Compal confidential

Schematics Document
Mobile Dothan uFCPGA with Intel
Alviso_GM+ICH6-M core logic

2005-02-15

LA-2592

REV:0.3

Compal Electronics, Inc.		
Title: *Cover Sheet*		
Size: Custom	Document Number: *LA-2592*	Rev: 0.3
Date: Monday, February 21, 2005	Sheet 1 of 46	

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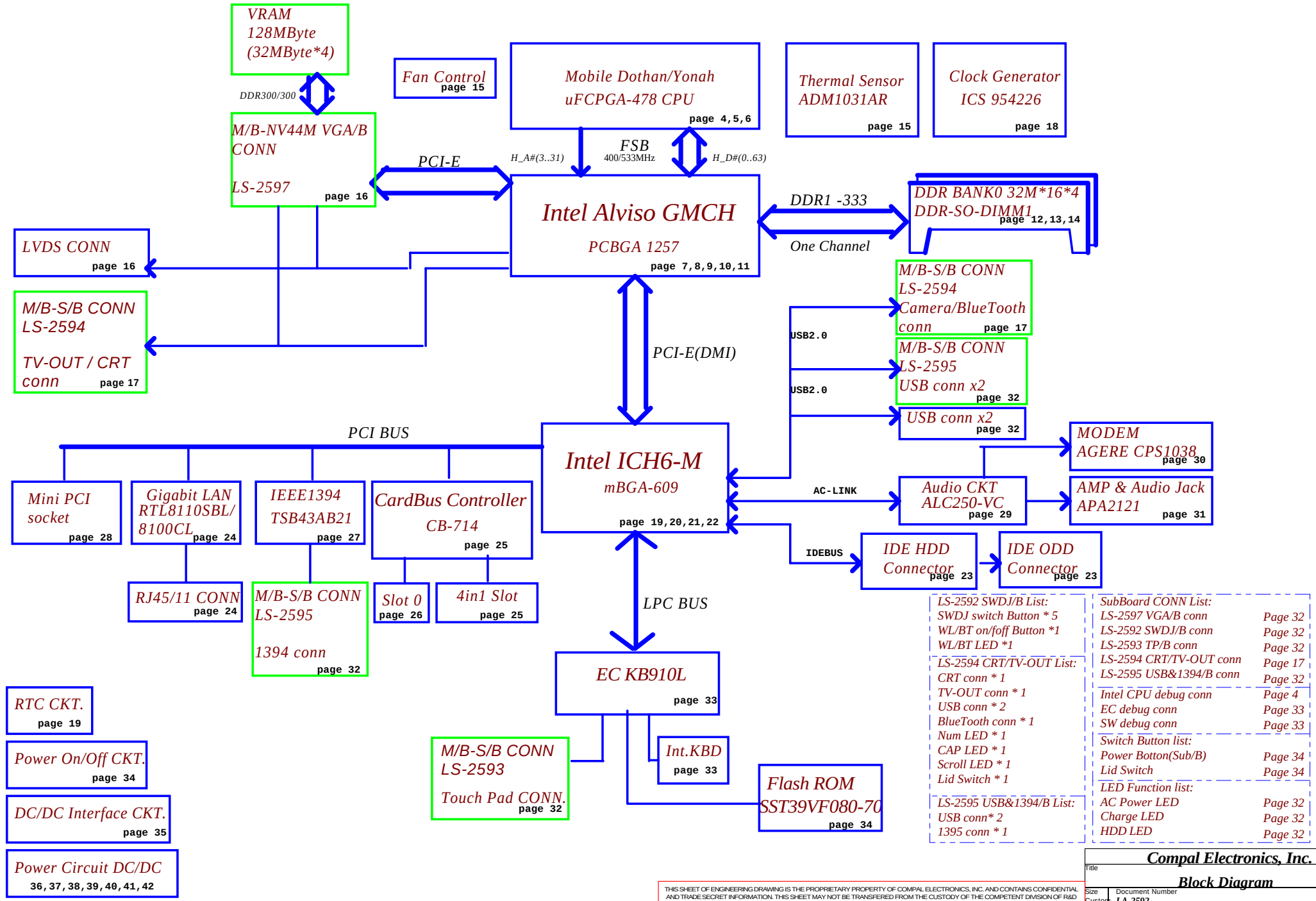
File Name : LA-2592



Compal Electronics, Inc.		
Title: Block Diagram		
Size: Custom	Document Number: LA-2592	Rev: 0.3
Date: Tuesday, February 15, 2005	Sheet 2 of 46	

I2C / SMBUS ADDRESSING

External PCI Devices

DEVICE	IDSEL #	REQ/GNT #	PIRQ
LAN	AD17	0	F
CARD BUS	AD20	1	A
Cardreader			B
1394	AD16	2	E
Wireless LAN(MINI PCI)	AD18	3	G,H

Power Managment table

State \ Signal	+12VALW +3VALW +5VALW	+3V +2.5V	+CPU_CORE +VCCP(1.05V) +5VS +3VS +2.5VS +1.5VS +1.25VS +1.1VS(VGA/B) +1.2VS(VGA/B) +1.8VS(VGA/B)
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

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU) ADM1032	SODIMM	CLK CHIP	MINI PCI	LCD
SMB_EC_CK1 SMB_EC_DA1	KB910L	X	√	X	X	X	X	X	X
SMB_EC_CK2 SMB_EC_DA2	KB910L	X	X	X	√	X	X	X	X
ICH_SMBCLK ICH_SMBDATA	ICH6-M	X	X	X	X	√	√	X	X
LCD_DDCCLK LCD_DDCDATA	Alviso GM-GP	X	X	X	X	X	X	X	√
I2CC_SCL I2CC_SDA	NV44M								

ZZZ1

LA-2592 REV 0.3

LA2591 Rev0.1-DA600001600(6 layer)
LA2592 Rev0.3-DA800005000(8 layer)

H_DPRSLP will change to H_DPRSTP in future collateral version.

U15A

Dothan

ADDR GROUP | DATA GROUP | HOST CLK | CONTROL GROUP | MISC | LEGACY CPU | THERMAL DIODE

TYCO_1612365-1_Dothan

Check ITP signal for Dothan

Place near JITP 0.5"

21 ITP_DBRESET# — R38 — ITP_DBRESET#

@ 200_0402_5%

ITP_BPM#[0:3] < 6" Spacing 1:2

Spacing 8 mil

Place near JITP 0.5"

ITP_BPM#0	PAD T6
ITP_BPM#1	PAD T5
ITP_BPM#2	PAD T8
ITP_BPM#3	PAD T2
ITP_BPM#4	PAD T9
ITP_BPM#5	PAD T3
RESETITP#	PAD T15
CLK_ITP	PAD T18
CLK_ITP#	PAD T19
ITP_TDO_R	PAD T16
ITP_TCK	PAD T17
ITP_TRST#	PAD T14
ITP_TMS	PAD T4
ITP_TDI	PAD T13

R46 @22.6_0402_1% H_RESET#

R47 @22.6_0402_1% ITP_TDO

+VCCP

Place near JITP 1"
R49 54.9_0402_1% ITP_TDO

Place near JITP 0.5"
R48 54.9_0402_1% H_RESET#
R33 56_0402_5% ITP_BPM#5

39.2
R42 39.2_0603_1% ITP_TMS Within 2" of the CPU
R179 150_0402_5% ITP_TDI Within 2" of the CPU
R177 680_0402_5% ITP_TRST# Within 2" of the CPU
R50 27.4_0402_1% ITP_TCK Within 2" of the CPU

R37 56_0402_5% +VCCP

1" ~ 6.5"

+3VS

R258 1K_0402_5%
R266 56_0402_5%
R253 56_0402_5%
Q29 2SC2411K_SC59
PROCHOT# 33
H_PROCHOT#

R32 200_0402_5% +VCCP H_PWRGOOD

Add pullups for PWRGOOD and THERMTRIP per INTEL

R251 @1K_0402_5% TEST2
R35 @1K_0402_5% TEST1

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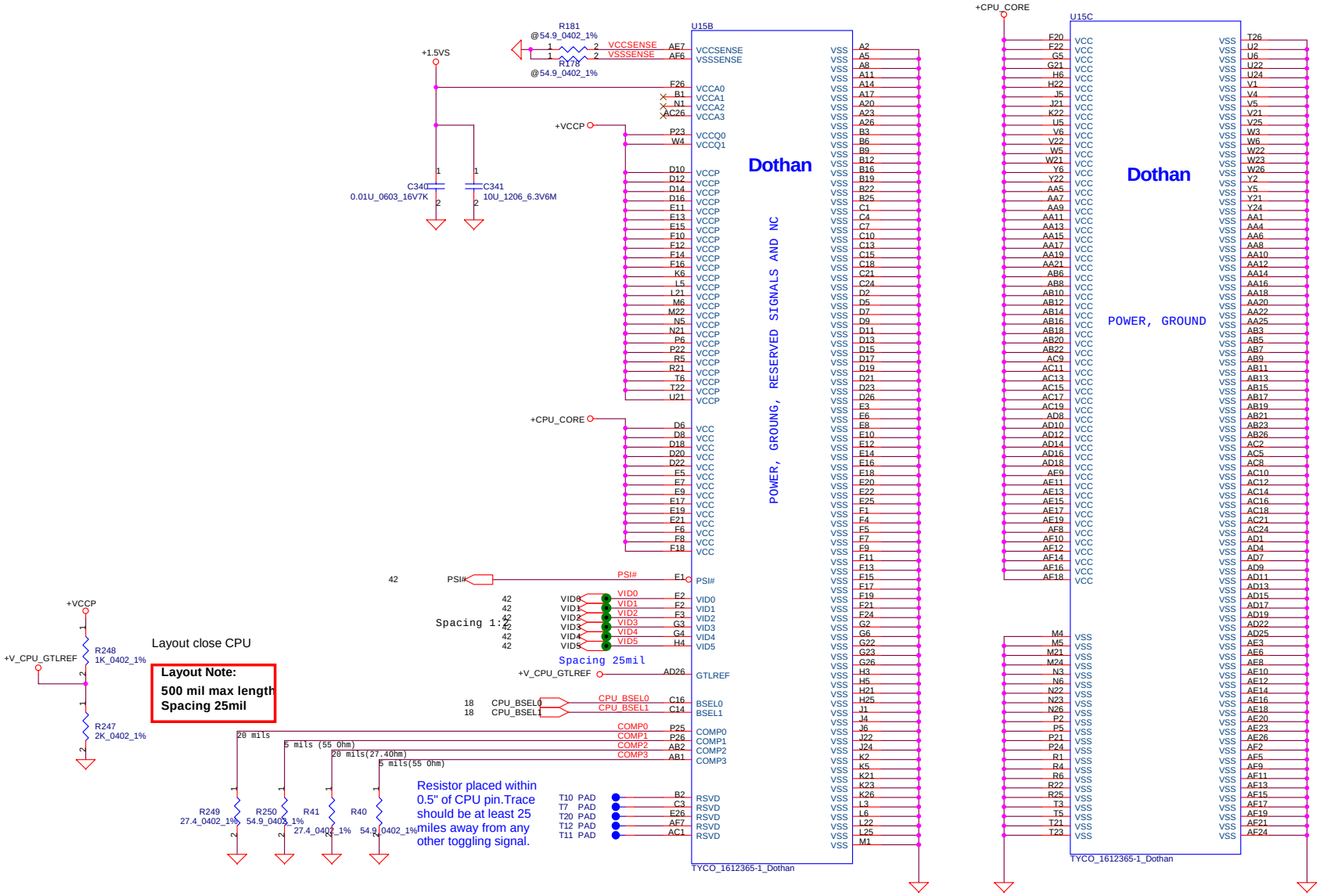
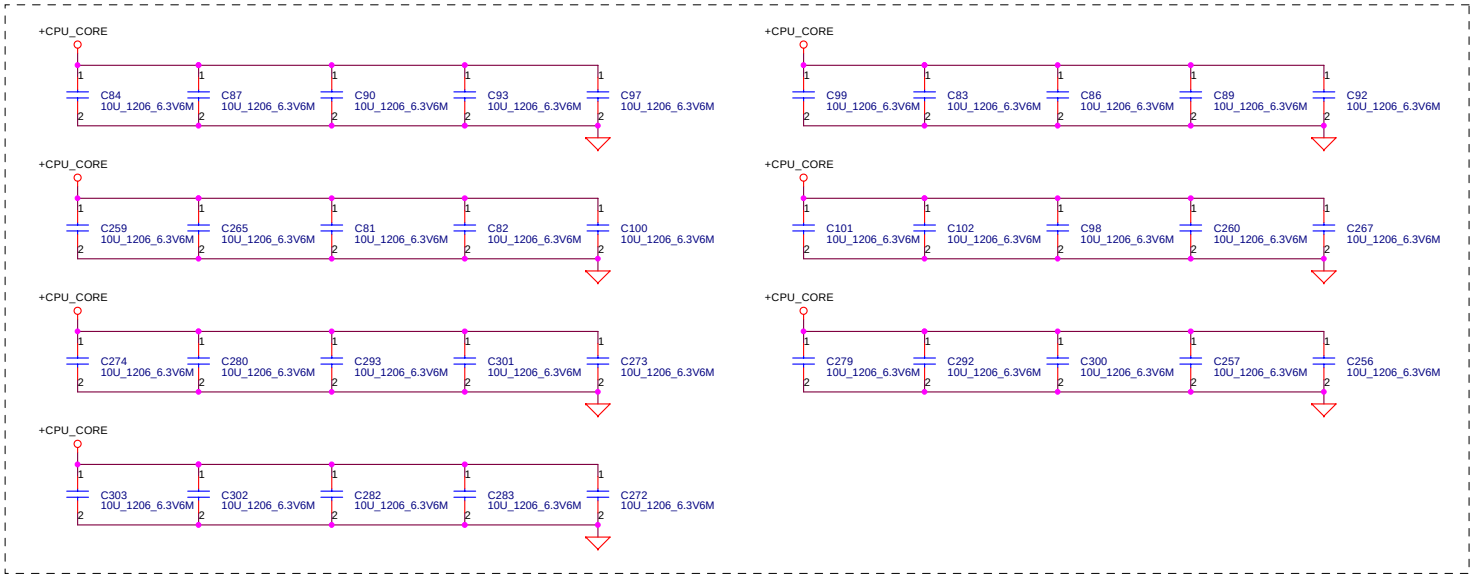
Title: **Dothan Processor(1/2)**

Size	Document Number	Rev
Custom	LA-2592	0.1

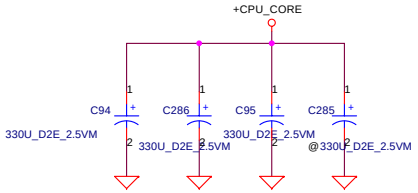
Date: Tuesday, February 15, 2005 Sheet 4 of 46



Compal Electronics, Inc.		
Title: Dothan Processor(2/2)		
Size: Custom	Document Number: LA-2592	Rev: 0.1
Date: Tuesday, February 15, 2005	Sheet 5 of 46	

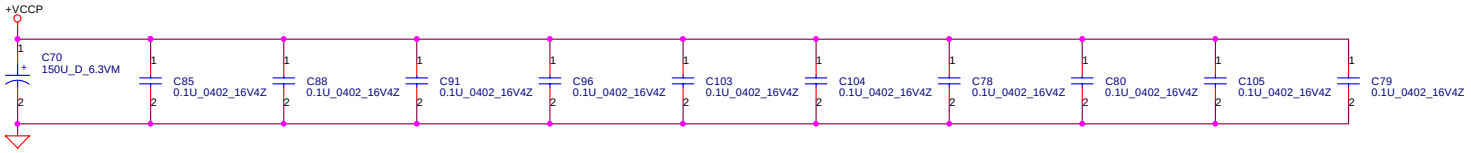


Near VCORE regulator.

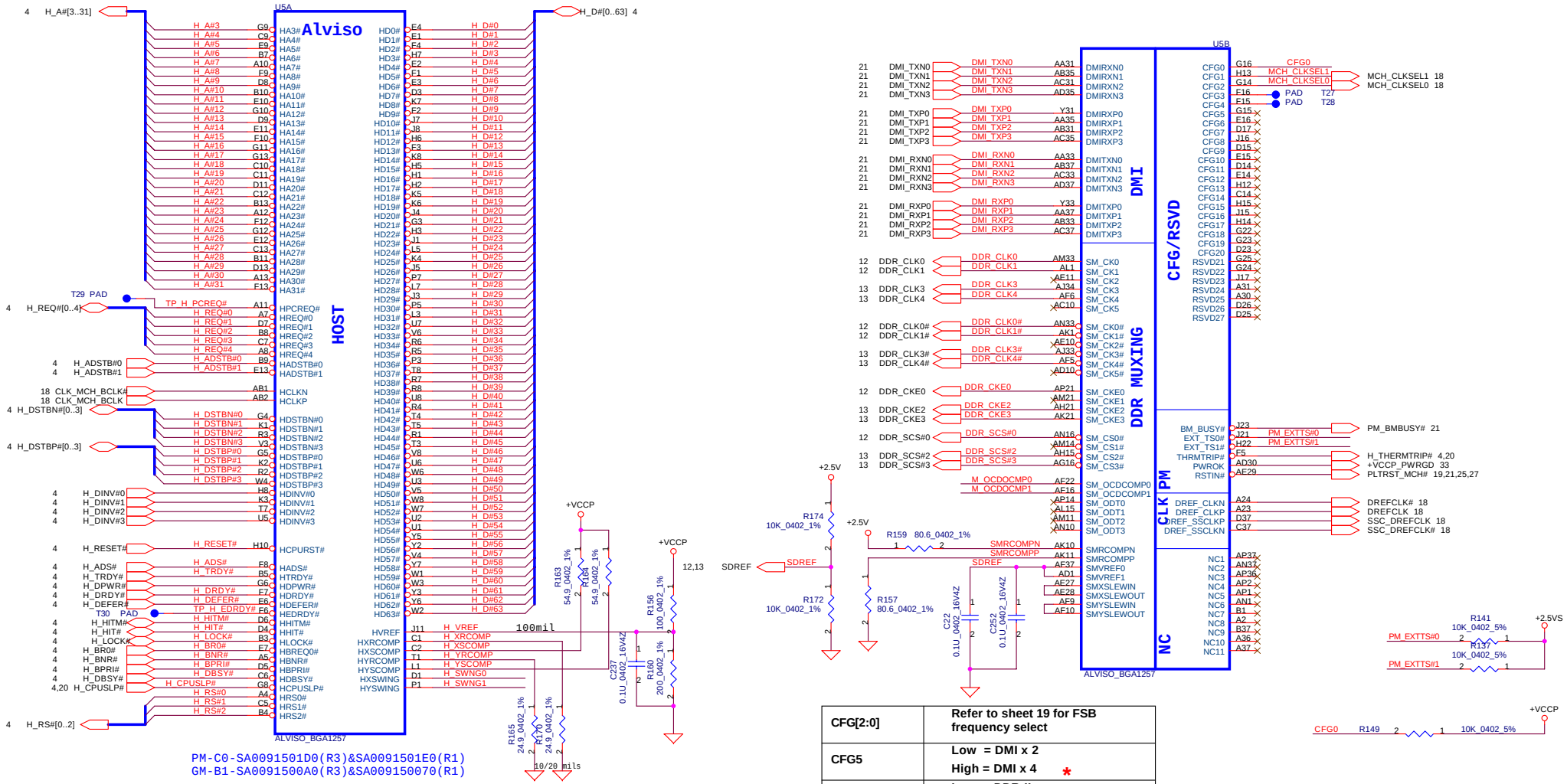


ESR <= 3m ohm

Capacitor > 880 uF



Compal Electronics, Inc.		
Title: Dothan Bypass		
Size: Custom	Document Number: LA-2592	Rev: 0.1
Date: Tuesday, February 15, 2005	Sheet 6 of 46	



CFG[2:0]	Refer to sheet 19 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 Z Mode Enabled 11 = Normal Operation (Default) *
CFG16 (FSB Dynamic ODT)	Low = Disabled High = Enabled *
CFG18 (VCC Select)	Low = 1.05V (Default) * High = 1.5V
CFG19 (VTT Select)	Low = 1.05V (Default) * High = 1.2V

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Title: Alviso(1 of 5)

Size: Custom | Document Number: LA-2592 | Rev: 0.2

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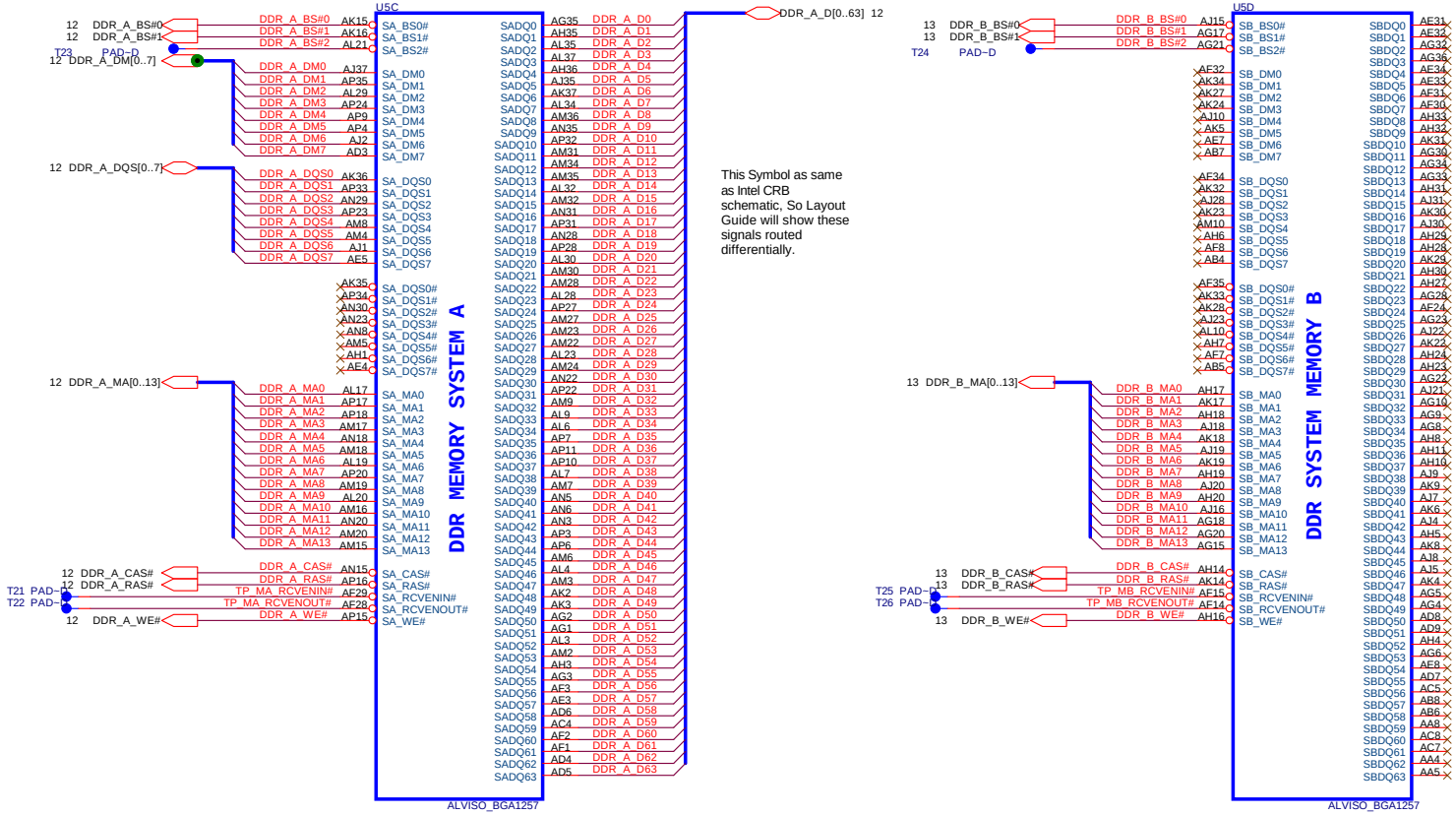

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Title: **Alviso(2 of 5)**

Size	Document Number	Rev
Custom	LA-2592	0.1

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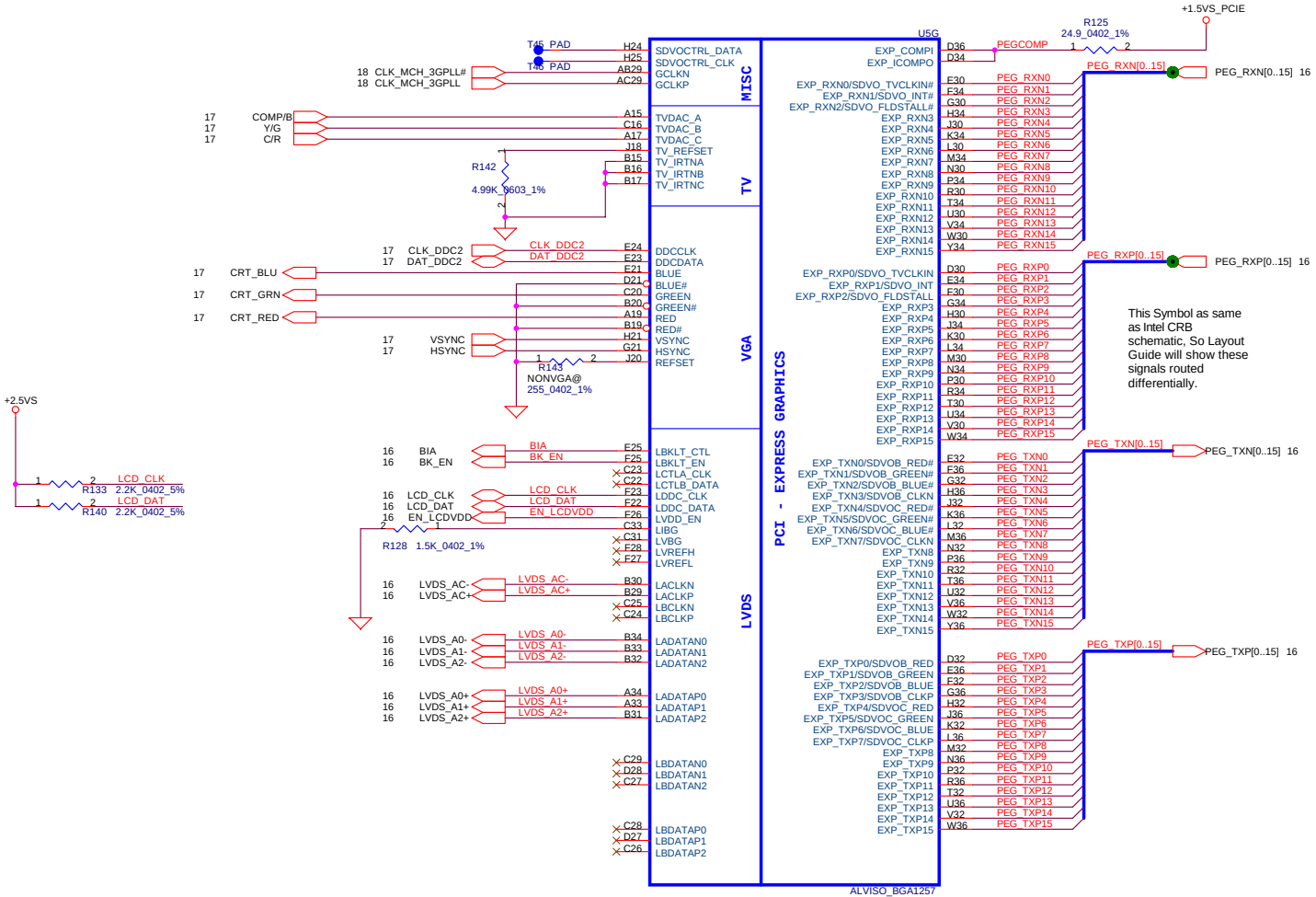

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Title: Alviso(3 of 5)

Size: Custom | Document Number: LA-2592 | Rev: 0.2

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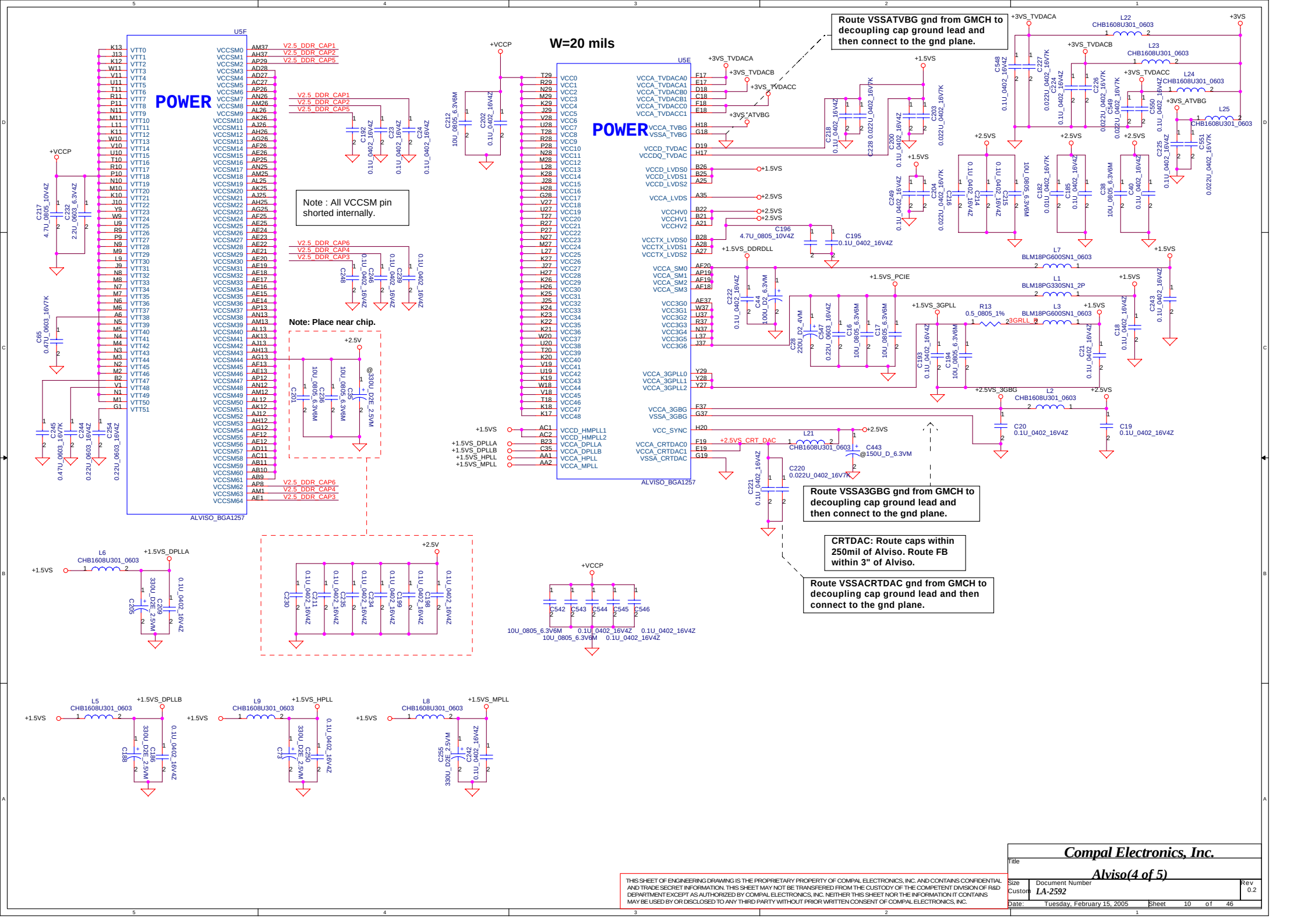

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Title: Alviso(4 of 5)		
Size: Custom	Document Number: LA-2592	Rev: 0.2
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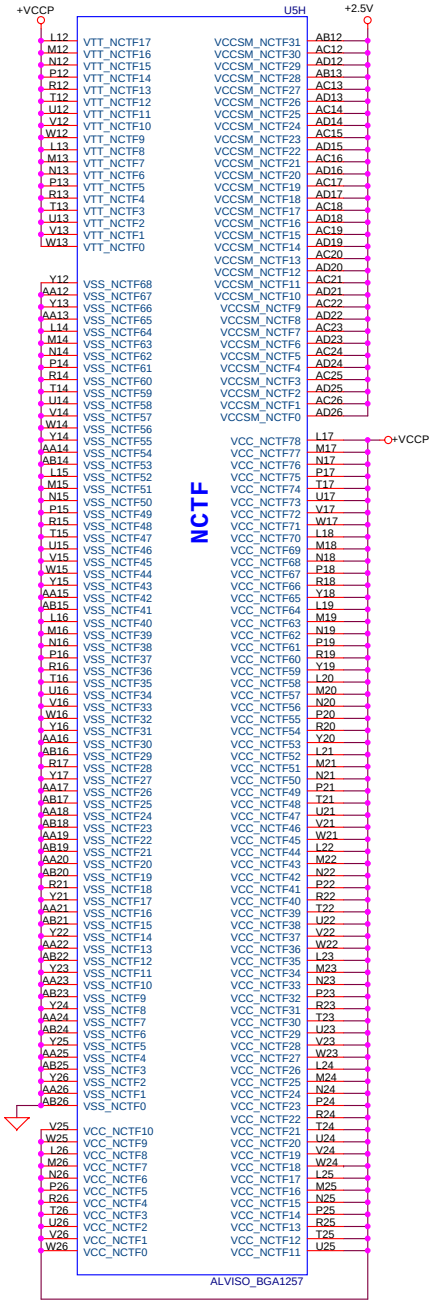

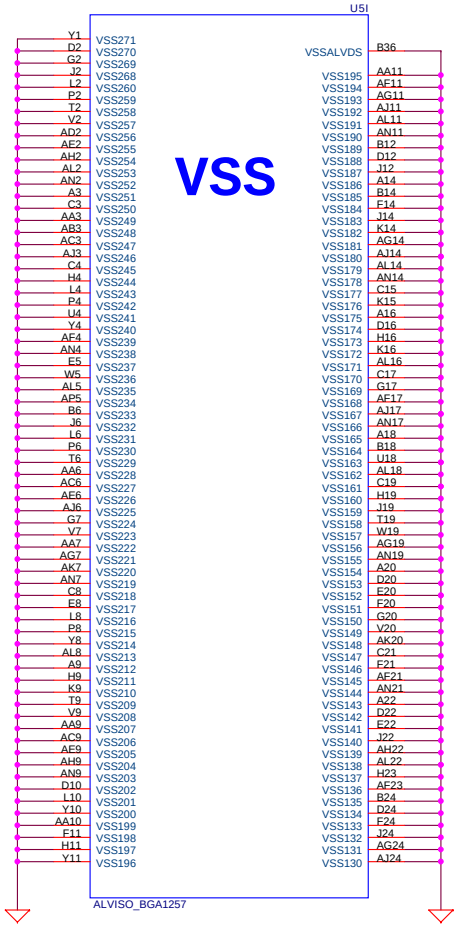

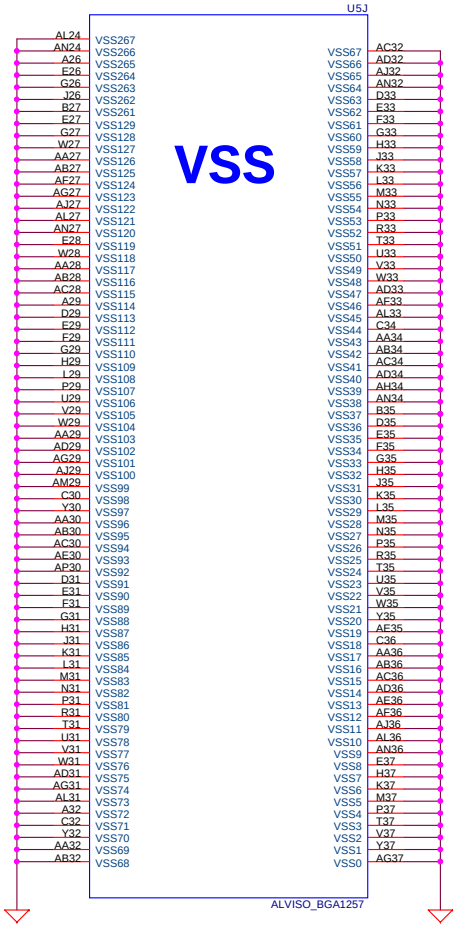

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Title: **Alviso(5 of 5)**

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8 DDR_A_D[0..63] — DDR_A_D[0..63]
8 DDR_A_DM[0..7] — DDR_A_DM[0..7]
8 DDR_A_DQS[0..7] — DDR_A_DQS[0..7]

DDR_D[0..63] — DDR_D[0..63] 13
DDR_DM[0..7] — DDR_DM[0..7] 13
DDR_DQS[0..7] — DDR_DQS[0..7] 13

8 DDR_A_MA[0..13] — DDR_A_MA[0..13]

Samsung K4H511638B-TC/LB3-SA116380000
Option-R217,R220(Del R221),R277(Del R283)
Infineon HYB25D512160AT-6-SA121600000(GM)
Default-R217,R221,R283
Hynix HY5DU121622AT-J-SA216220000(A die)->SA000023200(B die)(PM)
Option-R217,R220(Del R221),R283

RP22: DDR_A_D0 DDR_A_D1 DDR_A_D4 DDR_A_D5 / DDR_A_DM0 DDR_A_DQS0 R118 R111 / DDR_A_D6 DDR_A_D2 DDR_A_D3 DDR_A_D7 — 10_1206_8P4R_5%
RP23: DDR_A_DM0 DDR_A_DQS0 — 10_0402_5%
RP24: DDR_A_D8 DDR_A_D13 DDR_A_D9 DDR_A_D12 / DDR_A_DM1 DDR_A_DQS1 R121 R123 / DDR_A_D14 DDR_A_D15 DDR_A_D10 DDR_A_D11 — 10_1206_8P4R_5%
RP25: DDR_A_DM1 DDR_A_DQS1 — 10_0402_5%
RP28: DDR_A_D17 DDR_A_D16 DDR_A_D21 DDR_A_D20 / DDR_A_DM2 DDR_A_DQS2 R127 R126 / DDR_A_D19 DDR_A_D18 DDR_A_D22 DDR_A_D23 — 10_1206_8P4R_5%
RP29: DDR_A_DM2 DDR_A_DQS2 — 10_0402_5%
RP30: DDR_A_D24 DDR_A_D25 DDR_A_D29 DDR_A_D26 / DDR_A_DQS3 DDR_A_DM3 R129 R130 / DDR_A_D28 DDR_A_D30 DDR_A_D31 DDR_A_D27 — 10_1206_8P4R_5%
RP33: DDR_A_DQS3 DDR_A_DM3 — 10_0402_5%
RP34: DDR_A_D36 DDR_A_D37 DDR_A_D33 DDR_A_D32 / DDR_A_DQS4 DDR_A_DM4 R144 R145 / DDR_A_D38 DDR_A_D39 DDR_A_D35 DDR_A_D34 — 10_1206_8P4R_5%
RP35: DDR_A_DQS4 DDR_A_DM4 — 10_0402_5%
RP36: DDR_A_D45 DDR_A_D44 DDR_A_D41 DDR_A_D40 / DDR_A_DQS5 DDR_A_DM5 R155 R150 / DDR_A_D46 DDR_A_D47 DDR_A_D43 DDR_A_D42 — 10_1206_8P4R_5%
RP37: DDR_A_DQS5 DDR_A_DM5 — 10_0402_5%
RP38: DDR_A_D49 DDR_A_D52 DDR_A_D53 DDR_A_D48 / DDR_A_DM6 DDR_A_DQS6 R161 R162 / DDR_A_D54 DDR_A_D55 DDR_A_D50 DDR_A_D51 — 10_1206_8P4R_5%
RP39: DDR_A_DM6 DDR_A_DQS6 — 10_0402_5%
RP40: DDR_A_D61 DDR_A_D60 DDR_A_D56 DDR_A_D57 / DDR_A_DM7 DDR_A_DQS7 R171 R166 / DDR_A_D62 DDR_A_D59 DDR_A_D63 DDR_A_D58 — 10_1206_8P4R_5%
RP41: DDR_A_DM7 DDR_A_DQS7 — 10_0402_5%

7 DDR_CLK1 — DDR_CLK1
7 DDR_CLK1# — DDR_CLK1#
7 DDR_CLK0 — DDR_CLK0
7 DDR_CLK0# — DDR_CLK0#
7 DDR_CKE0 — DDR_CKE0
8 DDR_A_BS#0 — DDR_A_BS#0
8 DDR_A_BS#1 — DDR_A_BS#1
7 DDR_SCS#0 — DDR_SCS#0
8 DDR_A_RAS# — DDR_A_RAS#
8 DDR_A_CAS# — DDR_A_CAS#
8 DDR_A_WE# — DDR_A_WE#

+1.25VS
RP26: DDR_A_BS#0 DDR_A_MA12 DDR_A_BS#1 DDR_A_MA10 — 56_1206_8P4R_5%
RP27: DDR_A_MA1 DDR_A_MA2 DDR_A_MA5 DDR_A_MA3 — 56_1206_8P4R_5%
RP32: DDR_A_MA4 DDR_A_MA6 DDR_A_MA0 DDR_A_MA7 — 56_1206_8P4R_5%
RP31: DDR_A_MA8 DDR_A_MA9 DDR_A_MA11 DDR_A_MA13 — 56_1206_8P4R_5%
R124 DDR_CKE0 — 56_0402_5%
R122 DDR_SCS#0 — 56_0402_5%
R139 DDR_A_WE# — 56_0402_5%
R119 DDR_A_RAS# — 56_0402_5%
R135 DDR_A_CAS# — 56_0402_5%

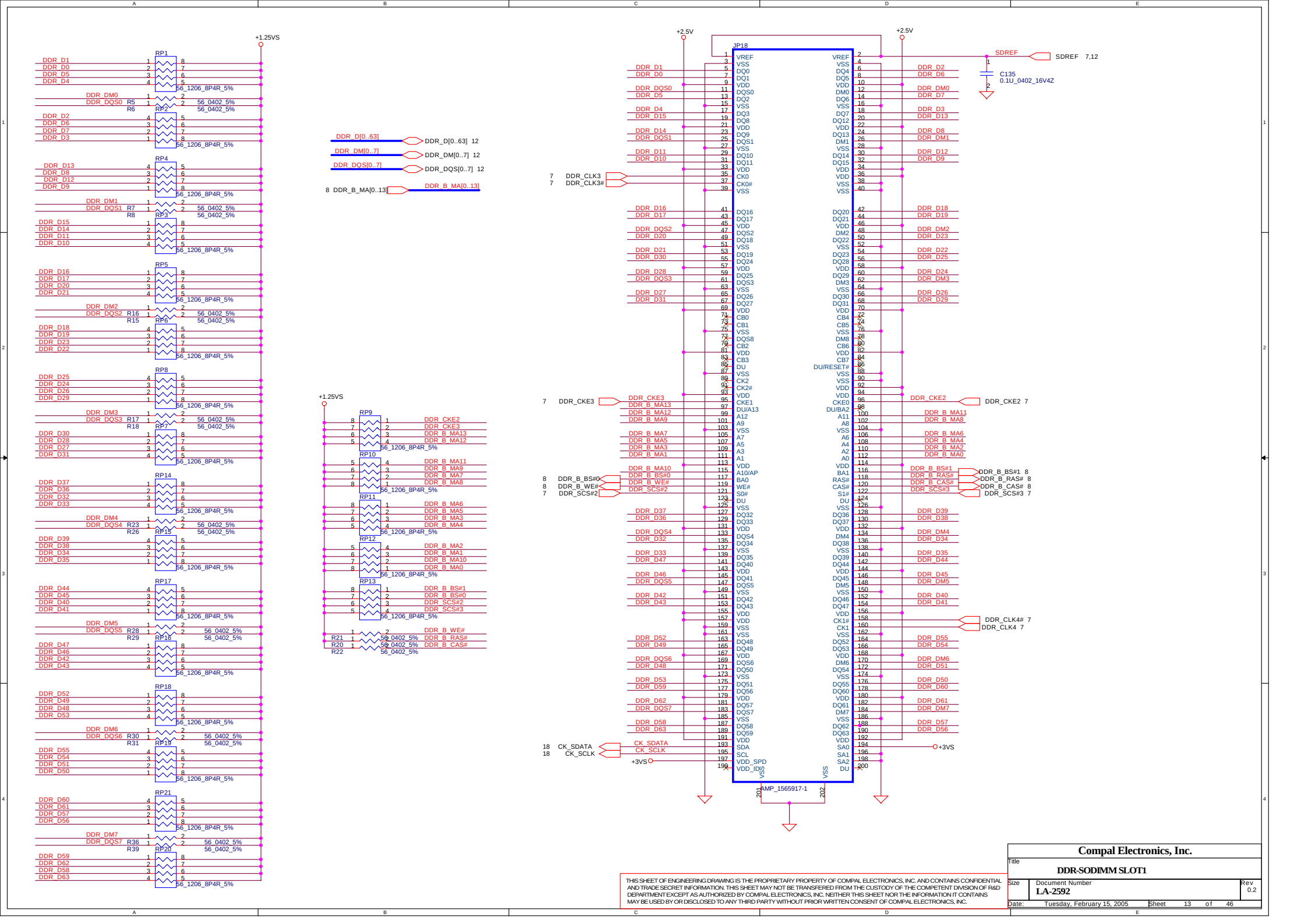
U2 (HY5DU121622A(L)T-J_TSOPII66)
DDR_DQS0 DDR_DM0 DDR_D0 DDR_D1 DDR_D4 DDR_D5 DDR_D6 DDR_D2 DDR_D3 DDR_D7
DDR_DQS1 DDR_DM1 DDR_D8 DDR_D13 DDR_D9 DDR_D12 DDR_D14 DDR_D15 DDR_D10 DDR_D11
DDR_A_MA0 DDR_A_MA1 DDR_A_MA2 DDR_A_MA3 DDR_A_MA4 DDR_A_MA5 DDR_A_MA6 DDR_A_MA7 DDR_A_MA8 DDR_A_MA9 DDR_A_MA10 DDR_A_MA11 DDR_A_MA12
DDR_A_MA13
DDR_CLK0 DDR_CLK0# DDR_CKE0
DDR_A_BS#0 DDR_A_BS#1
DDR_SCS#0
DDR_A_RAS# DDR_A_CAS# DDR_A_WE#
+2.5V
C4 C137 C27 C26 0.1U_0402_16V4Z
SDREF
C25 0.1U_0402_16V4Z
7,13 SDREF
Close pin49

U3 (HY5DU121622A(L)T-J_TSOPII66)
DDR_DQS2 DDR_DM2 DDR_D17 DDR_D16 DDR_D21 DDR_D20 DDR_D19 DDR_D18 DDR_D22 DDR_D23
DDR_DQS3 DDR_DM3 DDR_D24 DDR_D25 DDR_D29 DDR_D26 DDR_D28 DDR_D30 DDR_D31 DDR_D27
DDR_A_MA0 DDR_A_MA1 DDR_A_MA2 DDR_A_MA3 DDR_A_MA4 DDR_A_MA5 DDR_A_MA6 DDR_A_MA7 DDR_A_MA8 DDR_A_MA9 DDR_A_MA10 DDR_A_MA11 DDR_A_MA12
DDR_A_MA13
DDR_CLK0 DDR_CLK0# DDR_CKE0
DDR_A_BS#0 DDR_A_BS#1
DDR_SCS#0
DDR_A_RAS# DDR_A_CAS# DDR_A_WE#
+2.5V
C46 C47 C58 C57 0.1U_0402_16V4Z
SDREF
C56 0.1U_0402_16V4Z
Close pin49

U4 (HY5DU121622A(L)T-J_TSOPII66)
DDR_DQS4 DDR_DM4 DDR_D36 DDR_D37 DDR_D33 DDR_D32 DDR_D38 DDR_D39 DDR_D35 DDR_D34
DDR_DQS5 DDR_DM5 DDR_D45 DDR_D44 DDR_D41 DDR_D40 DDR_D46 DDR_D47 DDR_D43 DDR_D42
DDR_A_MA0 DDR_A_MA1 DDR_A_MA2 DDR_A_MA3 DDR_A_MA4 DDR_A_MA5 DDR_A_MA6 DDR_A_MA7 DDR_A_MA8 DDR_A_MA9 DDR_A_MA10 DDR_A_MA11 DDR_A_MA12
DDR_A_MA13
DDR_CLK1 DDR_CLK1# DDR_CKE0
DDR_A_BS#0 DDR_A_BS#1
DDR_SCS#0
DDR_A_RAS# DDR_A_CAS# DDR_A_WE#
+2.5V
C30 C29 C43 C42 0.1U_0402_16V4Z
SDREF
C41 0.1U_0402_16V4Z
Close pin49

U7 (HY5DU121622A(L)T-J_TSOPII66)
DDR_DQS6 DDR_DM6 DDR_D49 DDR_D52 DDR_D53 DDR_D48 DDR_D54 DDR_D55 DDR_D50 DDR_D51
DDR_DQS7 DDR_DM7 DDR_D61 DDR_D60 DDR_D56 DDR_D57 DDR_D62 DDR_D59 DDR_D63 DDR_D58
DDR_A_MA0 DDR_A_MA1 DDR_A_MA2 DDR_A_MA3 DDR_A_MA4 DDR_A_MA5 DDR_A_MA6 DDR_A_MA7 DDR_A_MA8 DDR_A_MA9 DDR_A_MA10 DDR_A_MA11 DDR_A_MA12
DDR_A_MA13
DDR_CLK1 DDR_CLK1# DDR_CKE0
DDR_A_BS#0 DDR_A_BS#1
DDR_SCS#0
DDR_A_RAS# DDR_A_CAS# DDR_A_WE#
+2.5V
C62 C61 C76 C75 0.1U_0402_16V4Z
SDREF
C74 0.1U_0402_16V4Z
Close pin49

Compal Electronics, Inc.
Title: DDR-SODIMM SLOT0
Size: Document Number LA-2592 Rev 0.1
Date: Tuesday, February 15, 2005 Sheet 12 of 46



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Title: **DDR-SODIMM SLOT1**

Size	Document Number	Rev
	LA-2592	0.2

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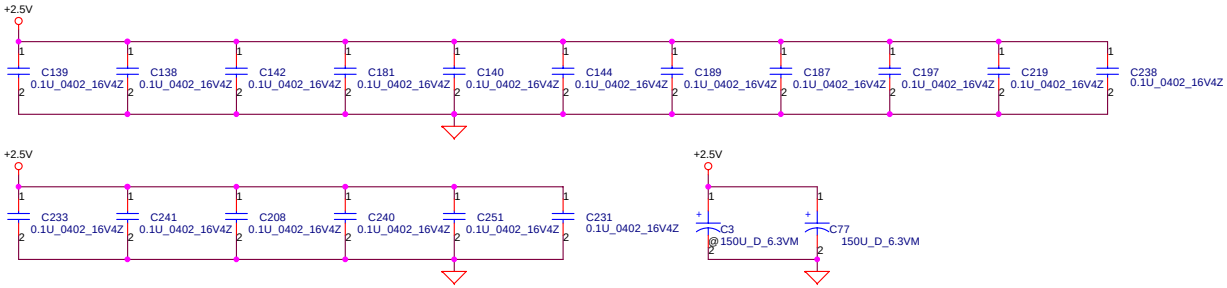
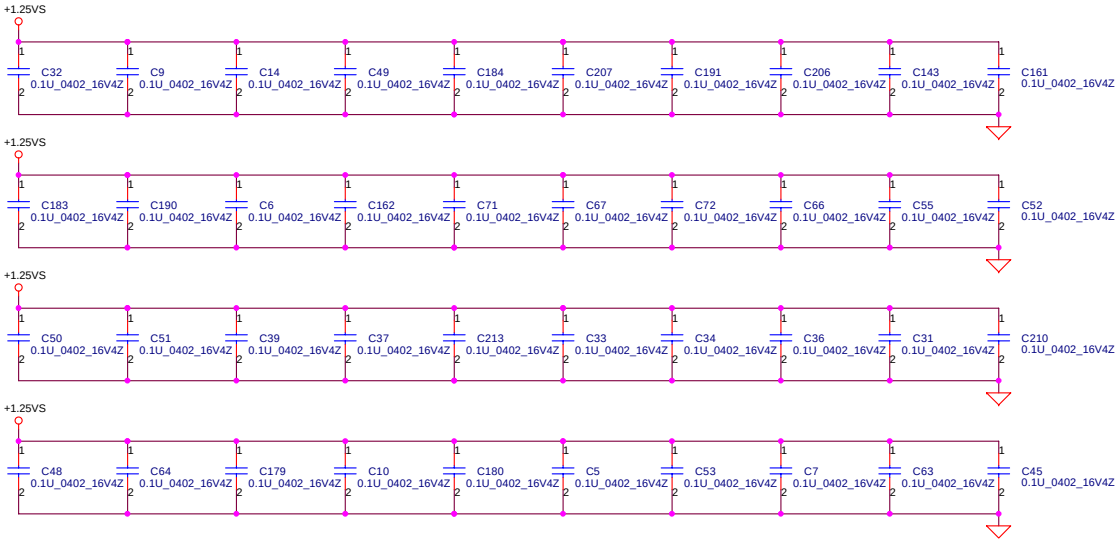
Layout note :

Distribute as close as possible to DDR-SODIMM.

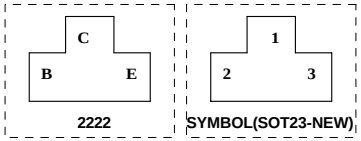


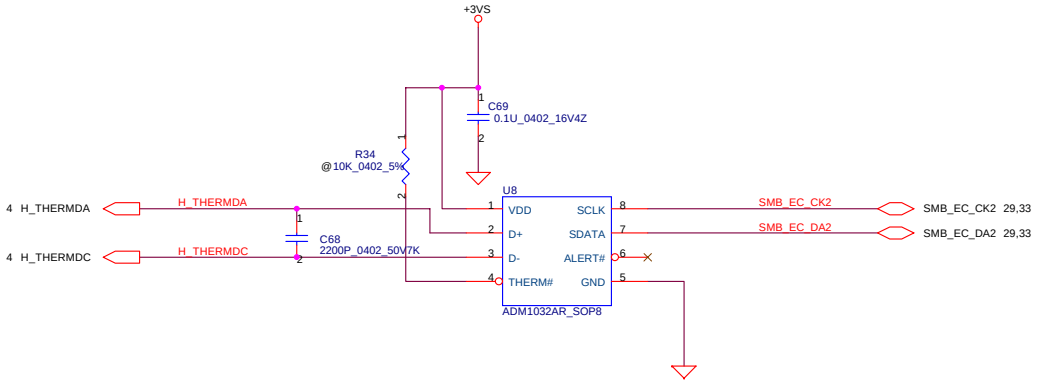
Layout note :

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

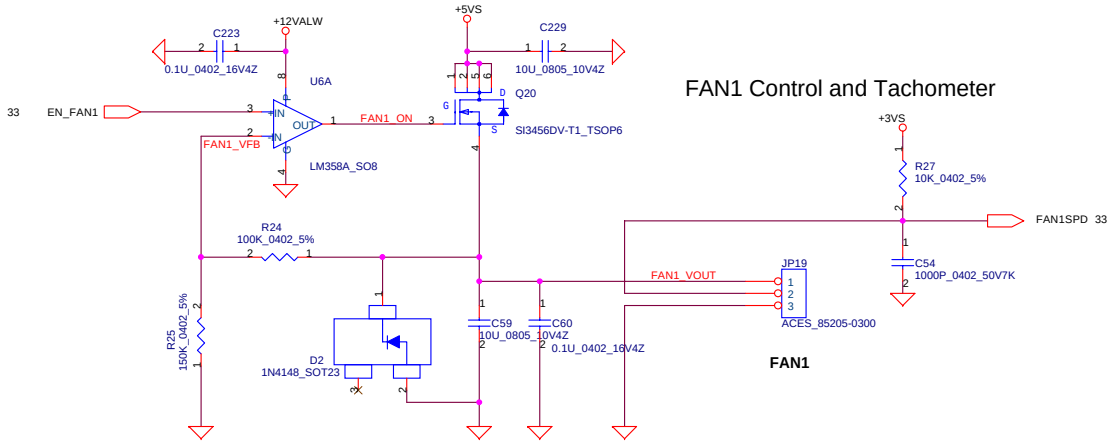


Compal Electronics, Inc.		
Title: DDR SODIMM Decoupling		
Size: Custom	Document Number: LA-2592	Rev: 0.2
Date: Tuesday, February 15, 2005	Sheet 14 of 46	

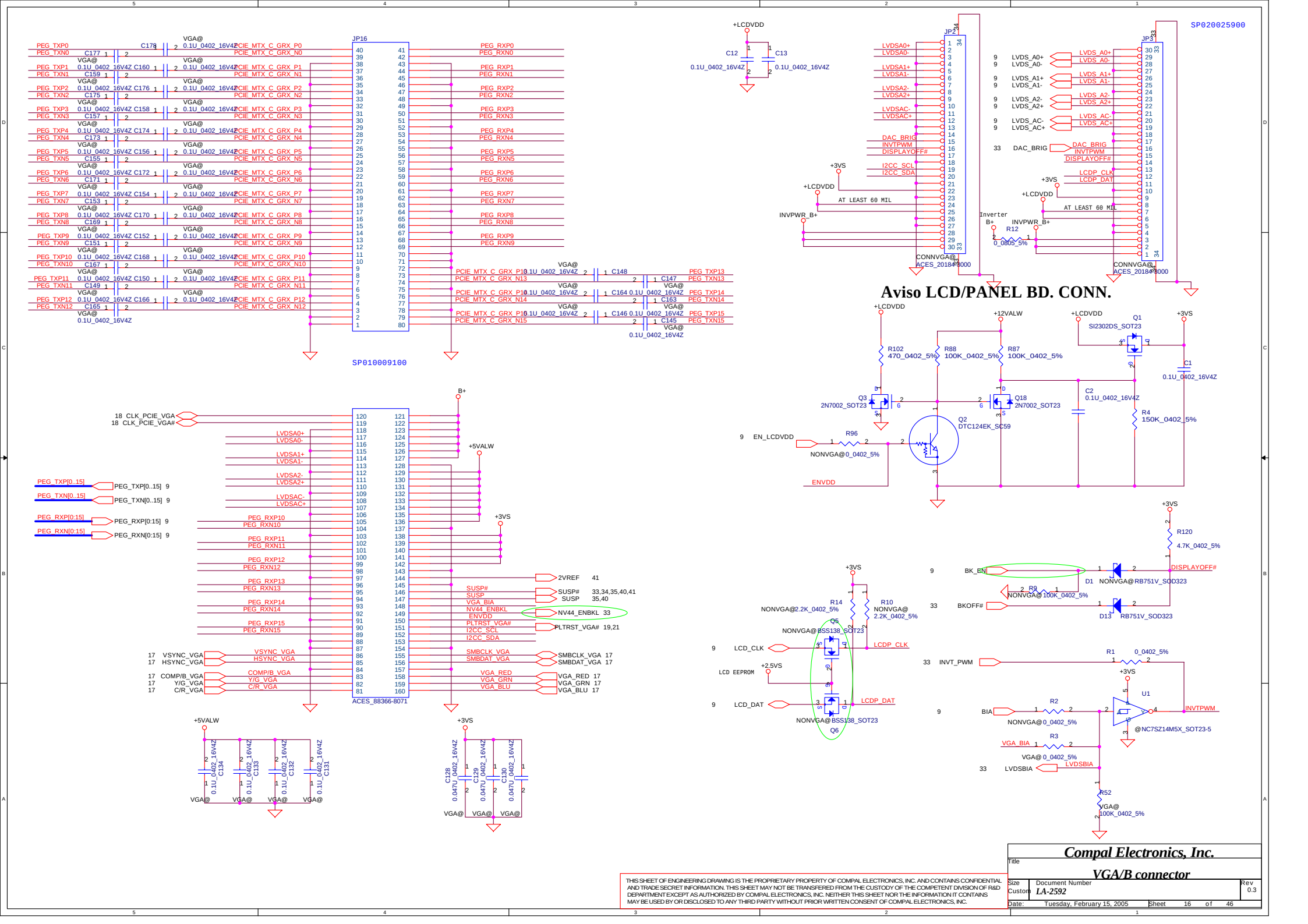




FAN1 Control and Tachometer



Compal Electronics, Inc.		
Title: Thermal sensor and Fan		
Size: Custom	Document Number: LA-2592	Rev: 0.2
Date: Tuesday, February 15, 2005	Sheet 15 of 46	


SP020025900
Aviso LCD/PANEL BD. CONN.
SP010009100
ACES_88366-8071
CONNVGA@ ACES_20184-3000
Compal Electronics, Inc.
VGA/B connector
LA-2592
Tuesday, February 15, 2005
Sheet 16 of 46
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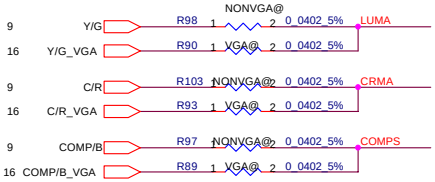
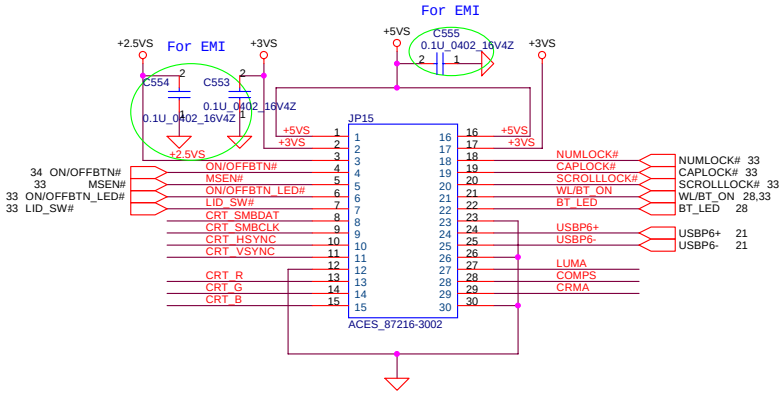
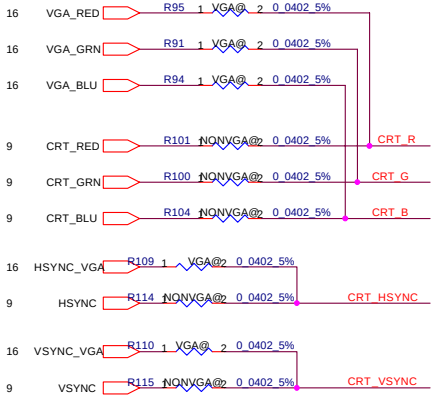
TV-Out Connector

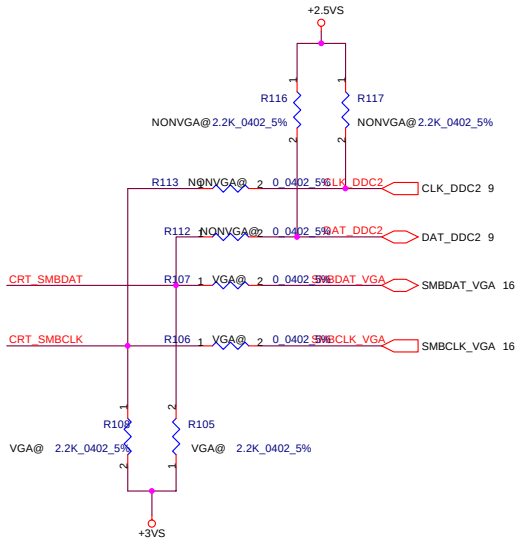


VGA I/O PORT Connector

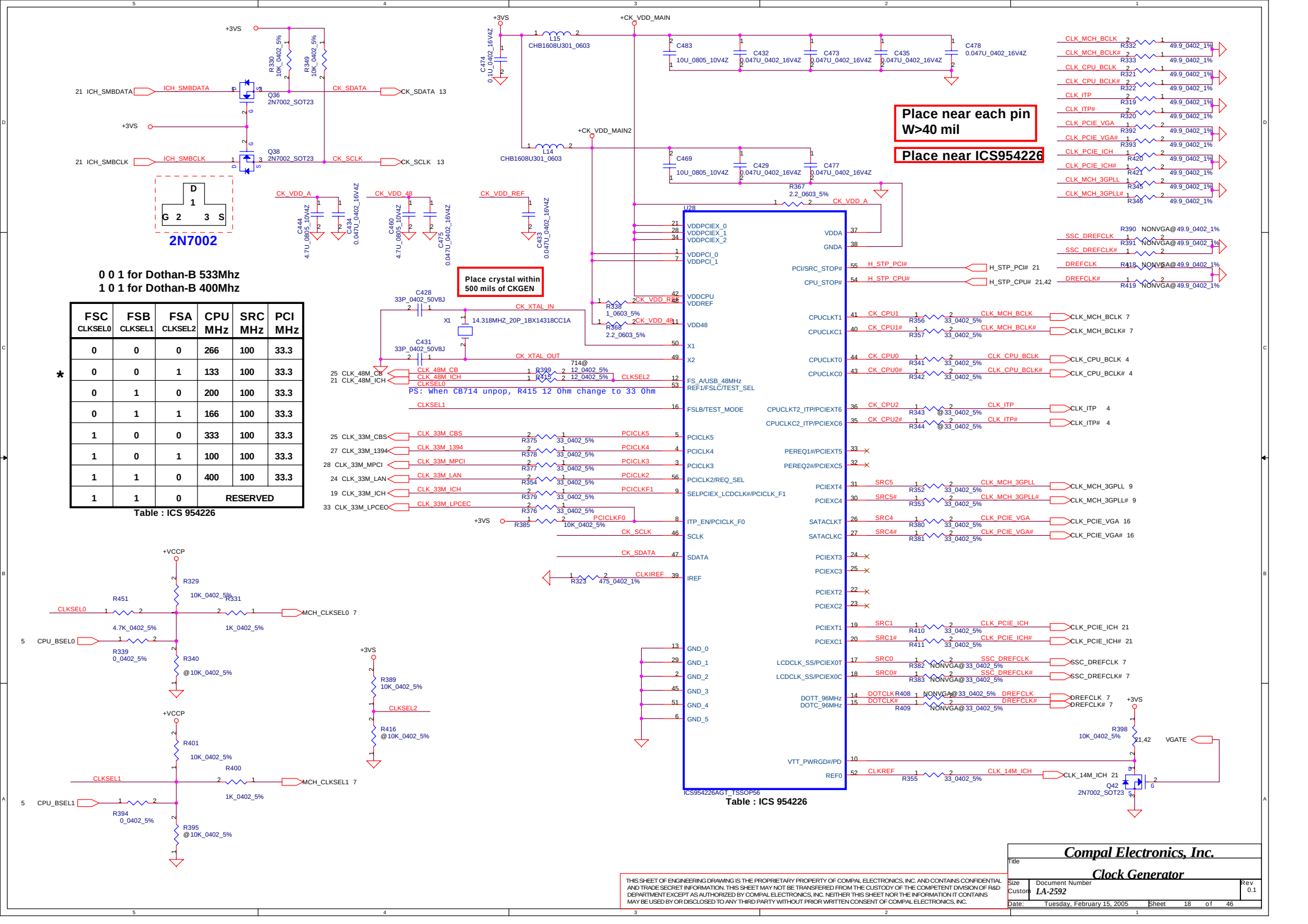


CRT CONNECTOR





Compal Electronics, Inc.		
Title: TV_OUT and DVI connector		
Size: Custom	Document Number: LA-2592	Rev: 0.2
Date: Tuesday, February 15, 2005	Sheet 17 of 46	



	FSC CLKSEL0	FSB CLKSEL1	FSA CLKSEL2	CPU MHz	SRC MHz	PCI MHz
	0	0	0	266	100	33.3
*	0	0	1	133	100	33.3
	0	1	0	200	100	33.3
	0	1	1	166	100	33.3
	1	0	0	333	100	33.3
	1	0	1	100	100	33.3
	1	1	0	400	100	33.3
	1	1	0	RESERVED		

Table : ICS 954226

Table : ICS 954226

Compal Electronics, Inc.

Title: Clock Generator

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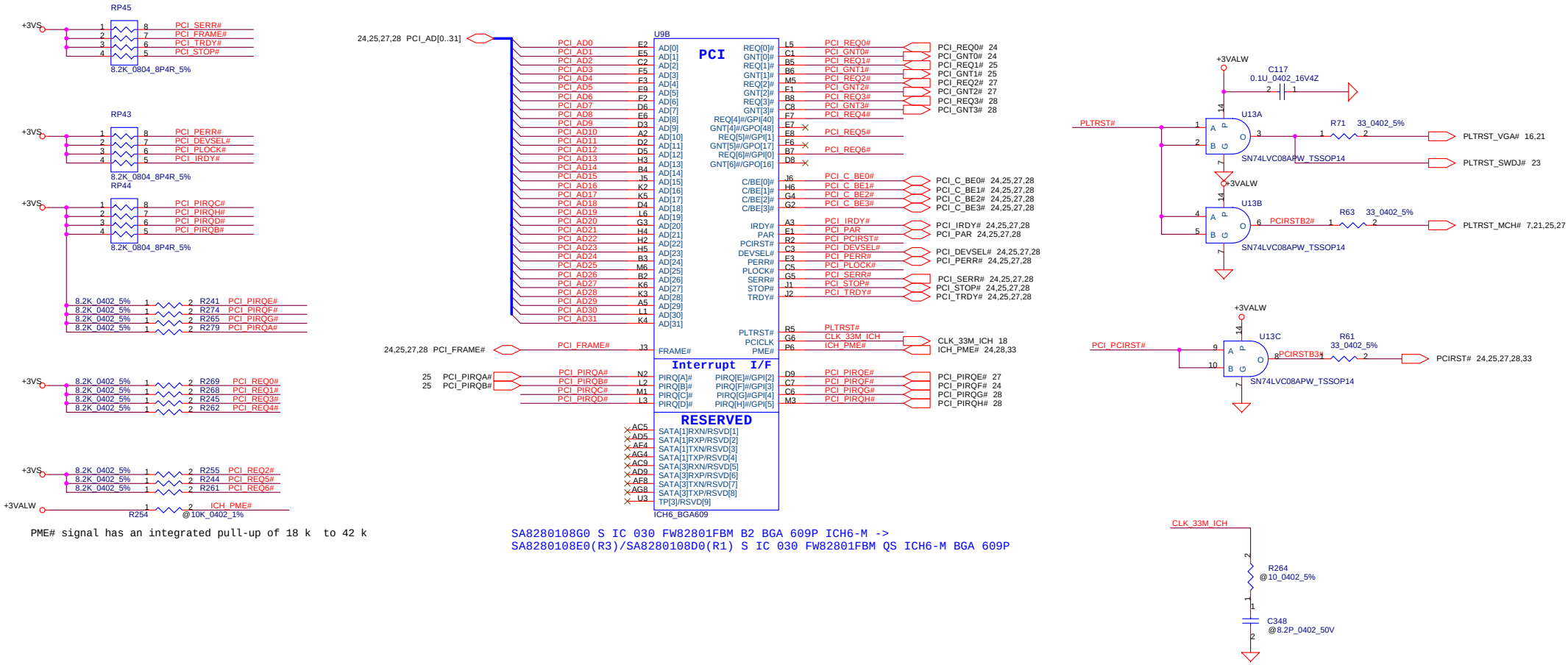

PME# signal has an integrated pull-up of 18 k to 42 k

SA8280108G0 S IC 030 FW82801FBM B2 BGA 609P ICH6-M ->
SA8280108E0(R3)/SA8280108D0(R1) S IC 030 FW82801FBM QS ICH6-M BGA 609P

Compal Electronics, Inc.

Title: ICH6(1/4)

Size: Custom | Document Number: LA-2592 | Rev: 0.1

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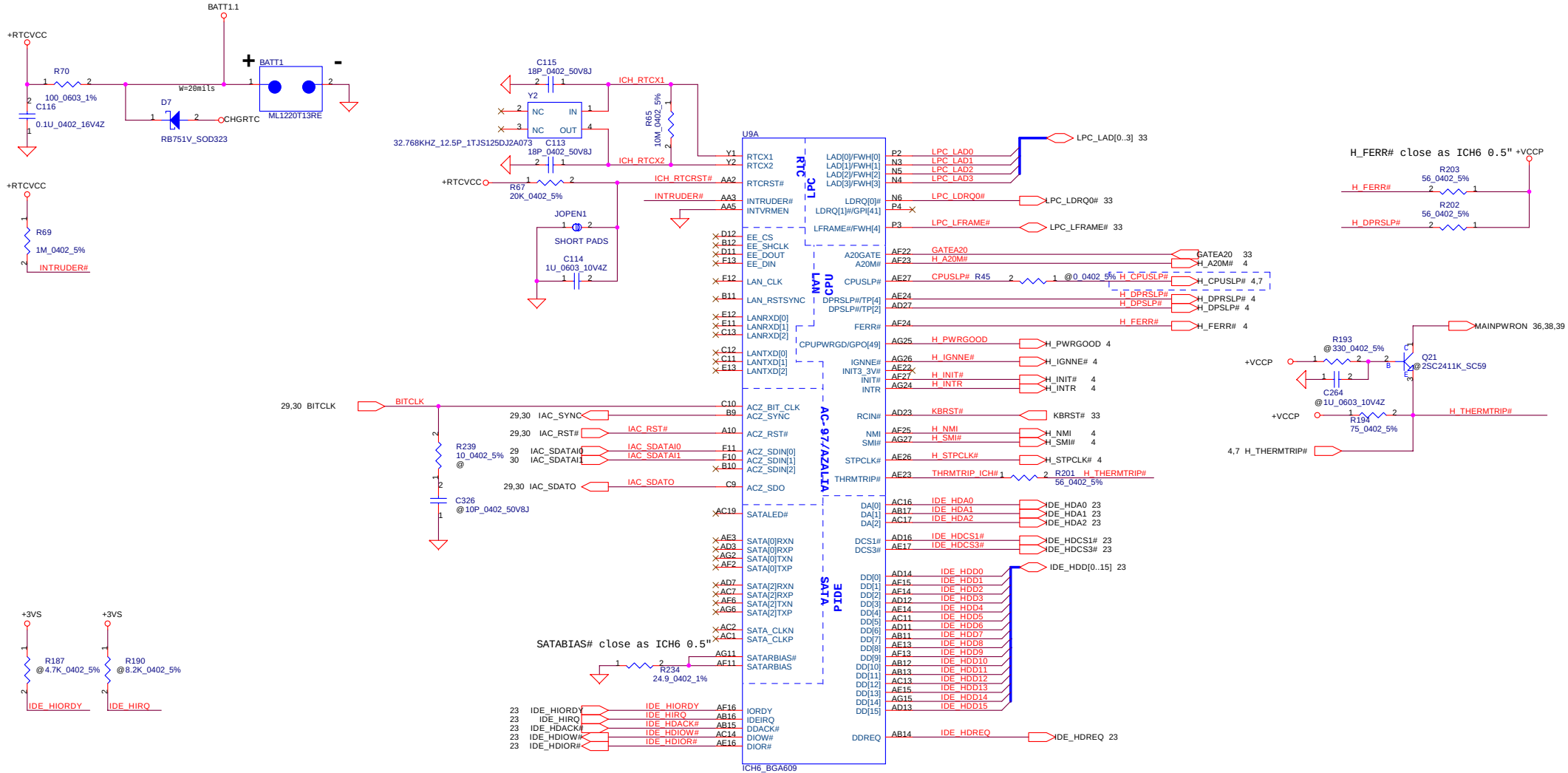
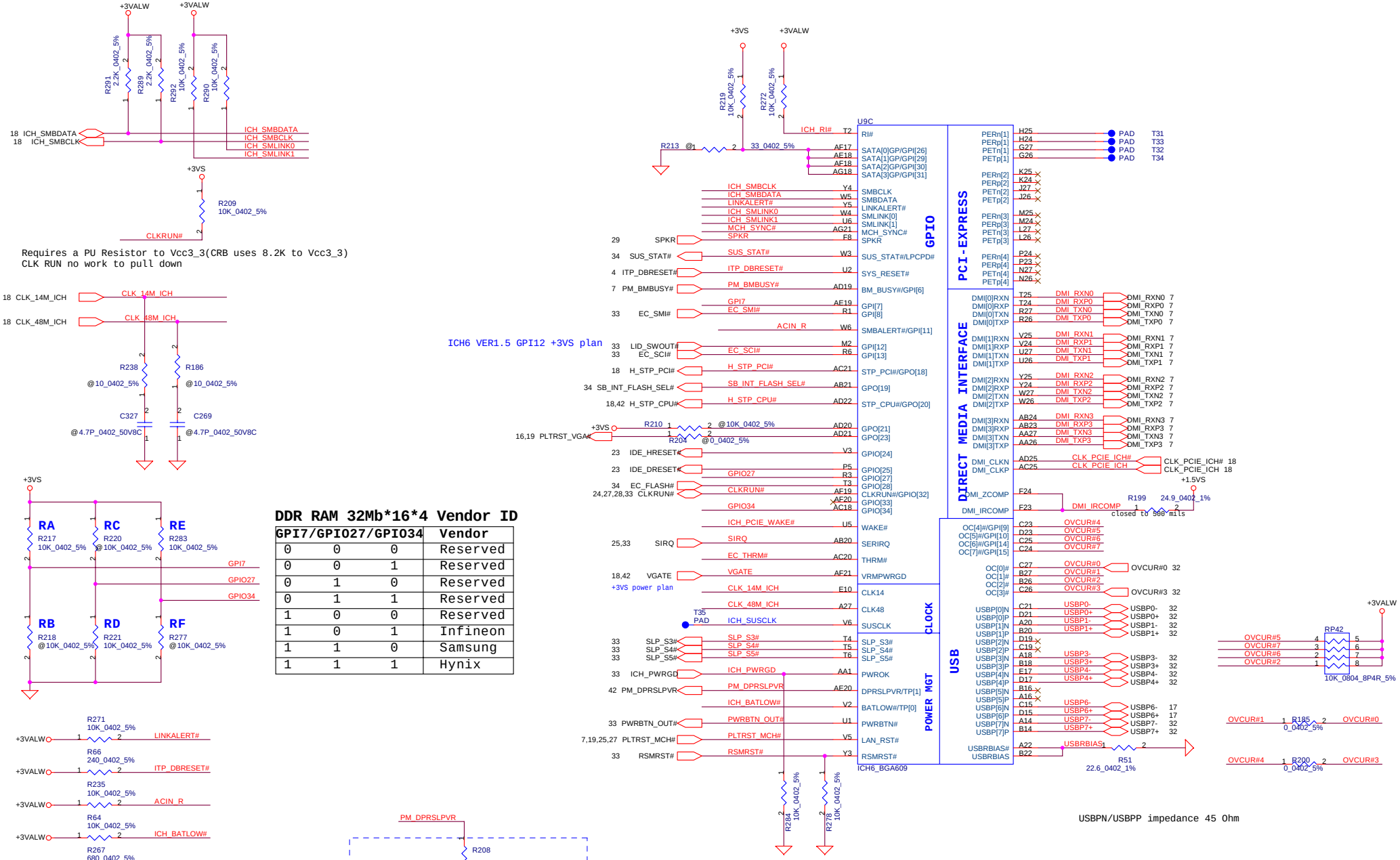


Compal Electronics, Inc.

Title	ICH6(2/4)	
Size	Document Number LA-2592	Rev 0.2
Date: Tuesday, February 15, 2005	Sheet 20 of 46	



Compal Electronics, Inc.

Title: ICH6(3/4)

Size | Document Number: LA-2592 | Rev: 0.2

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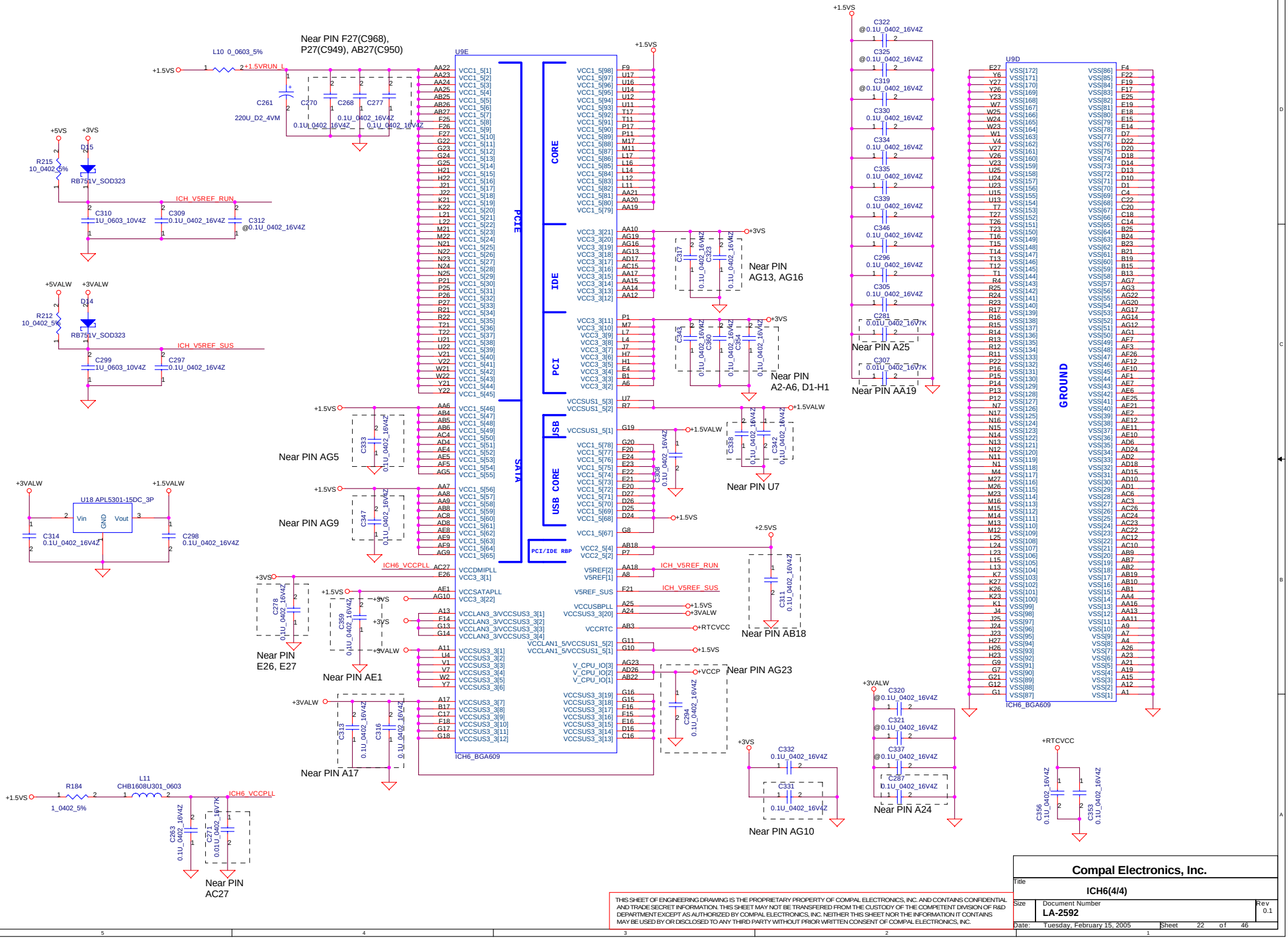
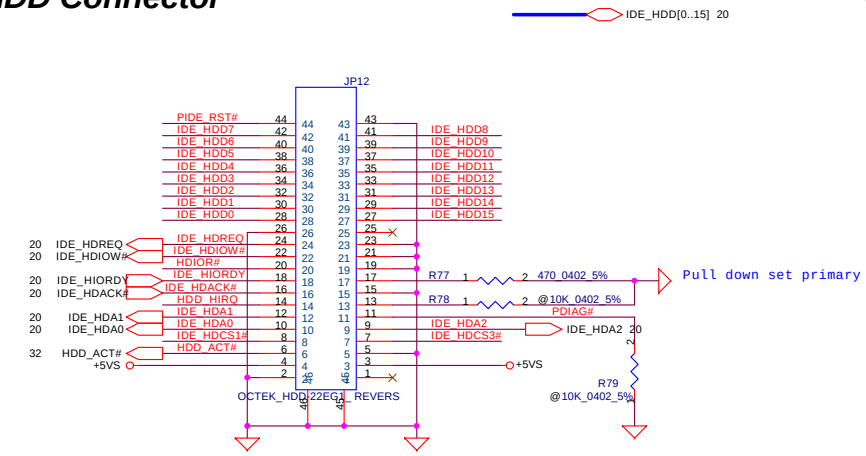
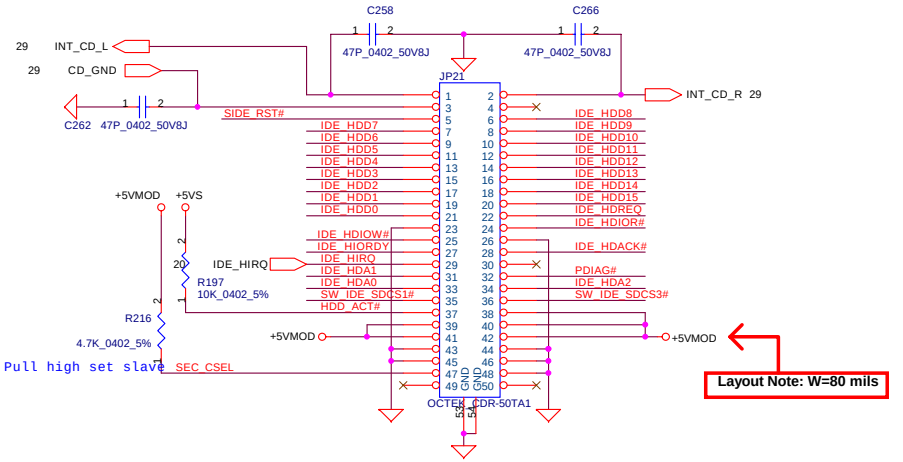
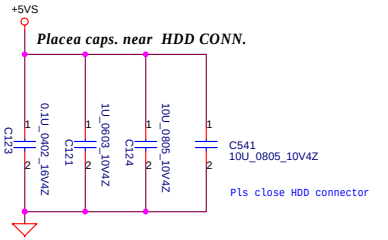


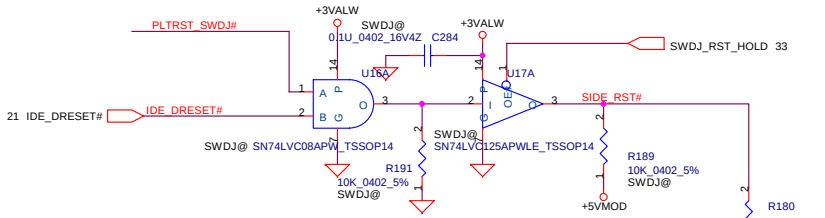
HDD Connector

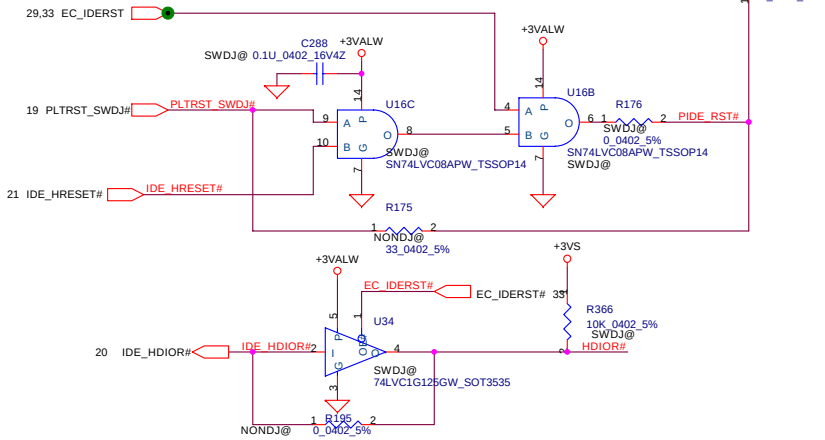


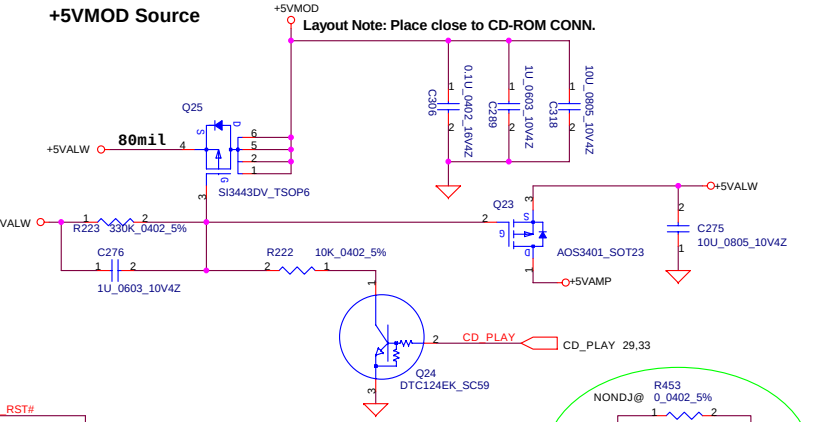
CD-ROM Connector

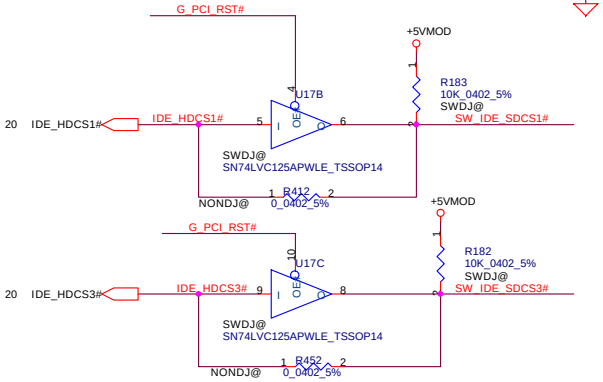


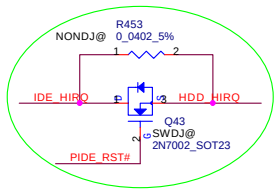


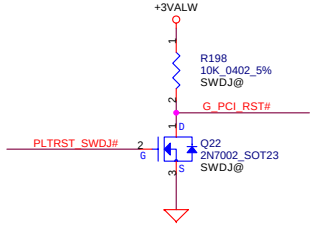












Compal Electronics, Inc.

Title: HDD & CD-ROM CONN.

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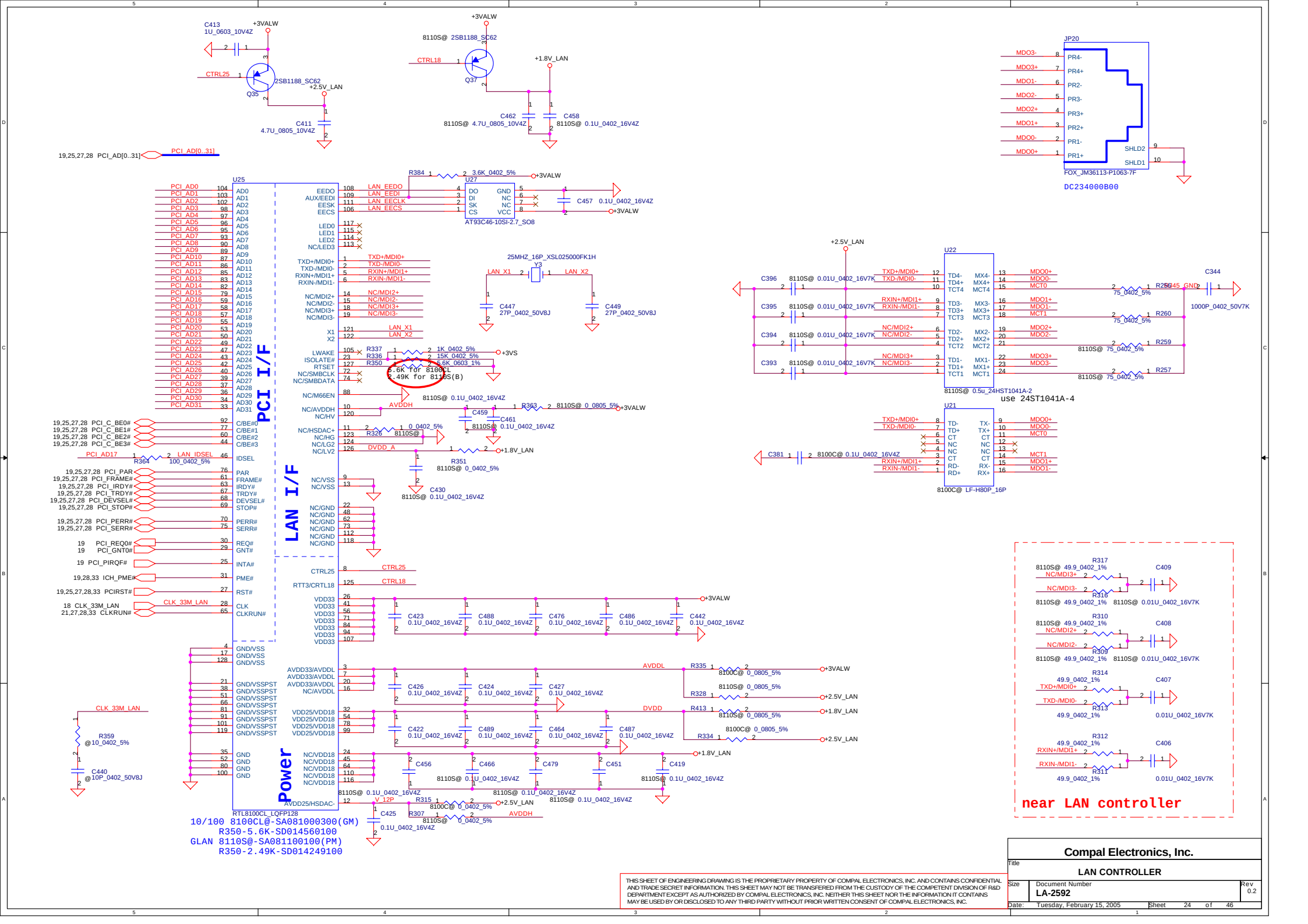

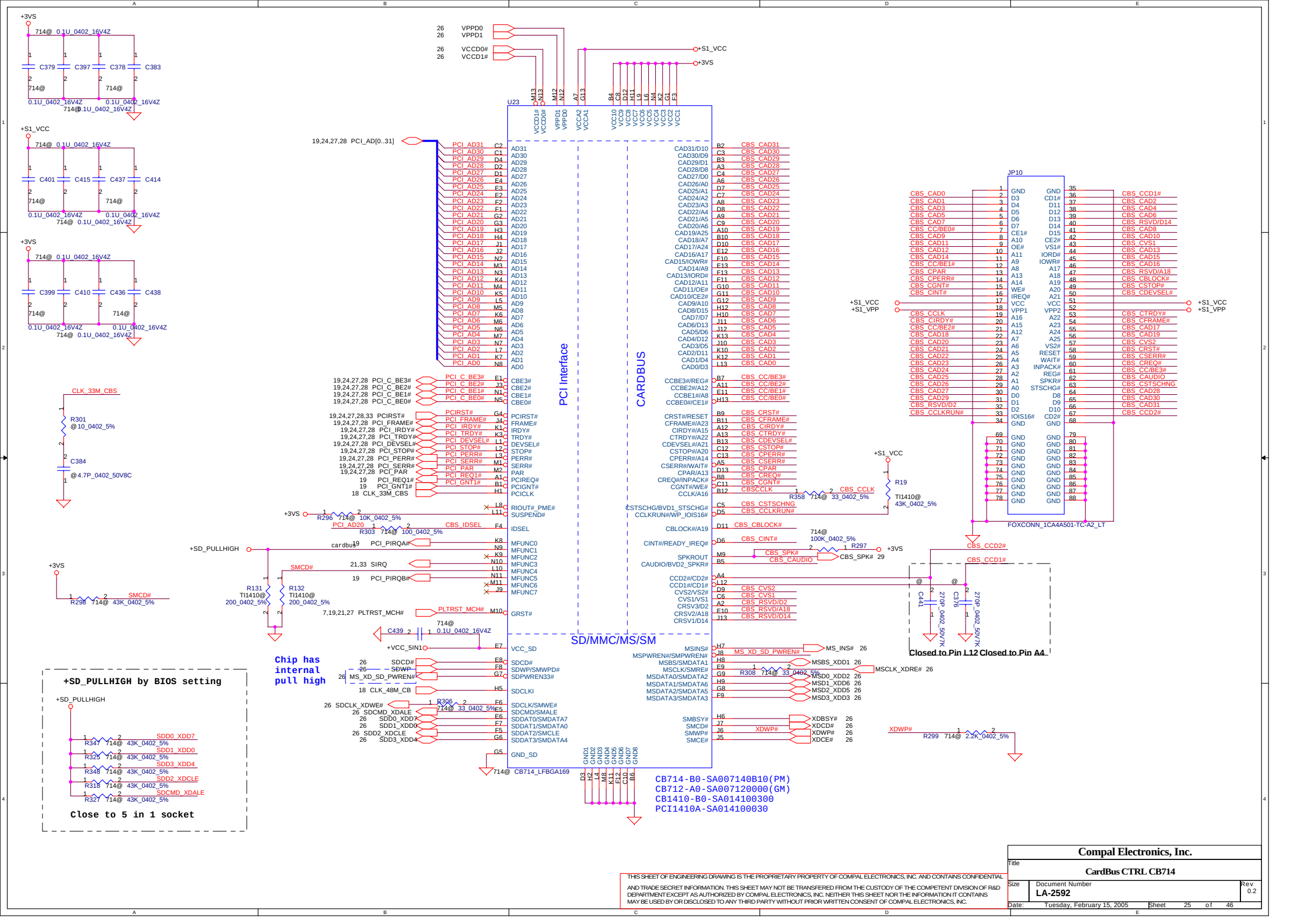

Compal Electronics, Inc.	
Title	CardBus CTRL CB714
Size	Document Number LA-2592
Rev	0.2
Date:	Tuesday, February 15, 2005
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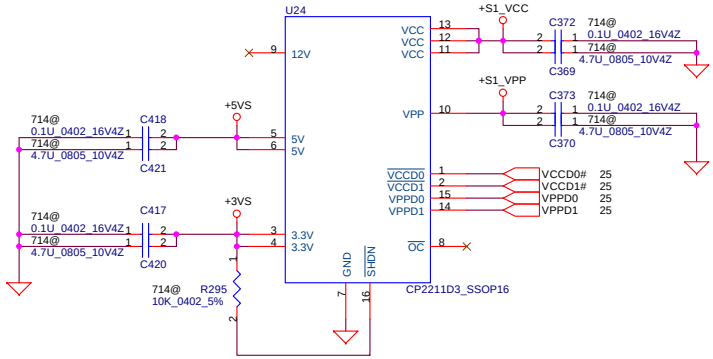

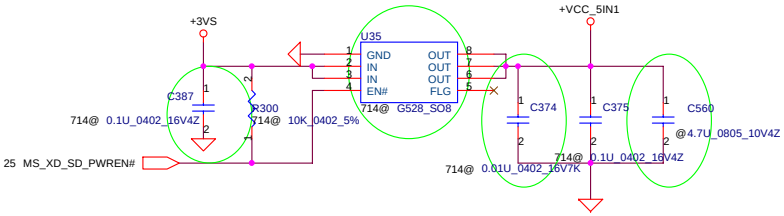

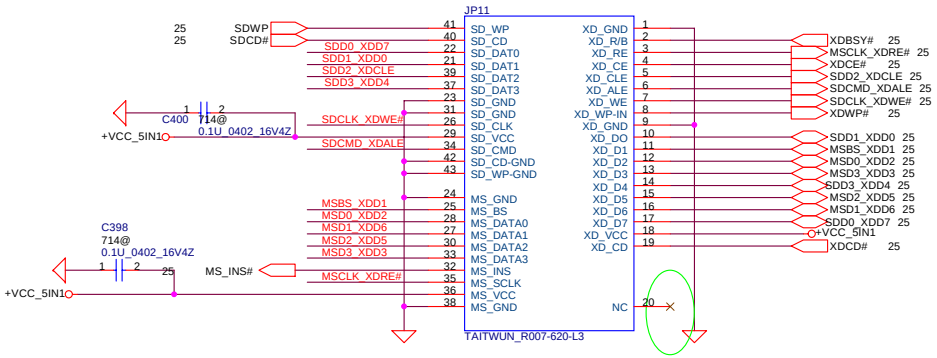

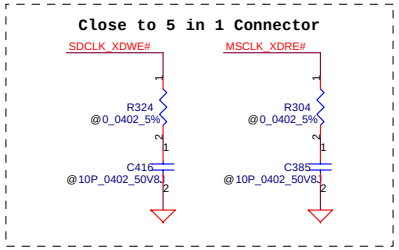

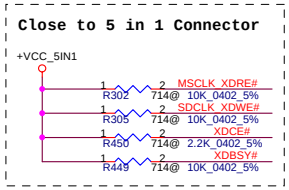

Compal Electronics, Inc.

Title: **CARD BUS SOCKET**

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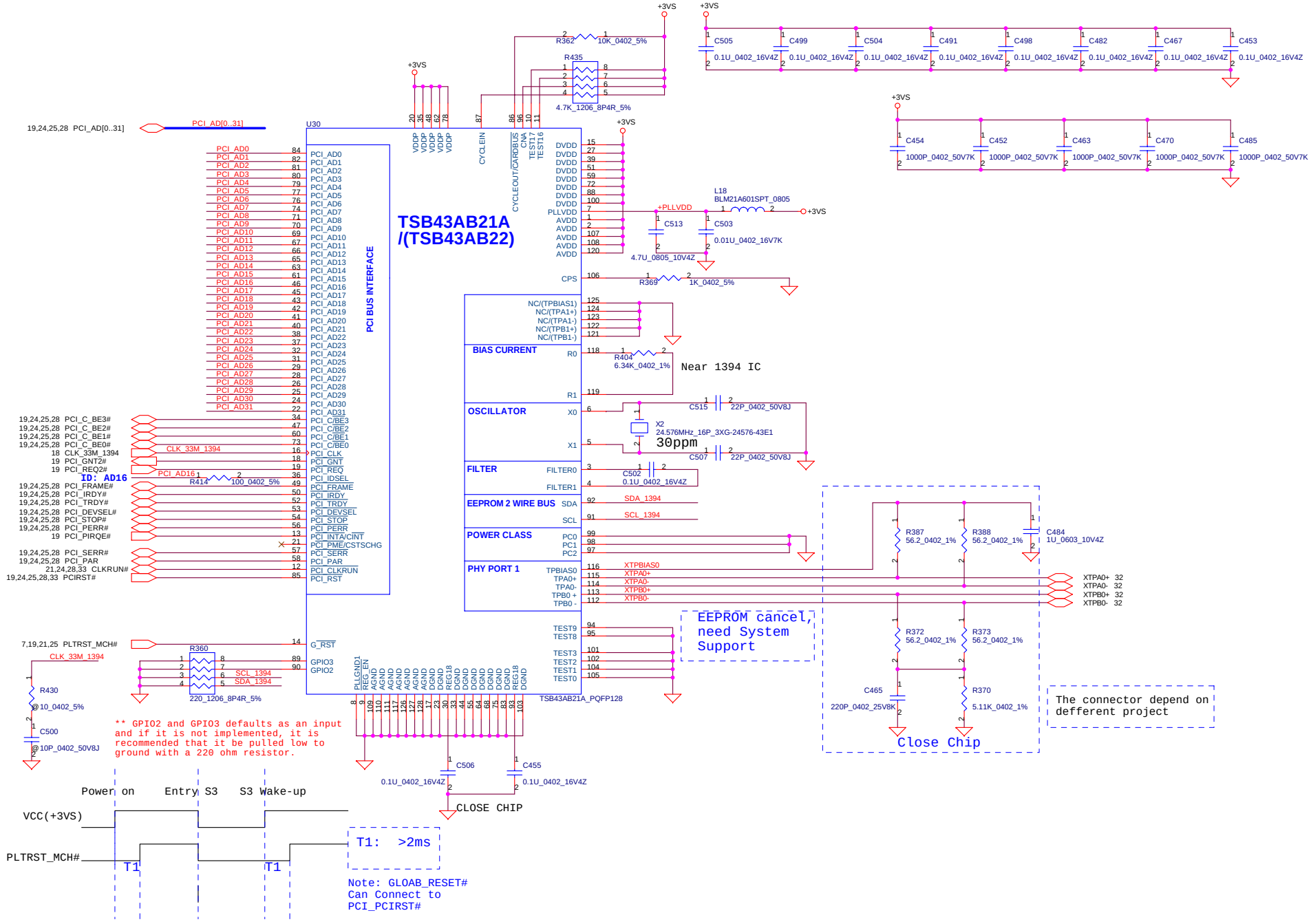
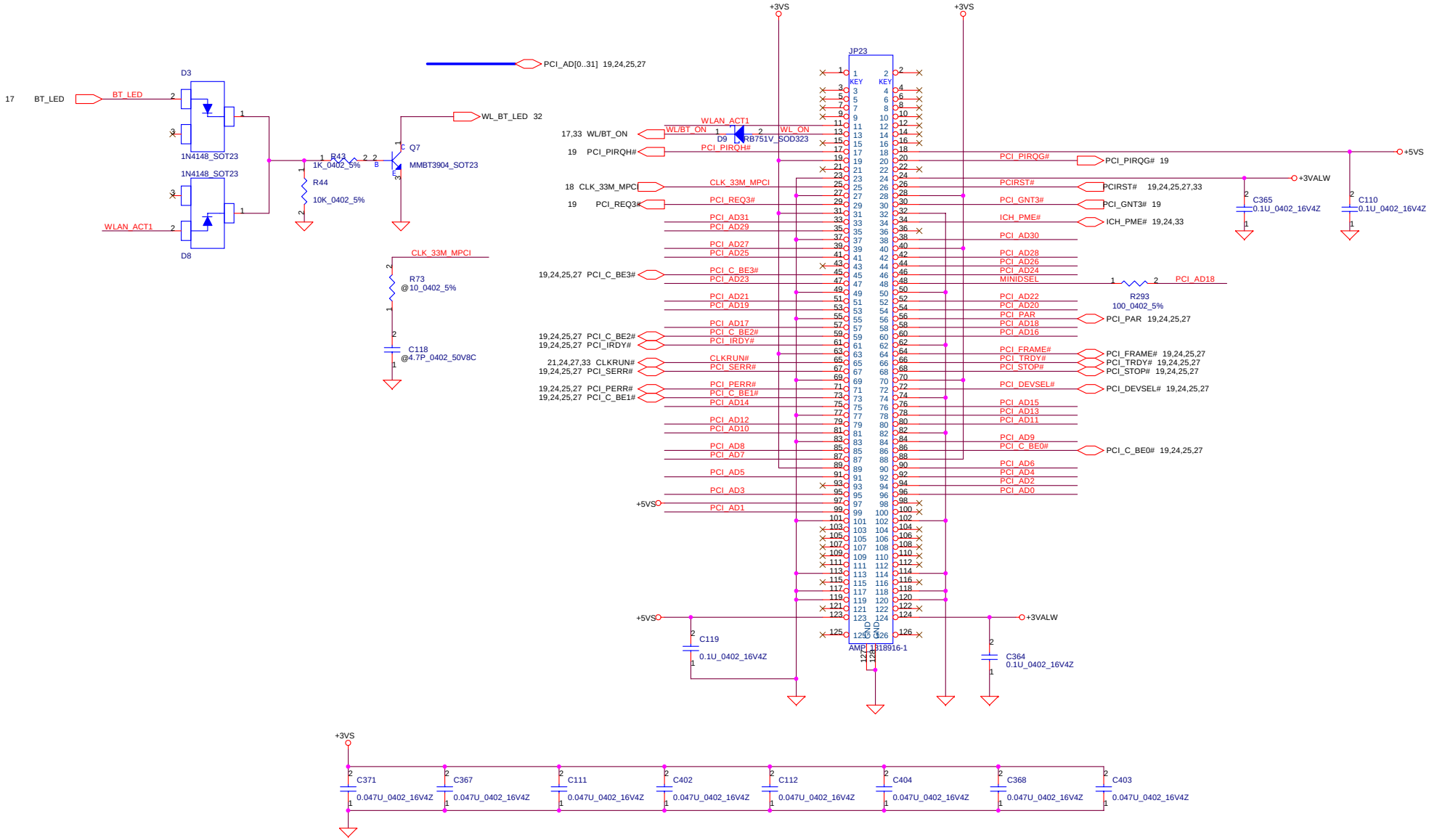


Compal Electronics, Inc.		
Title: IEEE 1394 CONTROLLER		
Size	Document Number: LA-2592	Rev: 0.2
Date: Tuesday, February 15, 2005	Sheet 27 of 46	



Compal Electronics, Inc.

Title: **MINIPCI**

Size | Document Number: **LA-2592** | Rev: 0.1

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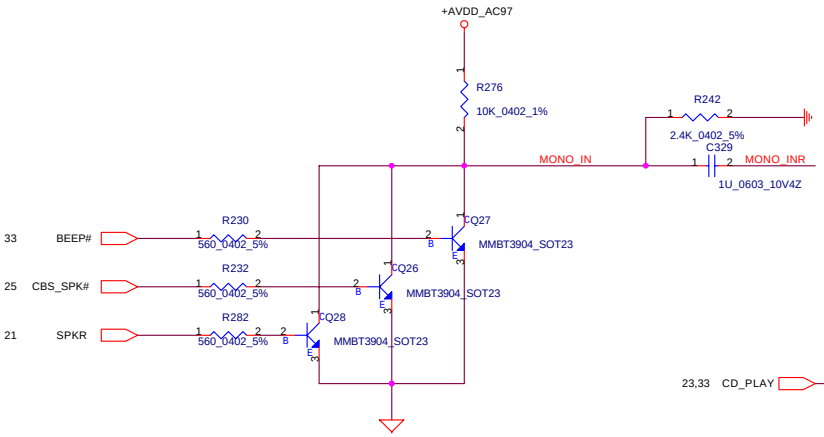
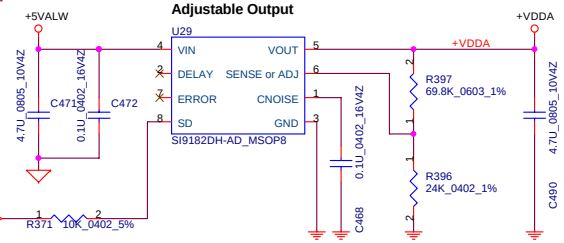
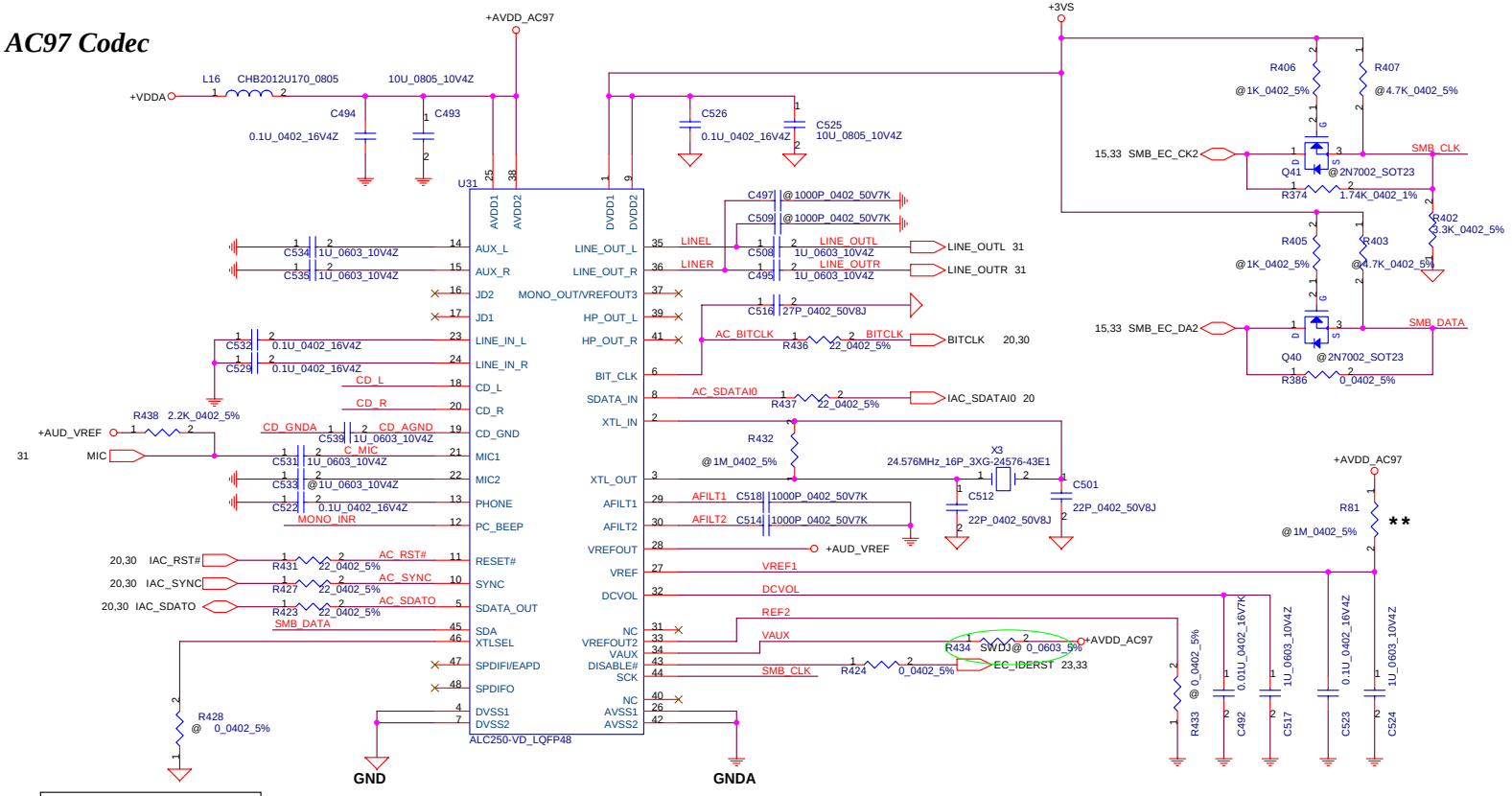


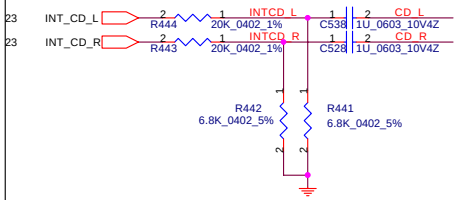


AC97 Codec

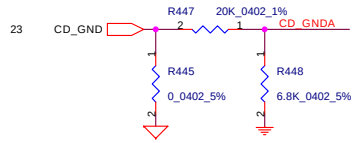


WITH 14.318MHz : Rxxx POP
WITH 24.576MHz : Rxxx DEPOP

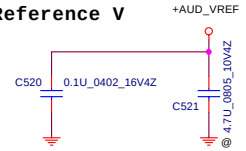
Audio Signal Bias Circuit



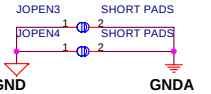
CD_GND To CD_GNDA Bypass



Analog Reference V



GND To GNDA Bypass



Compal Electronics, Inc.		
Title: Codec ALC250		
Size	Document Number: LA-2592	Rev: 0.2
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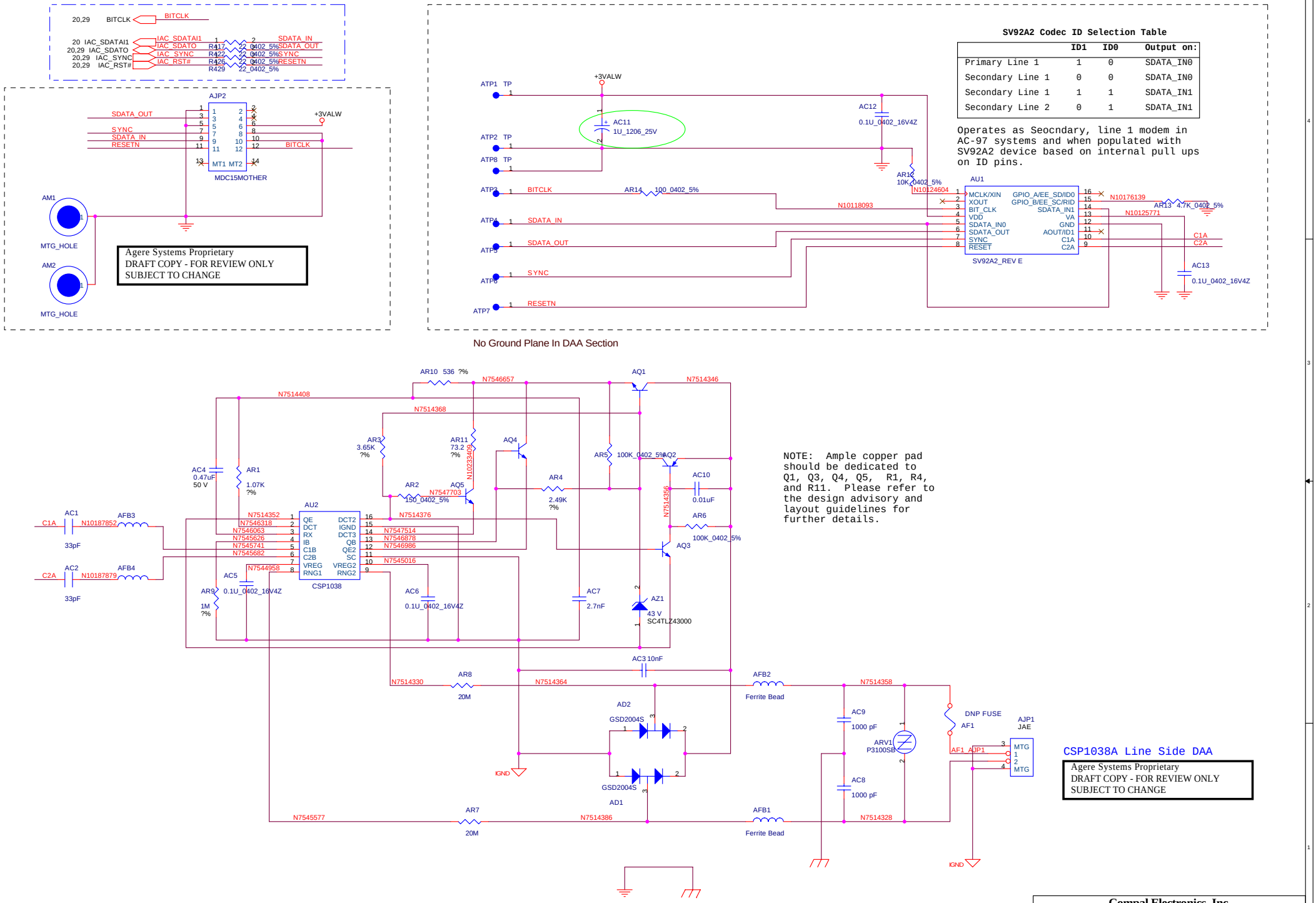

Compal Electronics, Inc.	
Title	MODEM-AgereMOM CPS1038
Size	Document Number: LA-2592
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Date:	Tuesday, February 15, 2005
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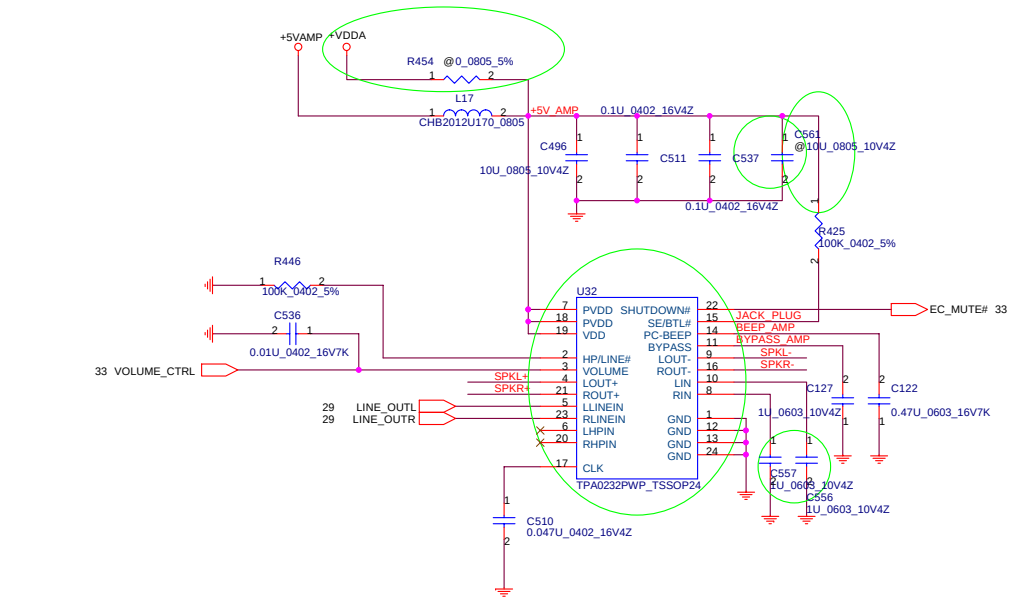

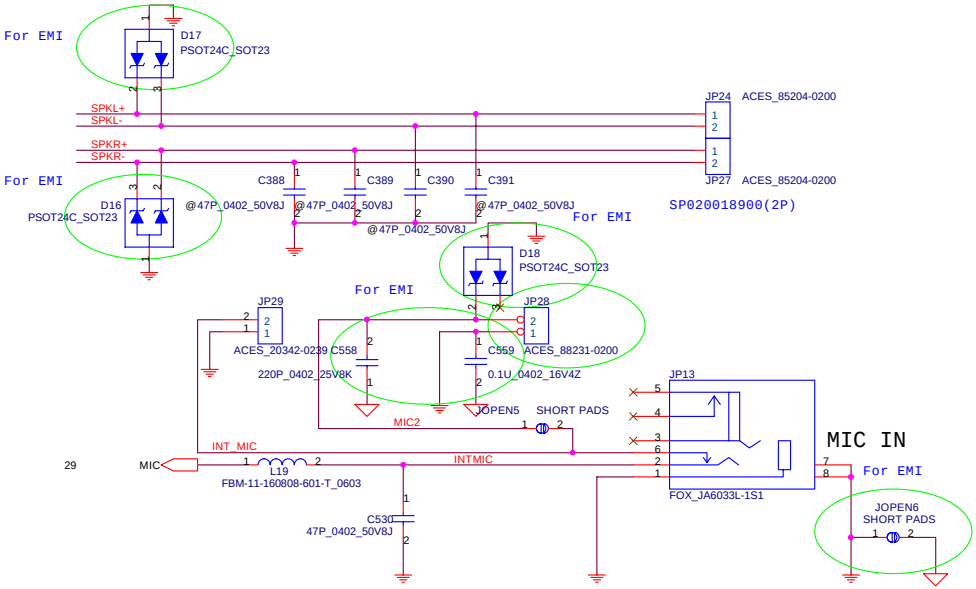

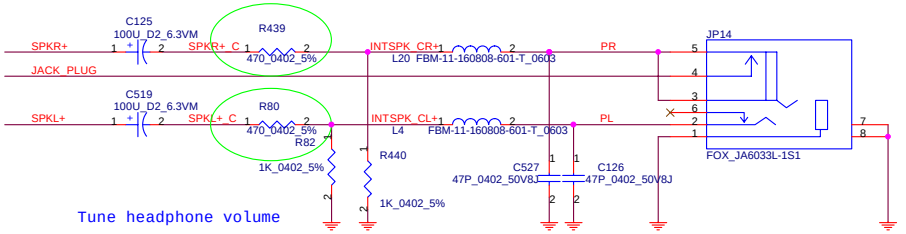

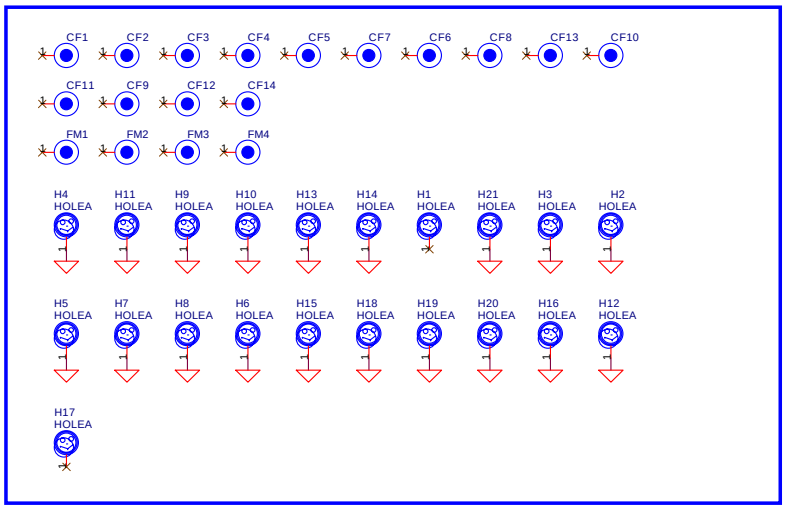

Compal Electronics, Inc.		
Title: AMP & Audio Jack		
Size: Custom	Document Number: LA-2592	Rev: 0.2
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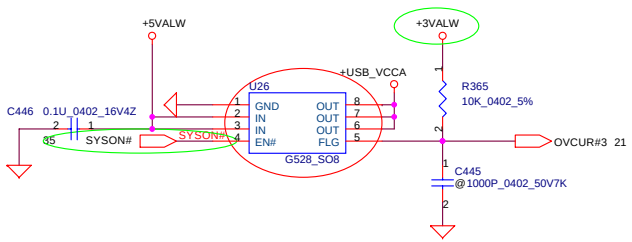
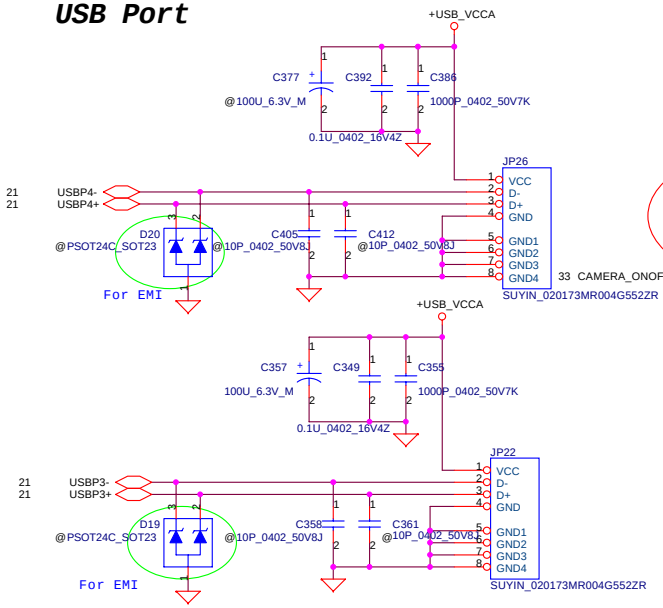
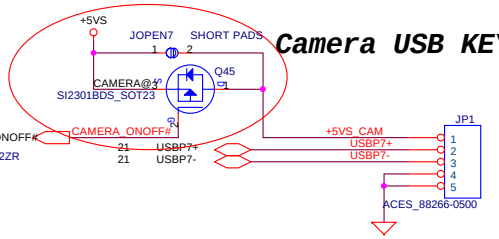
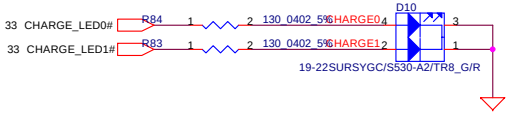
USB Port

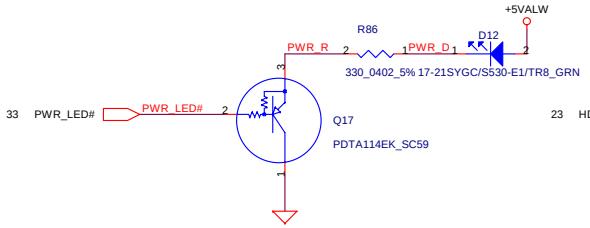


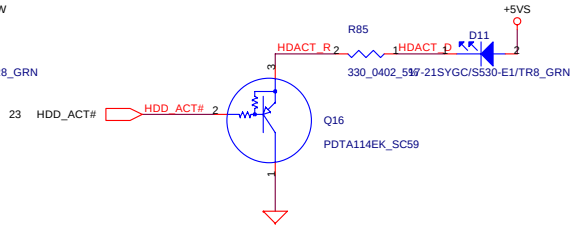




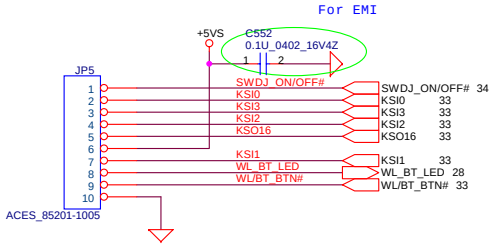
LED Function



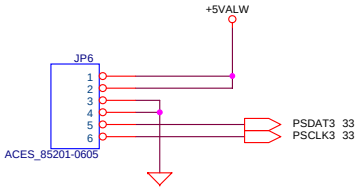




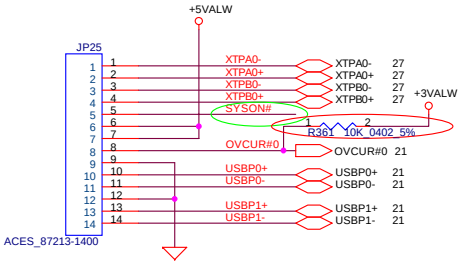
SWDJ Board



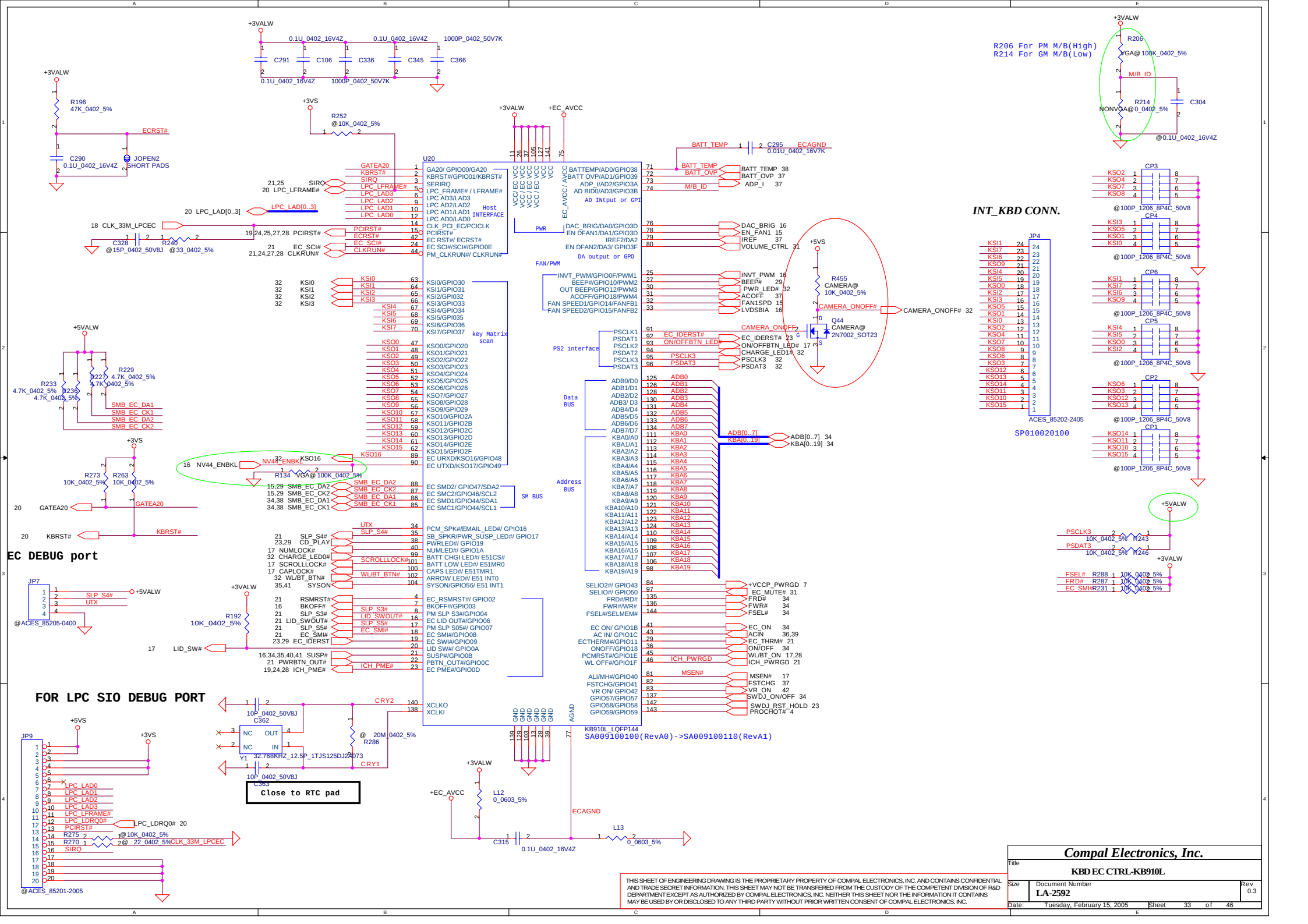
T/P Board



1394/USB Board



Compal Electronics, Inc.		
Title: USB Port		
Size: Custom	Document Number: LA-2592	Rev: 0.2
Date: Tuesday, February 15, 2005	Sheet 32 of 46	



Compal Electronics, Inc.

Title	KBD EC CTRL-KB910L	
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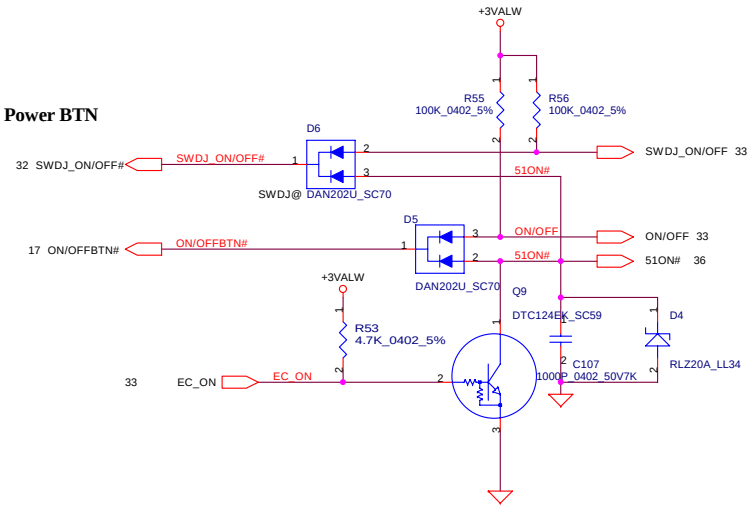
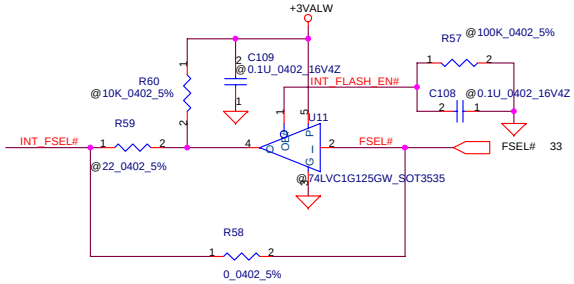
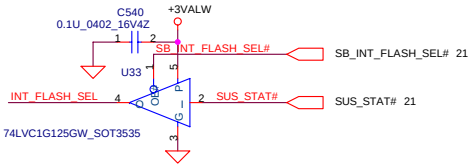
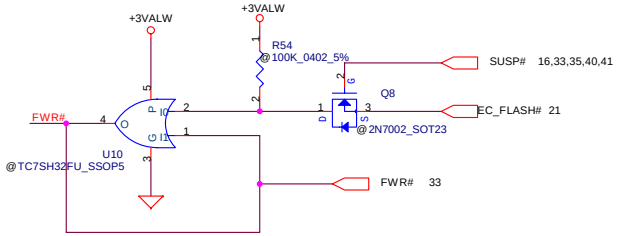
Power BTN





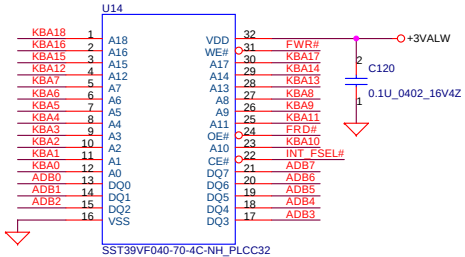




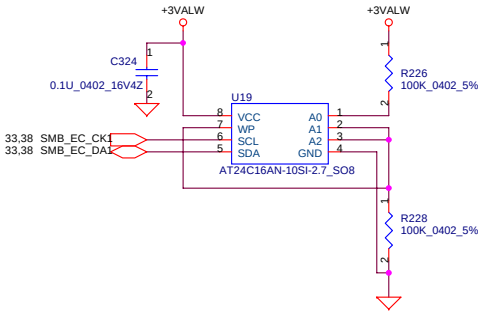
KBA[0..19] KBA[0..19] 33

ADB[0..7] ADB[0..7] 33

512K FLASH ROM

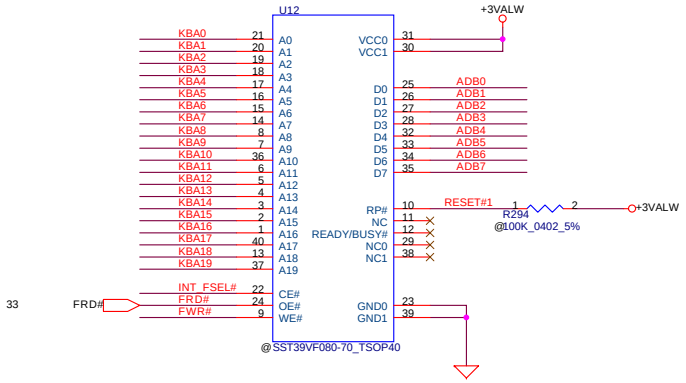


BIOS SOCKET-DC040043905

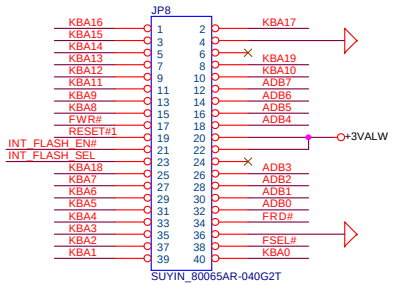


1MB FLASH ROM

Alternative SA290080100



1MB ROM SOCKET



Compal Electronics, Inc.

Title: BIOS & EXT. I/O PORT & PW BT

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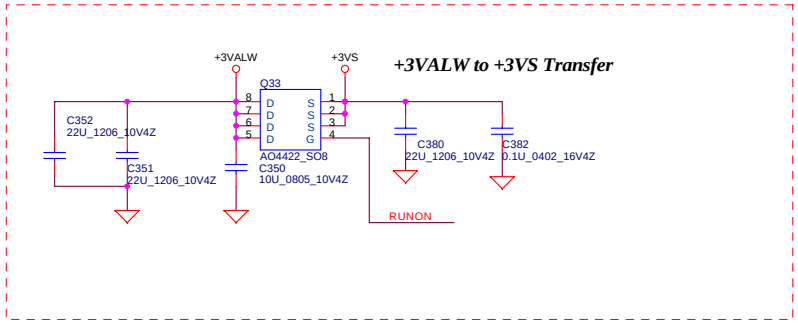

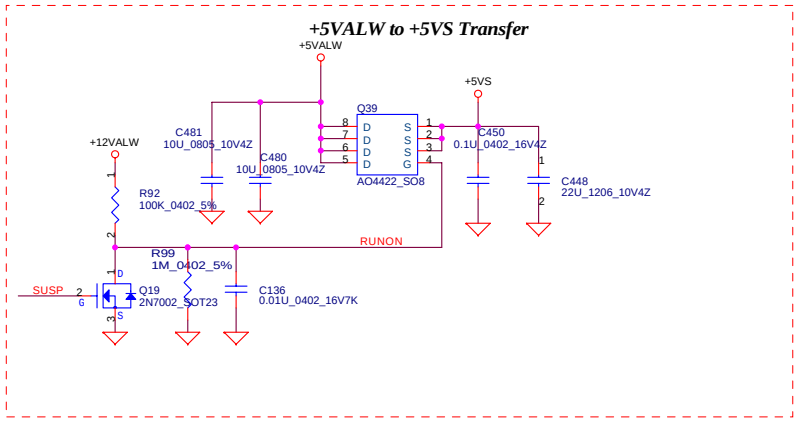

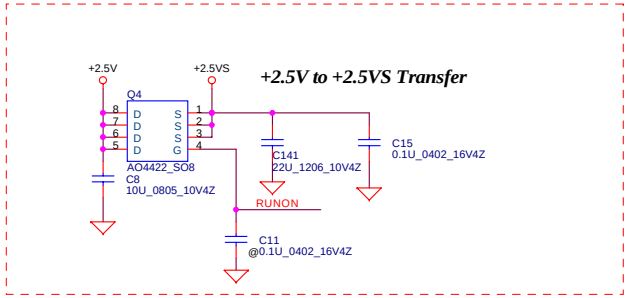

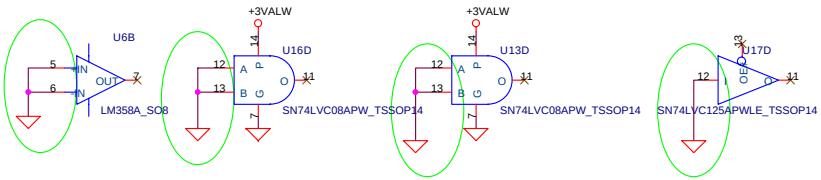

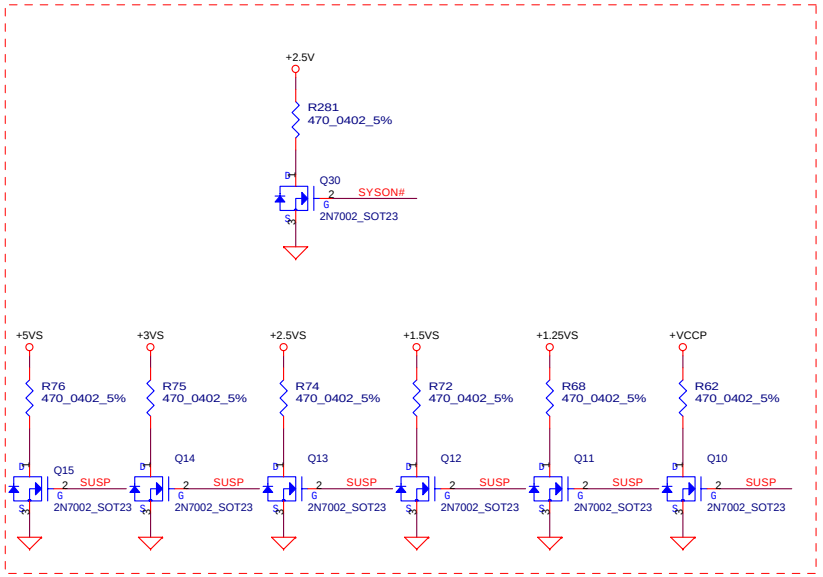

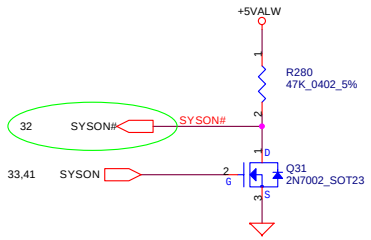

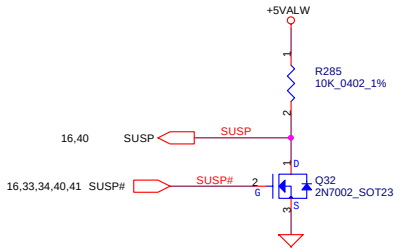

Compal Electronics, Inc.		
Title: POWER CONTROL		
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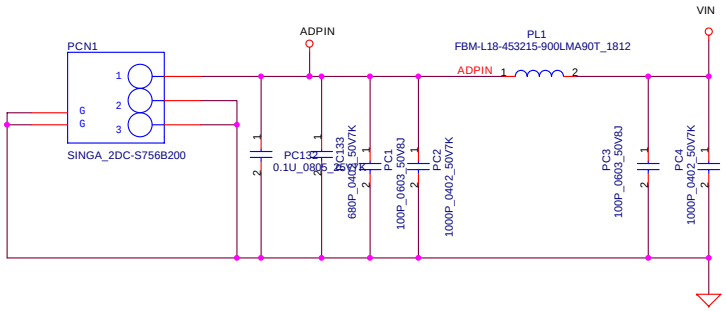
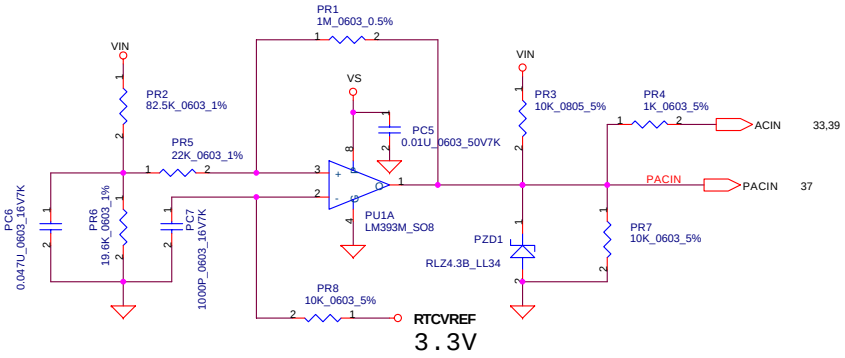
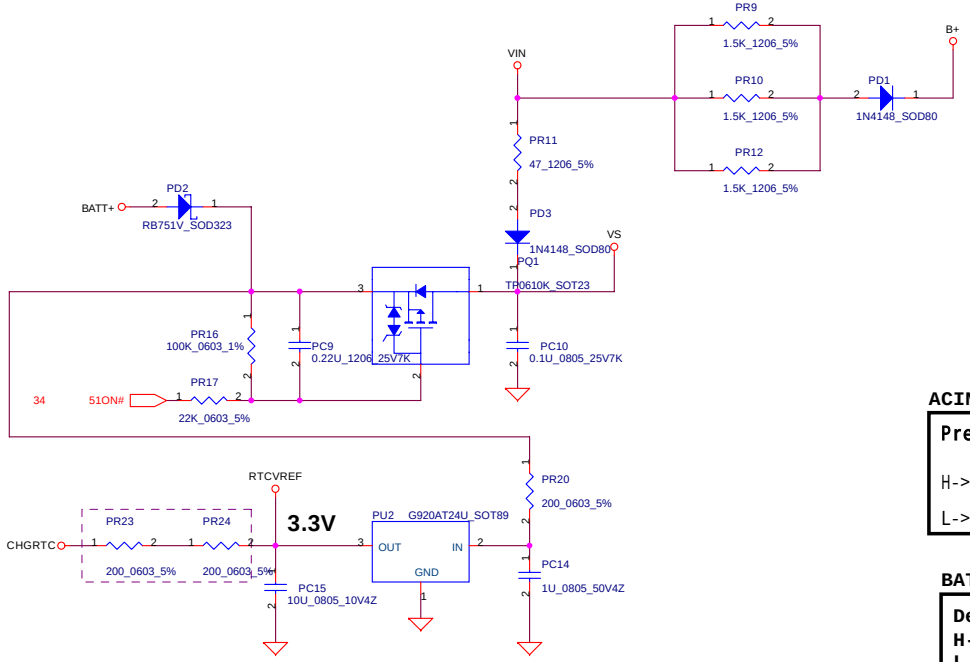
Detector

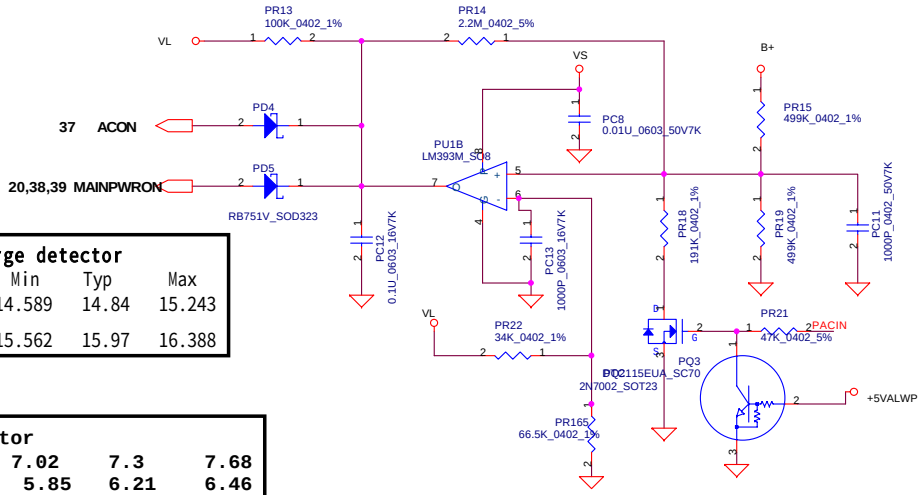


Vin Detector

18.234	17.841	17.449
17.597	17.210	16.813







ACIN

Precharge detector

	Min	Typ	Max
H->L	14.589	14.84	15.243
L->H	15.562	15.97	16.388

BATT

Detector

H-->L	7.02	7.3	7.68
L---H	5.85	6.21	6.46

Compal Electronics, Inc.
Title: Detector
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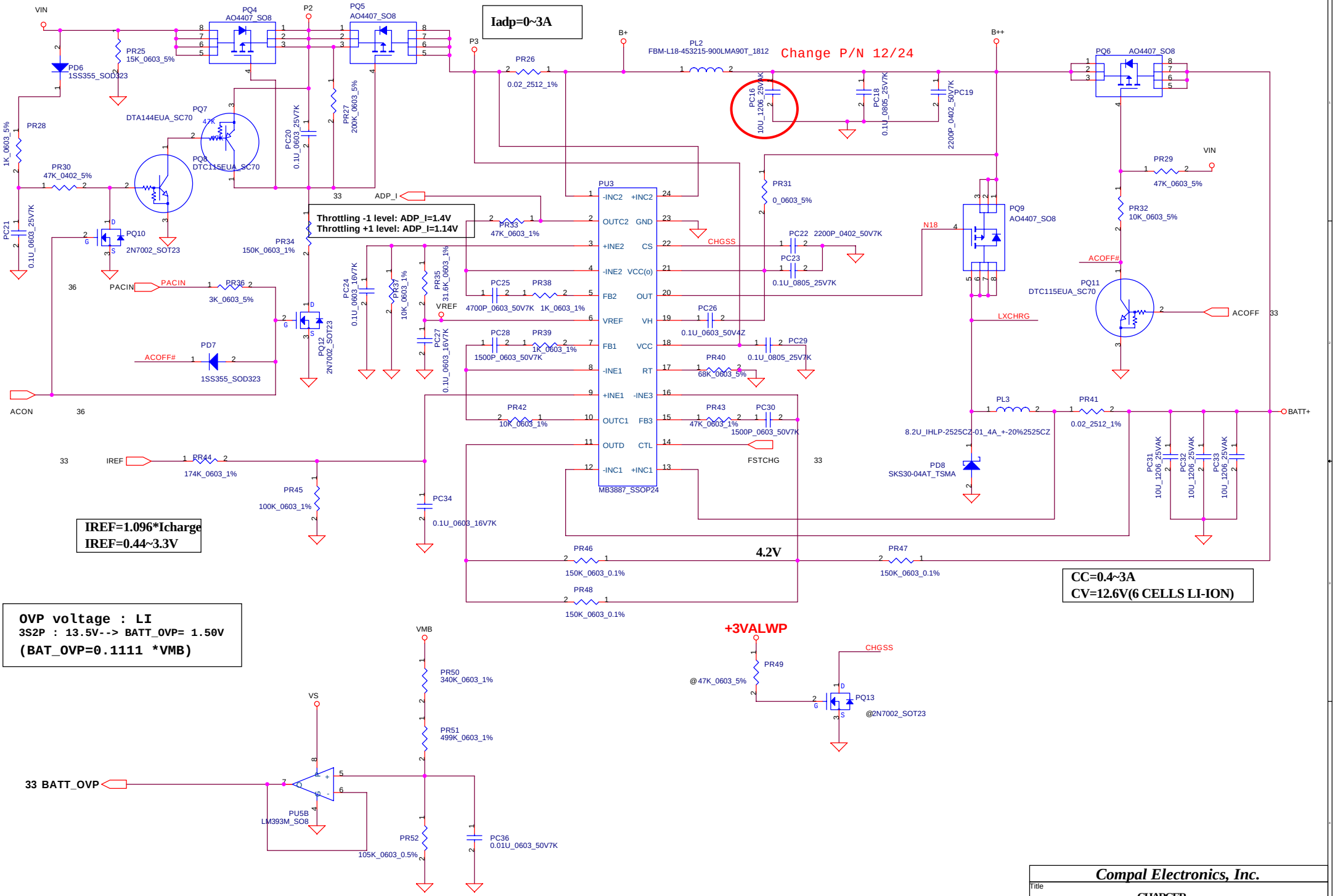
Iadp=0~3A
Change P/N 12/24
Throttling -1 level: ADP_I=1.4V
Throttling +1 level: ADP_I=1.14V
IREF=1.096*Icharge
IREF=0.44~3.3V
4.2V
CC=0.4~3A
CV=12.6V(6 CELLS LI-ION)
OVP voltage : LI
3S2P : 13.5V--> BATT_OVP= 1.50V
(BAT_OVP=0.1111 *VMB)
+3VALWP
VIN
B+
B++
P2
P3
PQ4 AO4407_SO8
PQ5 AO4407_SO8
PQ6 AO4407_SO8
PQ7 DTA144EUA_SC70
PQ8 DTC115EUA_SC70
PQ9 AO4407_SO8
PQ10 2N7002_SOT23
PQ11 DTC115EUA_SC70
PQ12 2N7002_SOT23
PQ13 @2N7002_SOT23
PD6 1SS355_SOD323
PD7 1SS355_SOD323
PD8 SKS30-04AT_TSMA
PU3 MB3887_SSOP24
PU5B LM393M_SO8
PL2 FBM-L18-453215-900LMA90T_1812
PL3 8.2U_IHLP-2525CZ-01_4A_+-20%2525CZ
PR25 15K_0603_5%
PR26 0.02_2512_1%
PR27 200K_0603_5%
PR28 1K_0603_5%
PR29 47K_0603_5%
PR30 47K_0402_5%
PR31 0_0603_5%
PR32 10K_0603_5%
PR33 47K_0603_1%
PR34 150K_0603_1%
PR35 31.6K_0603_1%
PR36 3K_0603_5%
PR37 10K_0603_1%
PR38 1K_0603_1%
PR39 1K_0603_1%
PR40 68K_0603_5%
PR41 0.02_2512_1%
PR42 10K_0603_1%
PR43 47K_0603_1%
PR44 174K_0603_1%
PR45 100K_0603_1%
PR46 150K_0603_0.1%
PR47 150K_0603_0.1%
PR48 150K_0603_0.1%
PR49 @47K_0603_5%
PR50 340K_0603_1%
PR51 499K_0603_1%
PR52 105K_0603_0.5%
PC16 10U_1206_25V6K
PC18 0.1U_0805_25V7K
PC19 2200P_0402_50V7K
PC20 0.1U_0603_25V7K
PC21 0.1U_0603_25V7K
PC22 2200P_0402_50V7K
PC23 0.1U_0805_25V7K
PC24 0.1U_0603_16V7K
PC25 4700P_0603_50V7K
PC26 0.1U_0603_50V4Z
PC27 0.1U_0603_16V7K
PC28 1500P_0603_50V7K
PC29 0.1U_0805_25V7K
PC30 1500P_0603_50V7K
PC31 10U_1206_25VAK
PC32 10U_1206_25VAK
PC33 10U_1206_25VAK
PC34 0.1U_0603_16V7K
PC36 0.01U_0603_50V7K
ADP_I
CHGSS
PACIN
ACOFF#
ACOFF
VREF
LXCHRG
FSTCHG
ACON
IREF
VMB
VS
BATT+
N18
33 BATT_OVP
-INC2 +INC2
OUTC2 GND
+INE2 CS
-INE2 VCC(o)
FB2 OUT
VREF VH
FB1 VCC
-INE1 RT
+INE1 -INE3
OUTC1 FB3
OUTD CTL
-INC1 +INC1
Compal Electronics, Inc.
CHARGER
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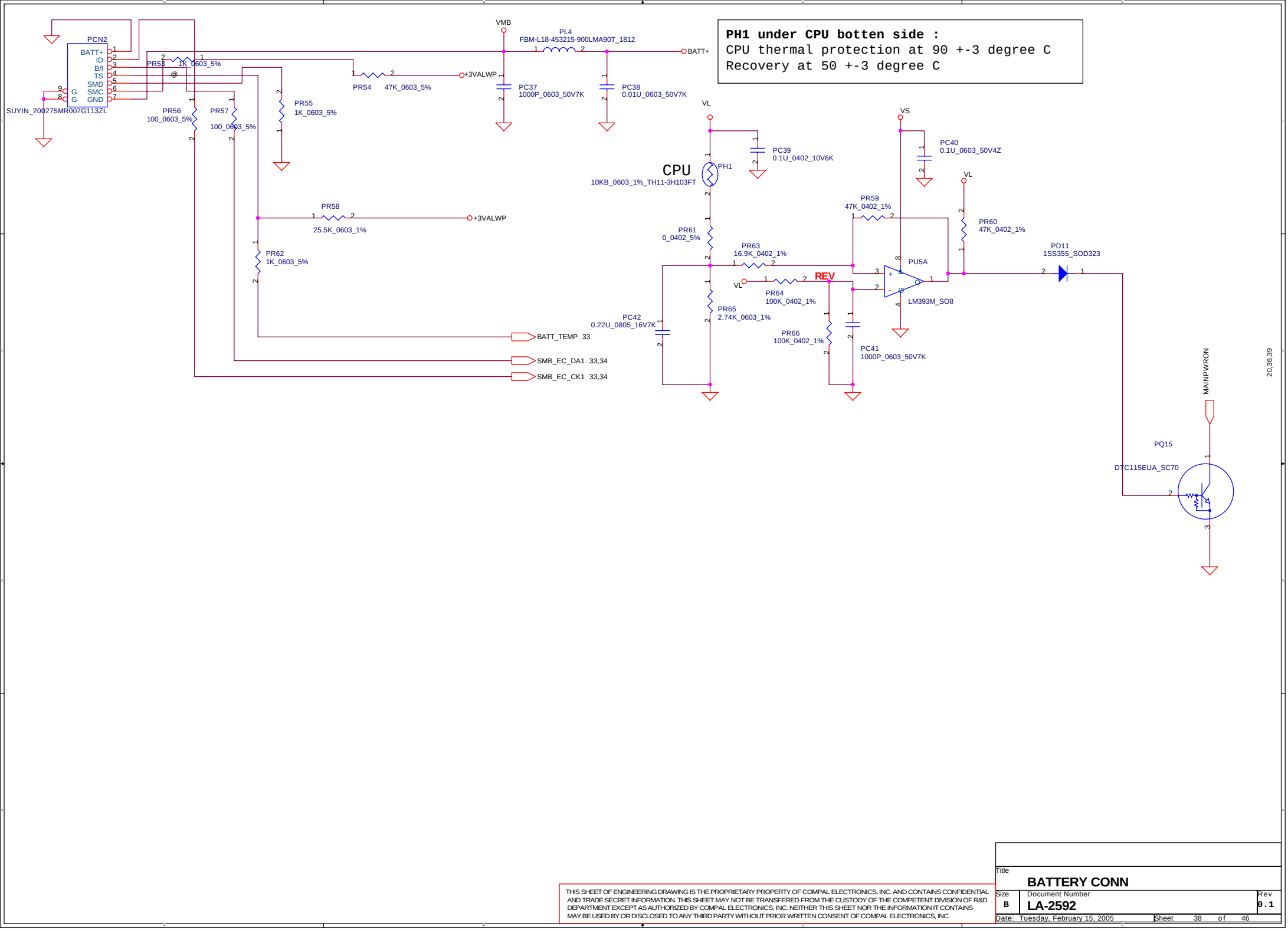

Title	BATTERY CONN	
Size: B	Document Number: LA-2592	Rev: 0.1
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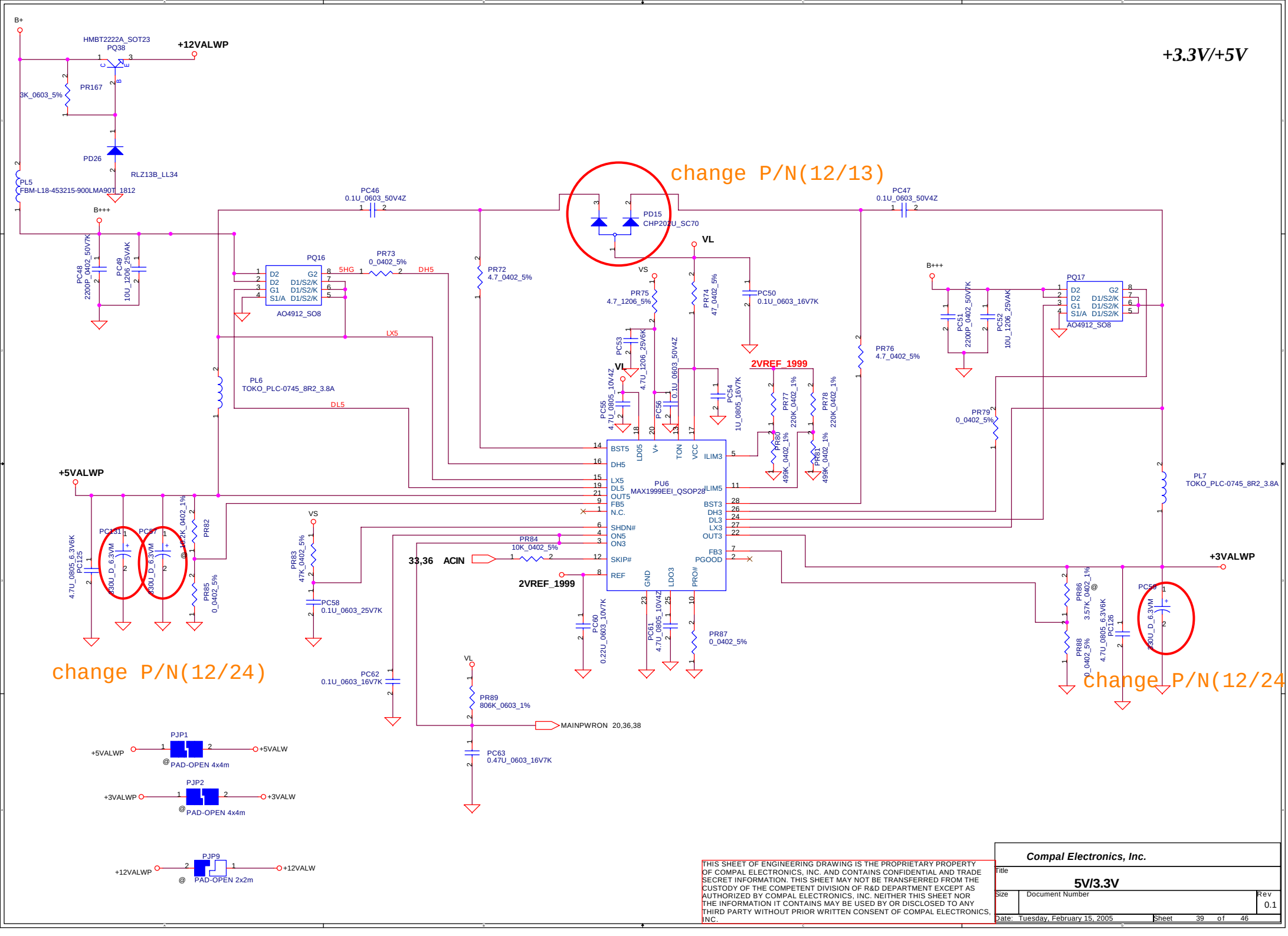

Compal Electronics, Inc.

Title: 5V/3.3V

Size | Document Number | Rev 0.1

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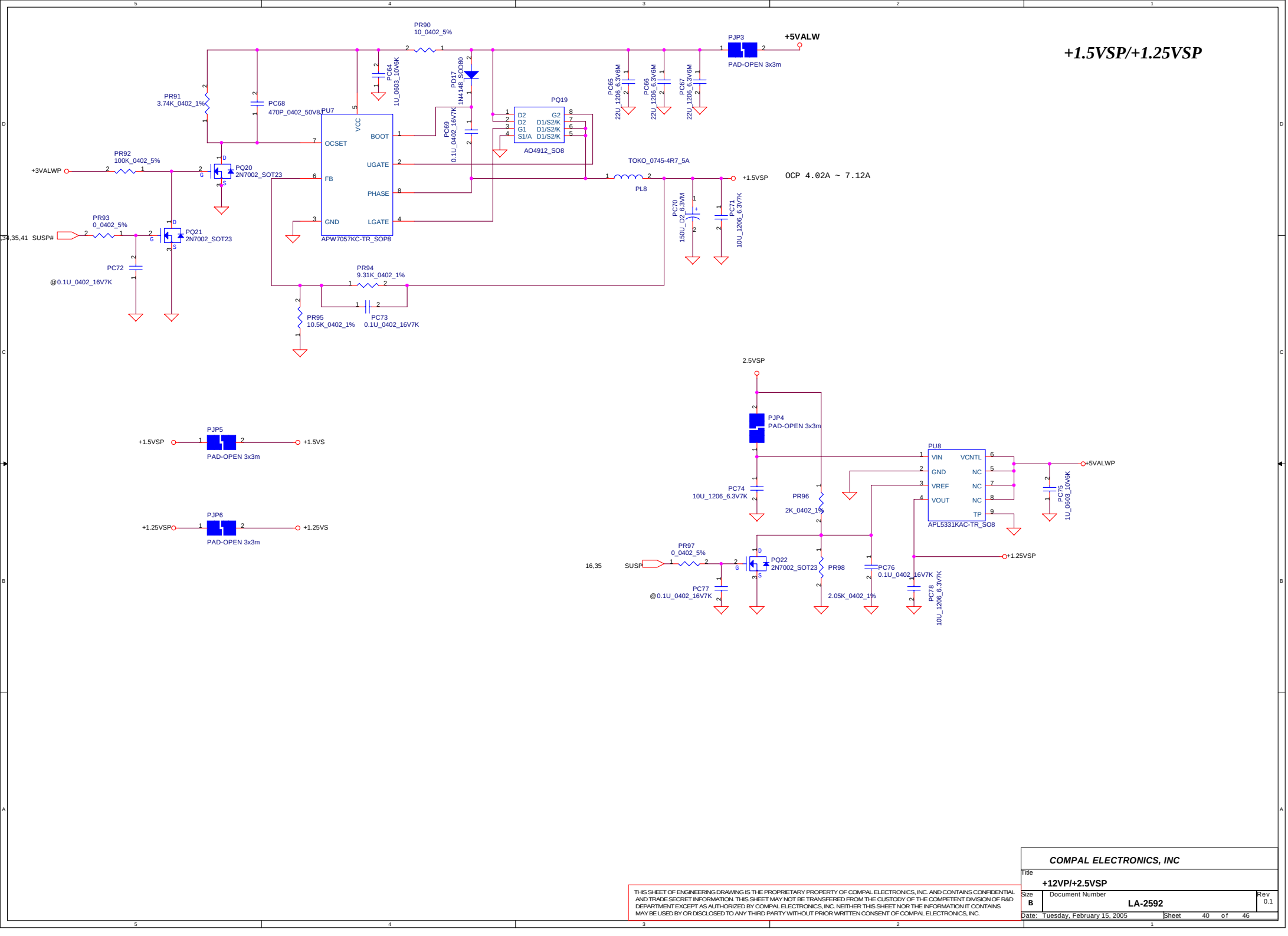
+1.5VSP/+1.25VSP



COMPAL ELECTRONICS, INC		
Title: +12VP/+2.5VSP		
Size: B	Document Number: LA-2592	Rev: 0.1
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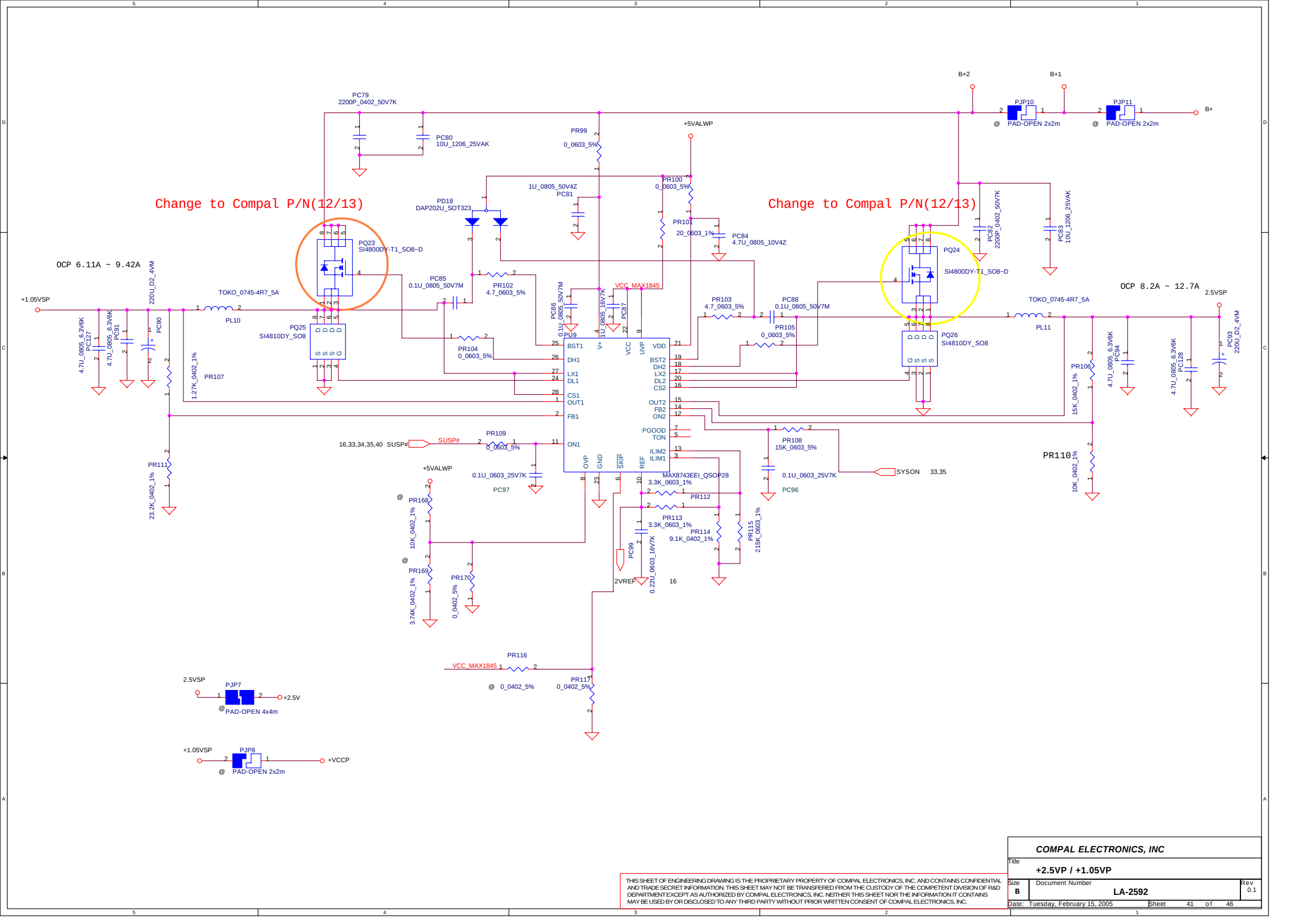

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COMPAL ELECTRONICS, INC

Title: **+2.5VP / +1.05VP**

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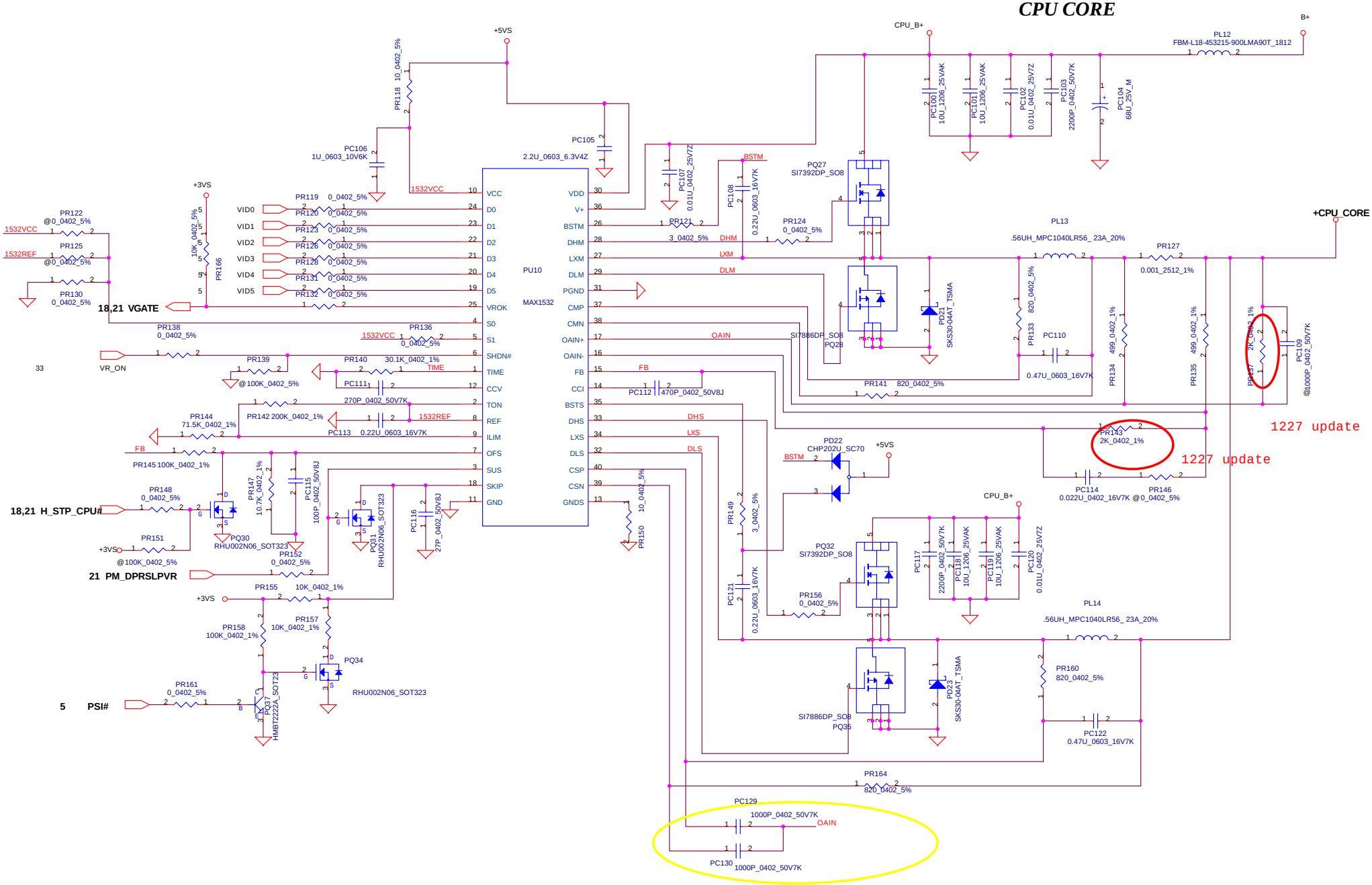
CPU CORE



Compal Electronics, Inc.		
Title: CPU_CORE		
Size: Custom	Document Number: LA-2592	Rev: 0.1
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Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
1	Change USB Power MOS form AATI4610AIGV-T1_SOT23-5 to RT9702ACB_SOT23-5 SA097020100	Cost down	Rev0.2	P31			
2	Add new part U33 74LVC1G125GW_SOT3535 SA411250200 & C540 0.1U_0402_16V4Z SE070104Z00 & R366 10K_0402_5% SD028100200	HDD IOR# issue	Rev0.2	P31			
3	Add new part C541 10U_0805_10V4Z SE053106Z00	HDD Power ripple	Rev0.2	P31			
4	Del R412 0_0402_5% SD028000000	BITCLK 0 ohm passthought	Rev0.2	P31			
5	Del R192(DPRSLP#)/R195(FERR#) 0_0402_5% SD028000000	Passthought Dothan B signal	Rev0.2	P31			
6	BOM Del R136/R147 40.2_0402_1% SD034402A00	Intel recommand	Rev0.2	P31			
7	Add new part C542/C543 10U_0805_6.3V6M SE093106K00	NB +VCCP Power ripple	Rev0.2	P31			
8	~~Add new part R192 0_0402_5% SD028000000~~	Passthought FWR# to FWE#	Rev0.2	P31			
9	BOM del C377 100U_6.3V_M SF10001M100	USB Power 100UF * 2 -> 100UF *1	Rev0.2	P32			
10	Del R412 0_0402_5% SD028000000	Del MODEM AC97 BITCLK 0 Ohm	Rev0.2	P30			
11	~~BOM add C35 330U_D2E_2.5VM SGA19331D00~~	NB +2.5V Power ripple	Rev0.2	P10			
12	~~BOM add C77 150U_D_6.3VM SG020151330~~	+2.5V Power ripple	Rev0.2	P14			
13	~~BOM add C285 330U_D2E_2.5VM SGA19331D00~~	+CPU_CORE Power ripple	Rev0.2	P6			
14	CRT LUMA/COMPS/CRMA & USBP6-/USBP6+ swap	layout swap avoid power noise cover	Rev0.2	P17			
15	1394 PCI BUS swap PCI_AD[0..31]	1394 PCI BUS Layout update	Rev0.2	P27			
16	Add new part R192 10K_0402_5% SD028100200	Lid SW# M/B pull high.	Rev0.2	P33			
17	RTC BATT1 pin swap	RTC Battary pin define error	Rev0.2	P20			
18	Del part R19 BOM part change R19 0_0603_5% to L21 BLM18PG600SN1_0603 SM010022000	CRT power filter noise NB power plan R19 -> L21	Rev0.2	P10			
19	BOM change part 10 to 56: RP1, RP2, RP3,RP4,RP5,RP6,RP7,RP8,RP14,RP15,RP16,RP17,RP18,RP19,RP20,RP21 -> 56_1206_8P4R_5% SD302560A00	Rev0.1 BOM error	Rev0.2	P13			
20	BOM change part 10 to 56: R5,R6,R7,R8,R15,R16,R17,R18,23,R26,R28,R29,R30,R31,R36,R39 -> 56_0402_5% SD028560A00	Rev0.1 BOM error	Rev0.2	P13			
21	Add new part C544,C545,C546,C548,C550 0.1U_0402_16V4Z SE070104Z00	NB Power plan filter	Rev0.2	P10			
22	Add new part C549,C551,C547 0.22U_0603_16V4Z SE027224NT5	NB Power plan filter	Rev0.2	P10			
23	Add new part L21,L22,L23,L24,L25 CHB1608U301_0603 SM010012500	NB Power plan filter	Rev0.2	P10			
24	U20Pin93 - Del ON/OFFBTN_LED# JP15.Pin6 - chagne ON/OFFBTN_LED# to GND	ON/OFFBTN_LED# need EC control, LED direct pull +3VS	Rev0.2	P17,P33			
25	BOM D6 change 1N4148_SOT23 to DAN202U_SC70 SC2N202U0T4	SWDF ON/OFF# no function	Rev0.2	P34			
26	JOPEN1,JOPEN3,JOPEN4 follow JOPEN2 footprint	DFX review recommand	Rev0.2	P20,P29			
27	JOPEN5,JOPEN6,JOPEN7 reserve MIC second rounting	For ME recommand	Rev0.2	P31			
28	Pin73 - EC_IDERST Move to Pin19 Pin19 - ADP_I Move to Pin73	For EC Swap sagnal	Rev0.2	P33			

Compal Electronics, Inc.
Title: PIR
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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
29	Del C443 0.47U_0603_16V7K SE026474KT6 Del BOM C445 1000P_0402_50V7K SE074102K00	Del +USB_VCCA CAF	Rev0.2	P32			
30	Add BOM R208 100K_0402_5% SD028100300	PM_DPRSLPVR stuff on resistor	Rev0.2	P21			
31	Add new part R19 43K_0402_5% SD028430200	Option ENE1410 & TI1410 resistor	Rev0.2	P25			
32	Add new part C443 150U_D_6.3VM SG020151330	NB power +2.5VS BOM non-stuff	Rev0.2	P10			
33	Change BOM part U11 74AHCT1G125GW to 74LVC1G125GW_SOT3535 SA411250200	BIOS block schematic part change	Rev0.2	P34			
34	Change BOM part L1 BLM18PG600SN1_0603 to 74BLM18PG330SN1_2P SM010019400	NB power +1.5VS ripple	Rev0.2	P10			
35	Add net U20.pin93 EC_IDERST# for gating HD_IOR#	Gating HD_IOR#	Rev0.2	P33			
36	Add BOM part R27 10K_0402_5% SD028100200 & C54 1000P_0402_50V7K SE074102K00	FAN schematic FAN1SPD stuff on pull high & CAF	Rev0.2	P15			
37	Add new part R195,R412,R452 0_0402_5% SD028000000	Option SWDJ@ & NONSWDJ@	Rev0.2	P23			
38	Del part R151,R152,R153,R154,R146,R158,R148,R138,R134	NB pin name CFG part change to test point.	Rev0.2	P07			
39	Del part R131,R132	NB pin name SDVOCTRL change to test point.	Rev0.2	P09			
40	ME change connector for LVDS/HDD/Keyboard/VGA B-B/Speaker/USB/RJ45/INT MIC		Rev0.2				
41	Del RJ45 LED function part R188, R224(10/100), R225(GLAN)	RJ45 connector no LED function	Rev0.2	P24	A2 MEMO		
42	BOM AC10 0.01UF NPO SE069103K00 change to 0.01UF X7R SE000000H00	Short part	Rev0.2	P30	A2 MEMO		
43	BOM AC11 SE168103M00 01U 250V M X7R 0805 change to SE093106K00 10U 6.3V M X5R 0805	BOM error	Rev0.2	P30	A2 MEMO		
44	BOM U23 CB714 A revision change to B0 SA007140B10	Change revision and all BOM`s CB712 change to CB714.	Rev0.2	P25	A2 MEMO		
45	BOM U20 KB910L A0 revision change to A1 revision SA009100110	Change revision	Rev0.2	P33	A2 MEMO		
46	Add new part U34 74LVC1G125GW SA411250200	IDE_HDIOR# gating.	Rev0.2	P23	A2 MEMO		
47	Add new part R131,R132 200 ohm 0402 SD028200000	For PCI-1410 BOM	Rev0.2	P27	A2 MEMO		
48	Del part U11,R57,R59,R60,C108,C109 Add part R58 0 0402 +-5% SD028000000	FSEL# pass-through INT_FSEL#	Rev0.2	P34	A2 MEMO		
49	Del part R206,C304	Signal M/B_ID	Rev0.2	P33	A2 MEMO		
50	SMT JP29 un-marked		Rev0.2	P31	A2 MEMO		
51	Del part C3, Add part C77	DDR +2.5V Cap change	Rev0.2	P14	A2 MEMO		
52	BOM AR7,AR8 SD010200500 20M Ohm +-1% change to SD015200500 20M Ohm +-5%	Short part	Rev0.2	P21	A2 MEMO		
53	BOM AC5,AC6,AC12,AC13 SE072104K00 0.1U 25V +-10% Y5V change to SE070104Z00 0.1U 16V +-10% Y5V	Short part	Rev0.2	P30	A2 MEMO		
54	Del part R237	Del SB`s AC_IN	Rev0.3	P30	B MEMO		
55	Change part DDR Hynix A die SA216220000 -> B die SA000023200	Chagne Hynix DDR version	Rev0.3	P12	B MEMO		
56	NB's signal COMP/B & Y/G swap	Schematic pindefine error.	Rev0.3	P09			

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

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	B.Ver#	Phase
57	Change BOM part Q5,Q6 2N7002 to BSS138	LVDS EDID Vih, Vil no match spec	Rev0.3	P16			
58	Net GMCH_ENBKL connect to EC U20.p90 Add new part R134 100K pull down. Del part R11 0 ohm.	PM panel white back light issue.	Rev0.3	P21			
59	Add new part C552,C553,C554,C555,C558,C559,D16,D17,D18,D19,D20.	EMI issue.	Rev0.3	P17,P31,P32			
60	Add new part R453,Q43.	For SWDJ geting RIQ.	Rev0.3	P23			
61	Pop part R434.	For SWDJ A-A issue.	Rev0.3	P29			
62	Change BOM part AC11 10U_0805 to 1U_1206	ME issue.	Rev0.3	P30			
63	Add part C557,C558.	Boost audio "BO" sound issue.	Rev0.3	P31			
64	Change BOM part R439,R80 0_0402 to 470_0402.	Ear phone sound too big issue.	Rev0.3	P31			
65	Change BOM part JP28 footprint no match spec.	layout spec issue.	Rev0.3	P31			
66	U6, U13, U16, U17 nc pin connect to GND.		Rev0.3	P35			
67	Add jumper JOPEN5	EMI issue.	Rev0.3	P31			
68	Add part C560 SE053475Z05 4.7U 10V Z Y5V 0805	Change Card Reader power MOS for MS card conn issue	Rev0.3	P26			
69	Del BOM part Q34 SB923010010 SI2301BDS	Change Card Reader power MOS for MS card conn issue	Rev0.3	P26			
70	Add part U34 SA005280100 G528	Change Card Reader power MOS for MS card conn issue	Rev0.3	P26			
71	Change BOM part C374 SE076103K00 .01U 16V K X7R 0402 to SE070104Z00 .1U 16V Z Y5V 0402	Change Card Reader power MOS for MS card conn issue	Rev0.3	P26			
72	Add part R454, C357. net EC_MUTE# pull high chanGe to +5V_AMP	For audio CD-L/R noise option +VDDA & +5VAMP.	Rev0.3	P31			
73	Change BOM part R361 20K Ohm to 10K Ohm	For camera power switch.	Rev0.3	P32	C TEST BOM MEMO.		
74	Add part R455, Q45, Q44, JOPEN7. Add net CAMERA_ONOFF&+5VS_CAM	For camera power switch.	Rev0.3	P33,32	C TEST BOM MEMO.		
75	Change BOM part U26 to G528 for USB power MOS. Change Net U26.4 to SYSON# & OVCUR#3 pull high +3VALW	For camera power switch.	Rev0.3	P32	C TEST BOM MEMO.		
76	Change BOM part U32 Change SA0212I0000 S IC APA2121RI_TR TSSOP-24 AUDIO AMP to SA002320300 S IC TPA0232PWP TSSOP-24 AUDIO AMP	For APA AMP audio power up "bo" sound	Rev0.3	P31	C TEST BOM MEMO.		
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Version change list (P.I.R. List)

Power section

Item	Reason for change	PG#	Modify List	Date	B.Ver#
1	Update 1.05V, 2.5V, 1.5V, 3.3V and 5V CHOKE for cost down	38	PL7, PL6, Pl10,PL11,PL8 update to TOKIN 4.5mm(High) from VISHAY(3mm High)	Nov/12	A.Ver#
2	Add Capacity 4.7UF 2 pcs for reduce ribble voltage	38	Add 4.7U in pC?	Nov/12	A.Ver#
3	Update BST Resistor to 4.7 ohm 2 pcs for reduce switching node noise	38	PR72, PR76 update to 4.7 ohm from 0 ohm	Nov/12	A.Ver#
4	Update 12VALWP 16V Zener to 12V Zener	38	Update PD26 to 12V Zener from 16V Zener	Nov/12	A.Ver#
5	Add CPU Thermal protect circuit	37	Add PR61,PR65,PC42,PR63,PR64,PR66,PC41,PR59,PU5,PC40,PR60 PD11,PQ15	Nov/12	A.Ver#
6	Delete Battery Thermal Protect circuit	37	Delete PH2,PC43,PR68, PC45,PR70,PR71,PR67,PR69,PR14	Nov/12	A.Ver#
7	Update Output Voltage to 1.26V from 1.25V	39	Update PR96 to 2K from 1K Update PR98 to 2.05K from 1K	Nov/12	A.Ver#
8	Reduce Ripple Voltage for 1.05V and 2.5V	40	Add 4.7U Capacity in pC128, PC127	Nov/12	A.Ver#
9	Update Out put Voltage to 1.054V from 1.05V	40	Update PR111 to 23.2K from 25.5K	Nov/12	A.Ver#
10	Reduce switching node noise	40	Update PR102,PR103 to 4.7 ohm from 0 ohm	Nov/12	A.Ver#
11	Reduce noise for SUSP#	40	Update PR1092,PR103 to 4. to 27 ohm from 0 ohm	Nov/12	A.Ver#
12	Reduce CPU noise for Vgate	41	Update PR166 to 10K from 100K	Nov/12	A.Ver#
13	Reduce CPU noise	41	Update PL12 to 13A from 8A	Nov/12	A.Ver#
14	Reduce CPU switching node noise	41	Update PR121, PR149 to 3 ohm from 0 ohm	Nov/12	A.Ver#
15	Reduce CPU noise for input side	41	Add 68UF Capacity in PC 129, PC104	Nov/12	A.Ver#
16	Adjust load line	41	Update PR137 , PR143 to 2K from 3K	Nov/12	A.Ver#
	Delete shocket Diode for Maxium 8743 and Maxium 1999 solution	40 38	Delete PD24, PD25, PD19, PD20	Nov/12	A.Ver#

Compal Electronics, Inc.
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