0	0	0	0	0	0	0	1	0	0
1.700V	0	0	0	0	1	0	0	1	1	0
1.650V	0	0	0	1	0	0	1	0	0	0
1.600V	0	0	0	1	1	0	1	0	1	0
1.550V	0	0	1	0	0	0	1	1	0	0
1.500V	0	0	1	0	1	0	1	1	1	0
1.450V	0	0	1	1	0	1	0	0	0	0
1.400V	0	0	1	1	1	1	0	0	1	0
1.350V	0	1	0	0	0	1	0	1	0	0
1.300V	0	1	0	0	1	1	0	1	1	0
1.250V	0	1	0	1	0	1	1	0	0	0
1.200V	0	1	0	1	1	1	1	0	1	0
1.150V	0	1	1	0	0	1	1	1	0	0
1.100V	0	1	1	0	1	1	1	1	1	0
1.050V	0	1	1	1	0	X	X	X	X	X
1.000V	0	1	1	1	1	X	X	X	X	X
0.975V	1	0	0	0	0	X	X	X	X	X
0.950V	1	0	0	0	1	X	X	X	X	X
0.925V	1	0	0	1	0	X	X	X	X	X
0.900V	1	0	0	1	1	X	X	X	X	X
0.875V	1	0	1	0	0	X	X	X	X	X
0.850V	1	0	1	0	1	X	X	X	X	X
0.825V	1	0	1	1	0	X	X	X	X	X
0.800V	1	0	1	0	1	X	X	X	X	X
0.775V	1	1	0	1	0	X	X	X	X	X
0.750V	1	1	0	0	1	X	X	X	X	X
0.725V	1	1	0	1	0	X	X	X	X	X
0.700V	1	1	0	1	1	X	X	X	X	X
0.675V	1	1	1	0	0	X	X	X	X	X
0.650V	1	1	1	0	1	X	X	X	X	X
0.625V	1	1	1	1	0	X	X	X	X	X
0.600V	1	1	1	1	1	X	X	X	X	X
VRM output off						1	1	1	1	1

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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
	401224	0B
Custom		
Date:	星期三, 八月 21, 2002	Sheet 7 of 43

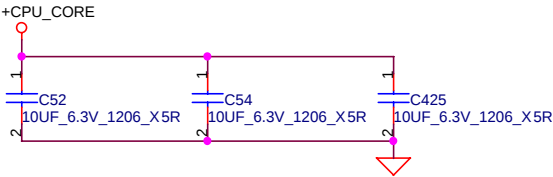
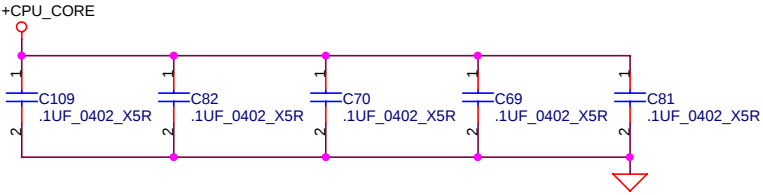
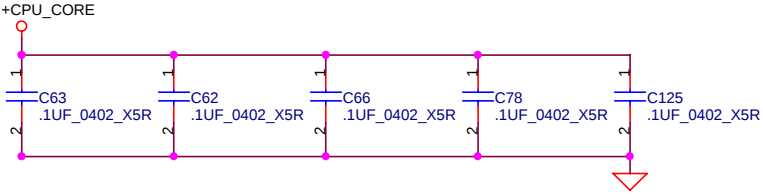




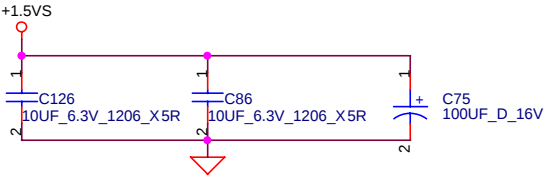
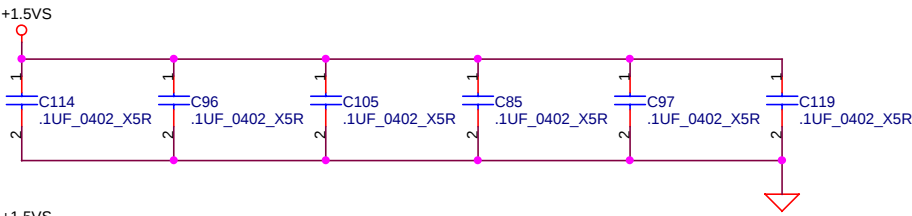
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Title			SCHEMATIC, M/B LA-1511	
Size	Document Number		401224	
Custom	Date: 星期三, 八月 21, 2002		Sheet 9 of 43	Rev 0B

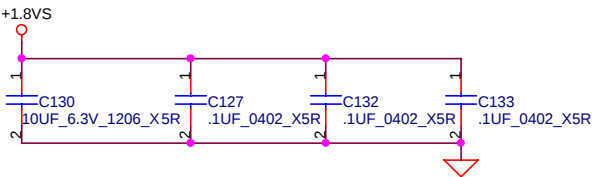
Layout note : Processor system bus
Distribute as close as possible
to MCH Processor Quadrant.(between VTTFSB and VSS pin)



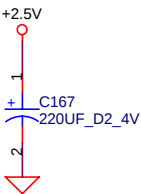
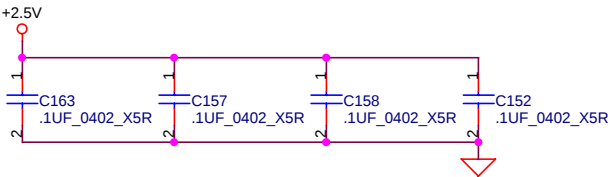
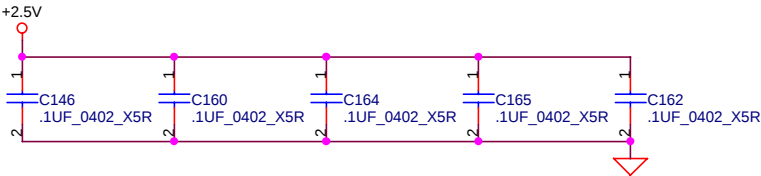
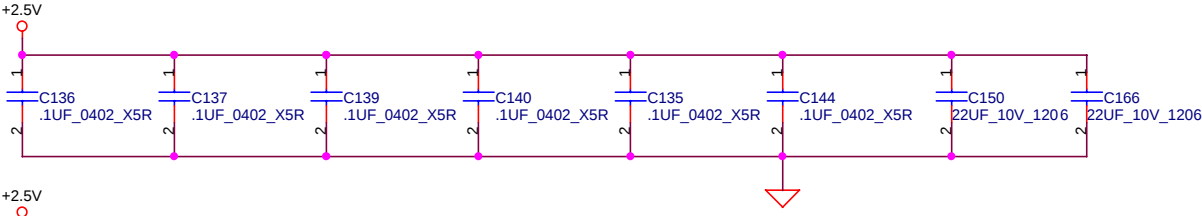
Layout note : AGP/CORE
Distribute as close as possible
to MCH Processor Quadrant.(between VCCAGP/VCCCORE
and VSS pin)



Layout note : Hub-Link
Distribute as close as possible
to MCH Processor Quadrant.(between VCCHL and VSS pin)



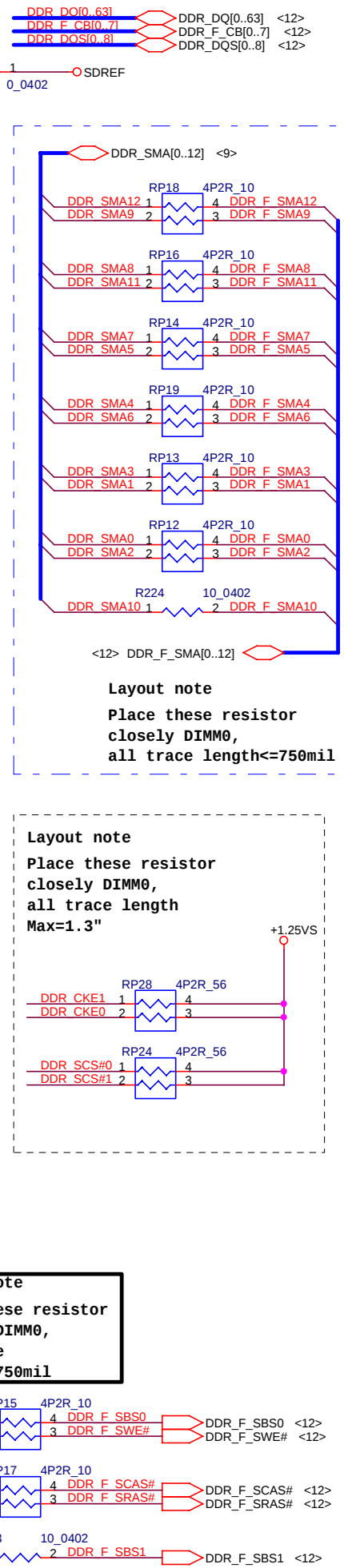
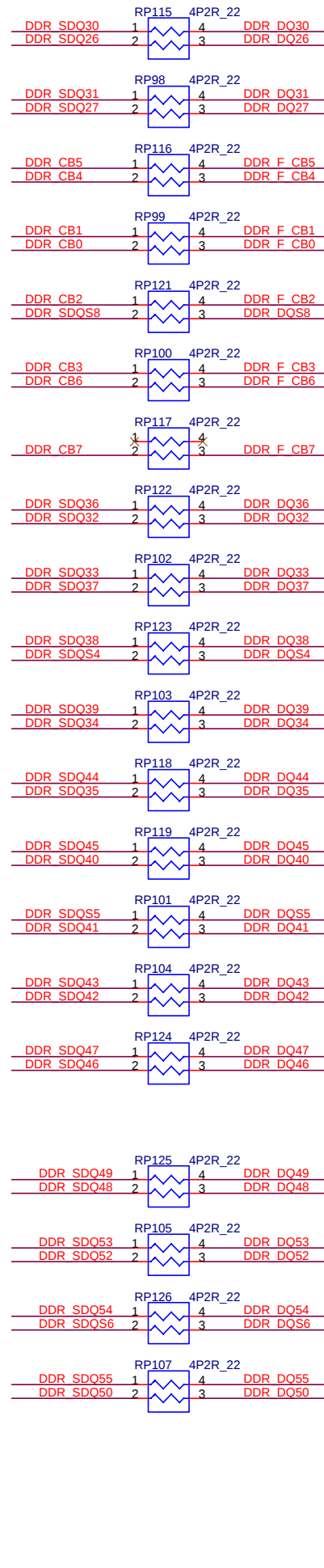
Layout note : DDR Memory interface
Distribute as close as possible
to MCH Processor Quadrant.(between VCCSM and VSS pin)



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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
	401224	0B
Custom Date:	星期三, 八月 21, 2002	Sheet 10 of 43

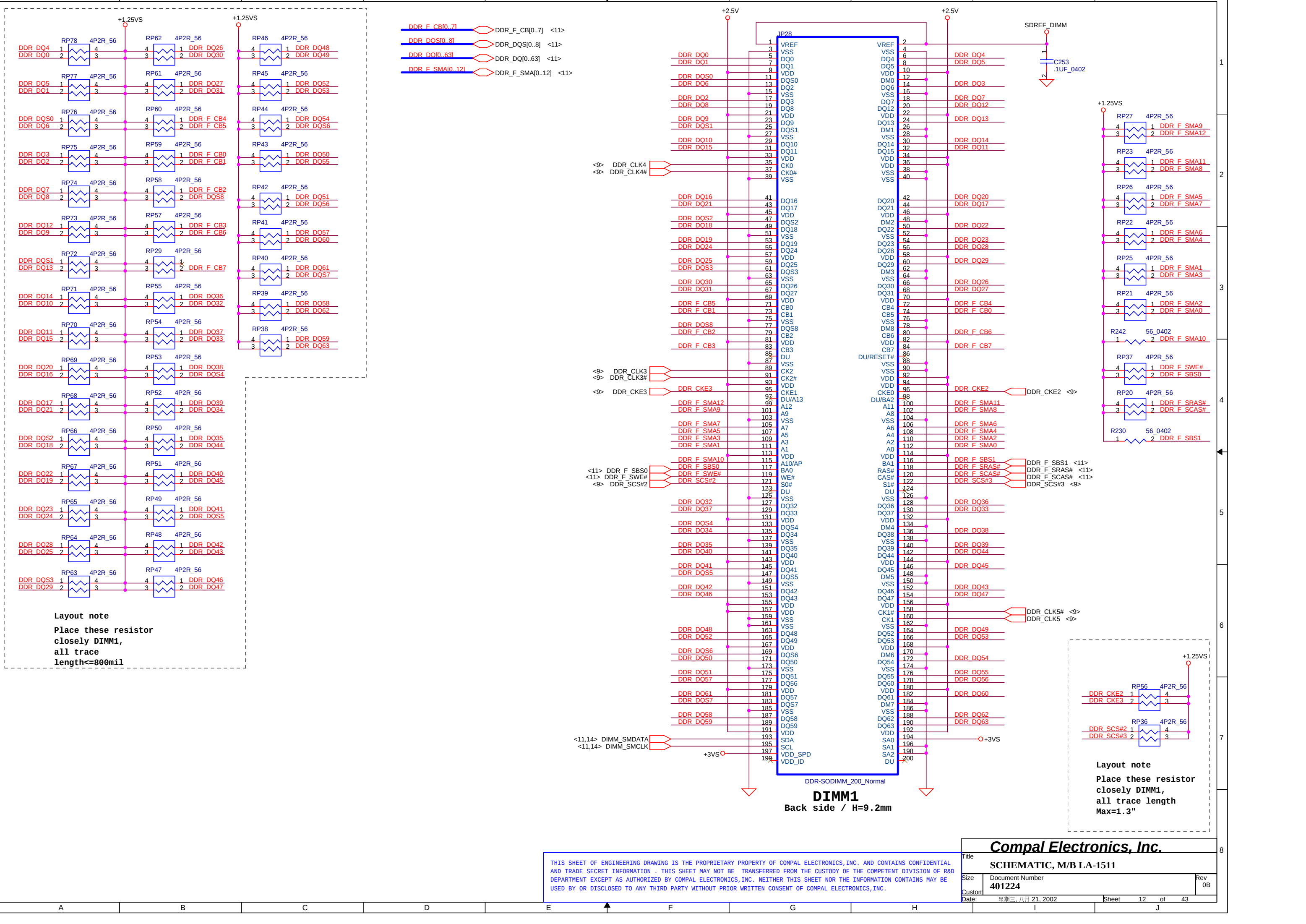
Place these resistor
closely DIMM0,
all trace length<750mil



Layout note
Place these resistor
closely DIMM0,
all trace
length<=750mil

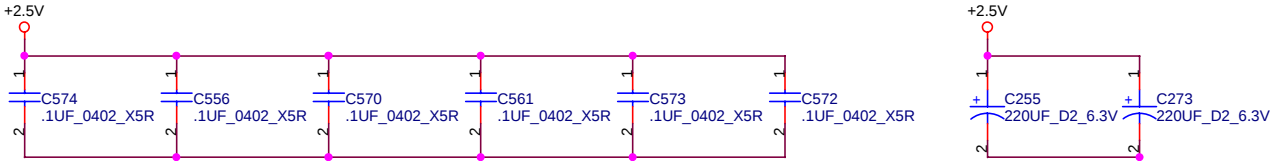
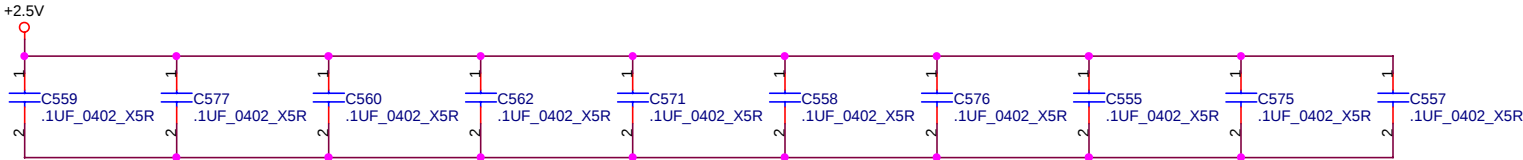
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
Title			
SCHEMATIC, M/B LA-1511			
Size	Document Number		Rev
	401224		0B
Custom Date:	星期二 八月 21, 2002		Sheet 11 of 43

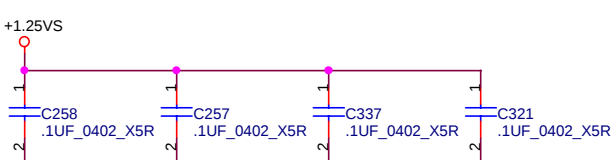
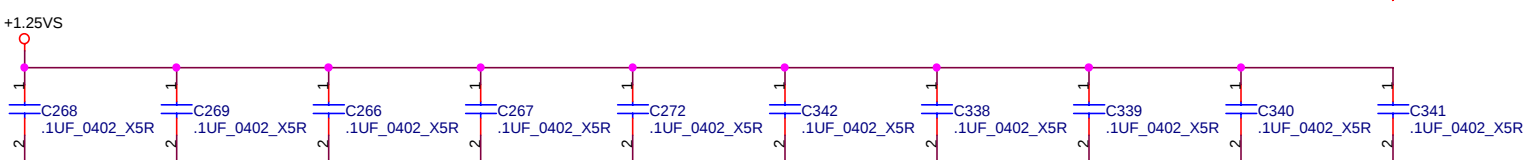
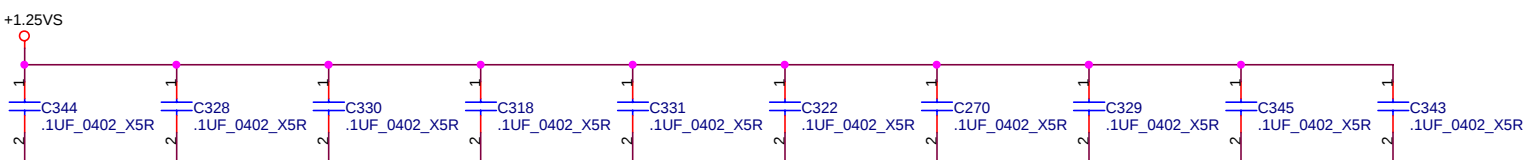
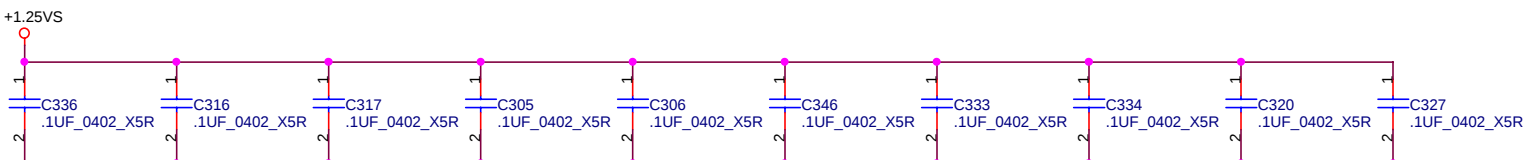
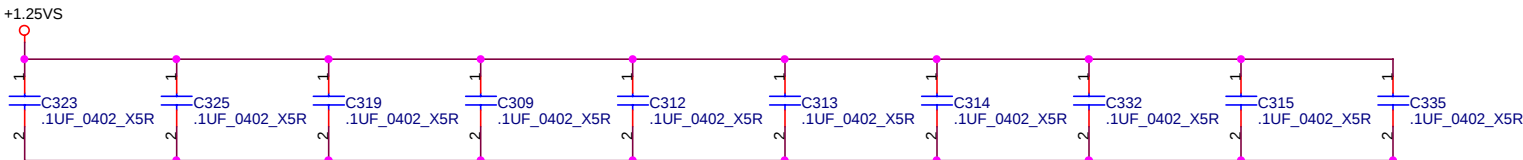
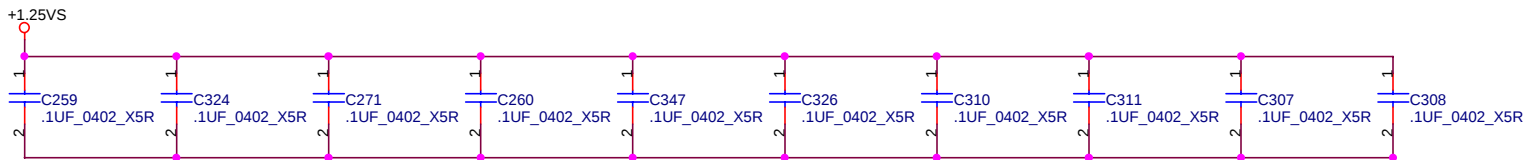


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

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



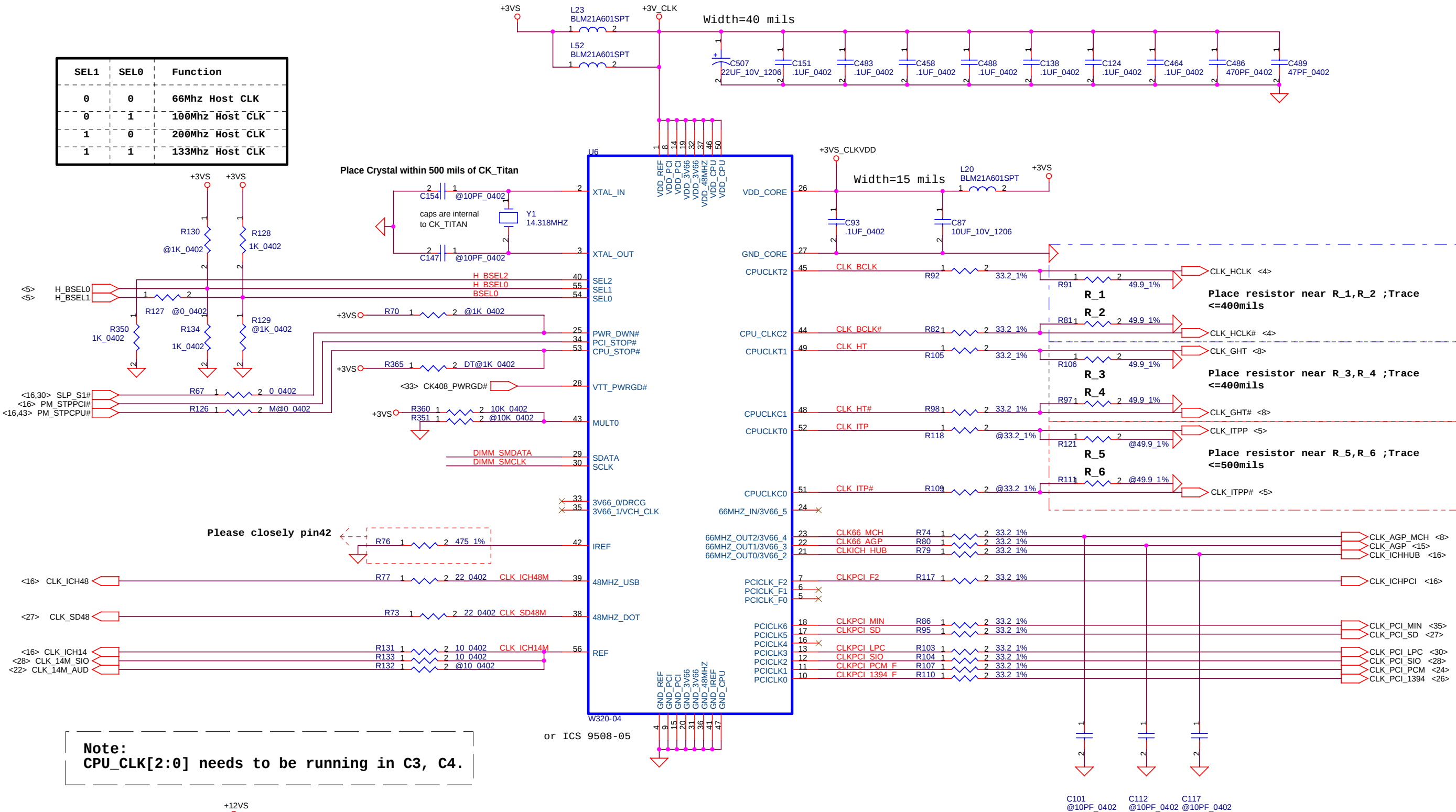
Layout note :
Place one cap close to every 2 pull up resistors termination to
+1.25V



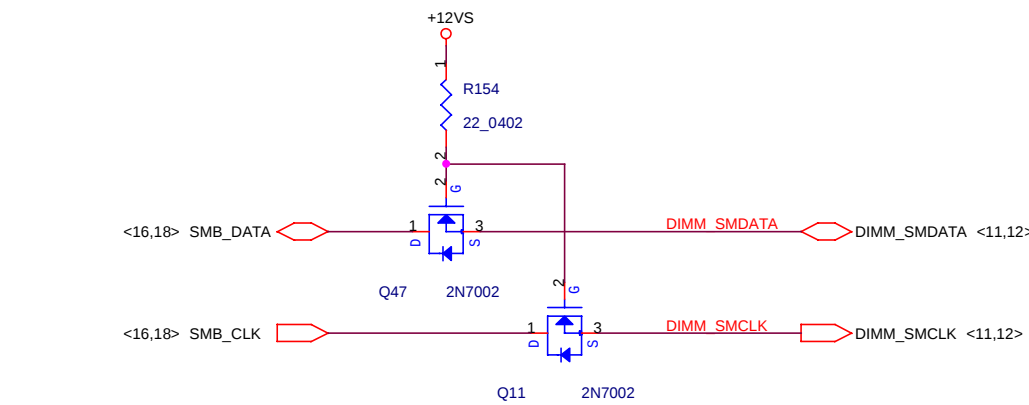
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.		
Title	SCHEMATIC, M/B LA-1511	
Size	Document Number	Rev
	401224	0B
Custom		
Date:	星期三, 八月 21, 2002	Sheet 13 of 43

SEL1	SEL0	Function
0	0	66Mhz Host CLK
0	1	100Mhz Host CLK
1	0	200Mhz Host CLK
1	1	133Mhz Host CLK



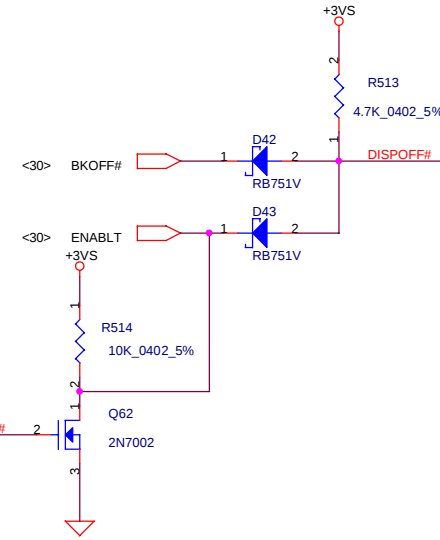
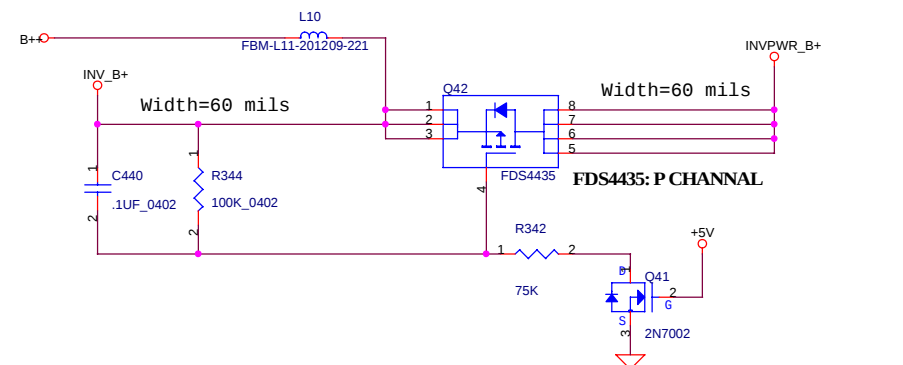
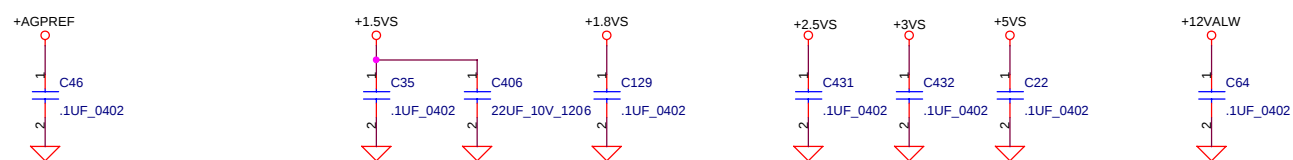
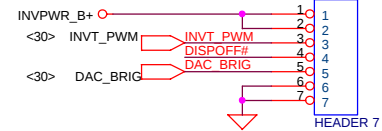
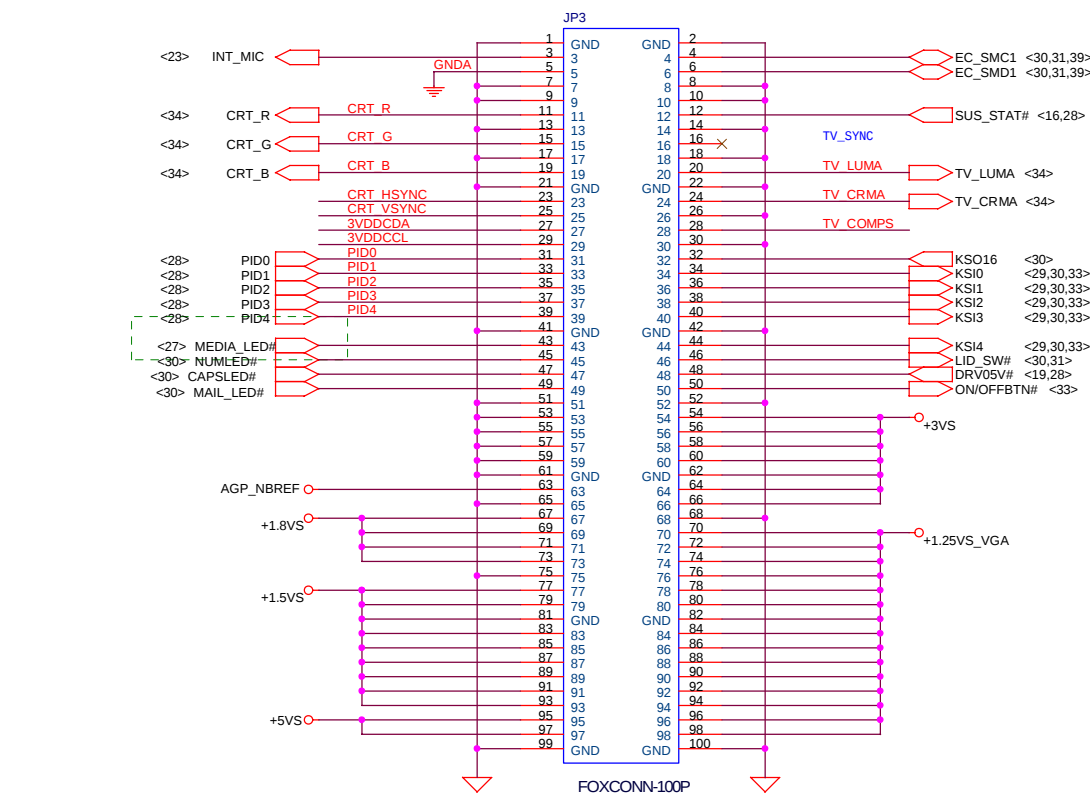
Note:
CPU_CLK[2:0] needs to be running in C3, C4.



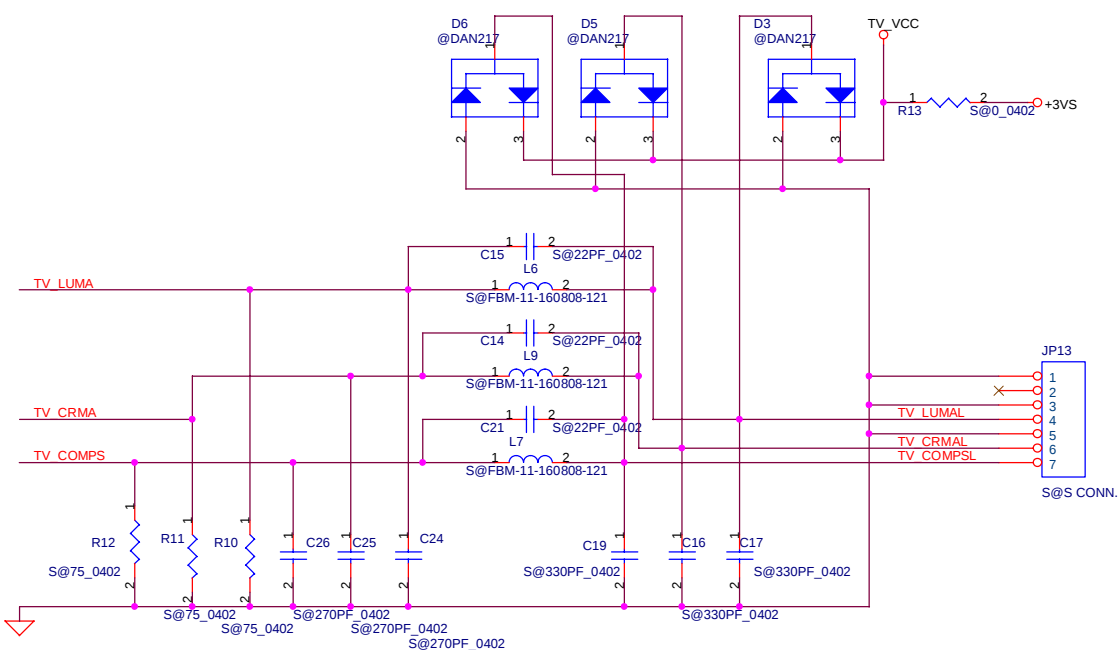
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.		
Title SCHEMATIC, M/B LA-1511		
Size 401224	Document Number 401224	Rev 0B
Date: 星期三, 八月 21, 2002		
Sheet 14 of 43		

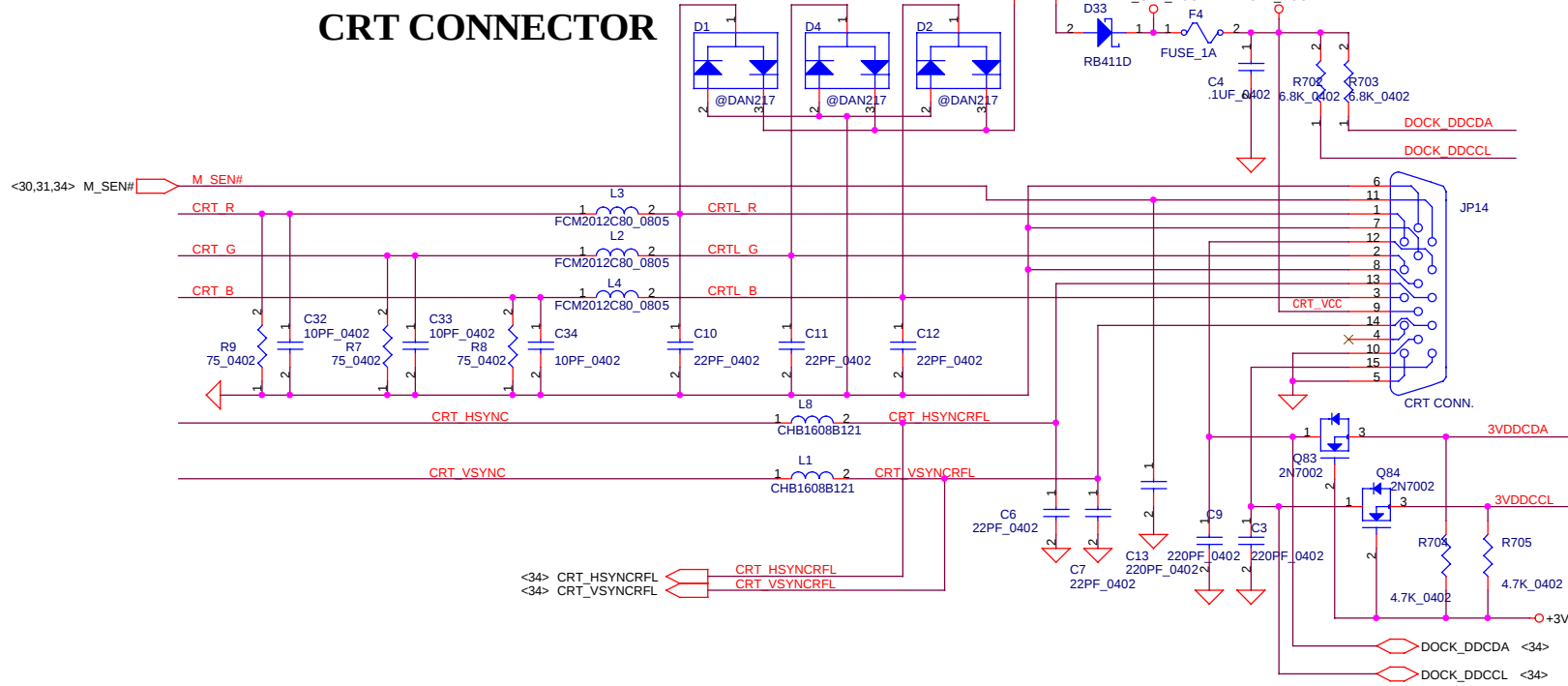
AGP 100X2 Pin connector



TV_OUT CONNECTOR



CRT CONNECTOR

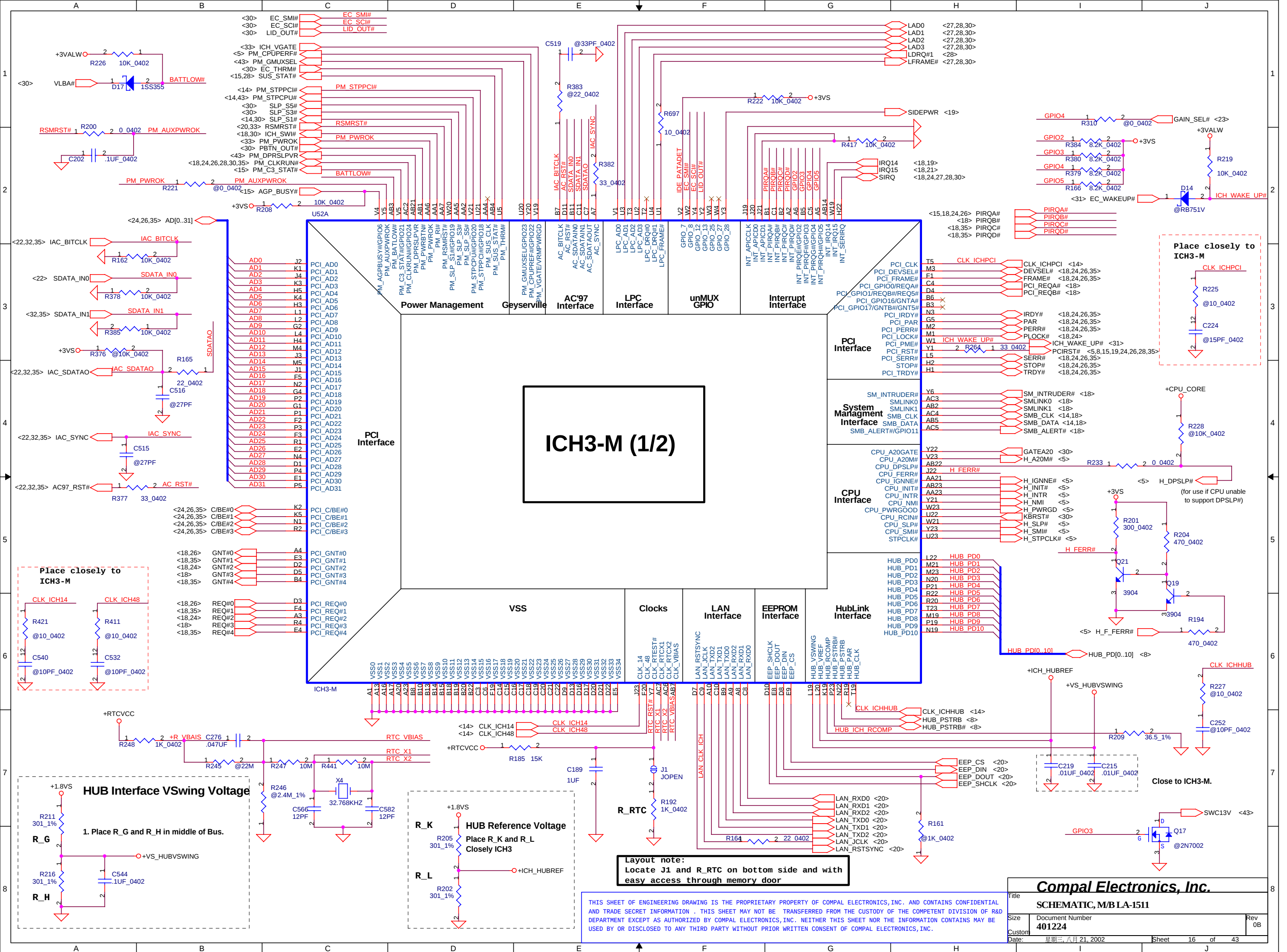


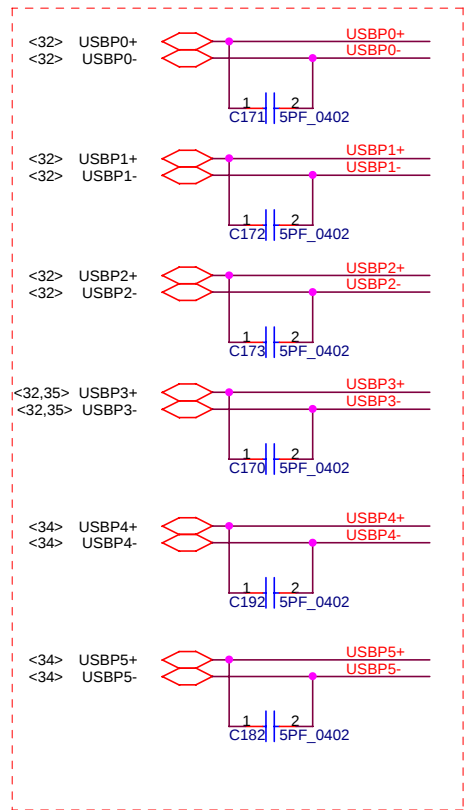
Compal Electronics, Inc.

SCHEMATIC, M/BLA-1511

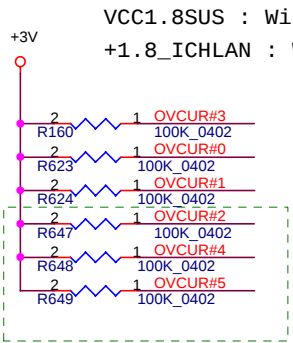
Size	Document Number	Rev
C	401224	0B
Date:	星期二, 八月 21, 2002	Sheet 15 of 43

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





Layout note The Cap close to ICH3-M(< 1 inch)



- USBP0+ D19
- USBP1+ A19
- USBP2+ E17
- USBP3+ B17
- USBP4+ D15
- USBP5+ A15
- USBP0- D18
- USBP1- A18
- USBP2- E16
- USBP3- B16
- USBP4- D14
- USBP5- A14

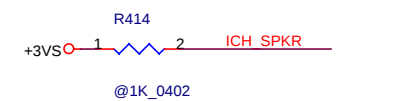
- OVCUR#0 E12
- OVCUR#1 D12
- OVCUR#2 C12
- OVCUR#3 B12
- OVCUR#4 A12
- OVCUR#5 A11

- PIDERST# H20
- ICH_IDE_SRST# G22
- BT_DET# F21
- MDC_DET# G19
- EC_FLASH# D23
- ICH_ACIN E23

- USB_RBIA5 B21
- SPKR H23
- VCCA U19

- VCCPUS3/VCCPUSB0 F17
- VCCPUS4/VCCPUSB1 F18
- VCCPUS5/VCCPUSB2 K14
- VCCPSUS0 E10
- VCCPSUS1 V8
- VCCPSUS2 V9

Note:
R376=22.6_1% for B0(QB63 part)
R376=18.2_1% for B0(QB62 & SL5LF part)



USB Interface

Misc

Power

Power

ICH3-M (2/2)

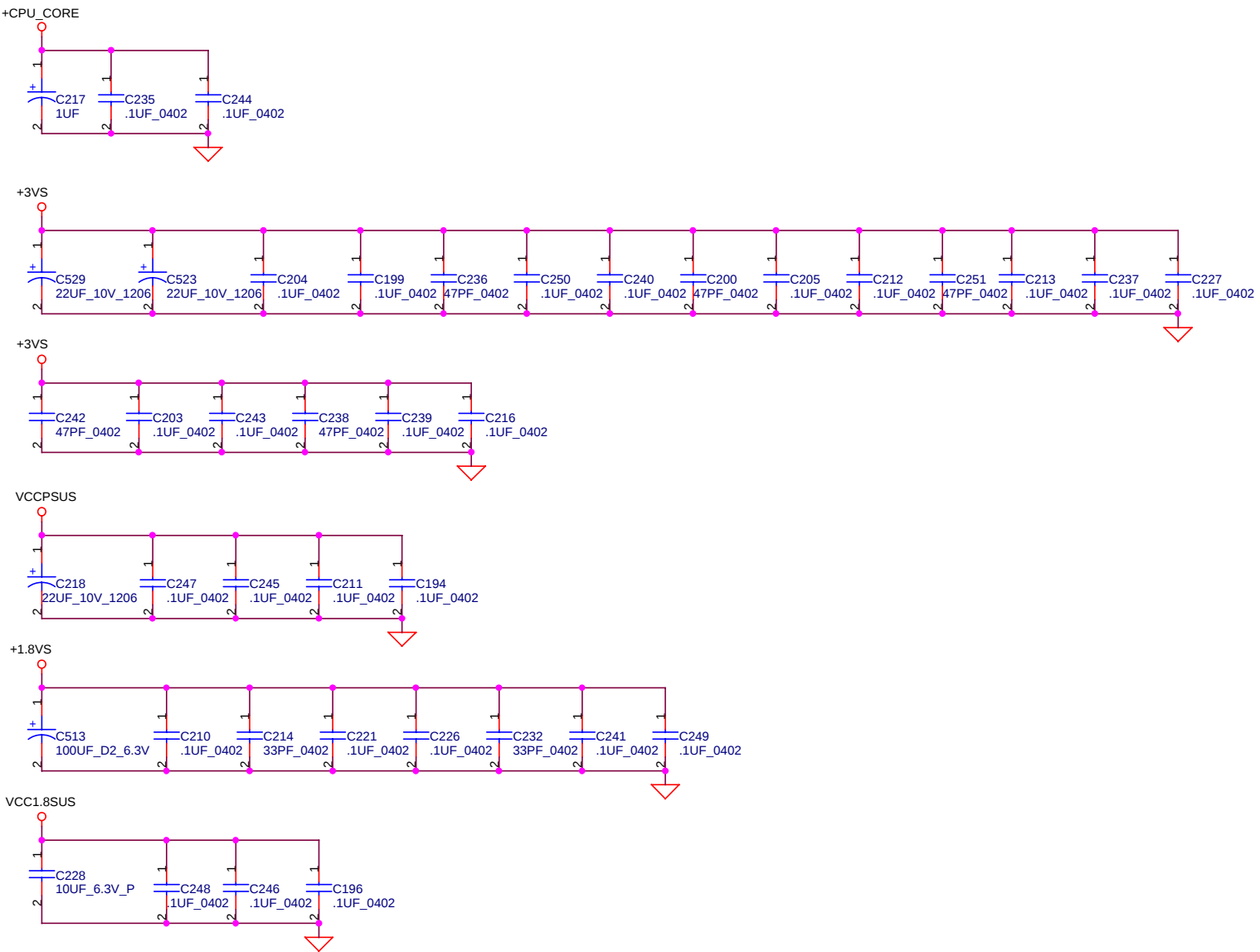
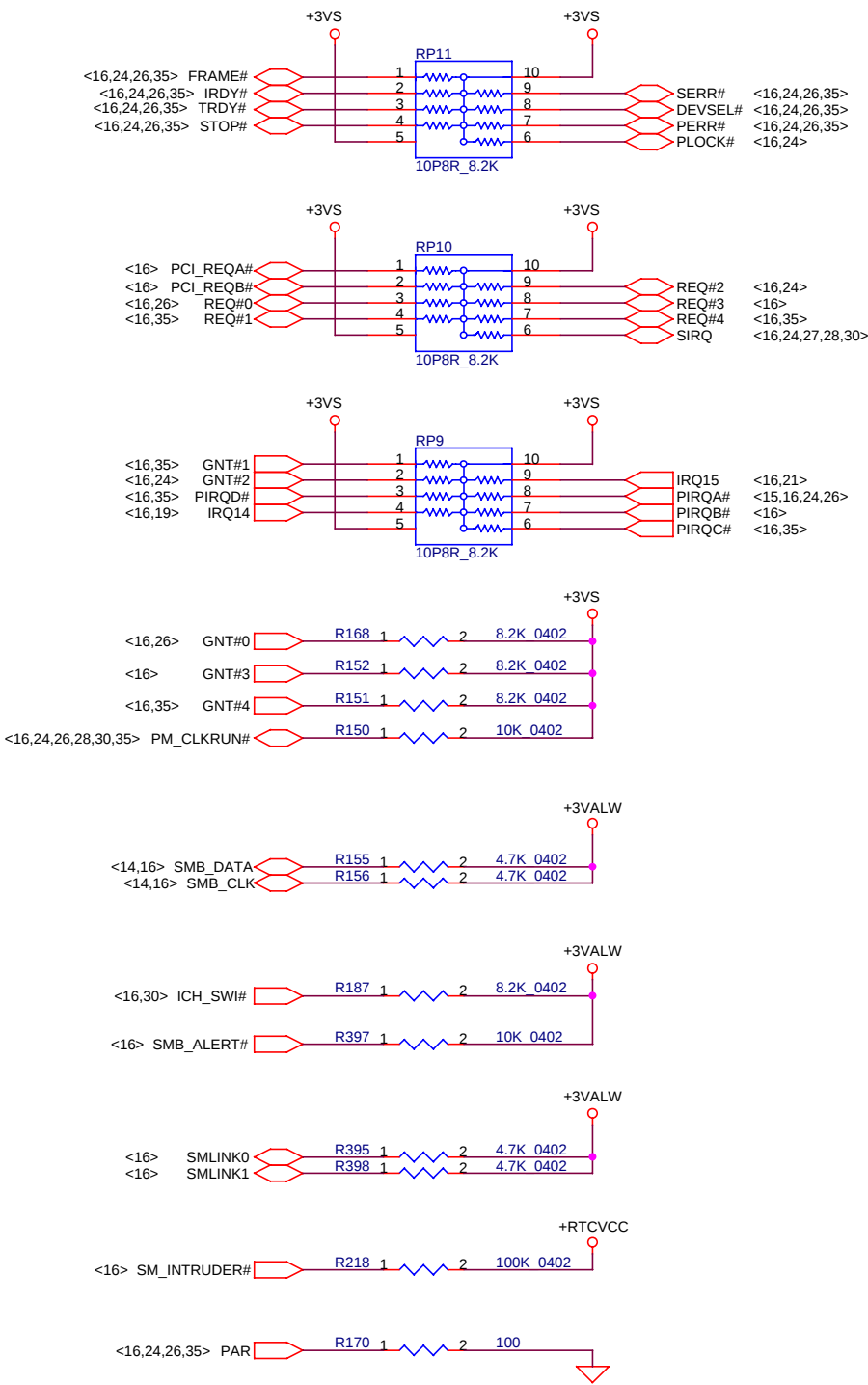
VSS

IDE Interface

- IDE_PDCS1# AC15
- IDE_PDCS3# AB15
- IDE_SDSCS1# AC21
- IDE_SDSCS3# AC22
- IDE_PDA0 AA14
- IDE_PDA1 AC14
- IDE_PDA2 AA15
- IDE_SDA0 AC20
- IDE_SDA1 AA19
- IDE_SDA2 AB20
- IDE_PDD0 W12
- IDE_PDD1 AB11
- IDE_PDD2 AA10
- IDE_PDD3 AC10
- IDE_PDD4 W11
- IDE_PDD5 Y9
- IDE_PDD6 AB9
- IDE_PDD7 AA9
- IDE_PDD8 AC9
- IDE_PDD9 Y10
- IDE_PDD10 W9
- IDE_PDD11 Y11
- IDE_PDD12 AB10
- IDE_PDD13 AC11
- IDE_PDD14 AA11
- IDE_PDD15 AC12
- IDE_SDD0 Y17
- IDE_SDD1 W17
- IDE_SDD2 AC17
- IDE_SDD3 AB16
- IDE_SDD4 W16
- IDE_SDD5 Y14
- IDE_SDD6 AA13
- IDE_SDD7 W15
- IDE_SDD8 W13
- IDE_SDD9 Y16
- IDE_SDD10 Y15
- IDE_SDD11 AC16
- IDE_SDD12 AB17
- IDE_SDD13 AA17
- IDE_SDD14 Y18
- IDE_SDD15 AC18
- IDE_PDDACK# Y13
- IDE_SDDACK# Y19
- IDE_PDDREQ# AB12
- IDE_SDDREQ# AB18
- IDE_PDIOR# AC13
- IDE_SDIOR# AC19
- IDE_PDIOW# Y12
- IDE_SDIOW# AA18
- IDE_PIORDY# AB13
- IDE_SDIORDY# AB19

Title			
SCHEMATIC, M/B LA-1511			
Size	Document Number		Rev
	401224		OB
Date:	星期三, 八月 21, 2002		Sheet 17 of 43

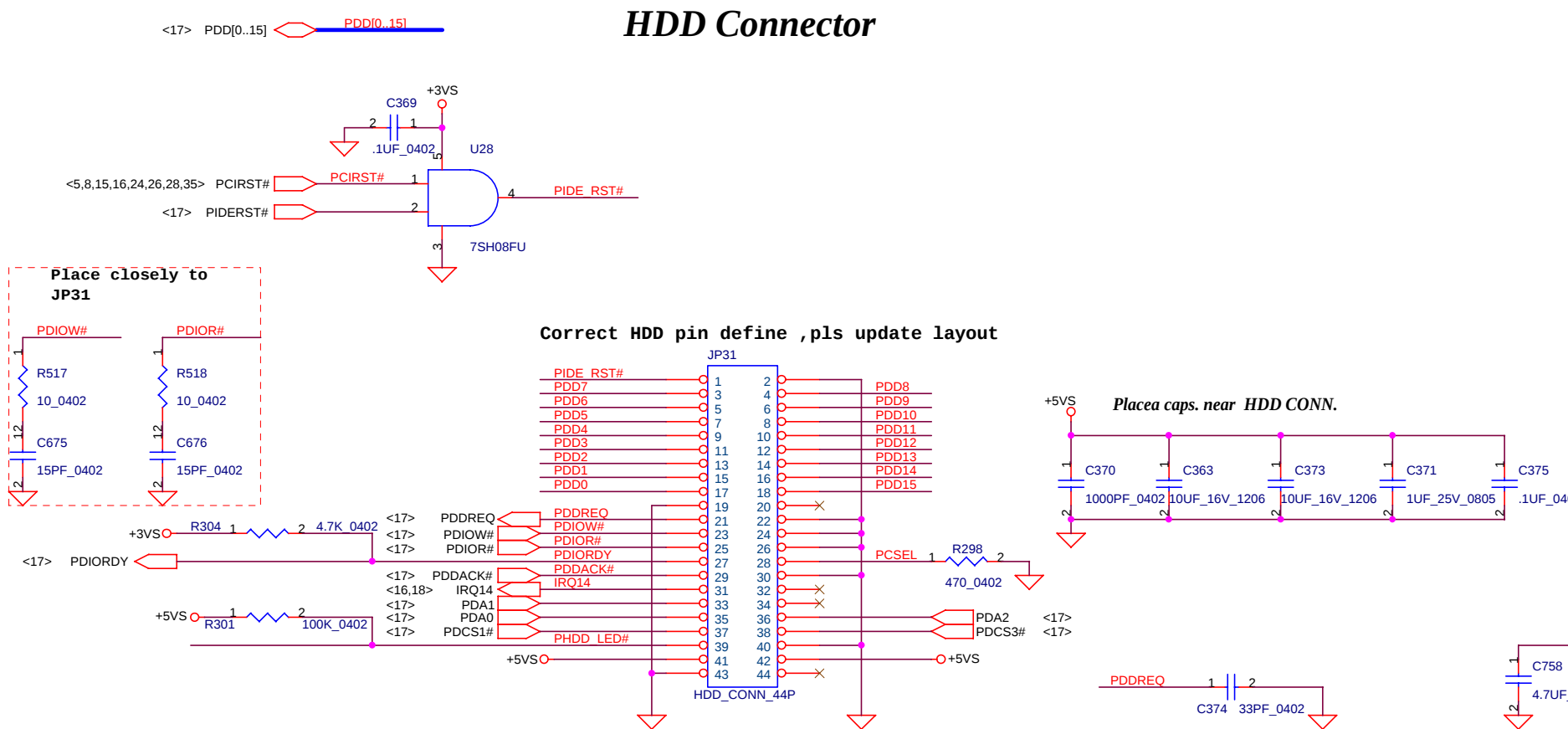
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



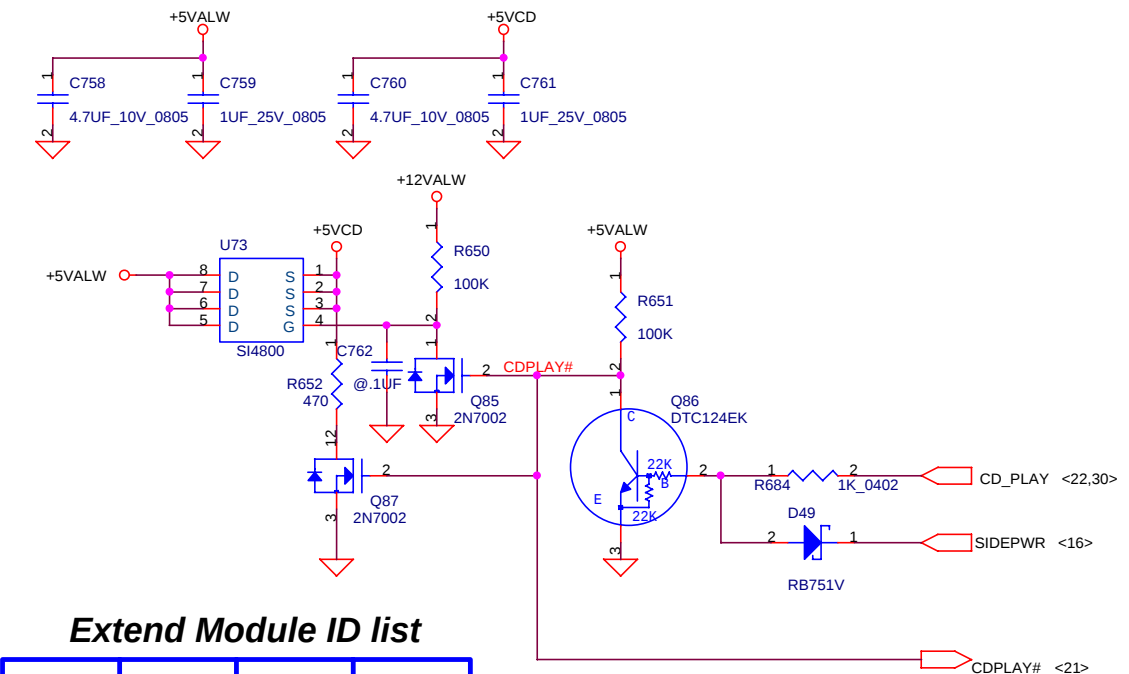
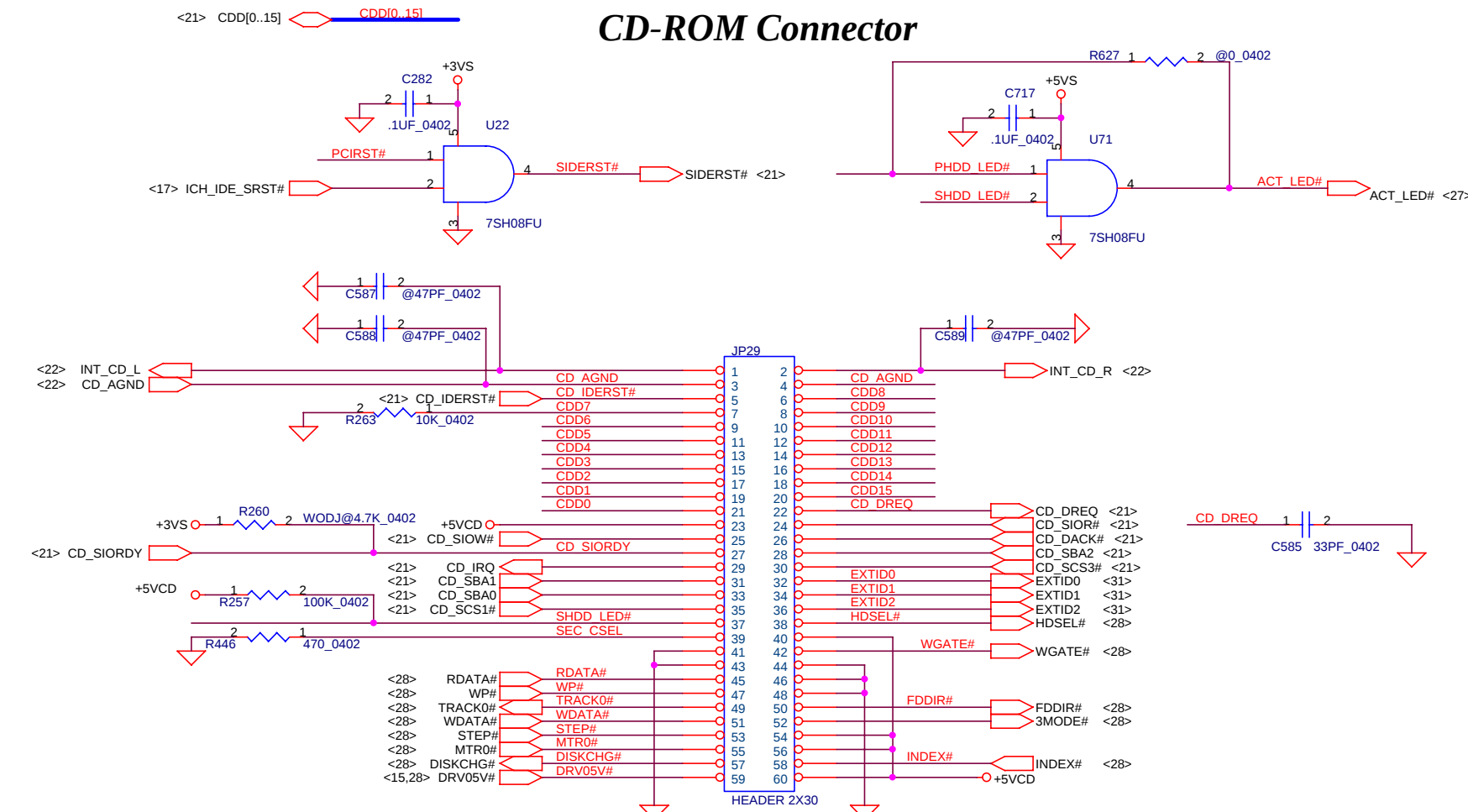
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Title			
SCHEMATIC, M/B LA-1511			
Size	Document Number		Rev
	401224		0B
Custom			
Date:	星期三, 八月 21, 2002		Sheet 18 of 43

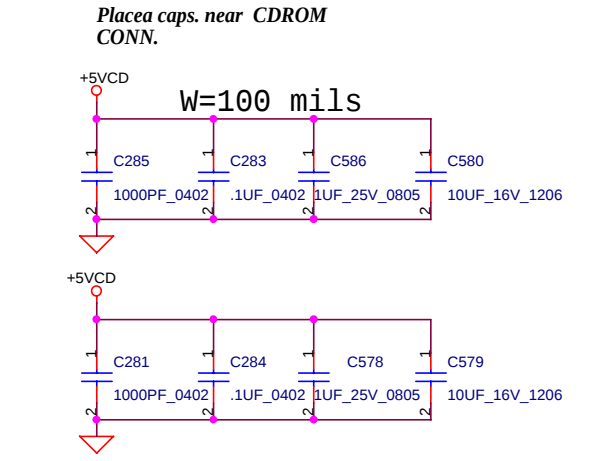
HDD Connector



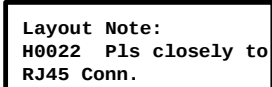
CD-ROM Connector

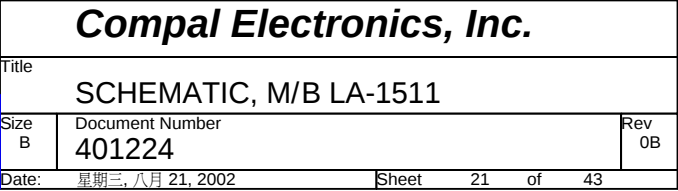


Extend Module ID list			
DEVICE	EXTID2	EXTID1	EXTID0
FDD	0	0	0
CD-ROM	0	0	1
LS-120	0	1	0
2'nd HDD	0	1	1
NONE	1	1	1

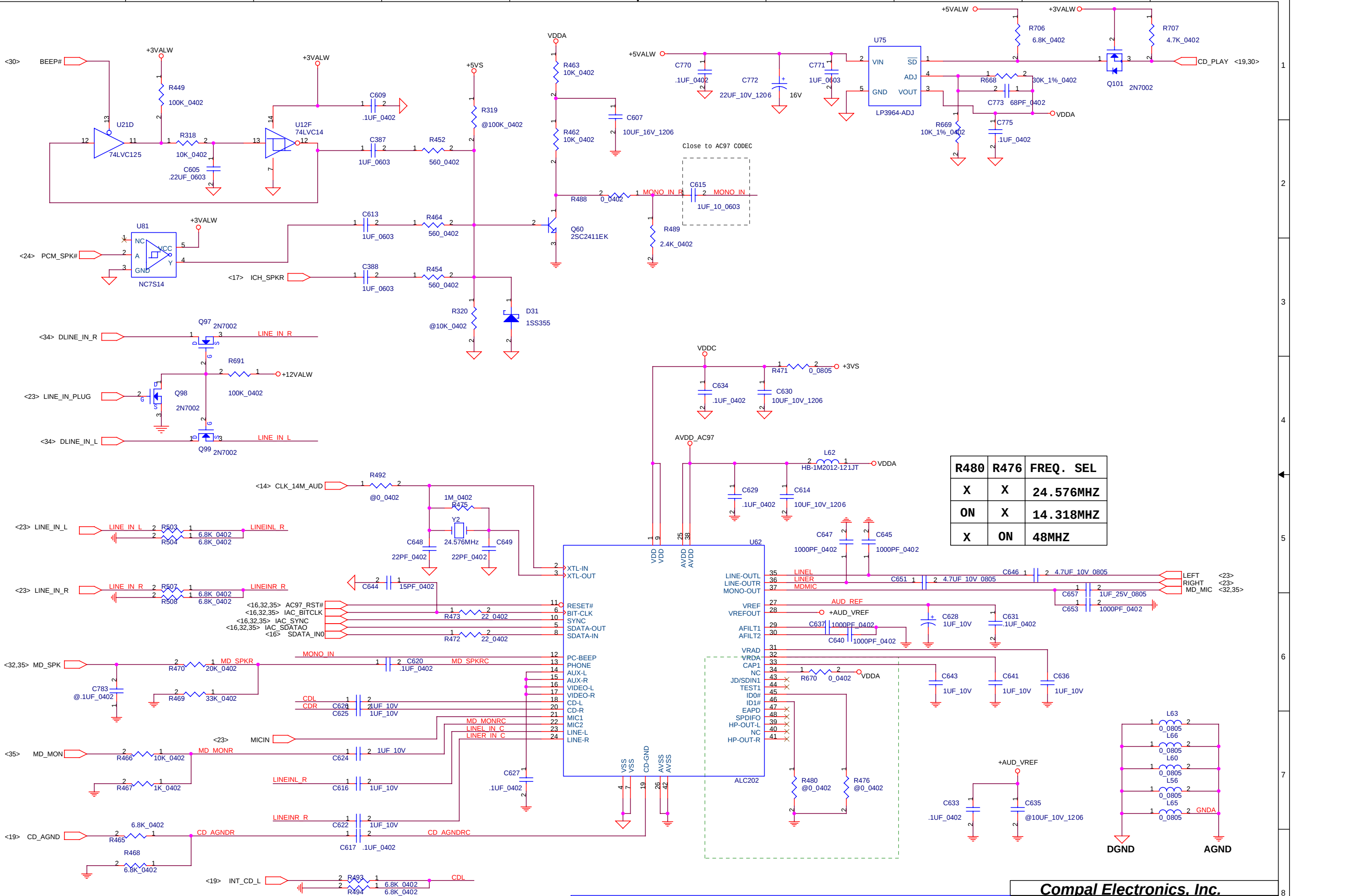


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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





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

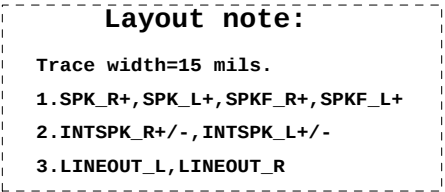


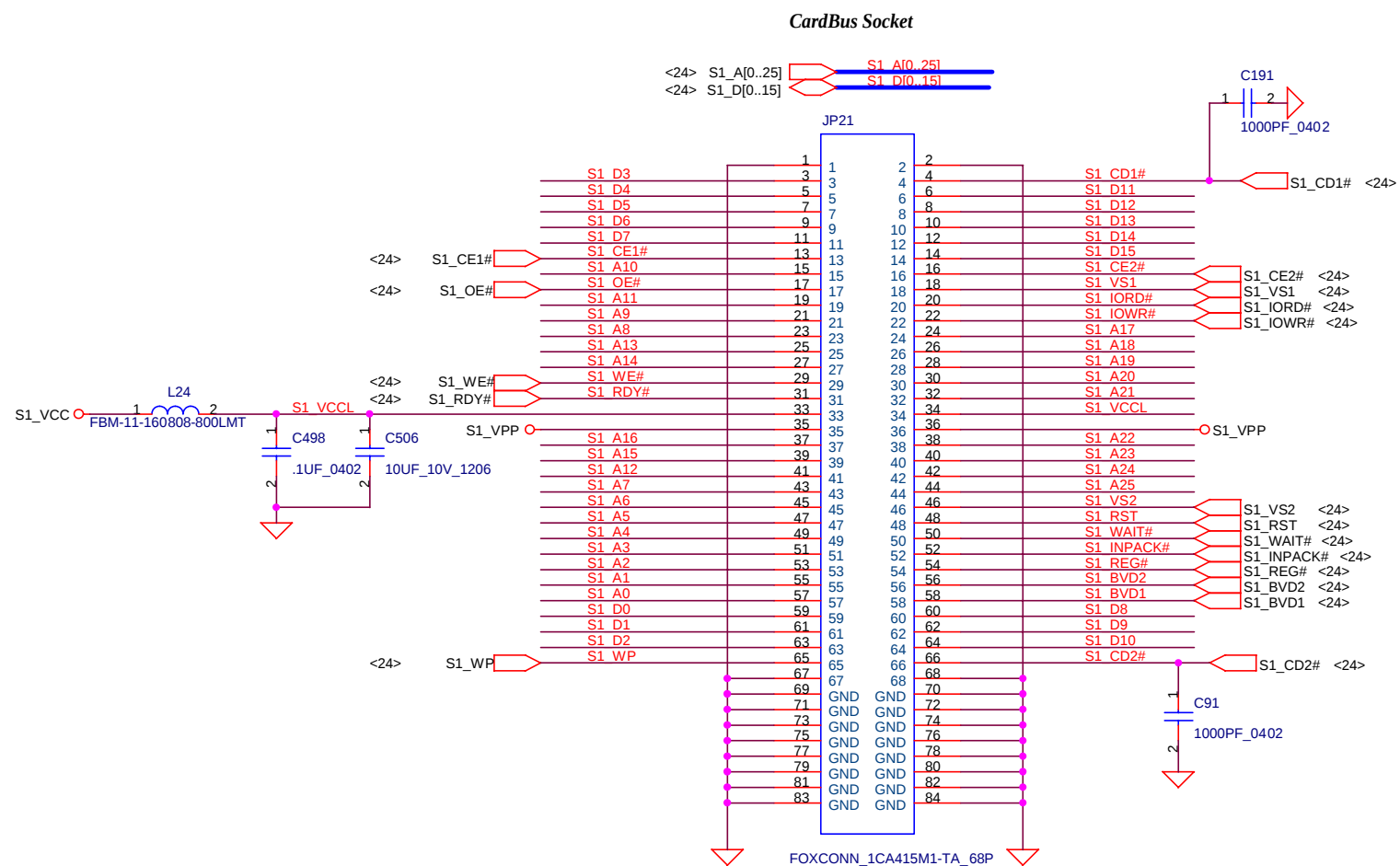
R480	R476	FREQ. SEL
X	X	24.576MHZ
ON	X	14.318MHZ
X	ON	48MHZ

Compal Electronics, Inc.

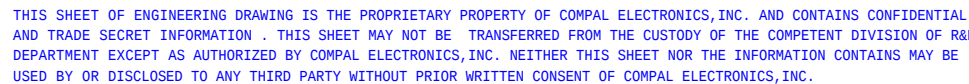
SCHEMATIC, M/B LA-1511

Size	Document Number	Rev
401224		0B
Custom	Date: 星期三, 八月 21, 2002	Sheet 22 of 43

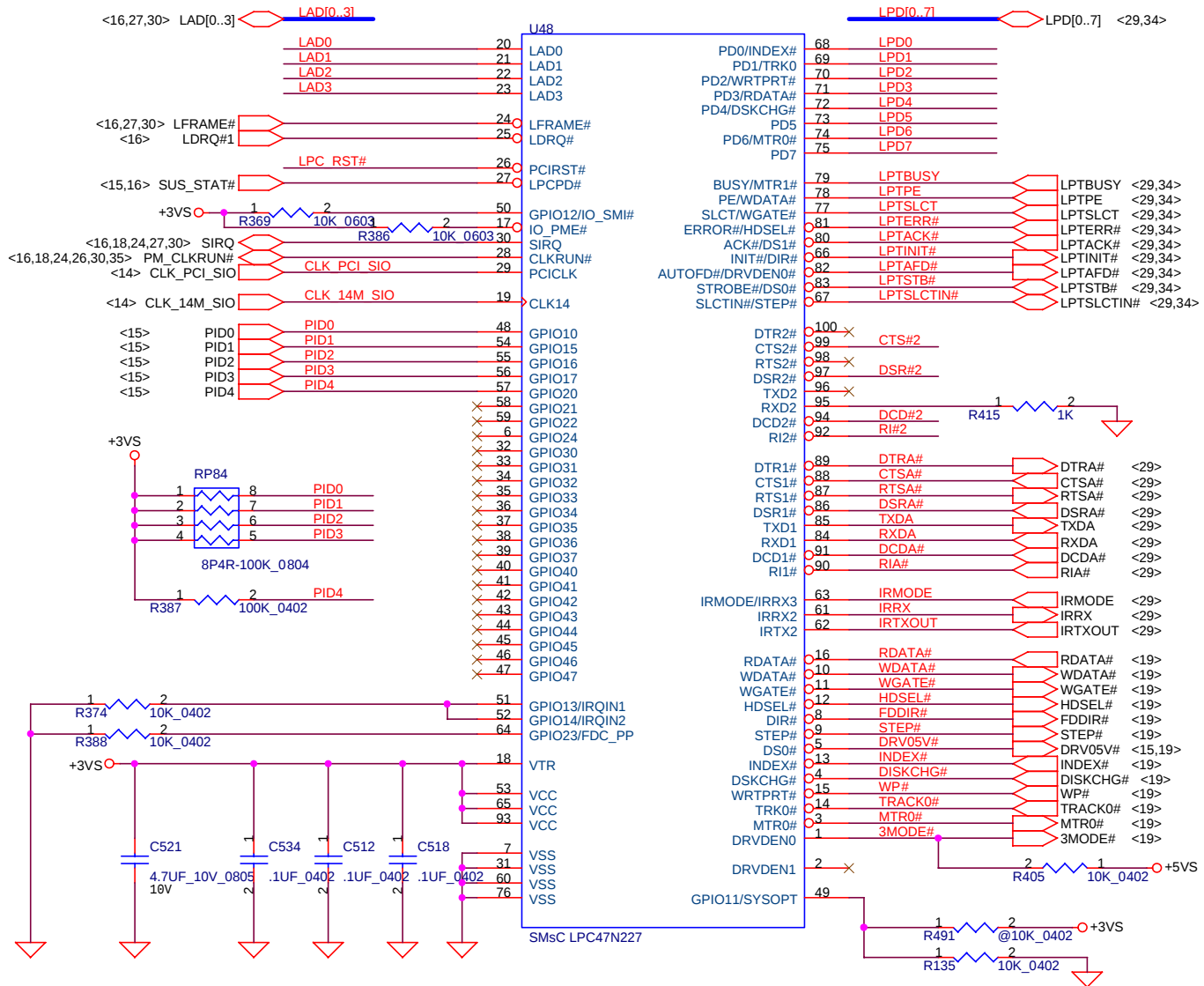




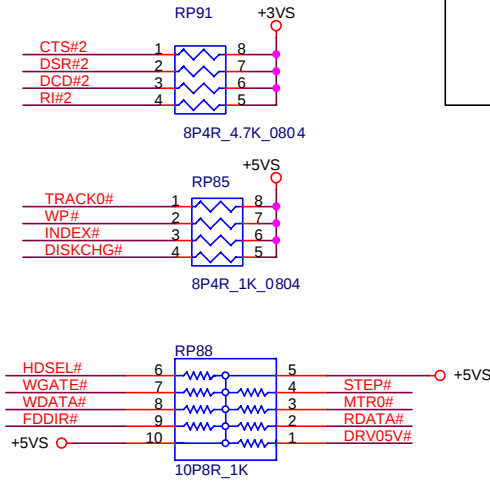
Compal Electronics, Inc.				8
Title SCHEMATIC, M/B LA-1511				
Size	Document Number 401224			Rev 0B
Custom				
Date:	星期三, 八月 21, 2002	Sheet	25 of 43	



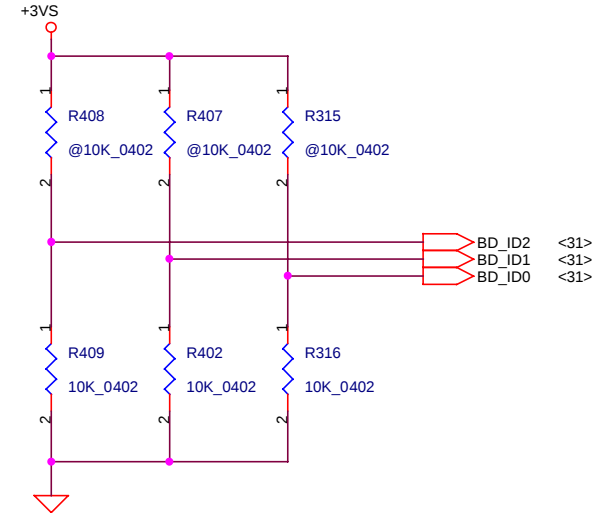
SUPER I/O SMsC FDC47N227



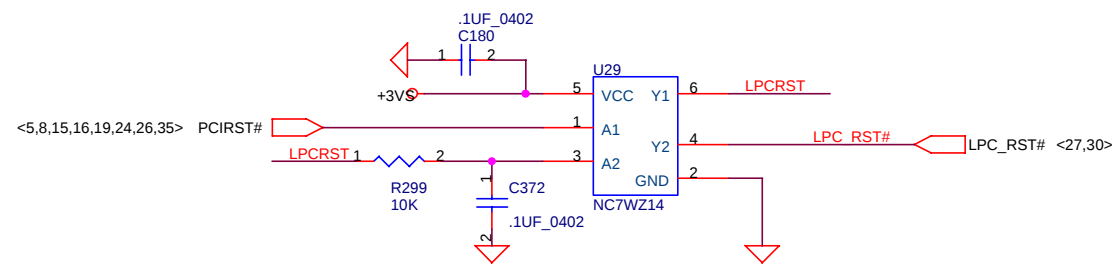
Base I/O Address
0 = 02Eh
*** 1 = 04Eh**



BOARD ID



	BD_ID2	BD_ID1	BD_ID0
SST	0	0	0
PT	0	0	1
ST	0	1	0
QT	0	1	1



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

Compal Electronics, Inc.

Title SCHEMATIC, M/B LA-1511

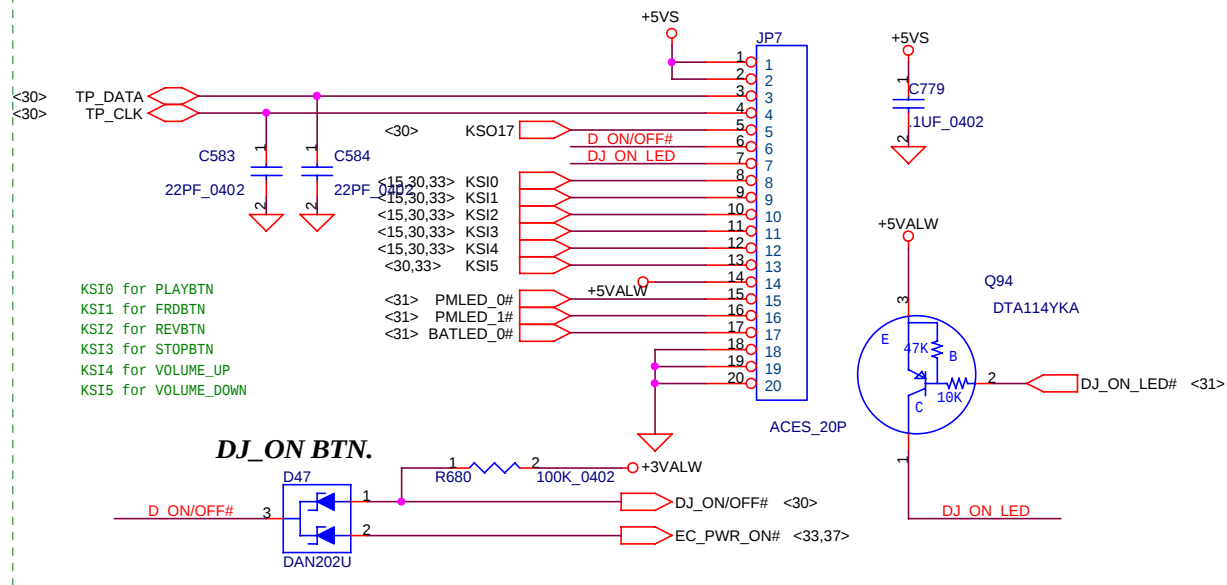
Size	Document Number
Custom	401224

Rev	0B
-----	----

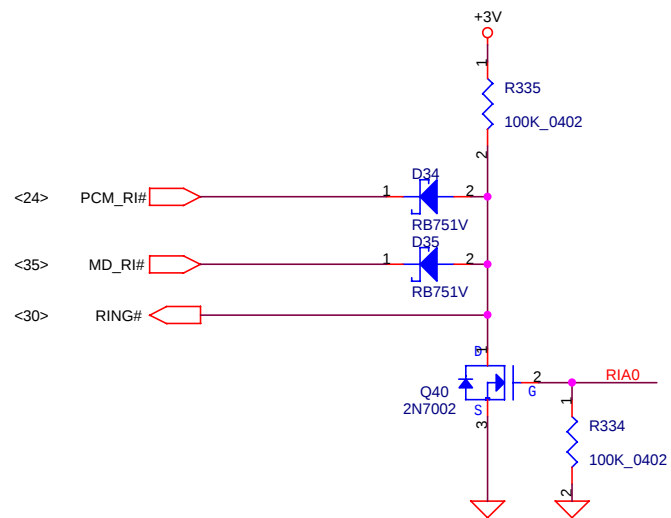
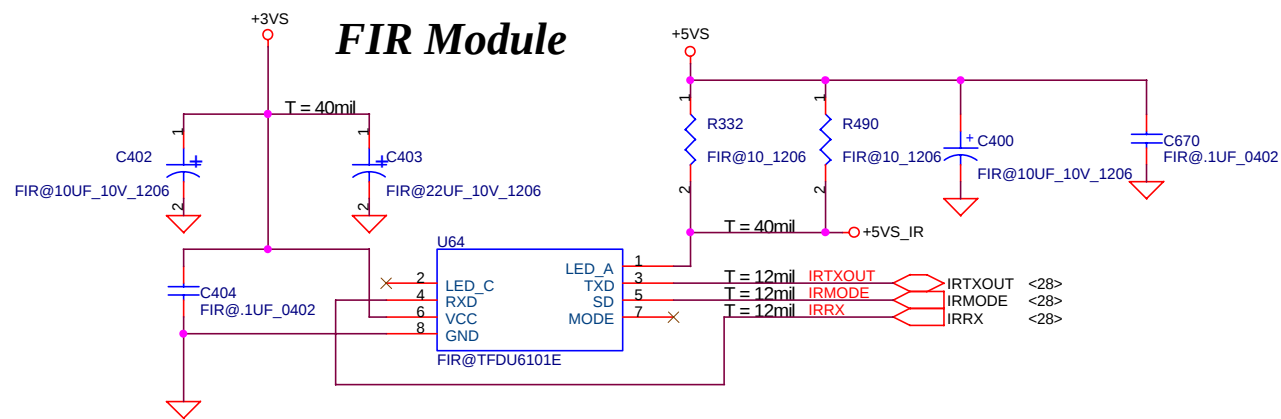
Date: 星期三, 八月 21, 2002

Sheet	28	of	43
-------	----	----	----

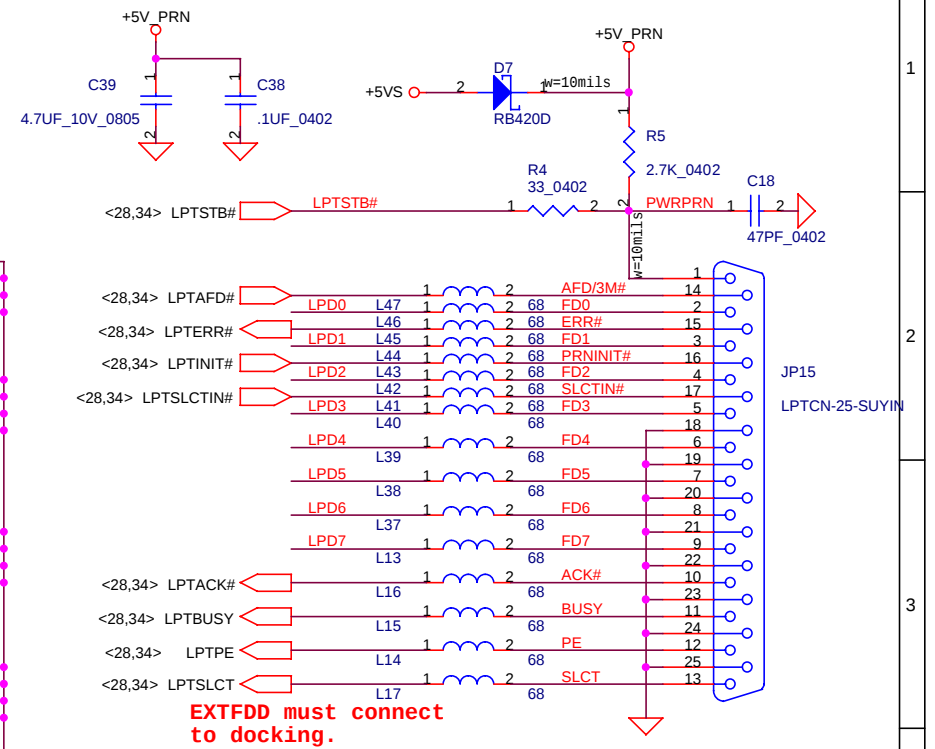
Touch Pad & Status LED Conn.



FIR Module

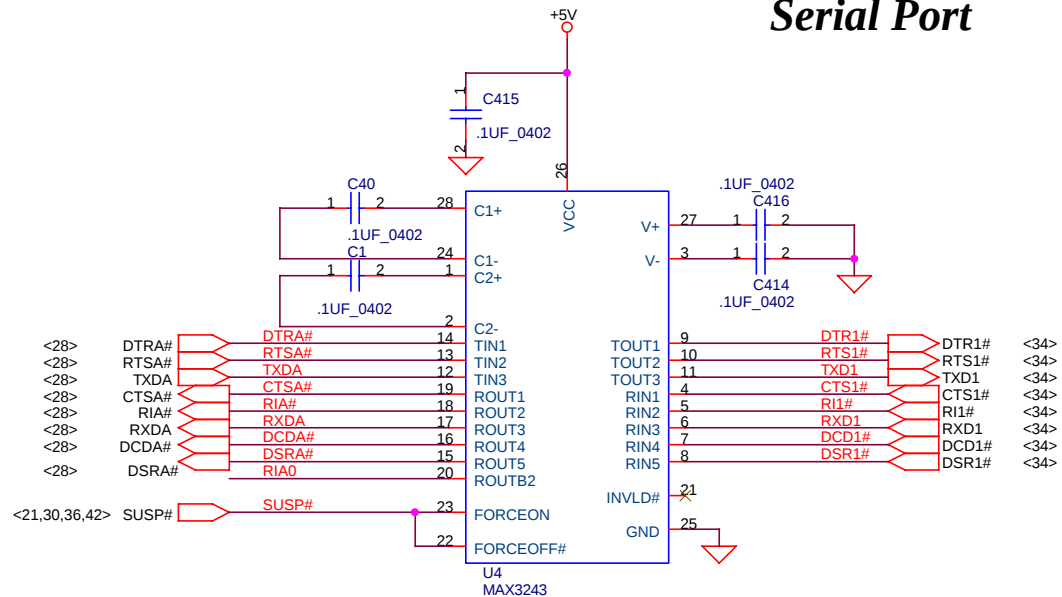


Parallel Port



EXTFDD must connect to docking.

Serial Port

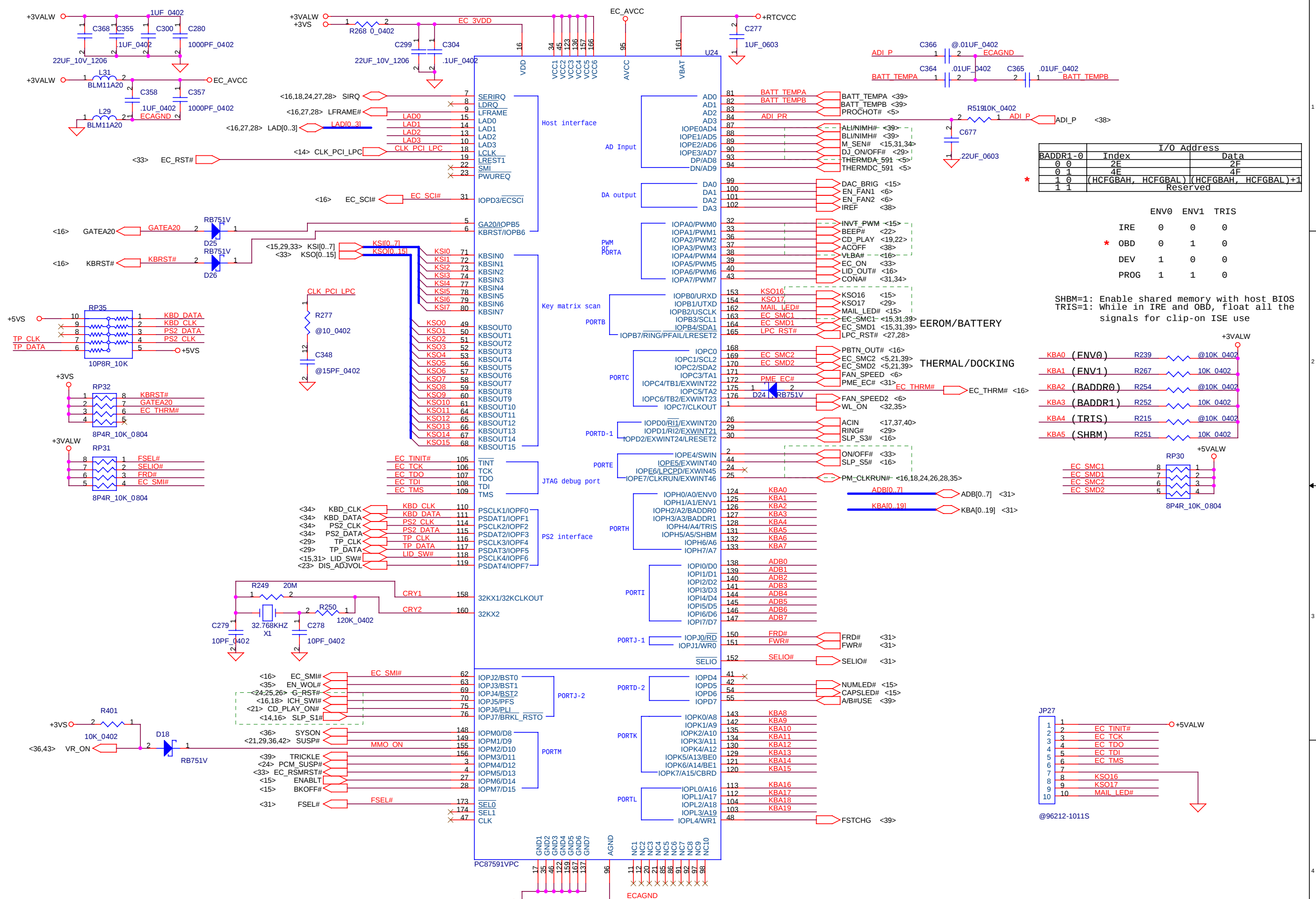


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

SCHEMATIC, M/B LA-1511

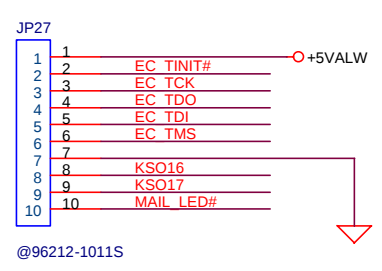
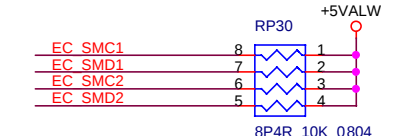
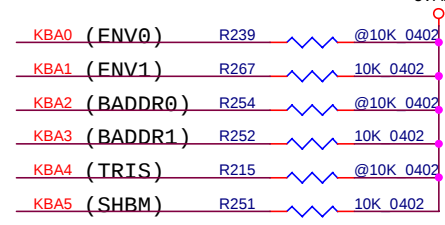
Size	Document Number	Rev
401224		0B
Date:	星期三, 八月 21, 2002	Sheet 29 of 43



I/O Address			
BADDR1-0	Index	Data	
0 0	2E	2F	
0 1	4E	4F	
1 0	(HCFGBAH, HCFGBAL)	(HCFGBAH, HCFGBAL)+1	
1 1	Reserved		

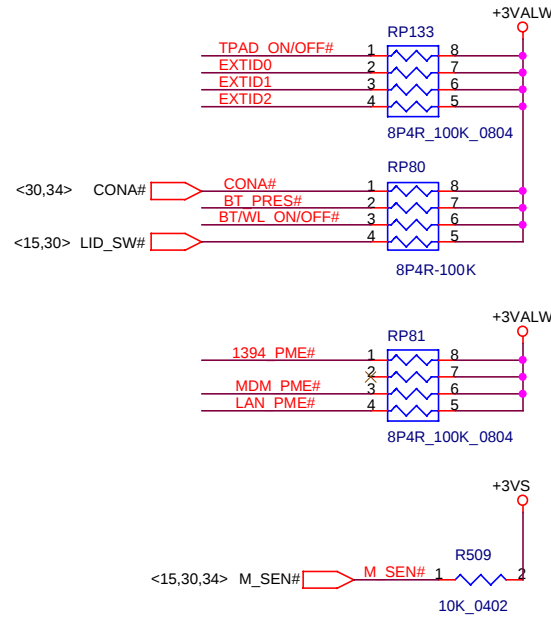
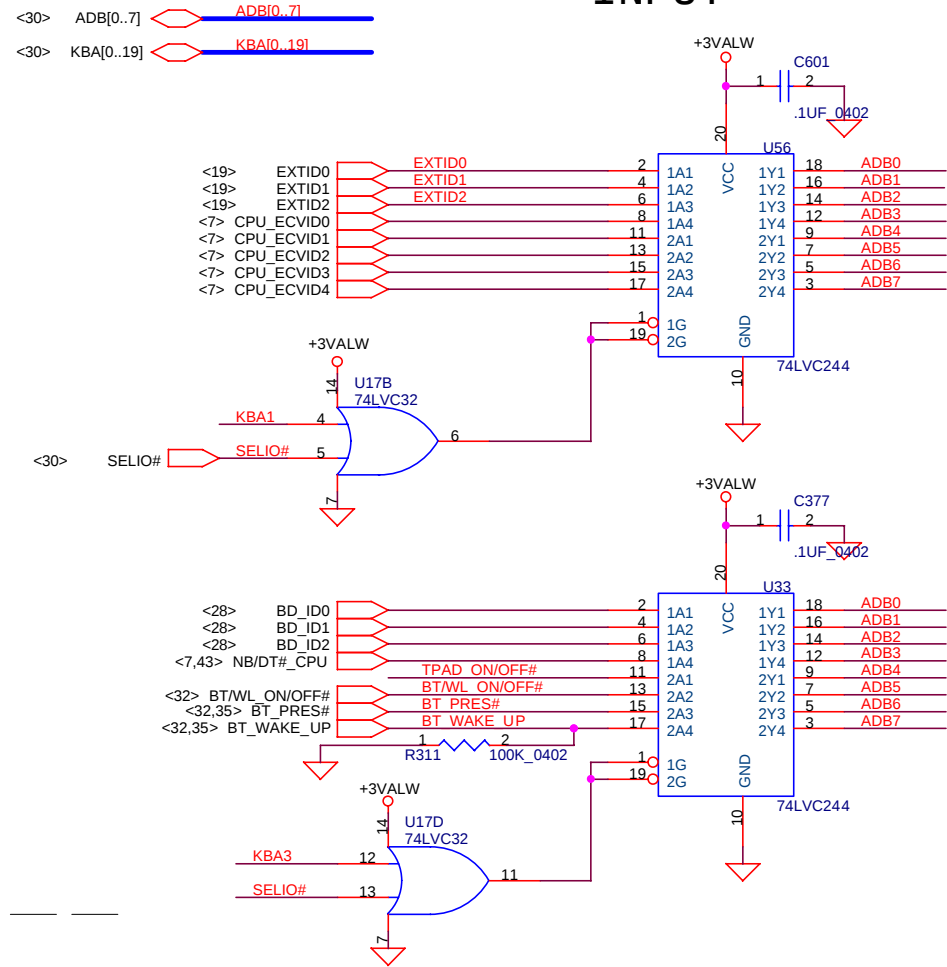
	ENV0	ENV1	TRIS
IRE	0	0	0
* OBD	0	1	0
DEV	1	0	0
PROG	1	1	0

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

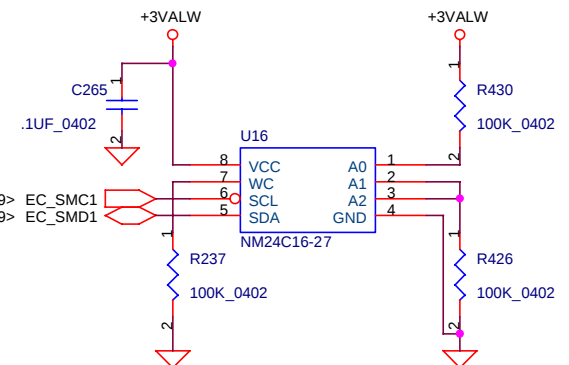
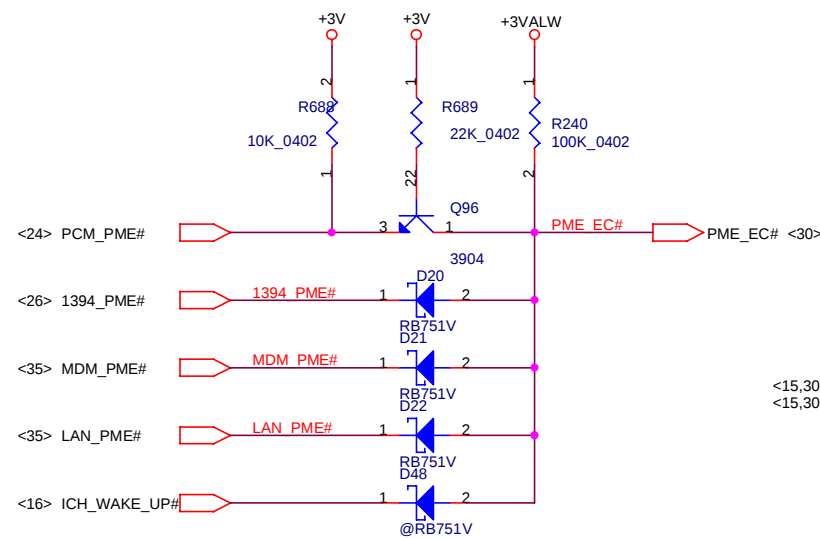
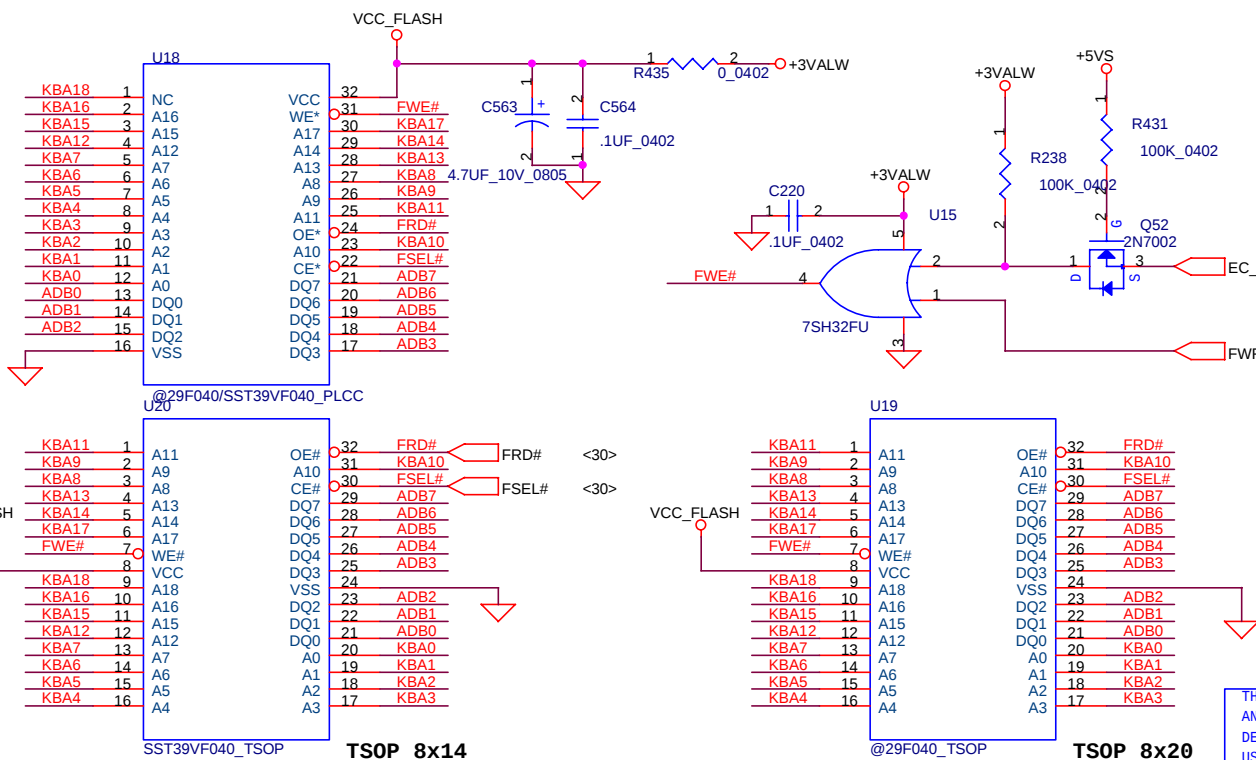
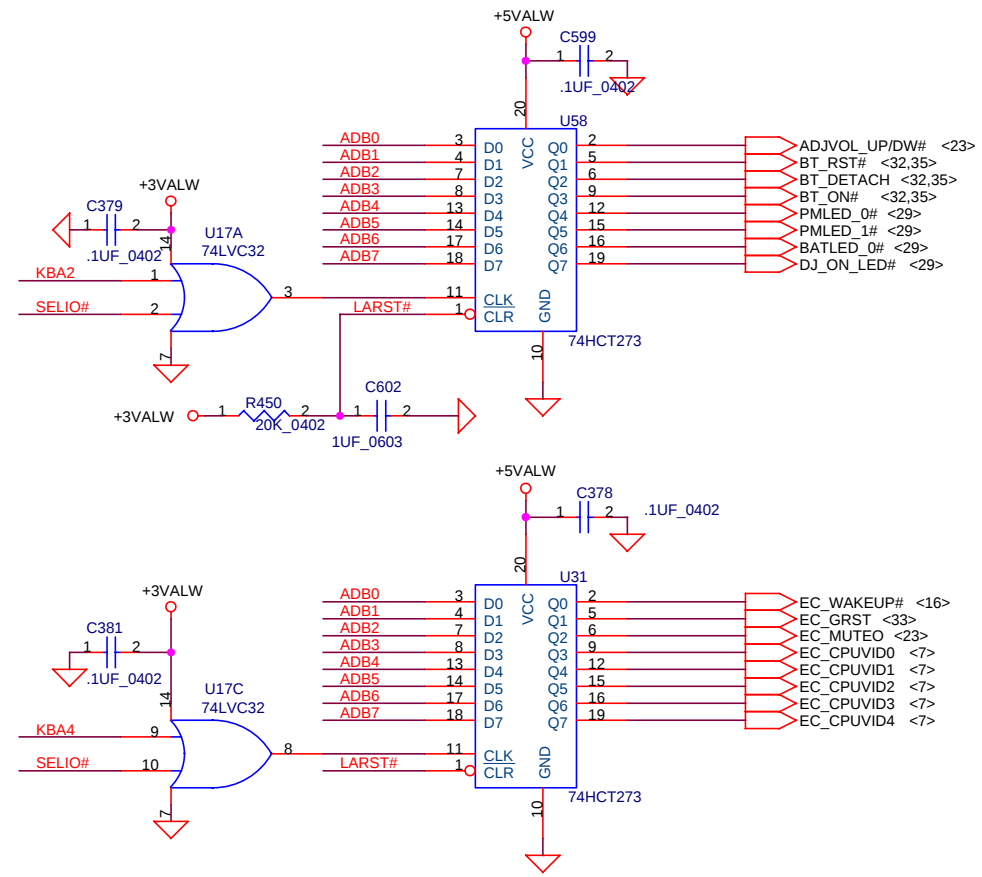


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

INPUT



OUTPUT



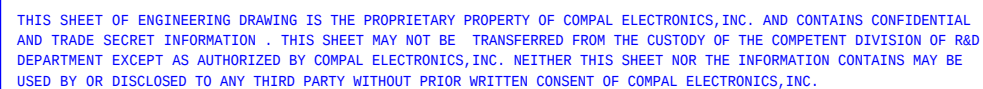
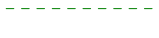
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

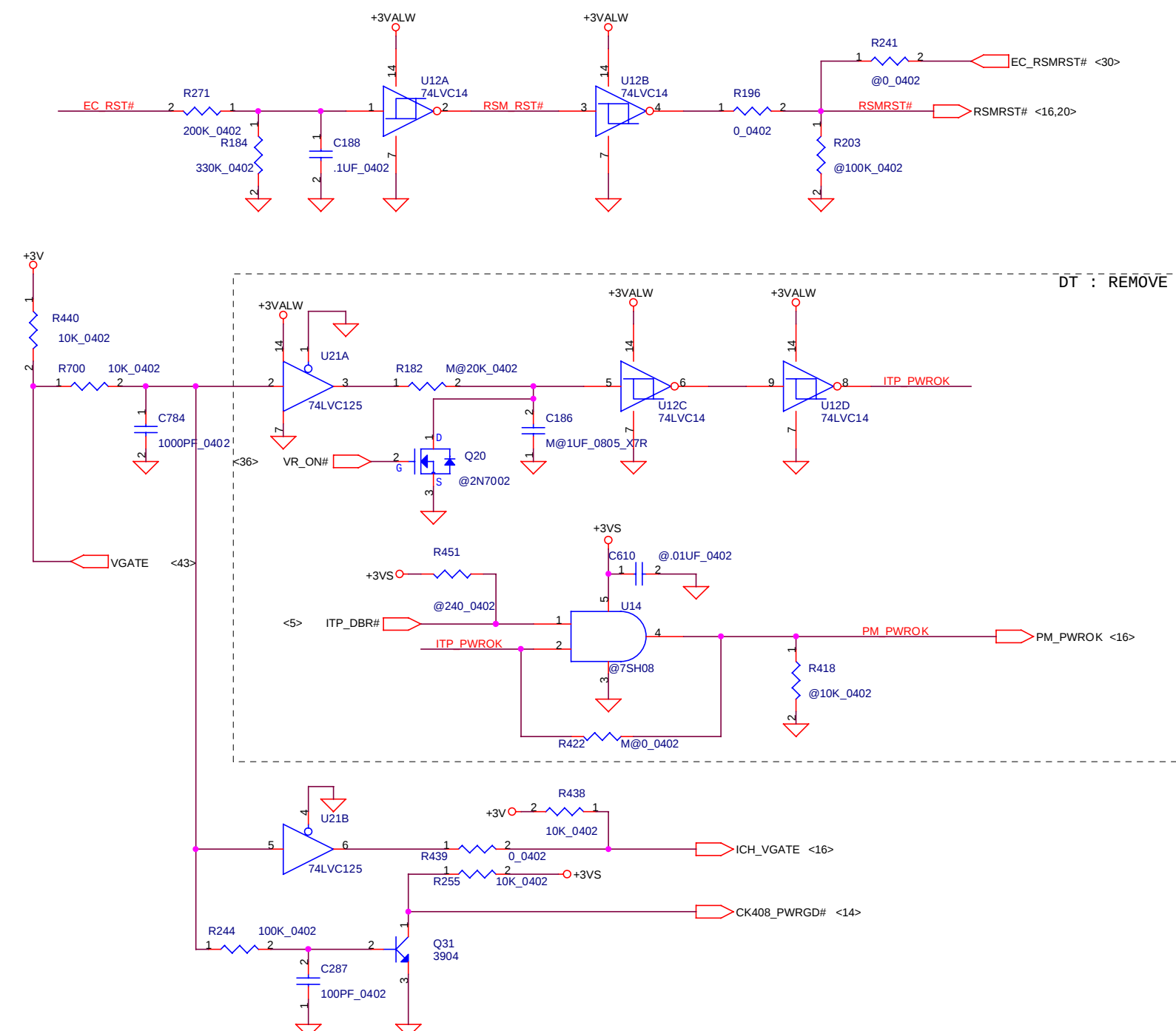
SCHEMATIC, M/B LA-1511

Size	Document Number	Rev
401224	401224	0B
Date	星期三, 八月 21, 2002	Sheet 31 of 43

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

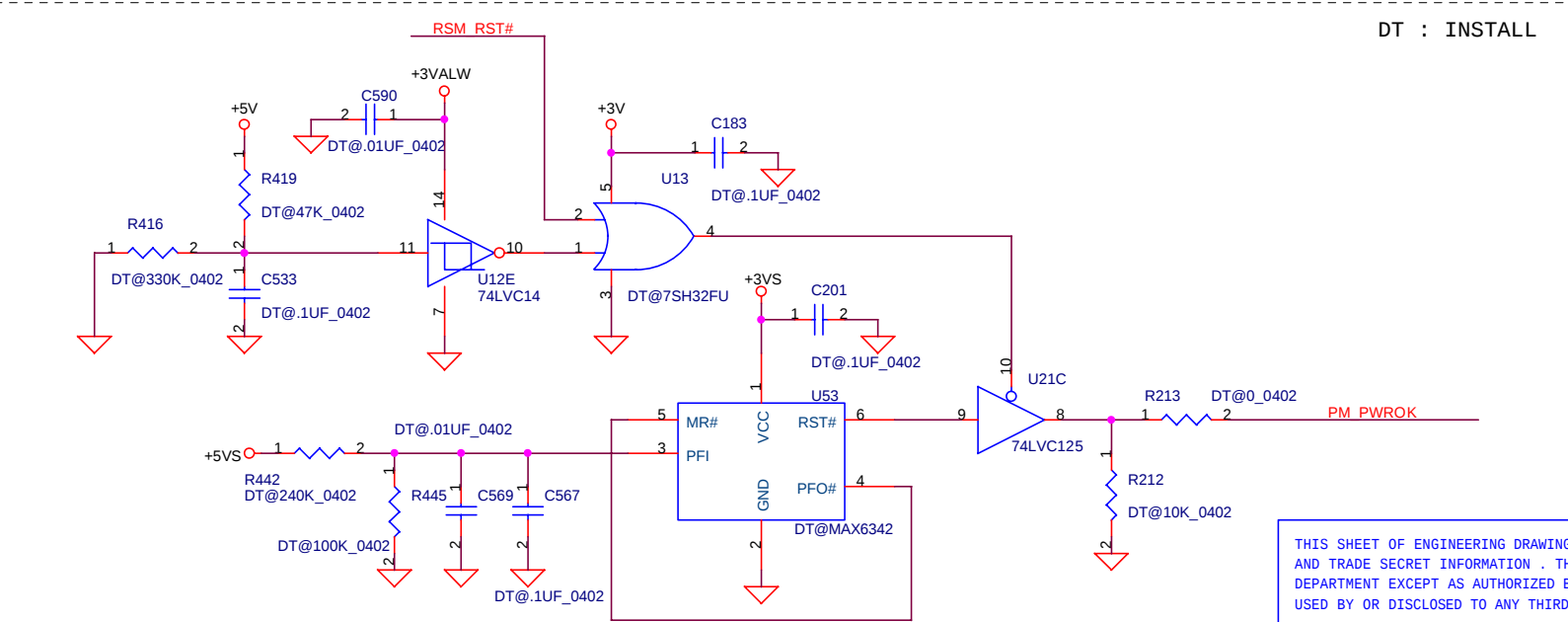


Power ON Circuit



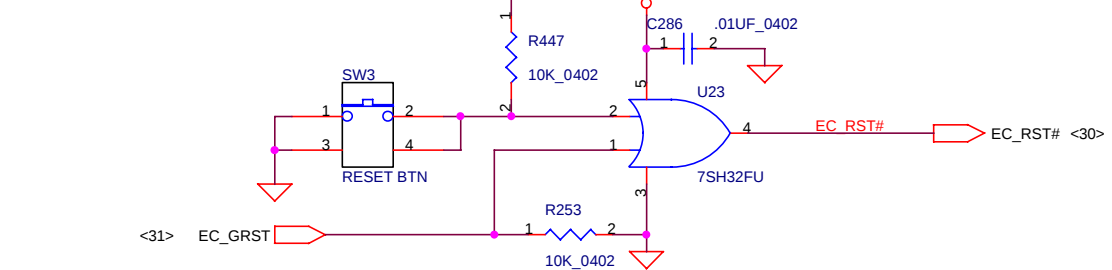
DT : REMOVE

DT : INSTALL

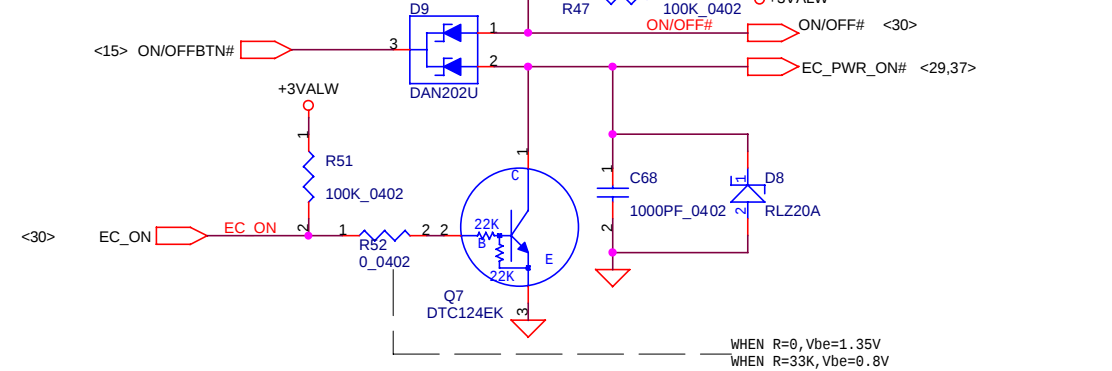


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Reset Button

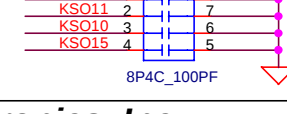
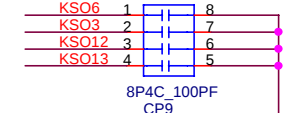
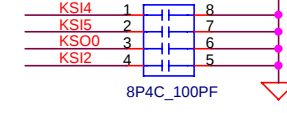
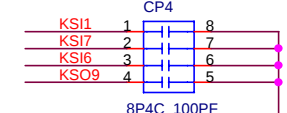
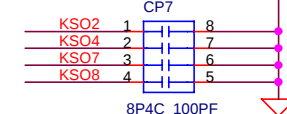
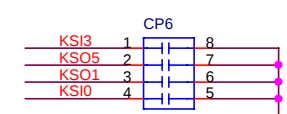
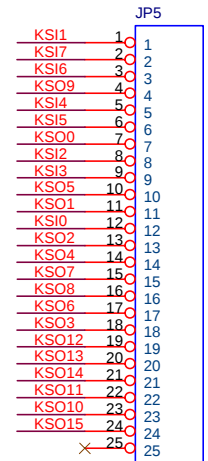


Power BTN



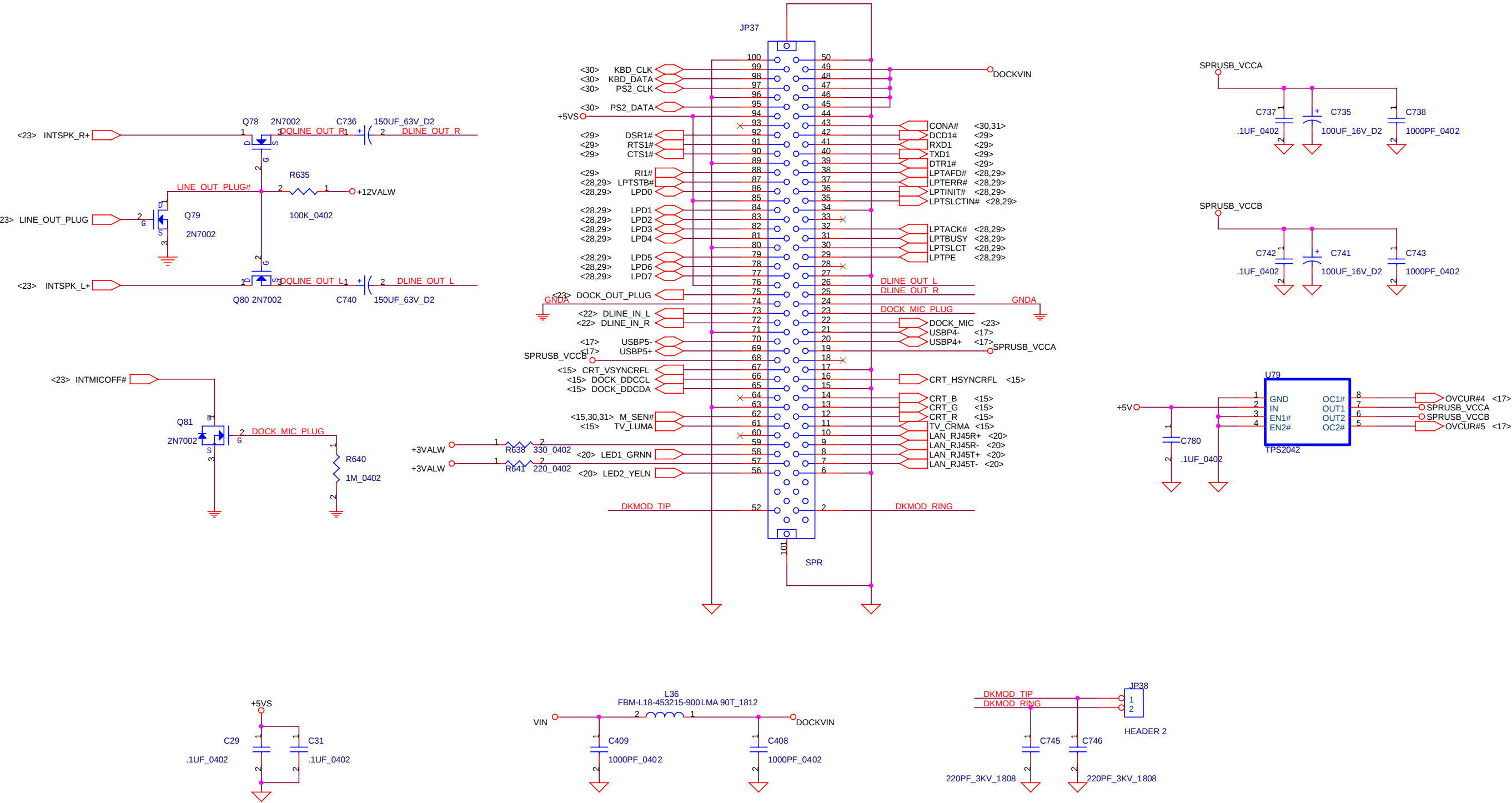
WHEN R=0, Vbe=1.35V
WHEN R=33K, Vbe=0.8V

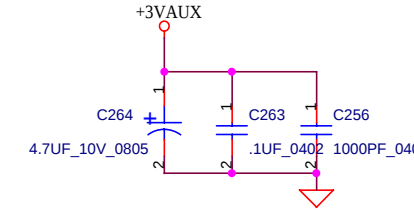
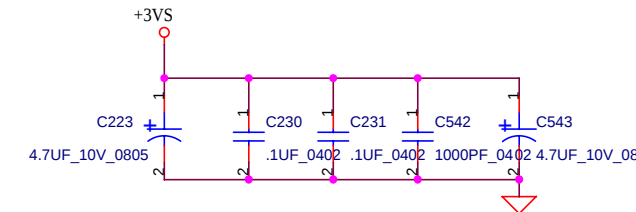
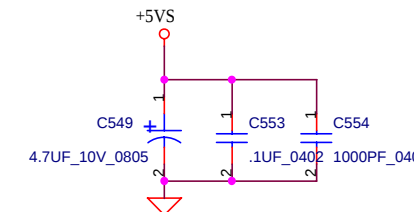
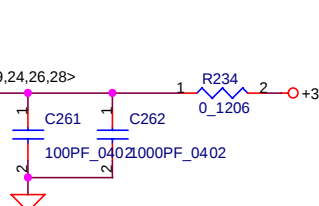
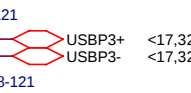
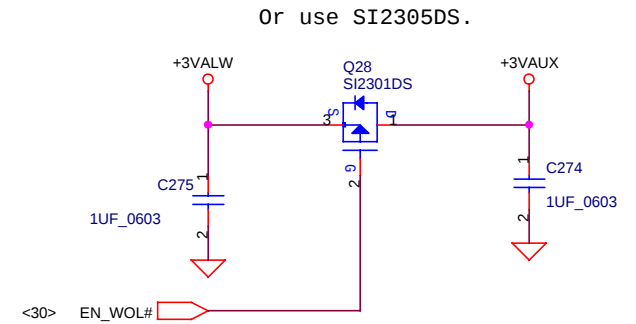
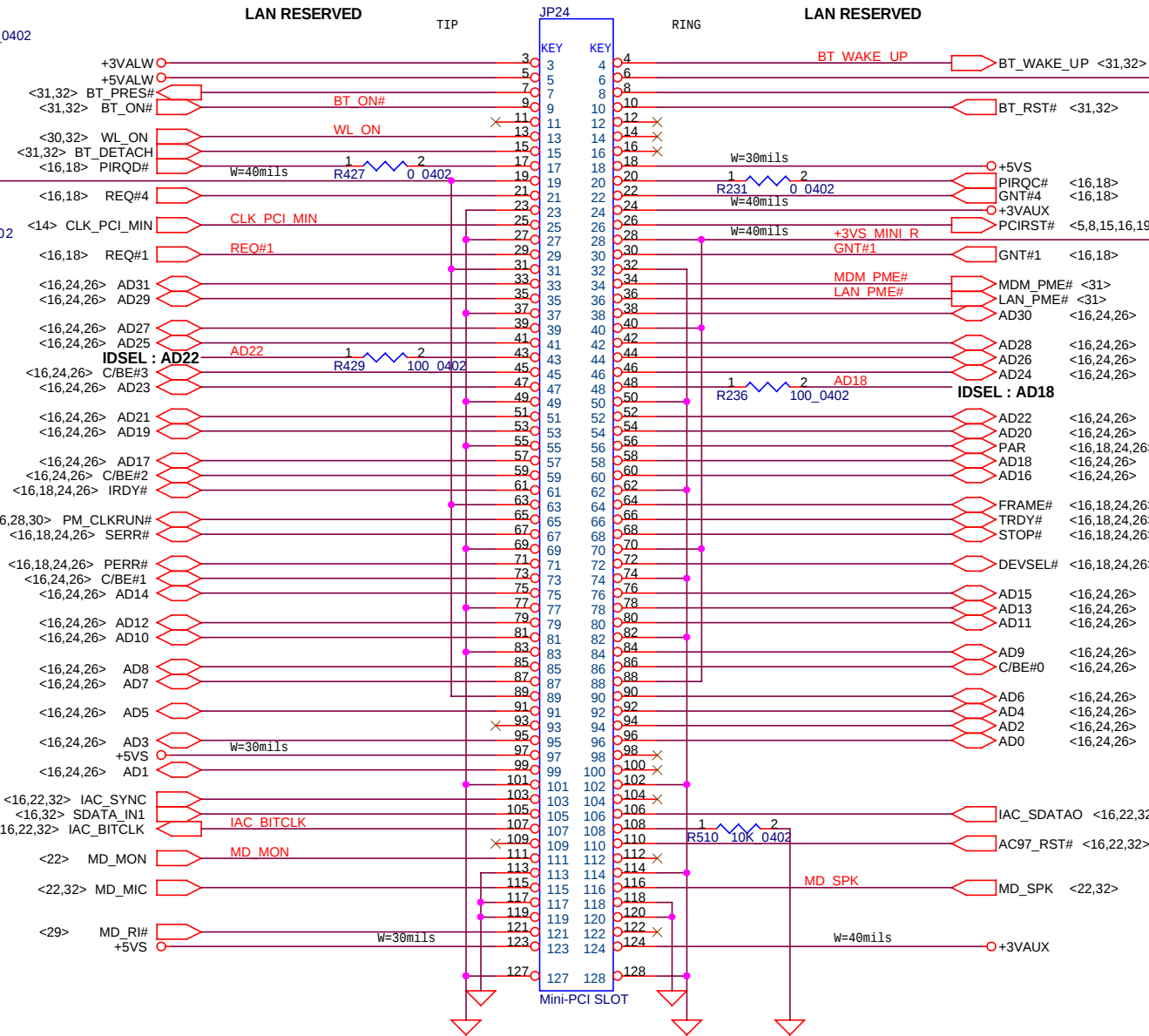
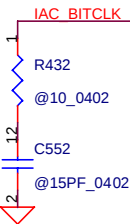
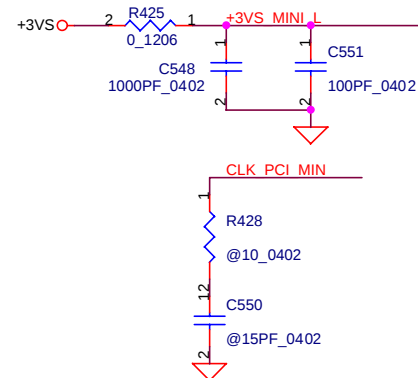
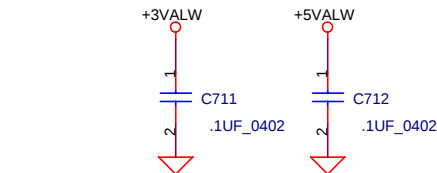
INT_KBD CONN.



Compal Electronics, Inc.			
SCHEMATIC, M/B LA-1511			
Size	Document Number	Rev	
401224	401224	0B	
Date:	星期三, 八月 21, 2002	Sheet	33 of 43

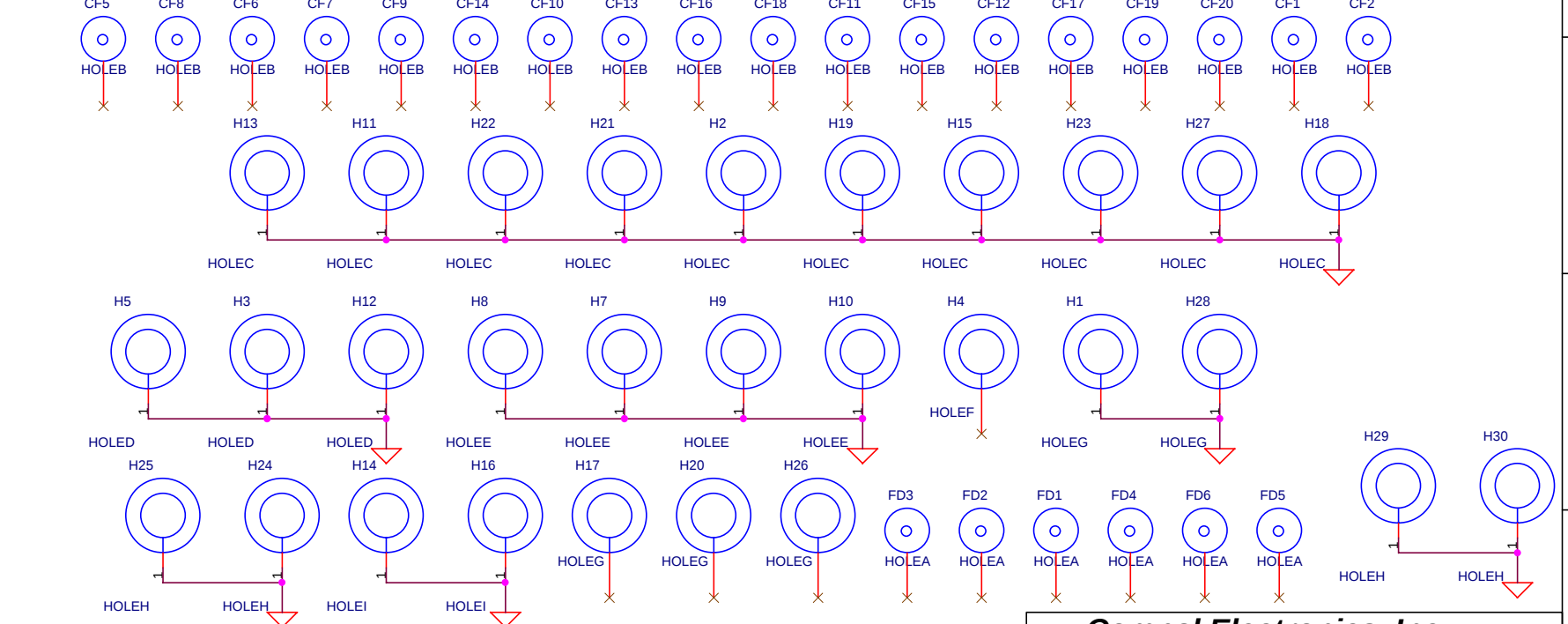
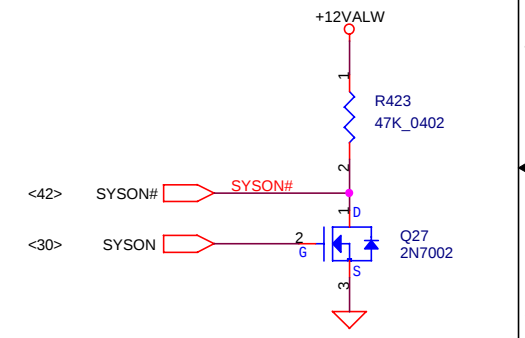
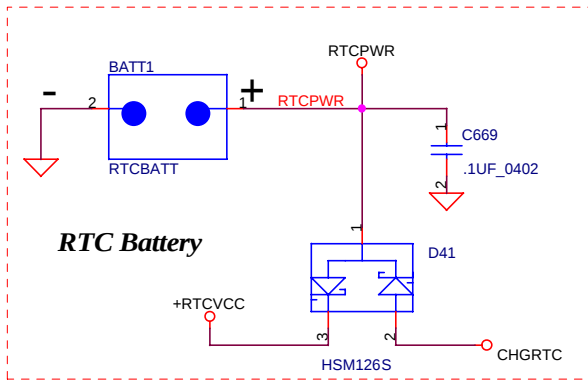
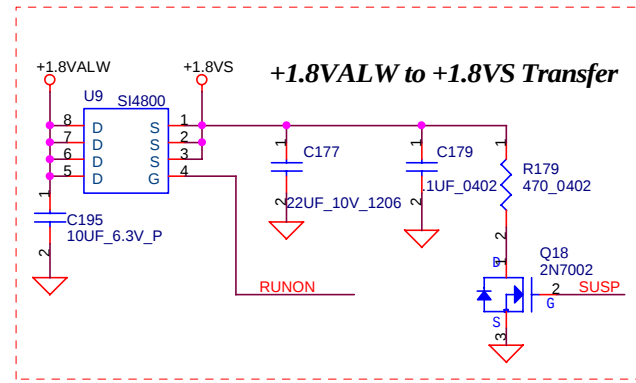
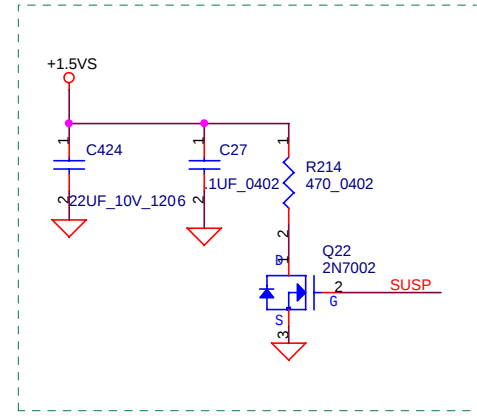
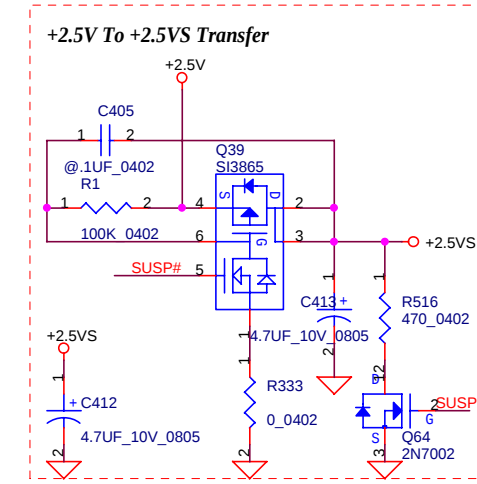
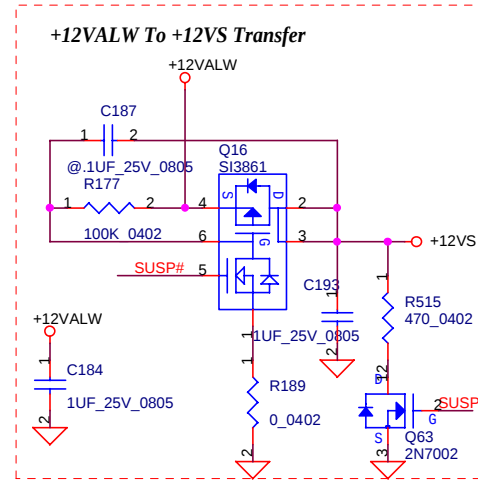
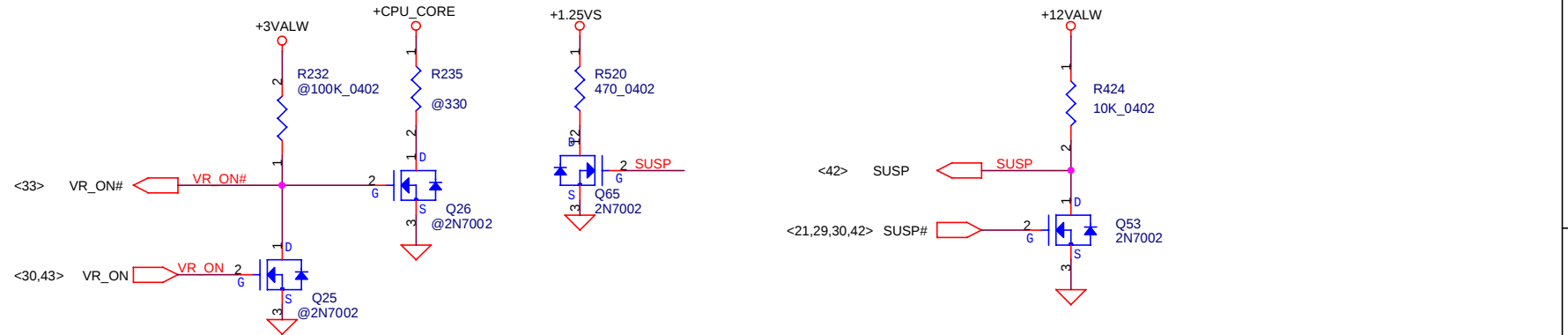
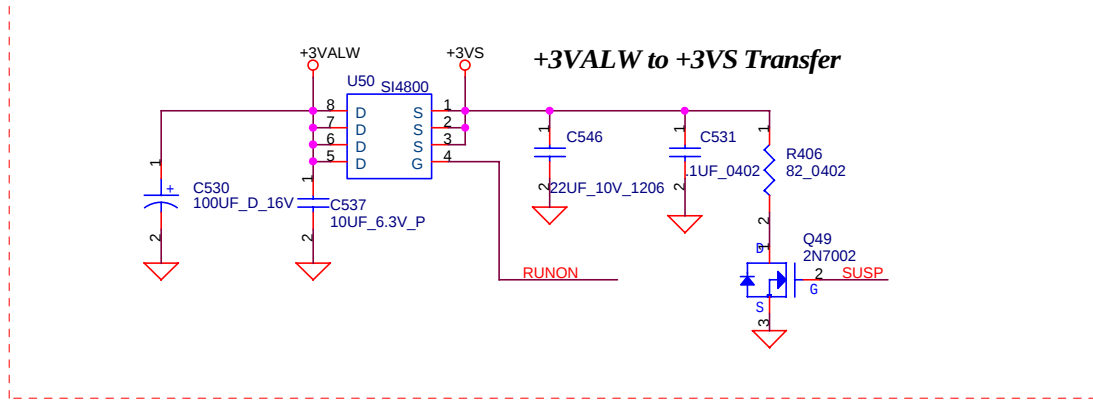
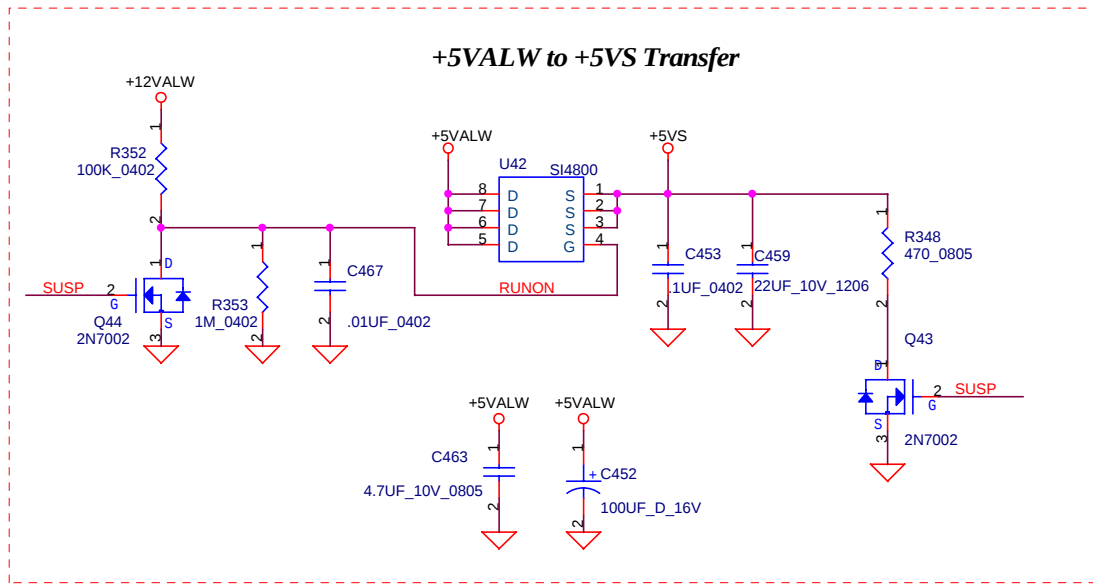
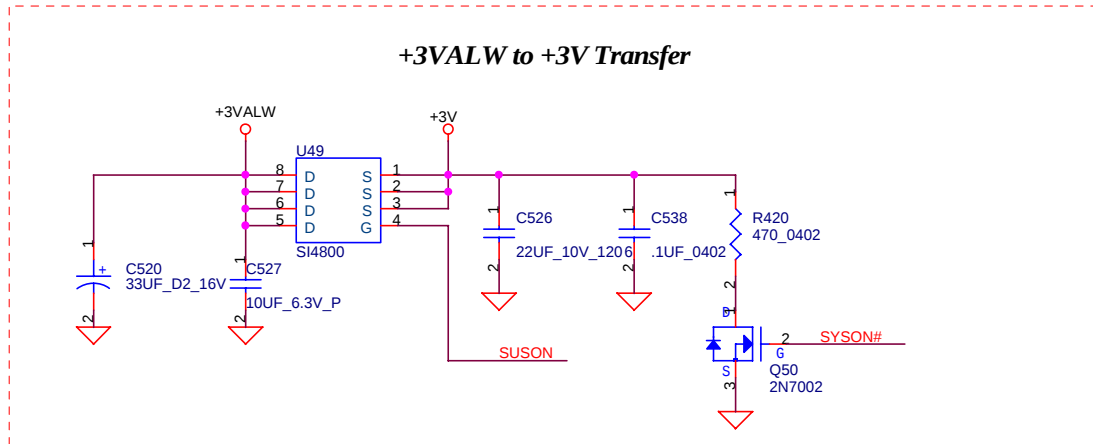
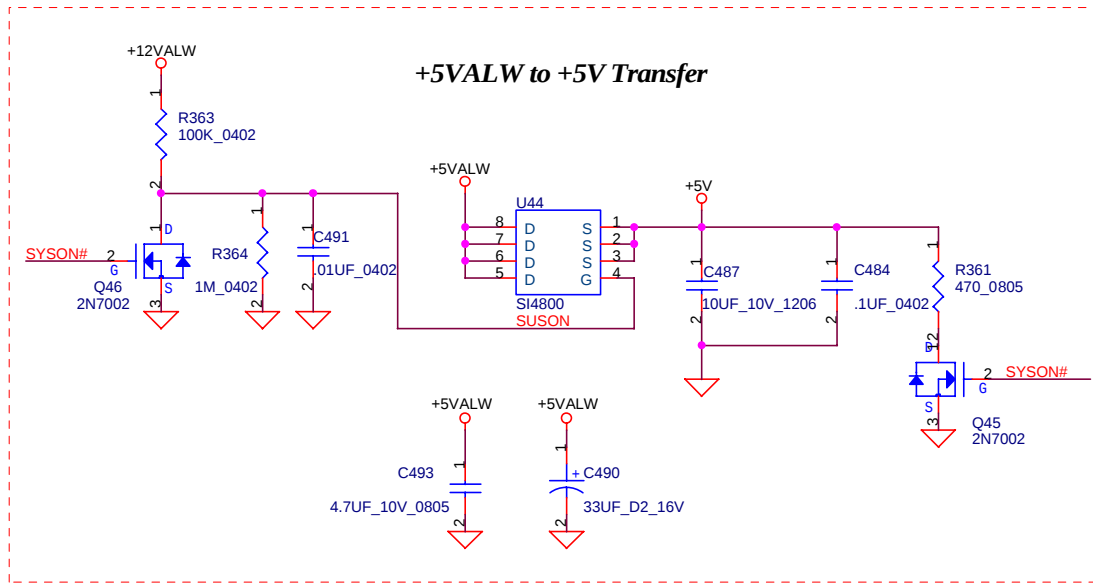
DOCKING 204 PIN





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

Compal Electronics, Inc.			
Title			
SCHEMATIC, MB LA-1511			
Size	Document Number		Rev
	401224		0B
Custom			
Date:	星期三, 八月 21, 2002		Sheet 35 of 43

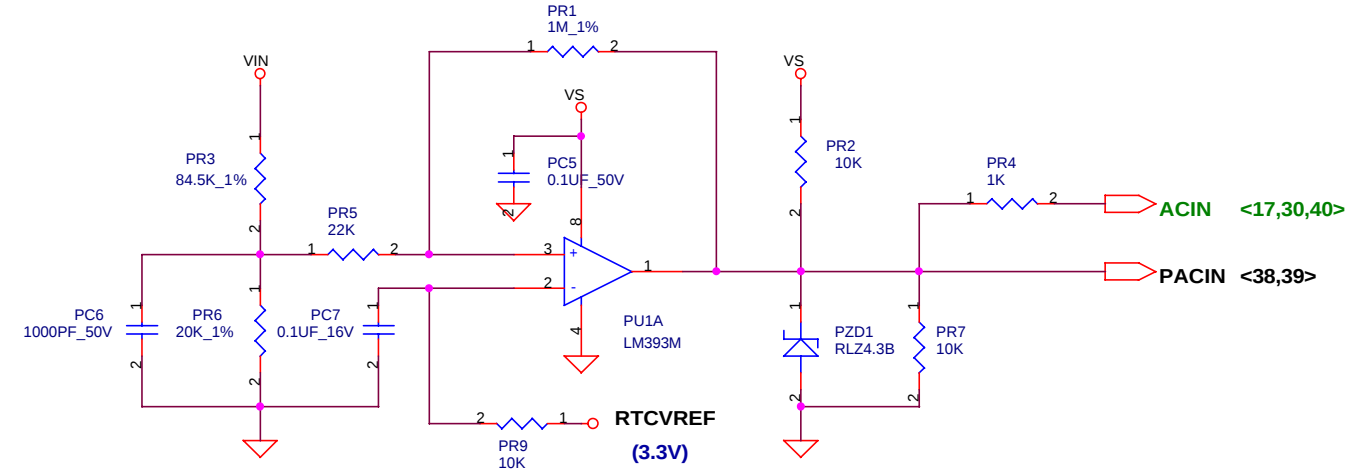
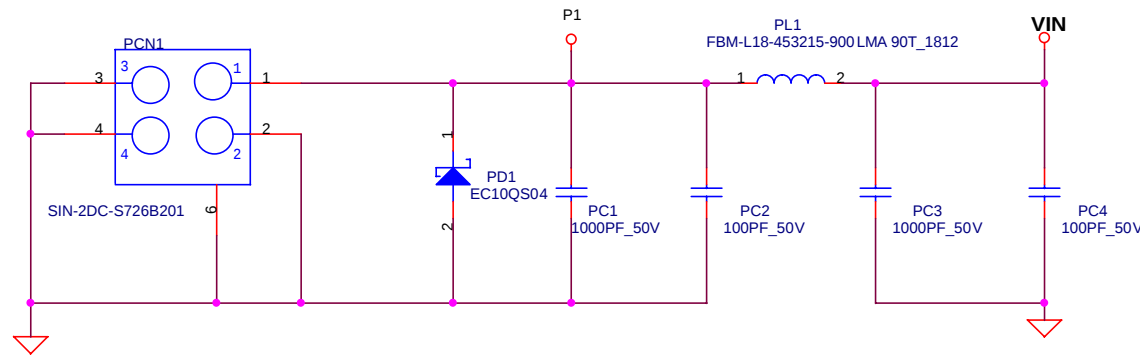


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
Title			
SCHEMATIC, M/B LA-1511			
Size		Document Number	
		401224	
Custom		Rev	
Date: 星期三, 八月 21, 2002		0B	
Sheet		36 of 43	

Vin Detector

High 18.784 17.901 17.077 V
Low 17.877 17.043 16.195 V



ACIN

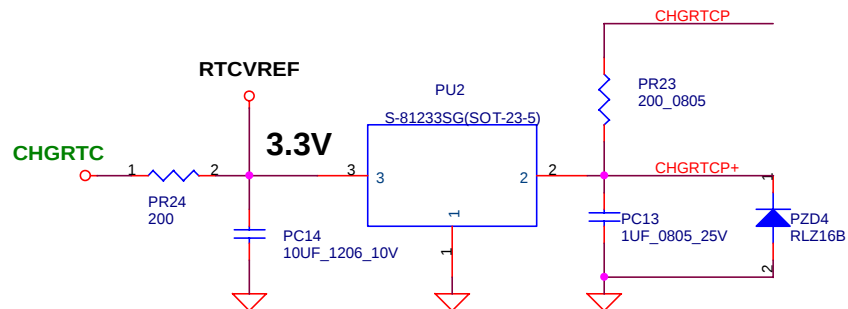
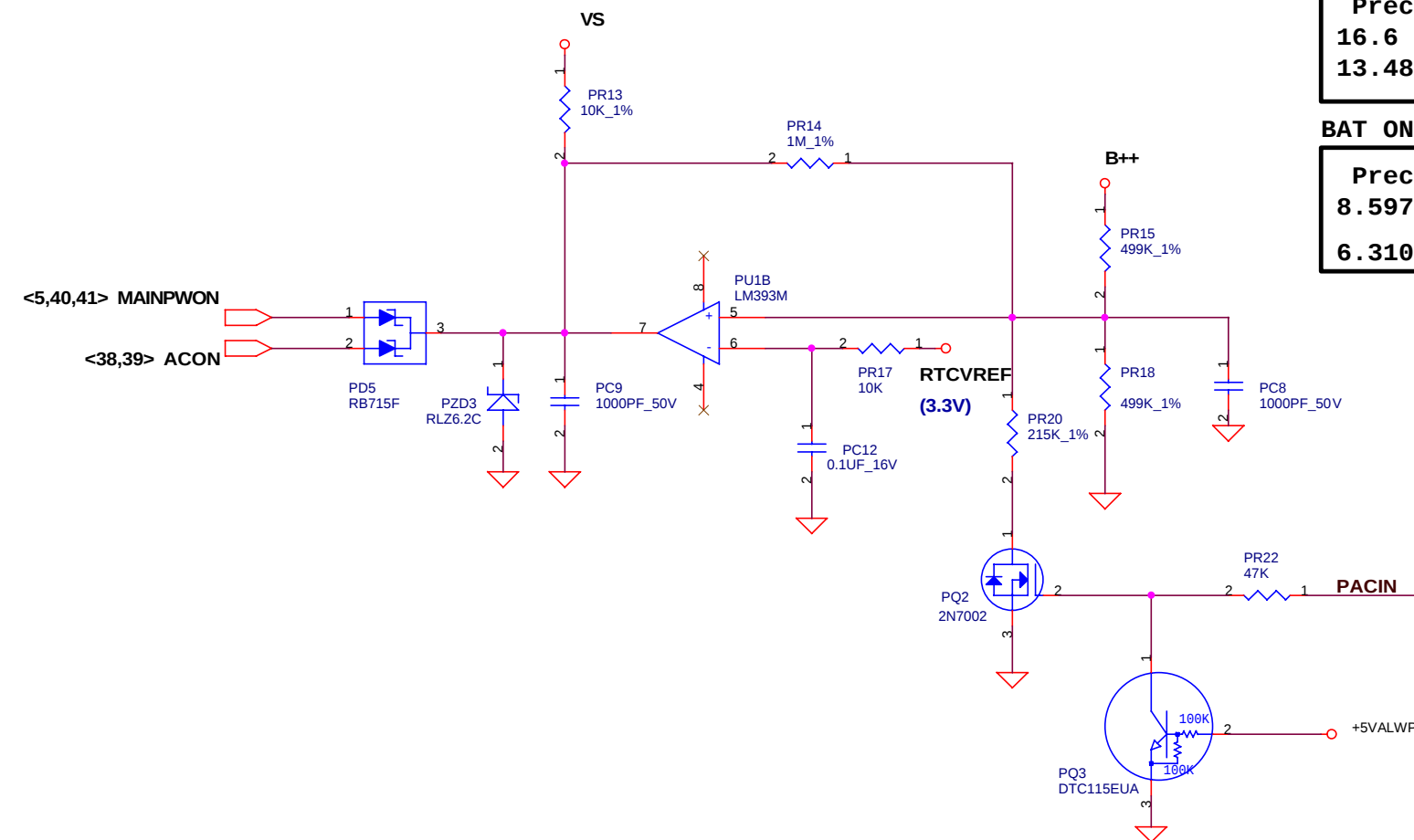
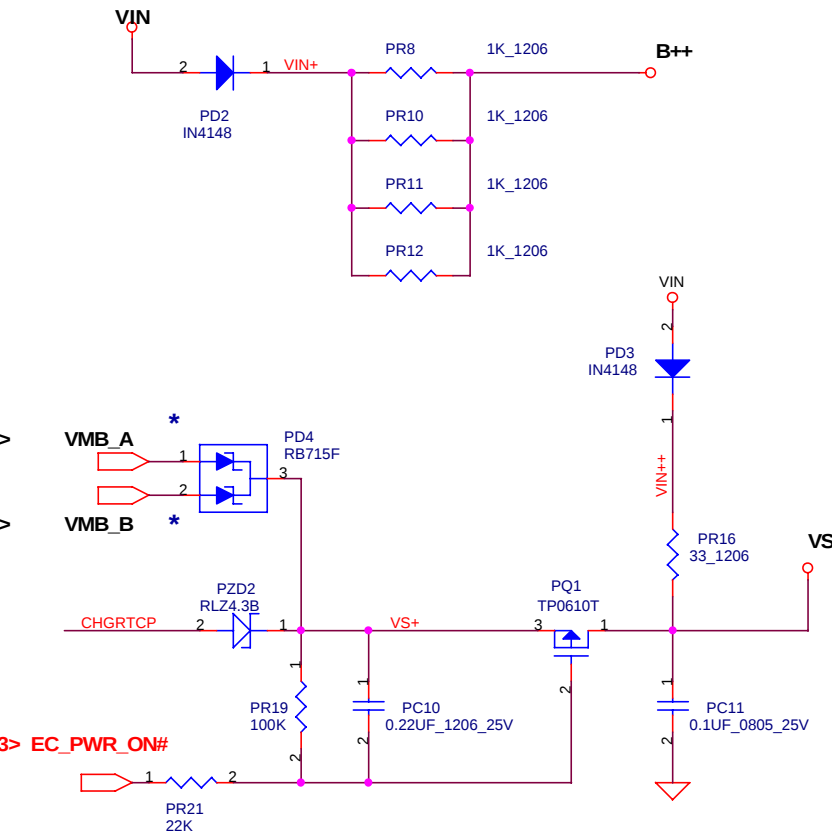
Precharge detector

16.6 15.9 15.2
13.48 12.93 12.09

BAT ONLY

Precharge detector

8.597 8.247 7.904
6.310 6.101 5.683

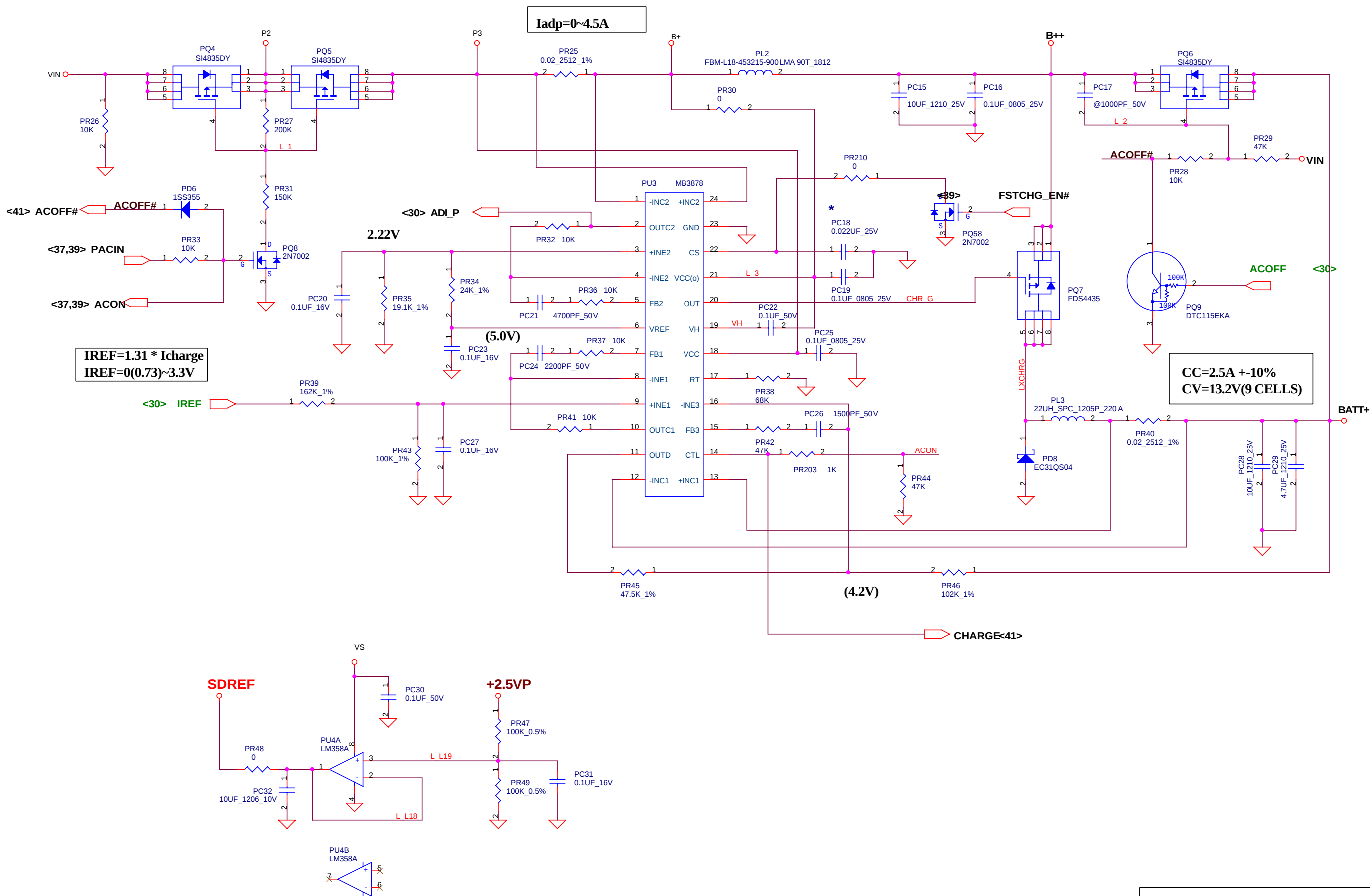


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

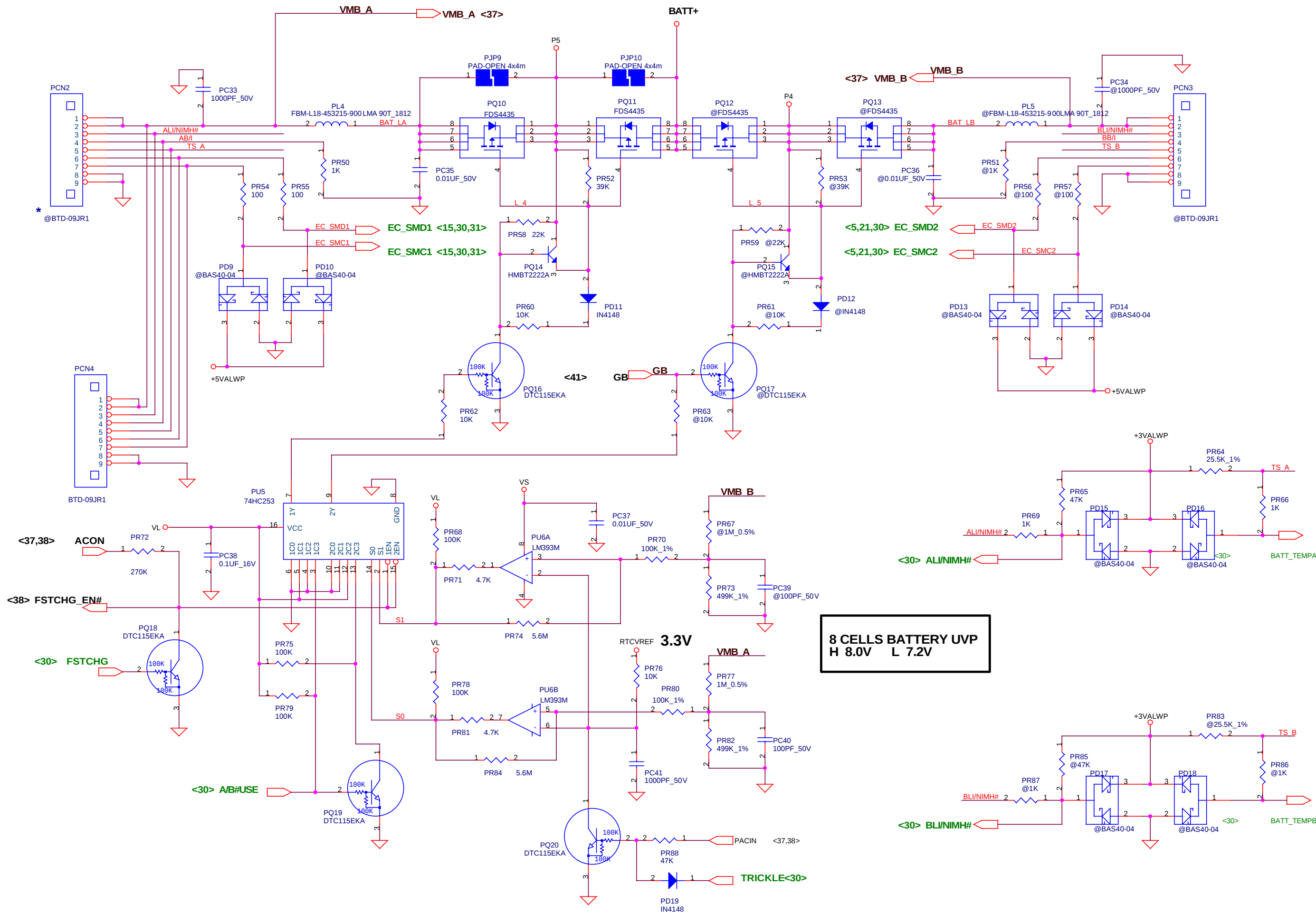
SCHEMATIC, M/B LA-1511

Size B Document Number 401224 Rev 0B
Date: 星期三, 八月 21, 2002 Sheet 37 of 43



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

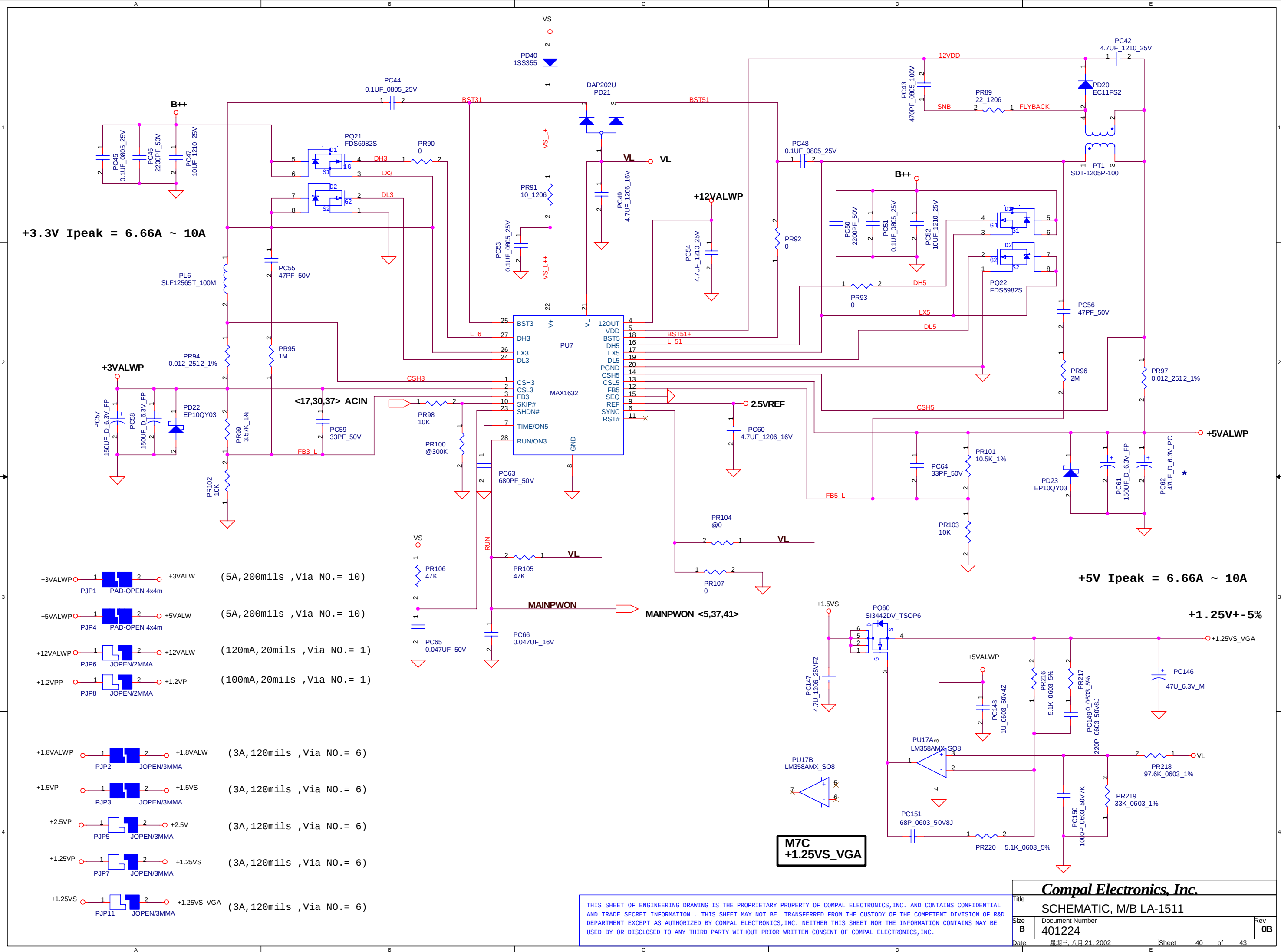
Compal Electronics, Inc.		
SCHEMATIC, M/B LA-1511		
Size	Document Number	Rev
B	401224	0B
Date:	星期三, 八月 21, 2002	Sheet 38 of 43



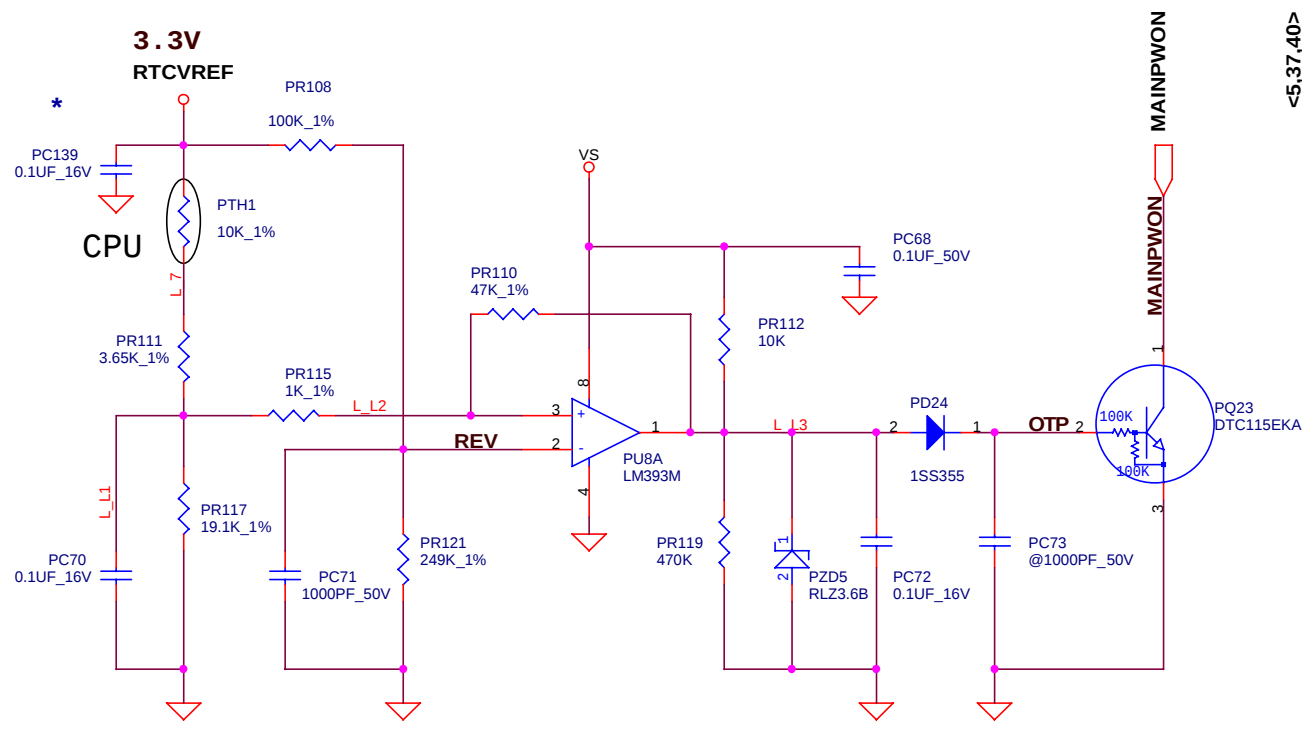
8 CELLS BATTERY UVP
H 8.0V L 7.2V

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

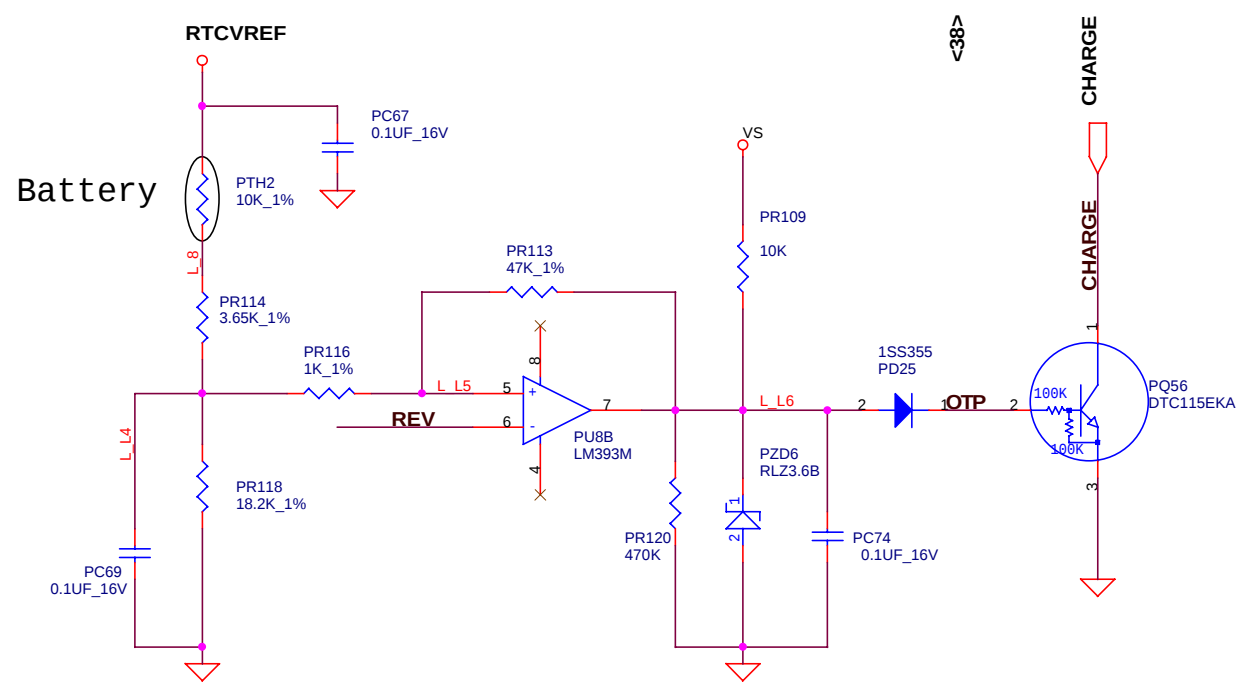
Compal Electronics, Inc.		
Title		
SCHEMATIC, M/B LA-1511		
Size	Document Number	Rev
B	401224	0B
Date: 星期二, 八月 21, 2002		
Sheet 39 of 43		



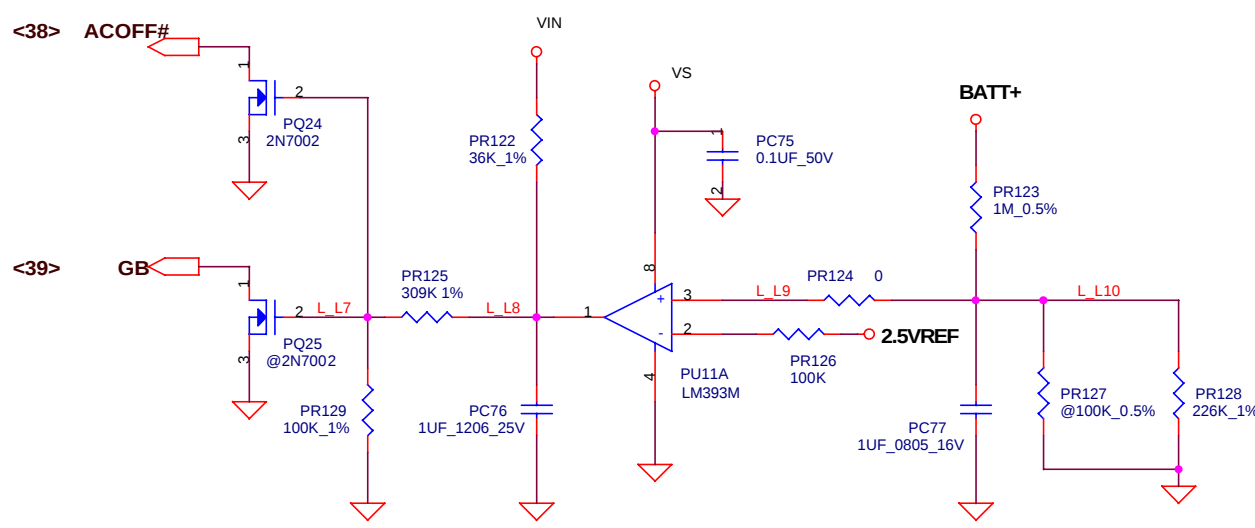
PH1 under CPU botten side :
CPU thermal protection at 90(91)+-3 degree C
Recovery at 50(51)+-3 degree C



PH2 near main Battery CONN :
BAT. thermal protection at 85(86)+-3 degree C
Recovery at 50(51)+-3 degree C

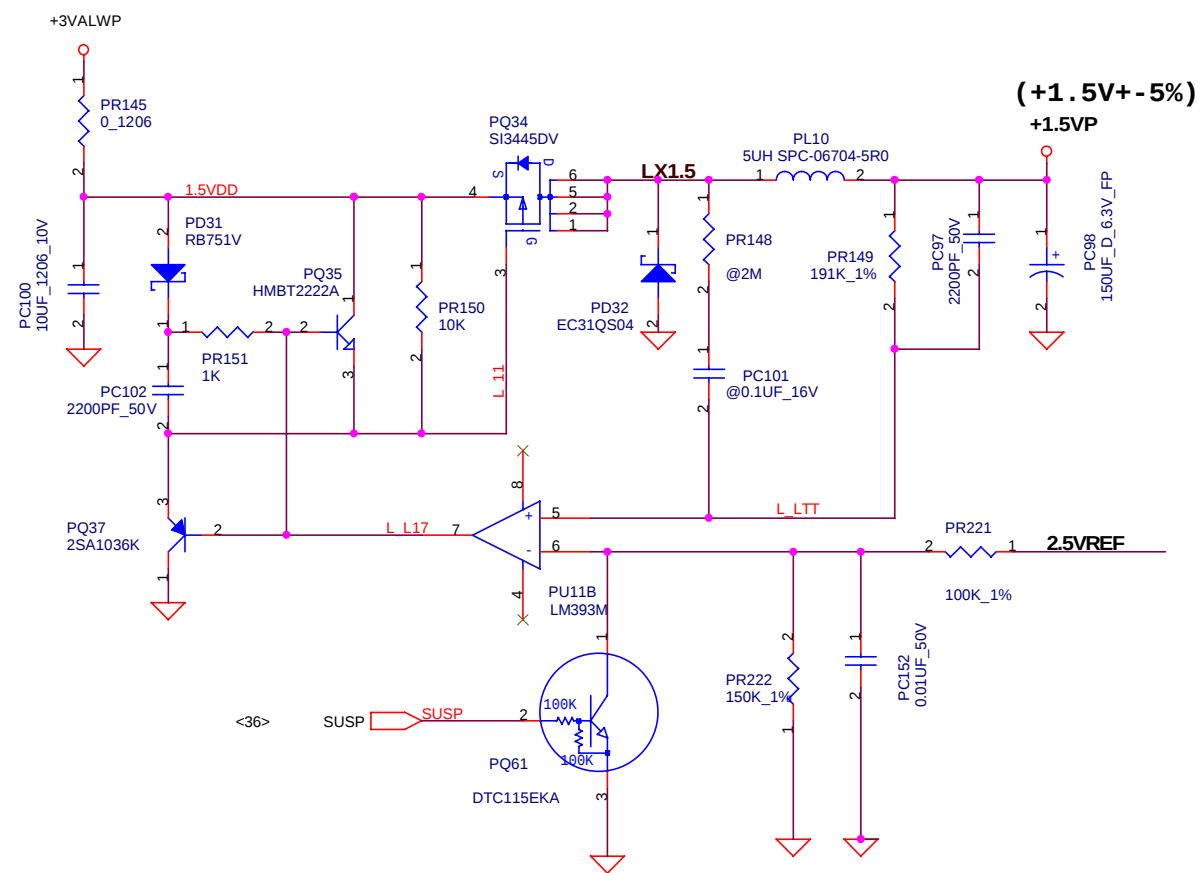
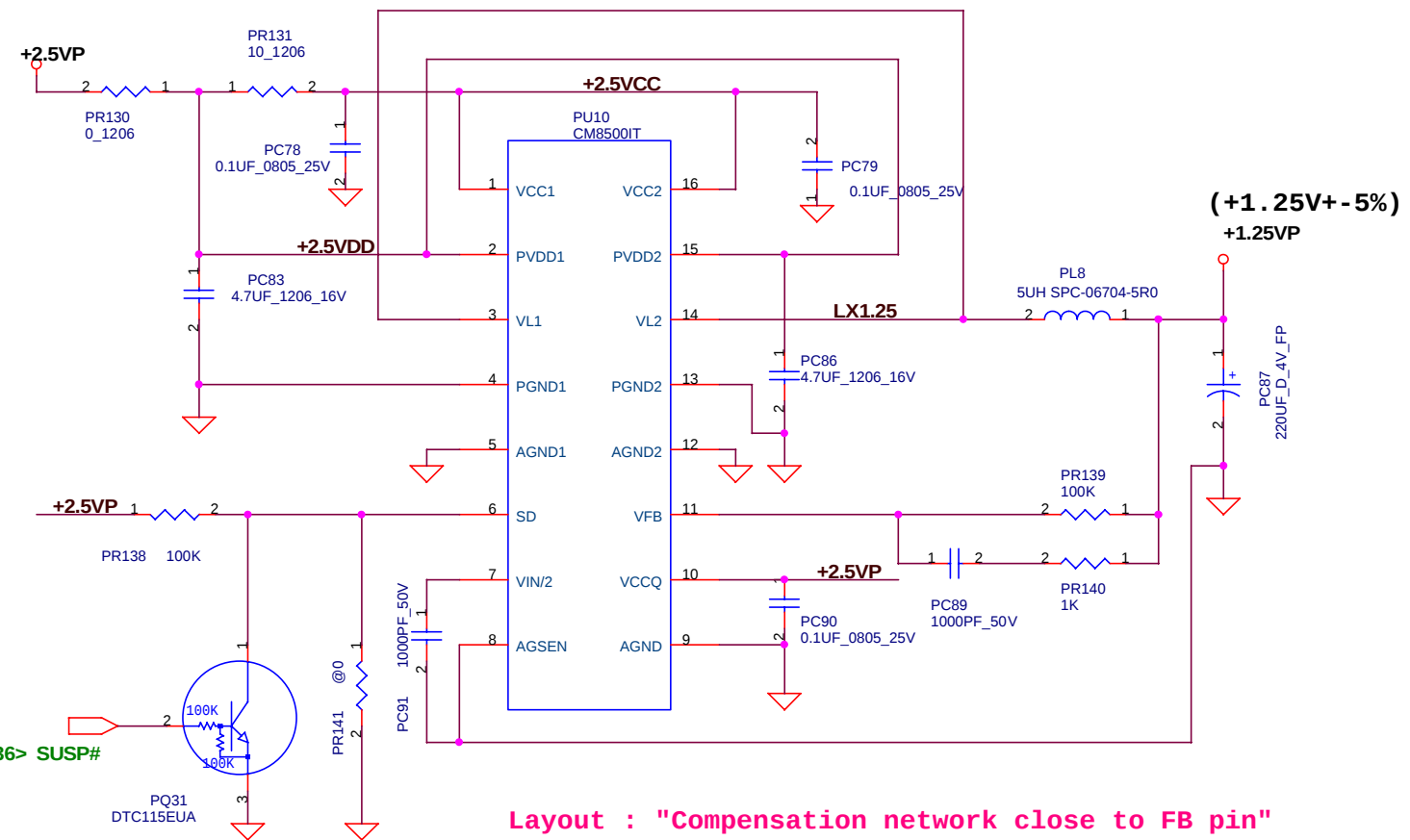


BATTERY Charger OVP : 13.56V

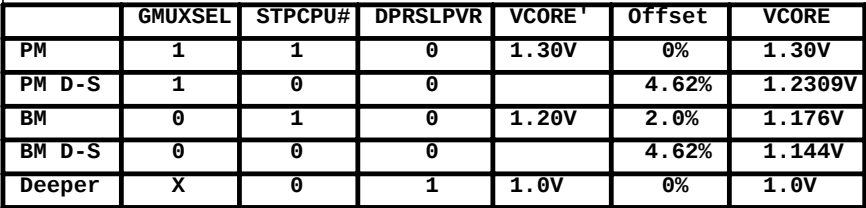


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION . THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.		
Title		
SCHEMATIC, M/B LA-1511		
Size	Document Number	
	401224	
Date: 星期三, 八月 21, 2002		Rev
Sheet 41 of 43		0B



Compal Electronics, Inc.			
Title	SCHEMATIC, M/B LA-1511		
Size B	Document Number 401224	Rev 0B	
Date: 星期二, 八月 21, 2002	Sheet	42	of 43



Compal Electronics, Inc.			
Title			
SCHEMATIC, M/B LA-1511			
Size B	Document Number 401224		Rev 0B
Date: 星期三, 八月 21, 2002	Sheet	43	of 46

www.s-manuals.com