# Compal Confidential

## DCL56 Schematics Document

## Banias uFCBGA/uFCPGA Package with Odem Core Logic

## 2004-02-03 for C-test

## REV: 0.3



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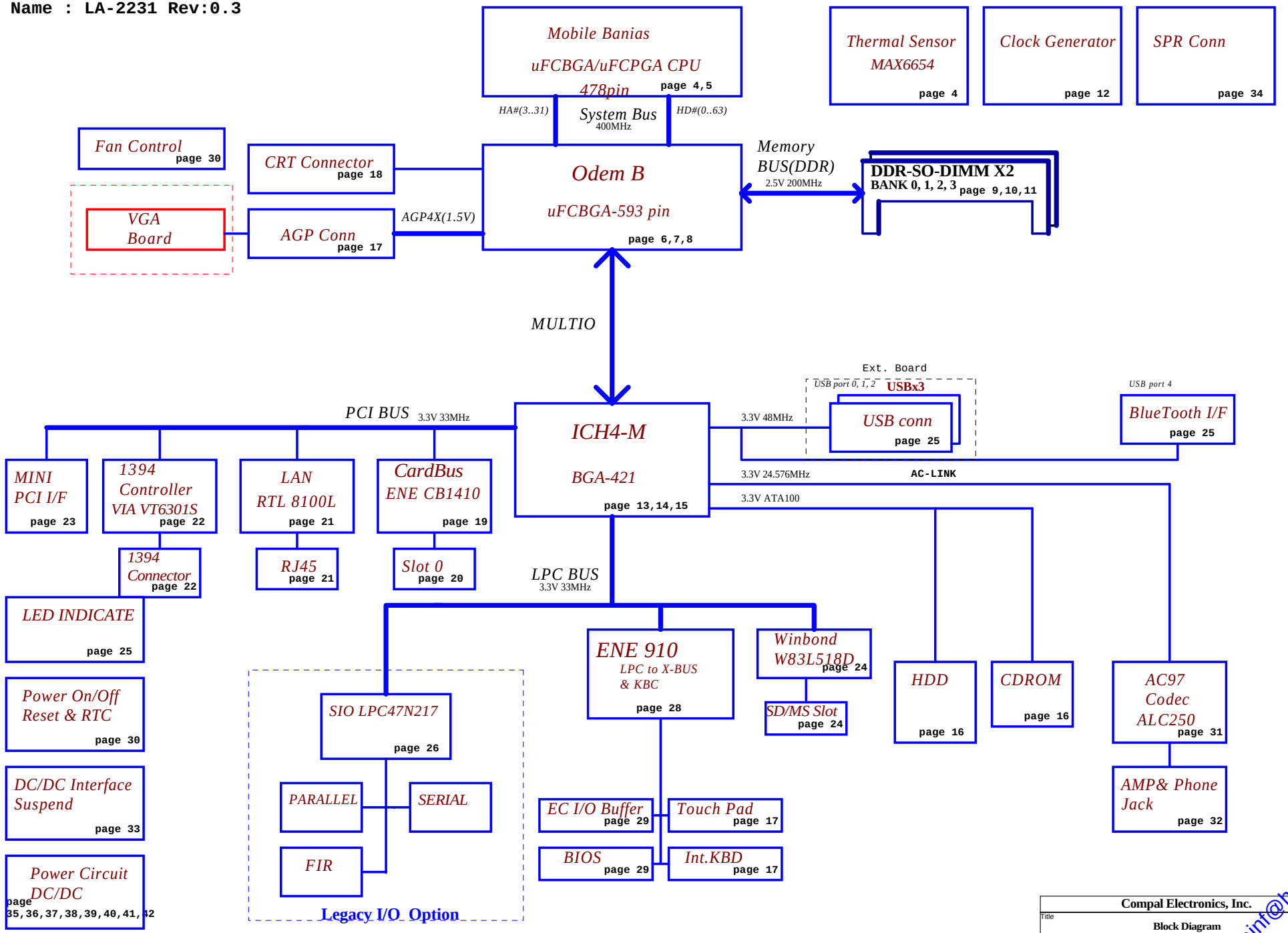
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: Cover Sheet | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 1 of 45 | |

# Block Diagram

Model Name :DCL56

File Name : LA-2231 Rev:0.3

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| Title: Block Diagram | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Tuesday, February 17, 2004 | Sheet 2 of 45 | |

## Voltage Rails

| Power Plane | Description | S0-S1 | S3 | S5 |
|---|---|---|---|---|
| VIN | Adapter power supply (19V) | N/A | N/A | N/A |
| B+ | AC or battery power rail for power circuit. | N/A | N/A | N/A |
| +CPU_CORE | Core voltage for CPU | ON | OFF | OFF |
| +VCCP | 1.05V rail for Processor I/O | ON | OFF | OFF |
| +1.2VS | 1.2VS switched power rail for MCH | ON | OFF | OFF |
| +1.25VS | 1.25V switched power rail | ON | OFF | OFF |
| +1.5VALW | 1.5V power rail | ON | ON | ON |
| +1.5V | 1.5V power rail | ON | ON | OFF |
| +1.5VS | AGP 4X | ON | OFF | OFF |
| +1.8VALW | 1.8V power rail | ON | ON | ON* |
| +1.8VS | 1.8V switched power rail | ON | OFF | OFF |
| +2.5V | 2.5V power rail | ON | ON | OFF |
| +2.5VS | 2.5V switched power rail | ON | OFF | OFF |
| +3VALW | 3.3V always on power rail | ON | ON | ON* |
| +3V | 3.3V power rail | ON | ON | OFF |
| +3VS | 3.3V switched power rail | ON | OFF | OFF |
| +5VALW | 5V always on power rail | ON | ON | ON* |
| +5V | 5V power rail | ON | ON | OFF |
| +5VS | 5V switched power rail | ON | OFF | OFF |
| +12VALW | 12V always on power rail | ON | ON | ON* |
| RTCVCC | RTC power | ON | ON | ON |

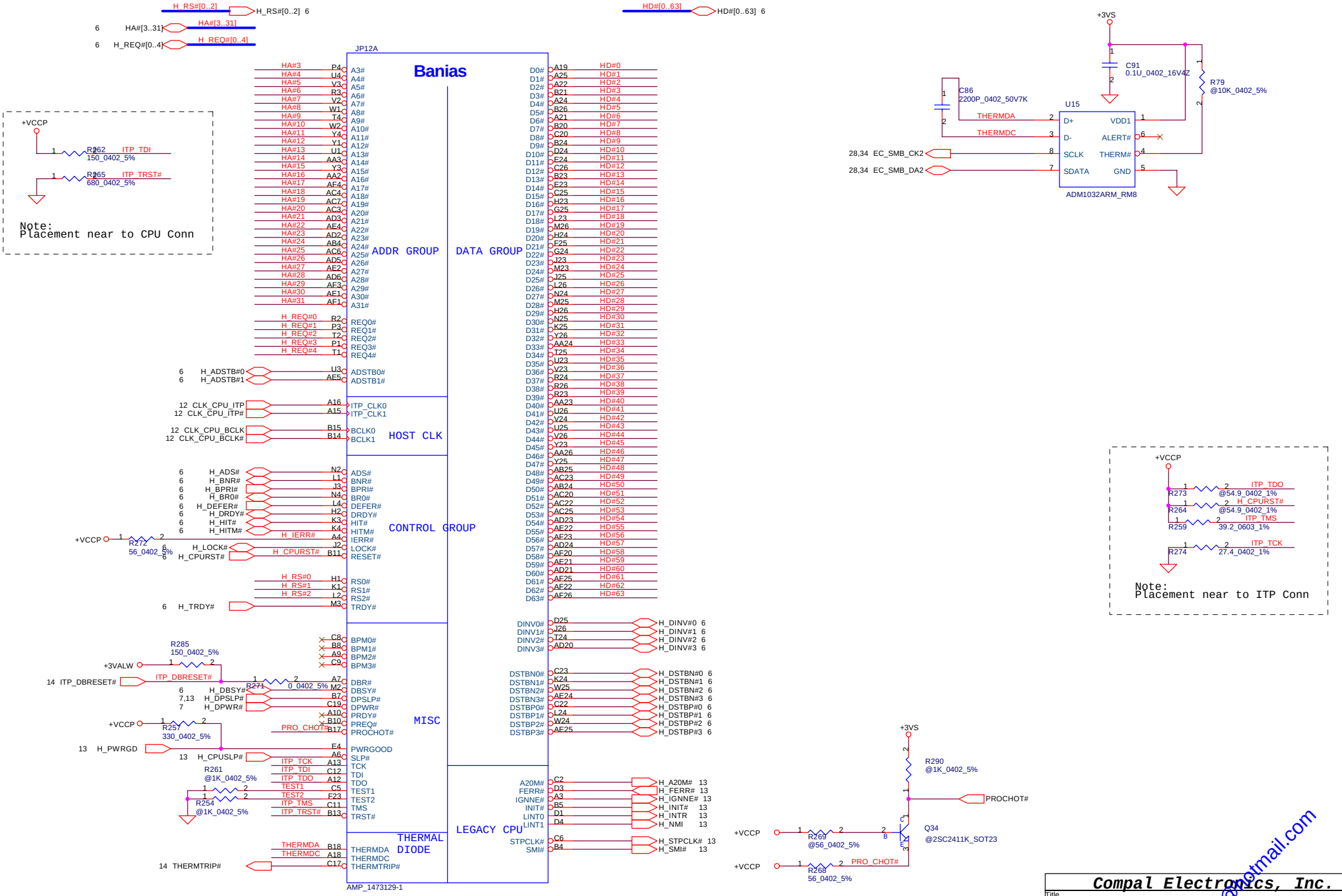
Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

## Board ID Table

| BID2 | BID1 | BID0 | PCB Revision |
|---|---|---|---|
| 0 | 0 | 0 | 0.1 |
| 0 | 0 | 1 | 0.2 |
| 0 | 1 | 0 | 0.3 |
| 0 | 1 | 1 | 0.4 |
| 1 | 0 | 0 | |
| 1 | 0 | 1 | |
| 1 | 1 | 0 | |
| 1 | 1 | 1 | |

## External PCI Devices

| Device | IDSEL# | REQ#/GNT# | Interrupts |
|---|---|---|---|
| VGA | | | PIRQA |
| CardBus | AD19 | 2 | PIRQC |
| LAN | AD17 | 3 | PIRQD |
| Mini-PCI | AD18,AD22 | 1/4 | PIRQC/PIRQD |
| 1394 | AD16 | 0 | PIRQB |



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| | | |
|---|---|---|
| Title | Banias Processor in mFCPGA479 with ITP | |
| Size: A3 | Document Number: DCL56 LA2231 | Rev: 0.3 |
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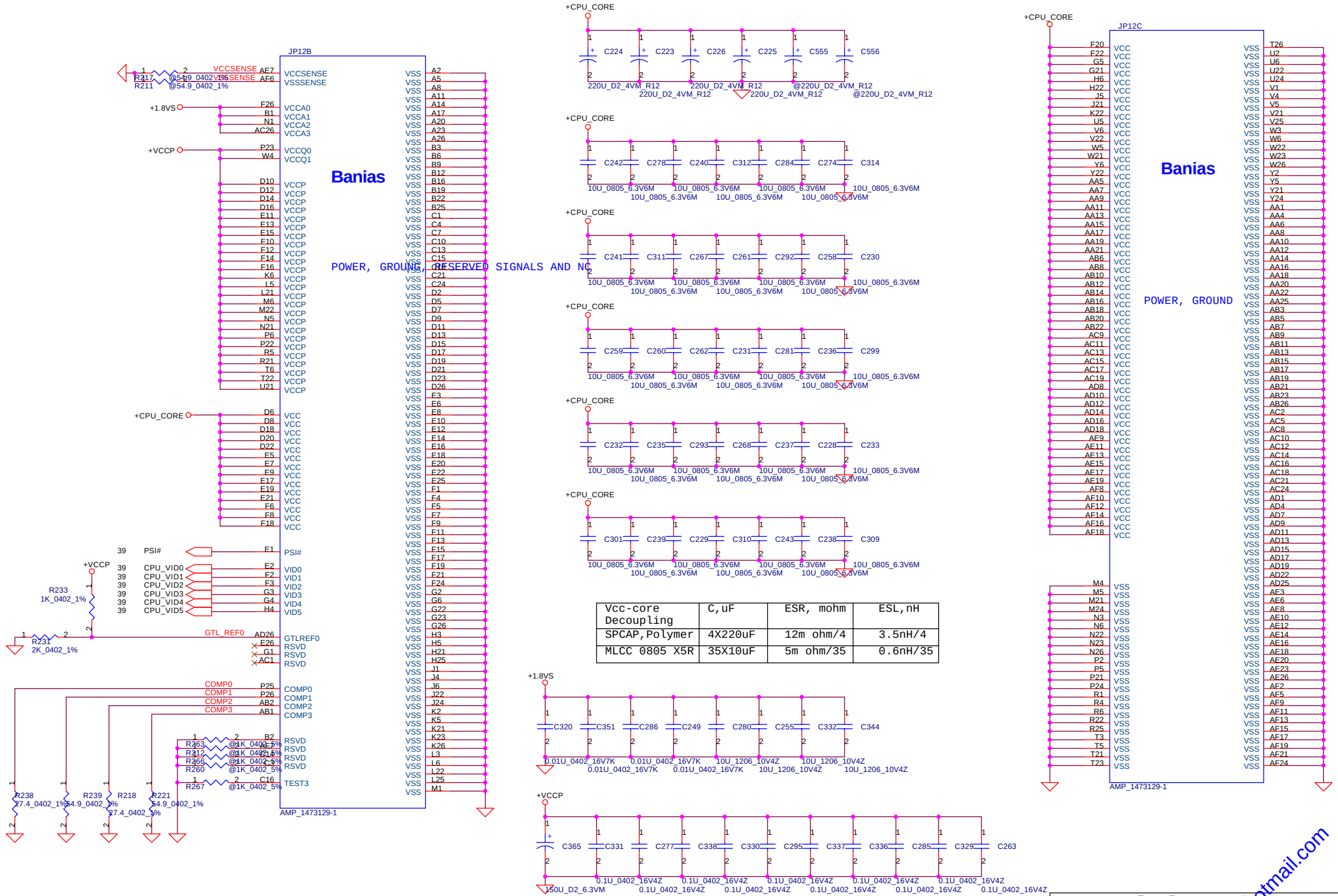


| Vcc-core Decoupling | C,uF | ESR, mohm | ESL,nH |
|---|---|---|---|
| SPCAP,Polymer | 4X220uF | 12m ohm/4 | 3.5nH/4 |
| MLCC 0805 X5R | 35X10uF | 5m ohm/35 | 0.6nH/35 |



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| | | |
|---|---|---|
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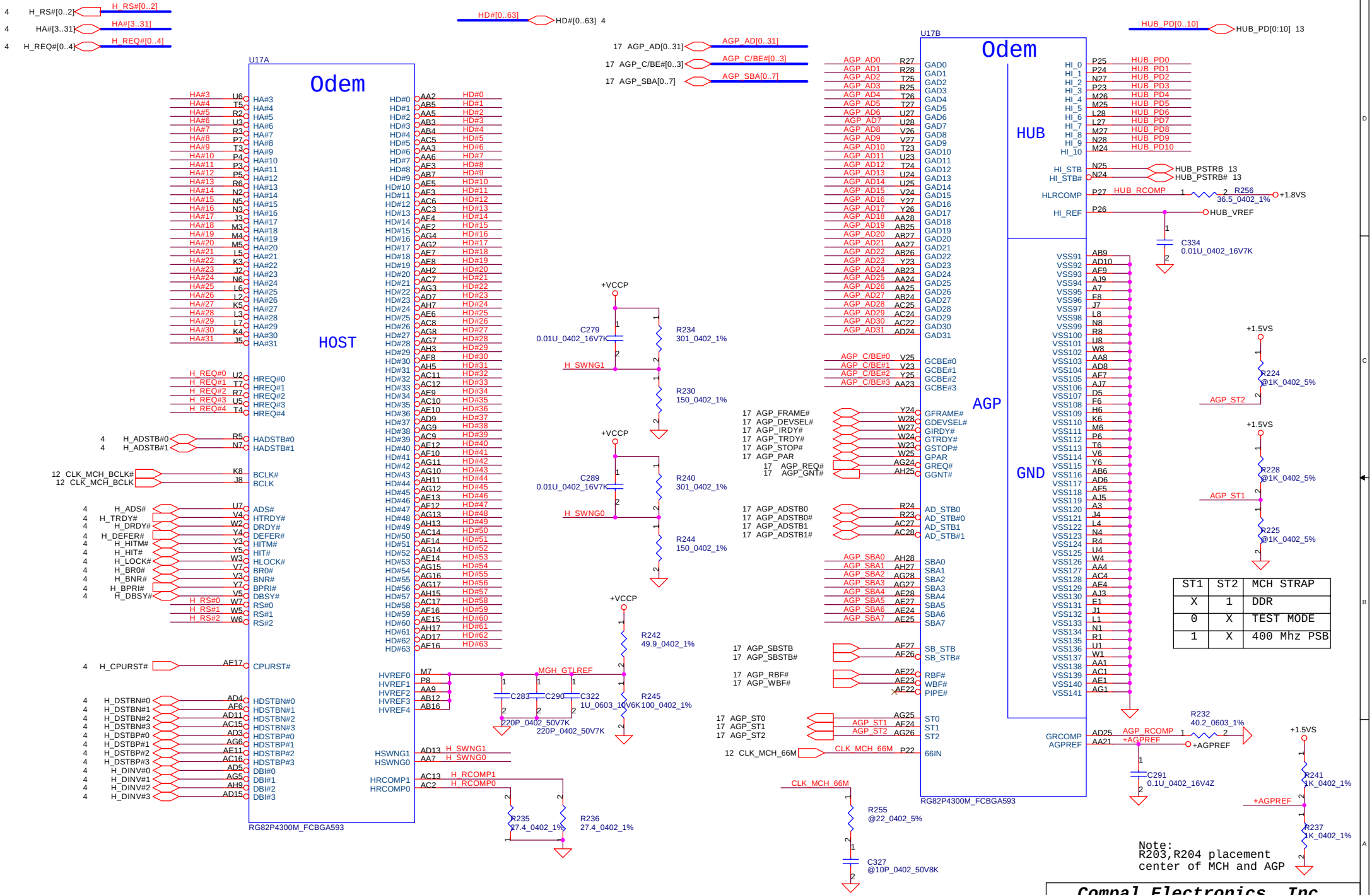




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| Title | Odem(1 of 3) | | |
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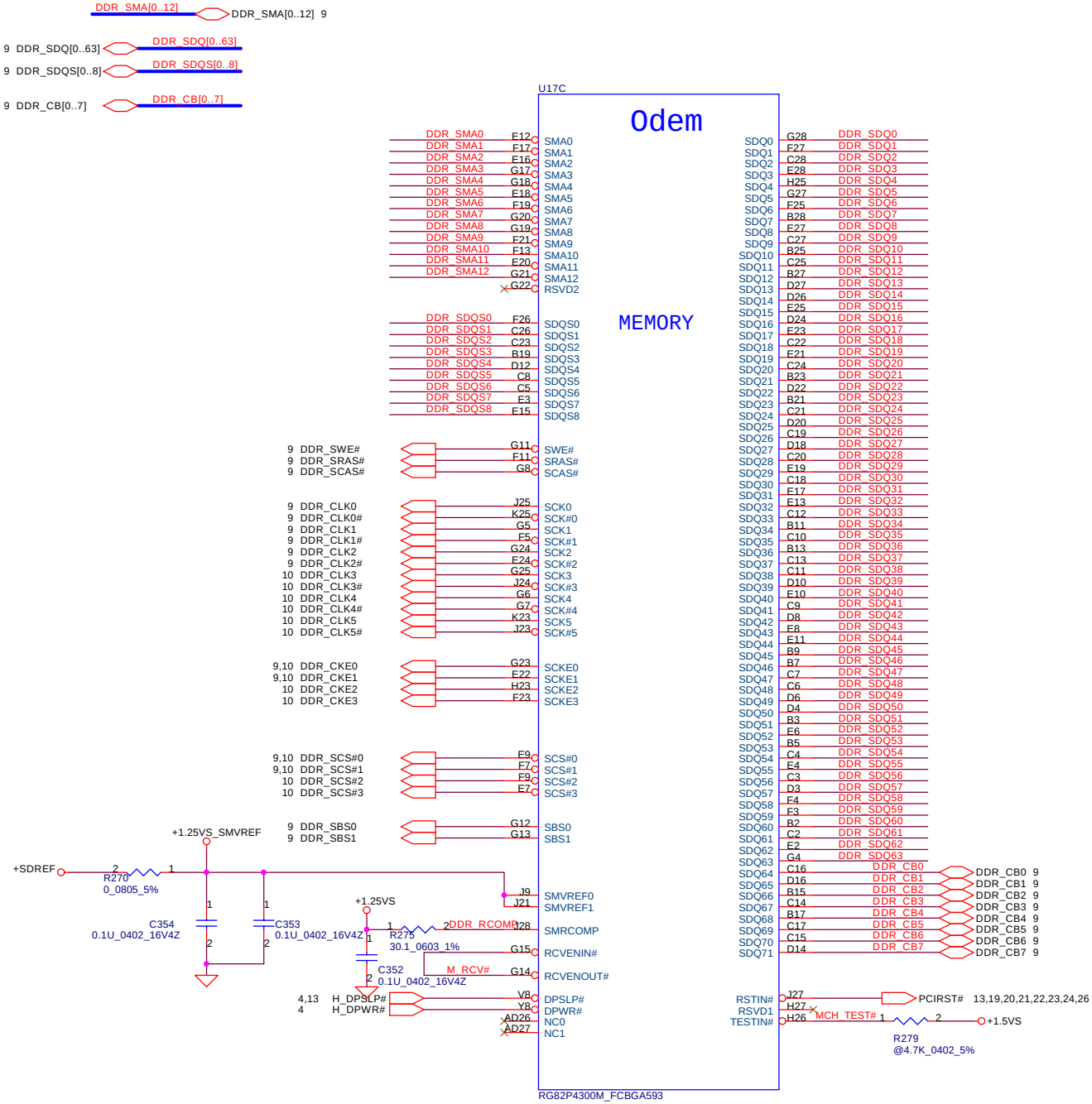




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|---|---|---|
| Title | Odem(2 of 3) | |
| Size: Custom | Document Number: DCL56 LA2231 | Rev: 0.3 |
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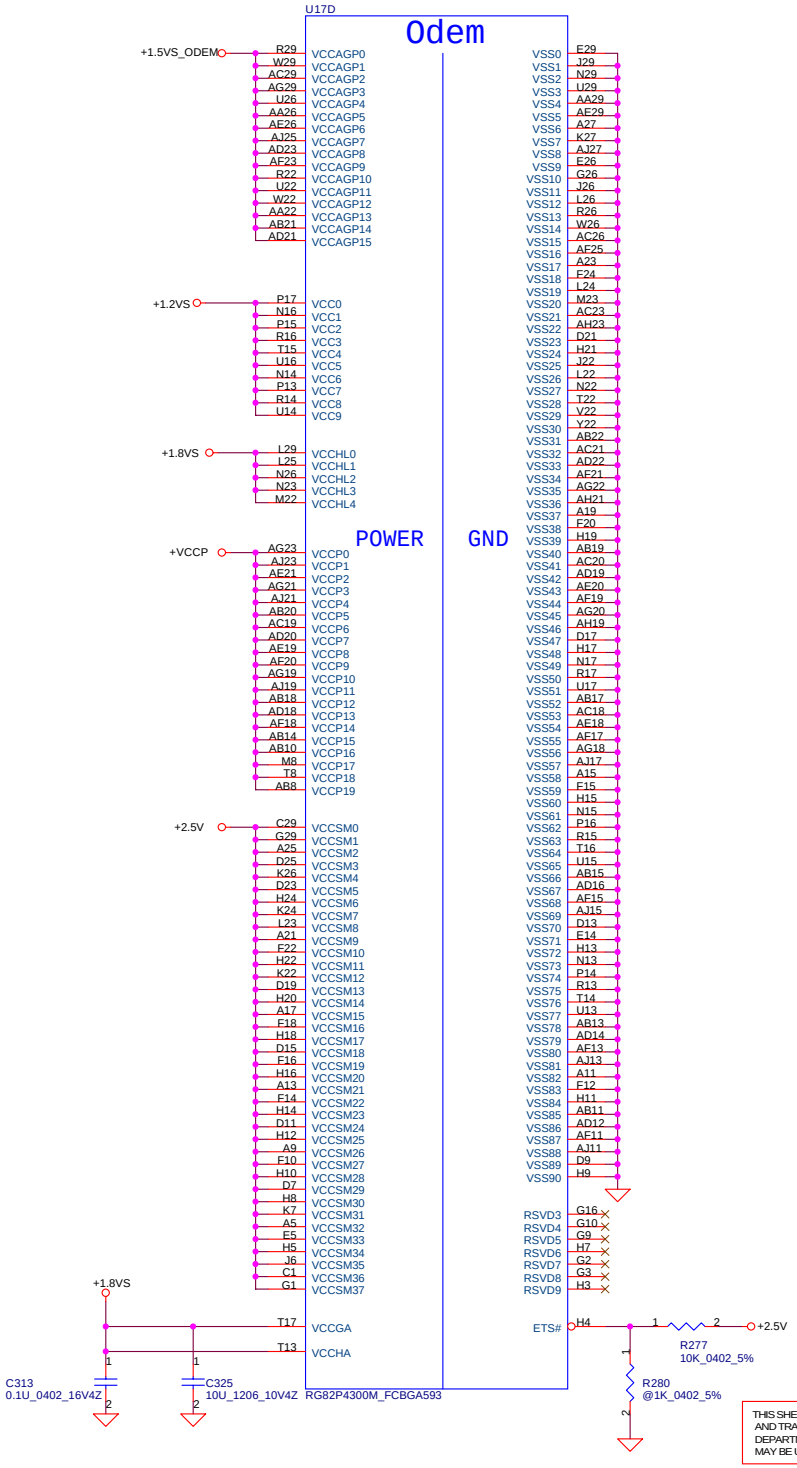


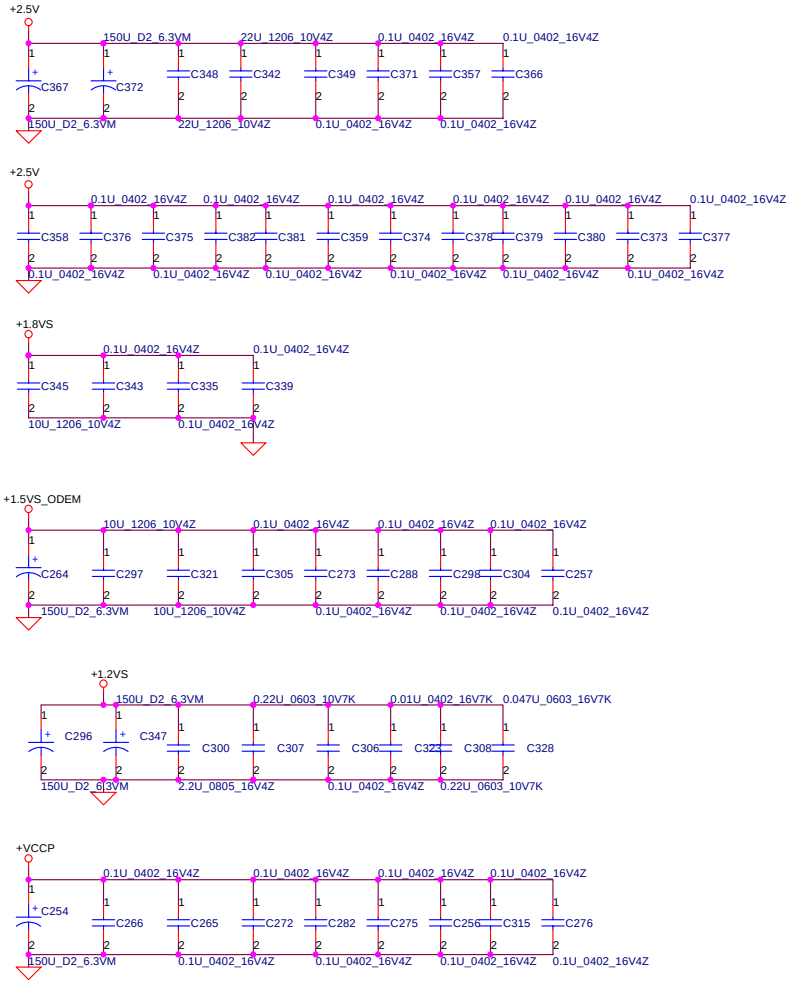




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|---|---|---|
| Title | Odem(3 of 3) | |
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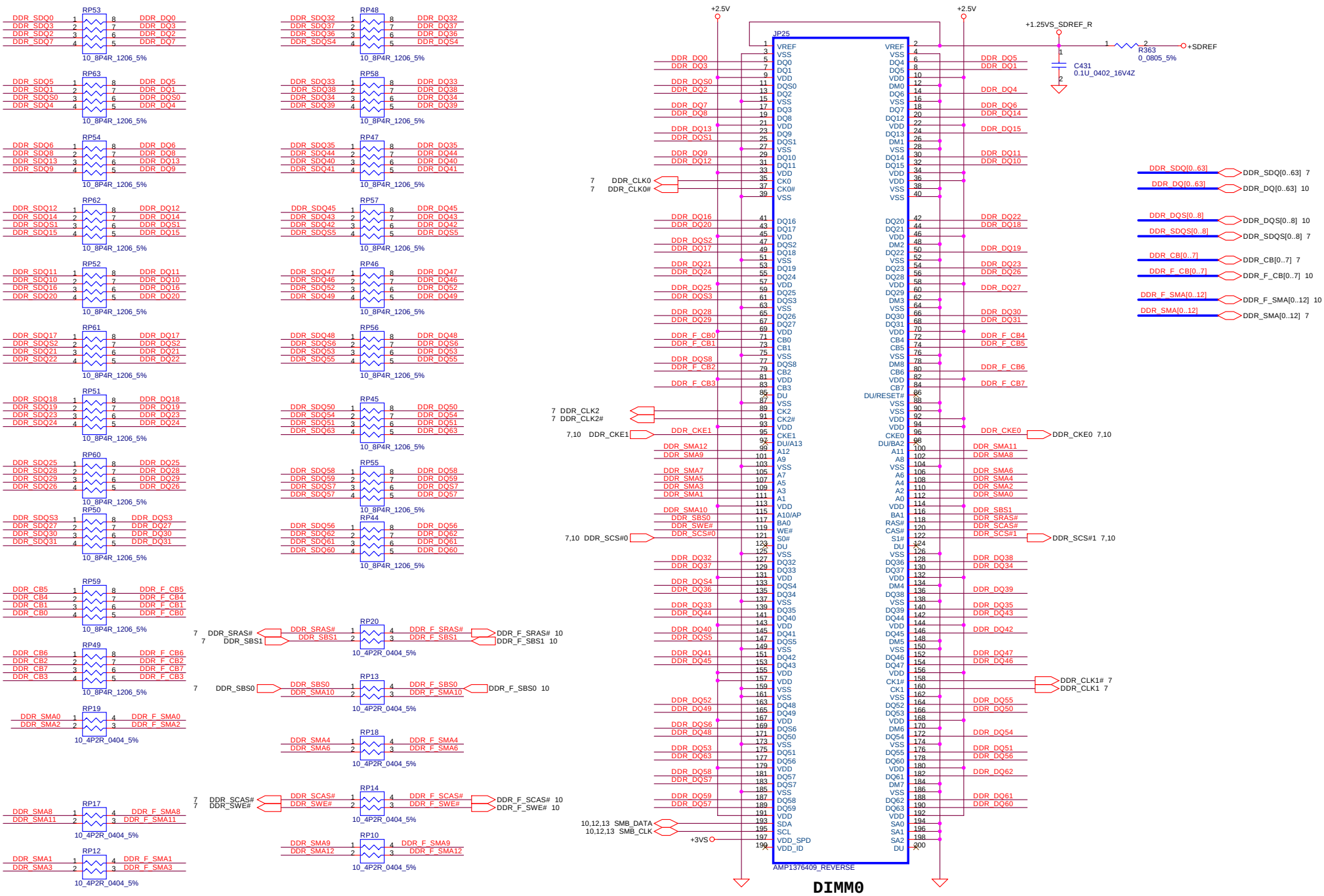


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|---|---|
| Compal Electronics, Inc. | |
| Title | DDR-SODIMM SLOT0 |
| Size | Document Number: DCL56 LA2231 |
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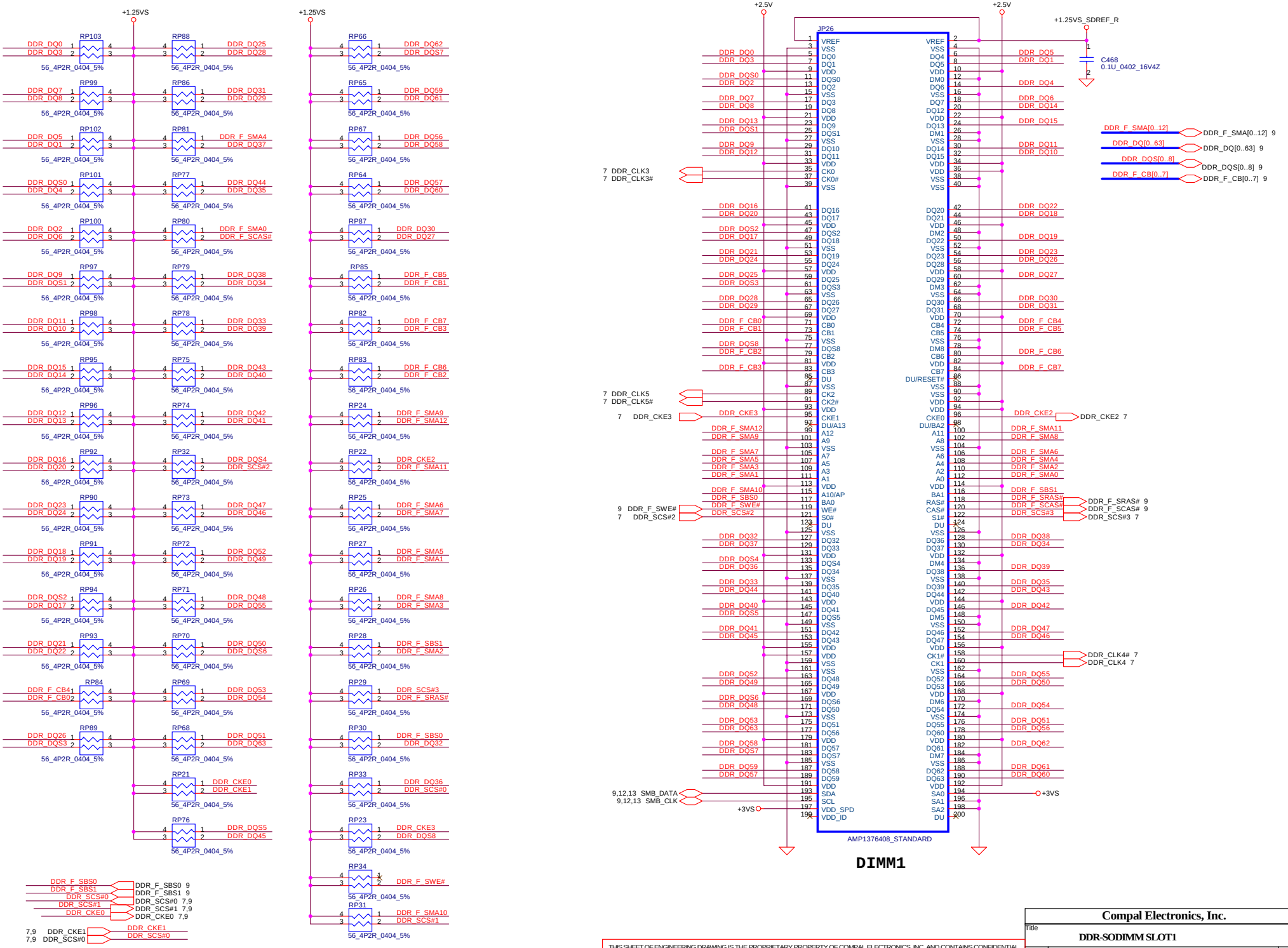


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Title: **DDR-SODIMM SLOT1**

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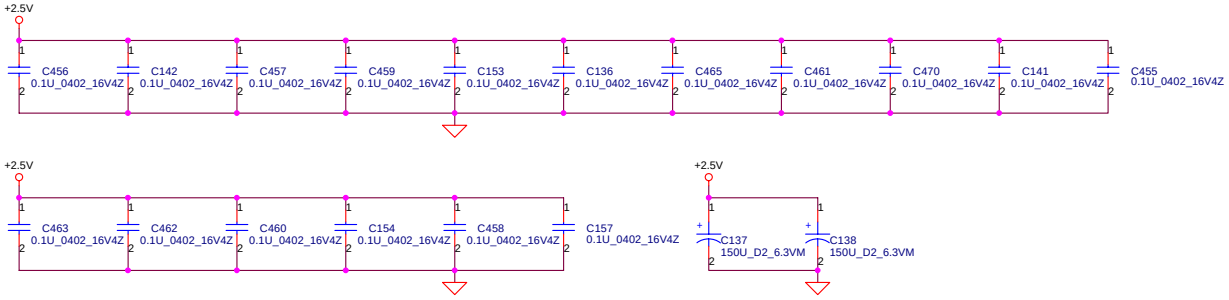
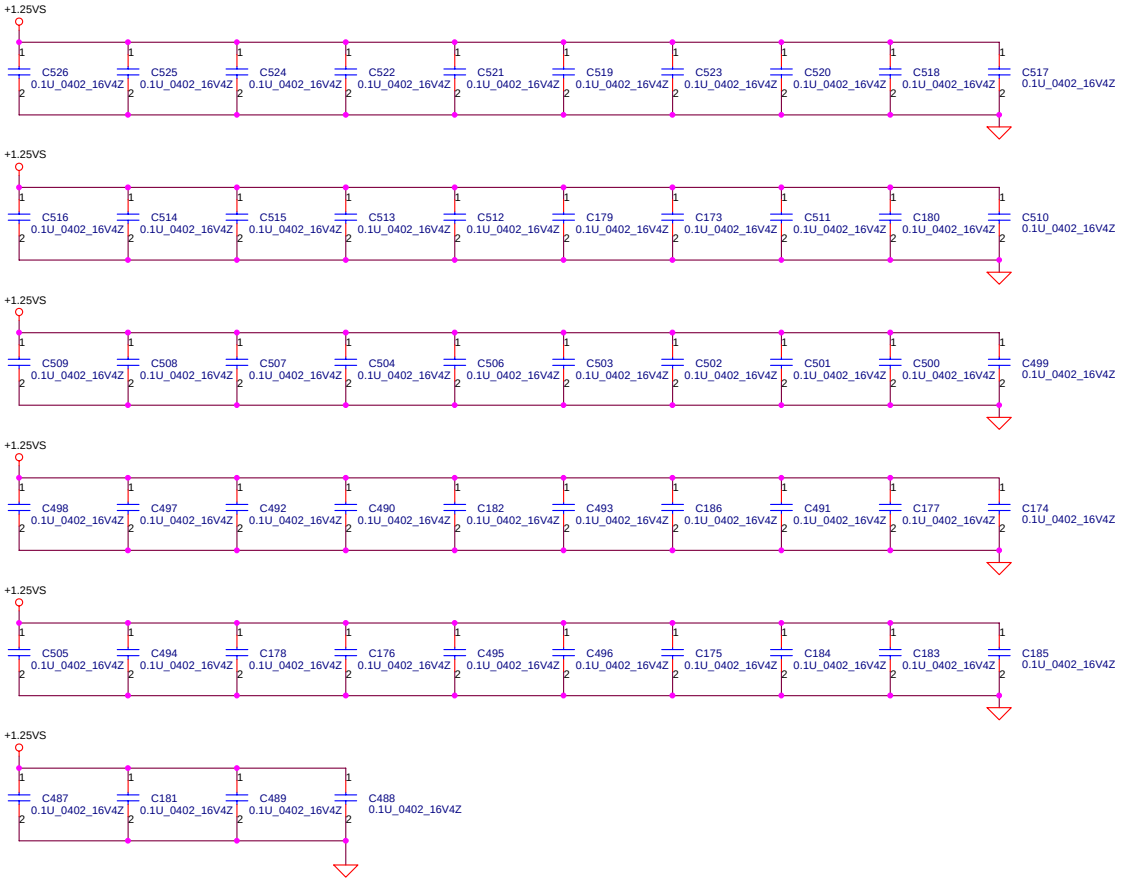
**Layout note :**

**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 | | |
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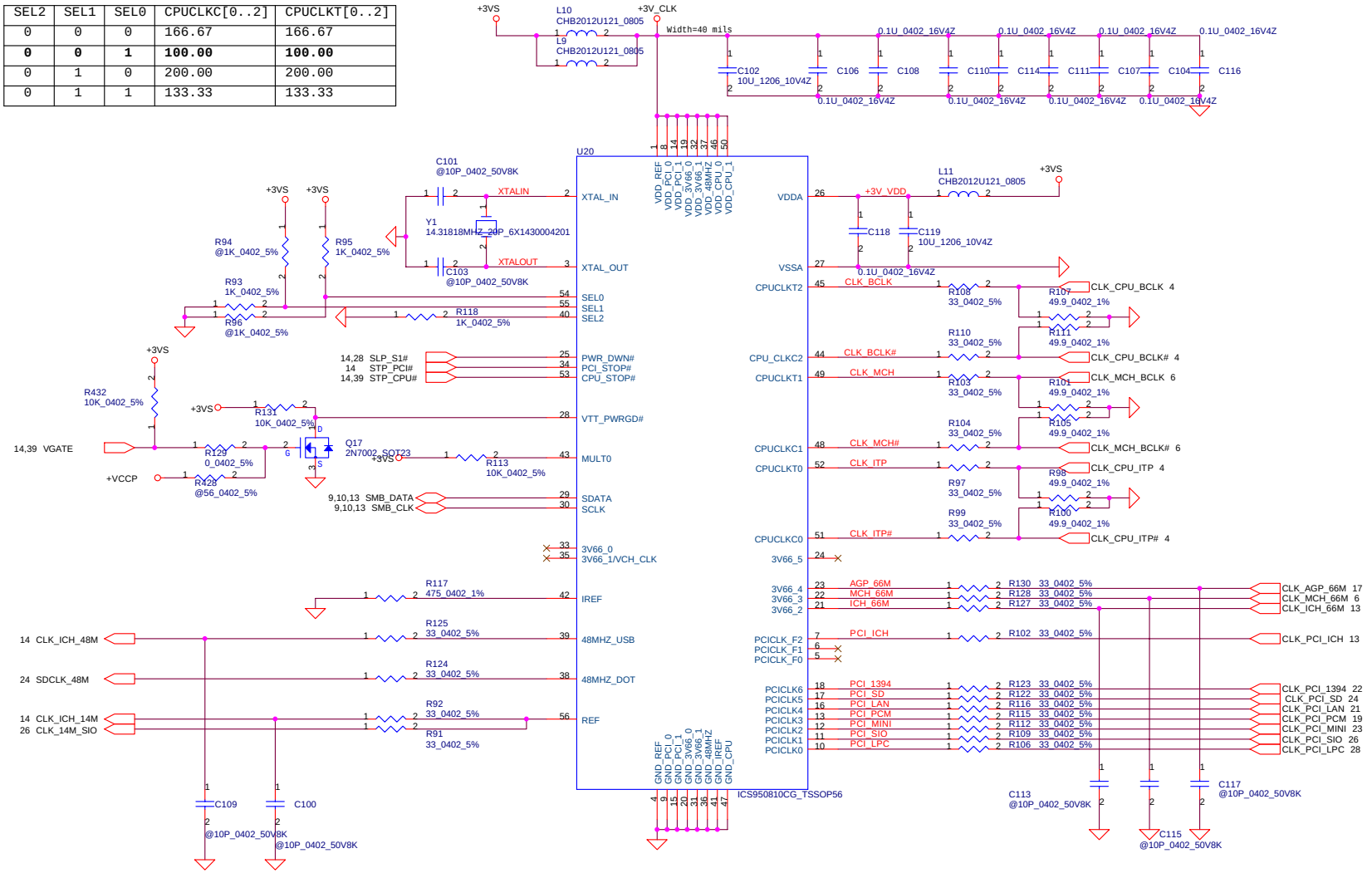
| Date: Thursday, February 05, 2004 | Sheet 11 of 45 | |

# Clock Generator

| SEL2 | SEL1 | SEL0 | CPUCLKC[0..2] | CPUCLKT[0..2] |
|---|---|---|---|---|
| 0 | 0 | 0 | 166.67 | 166.67 |
| **0** | **0** | **1** | **100.00** | **100.00** |
| 0 | 1 | 0 | 200.00 | 200.00 |
| 0 | 1 | 1 | 133.33 | 133.33 |



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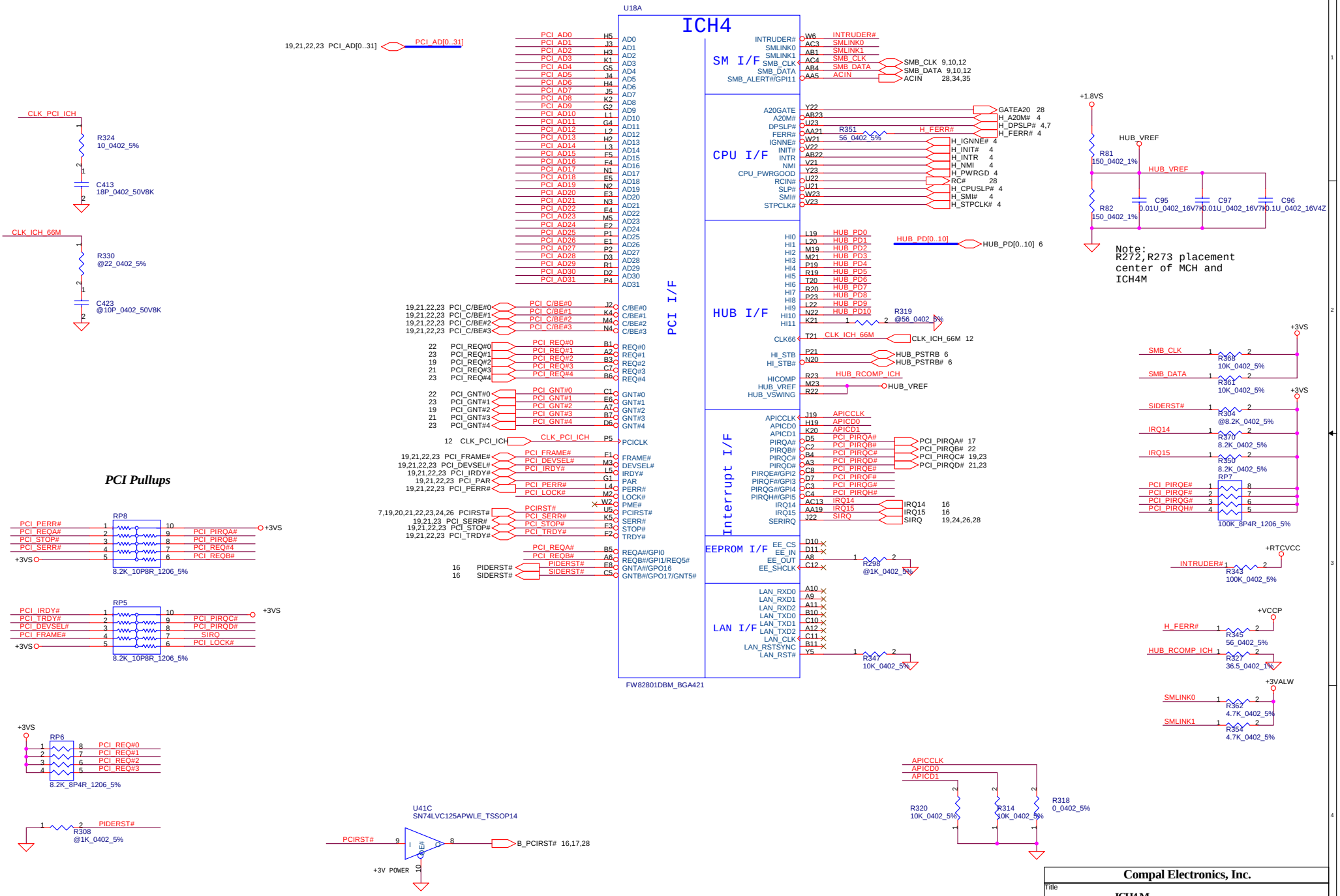
| Compal Electronics, Inc. | | |
| Title: Clock Generator | | |
| Size: B | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 12 of 45 | |



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| Title: ICH4-M | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
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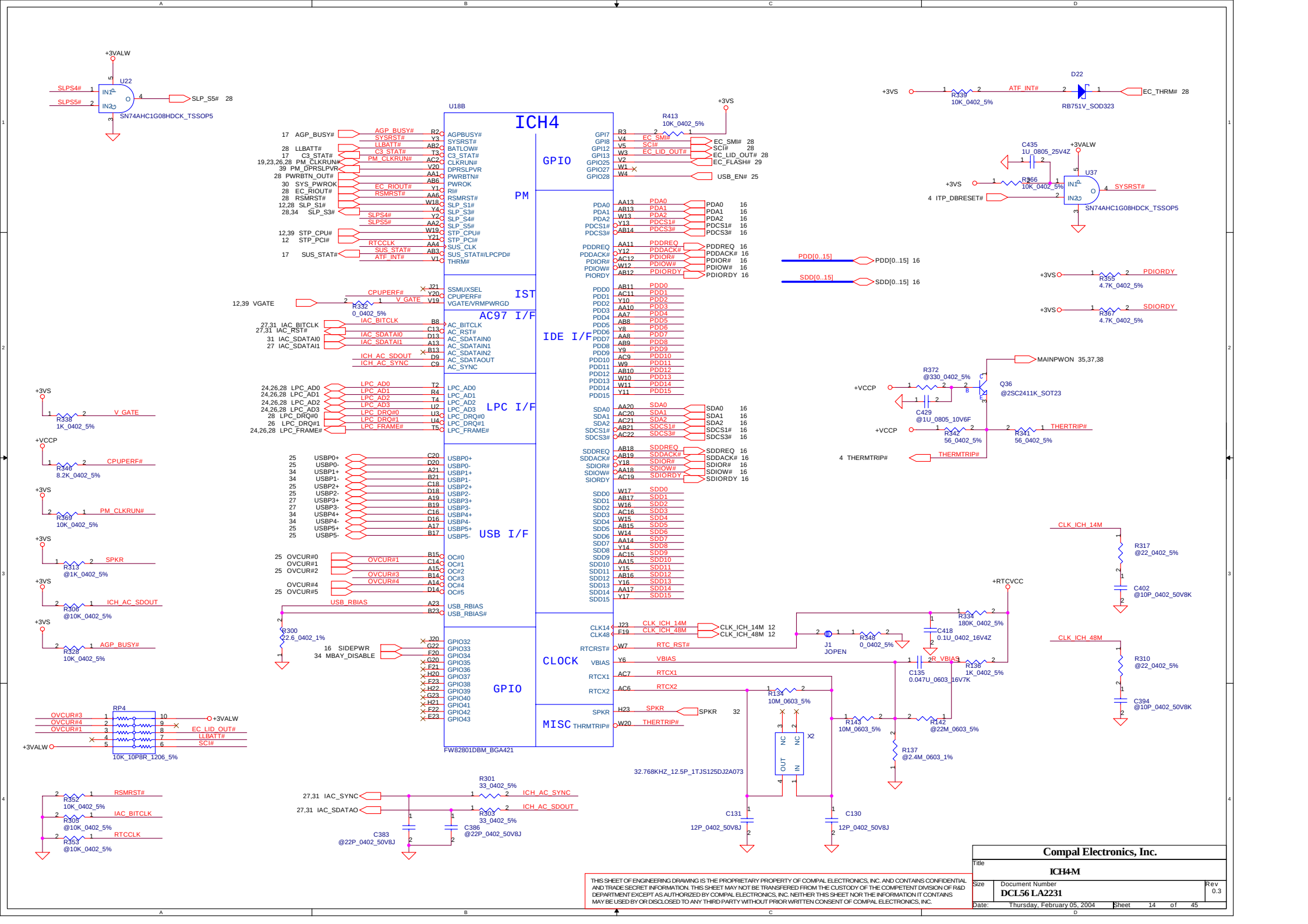
ICH4
U18B
GPIO
PM
IST
AC97 I/F
IDE I/F
LPC I/F
USB I/F
CLOCK
MISC
GPIO
FW82801DBM_BGA421
SN74AHC1G08HDCK_TSSOP5
RB751V_SOD323
Q36
@2SC2411K_SOT23
RP4
10K_10P8R_1206_5%
X2
32.768KHZ_12.5P_1TJS125DJ2A073
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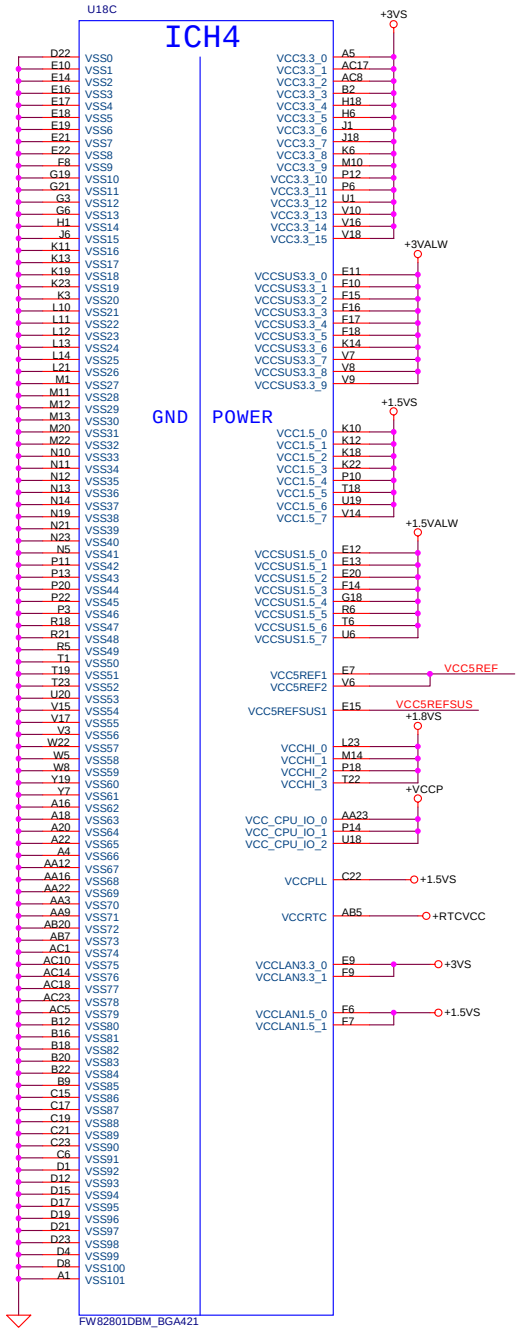


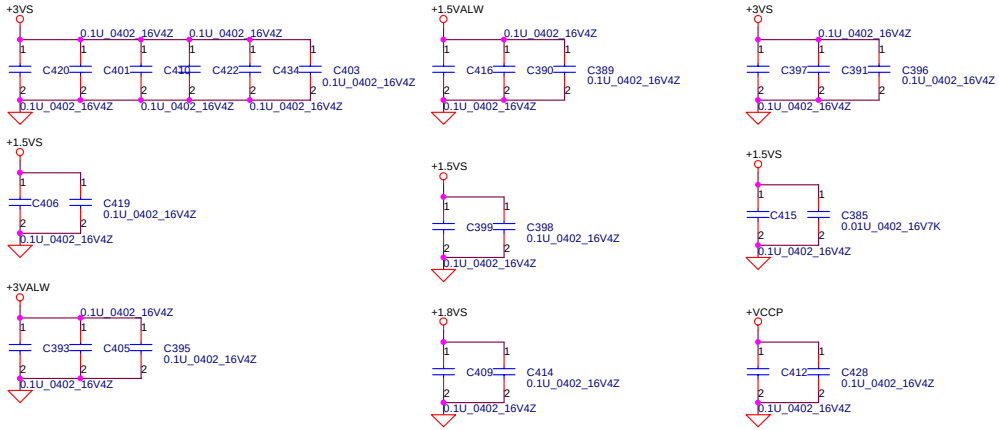


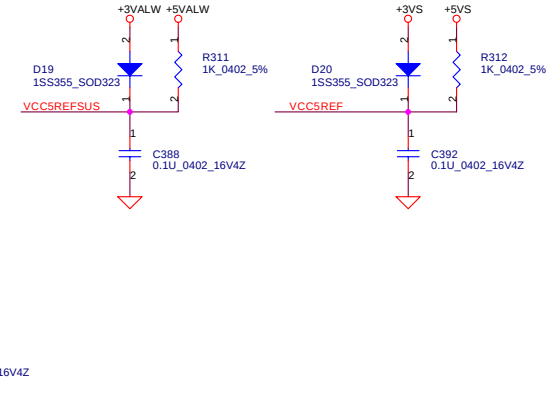


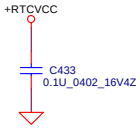




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| Title: ICH4-M | | |
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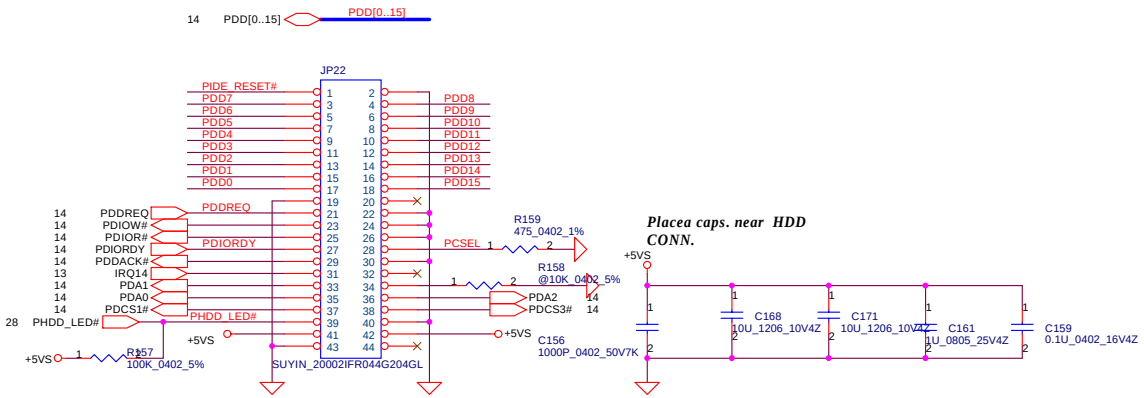
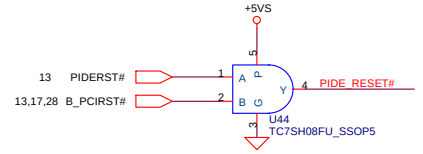
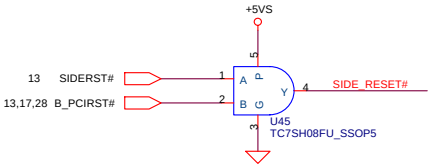
## HDD Connector



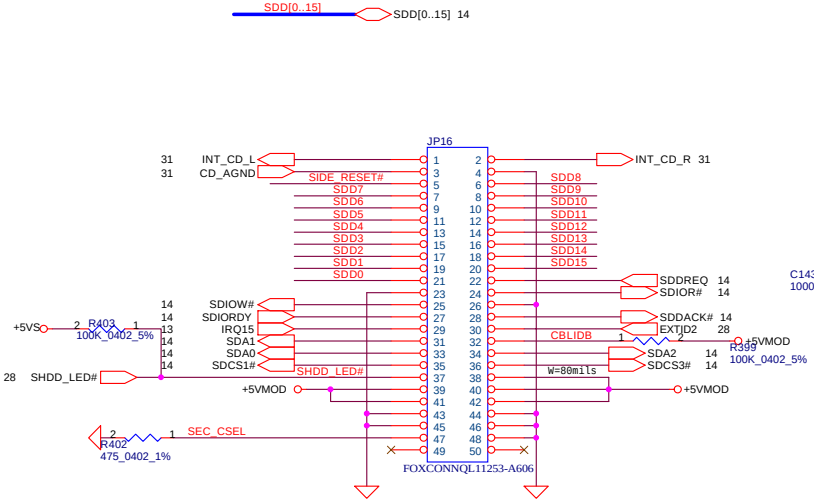

***Placea caps. near HDD CONN.***



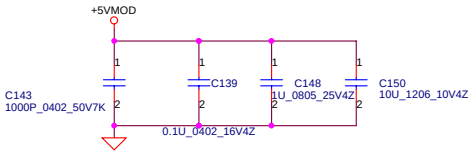



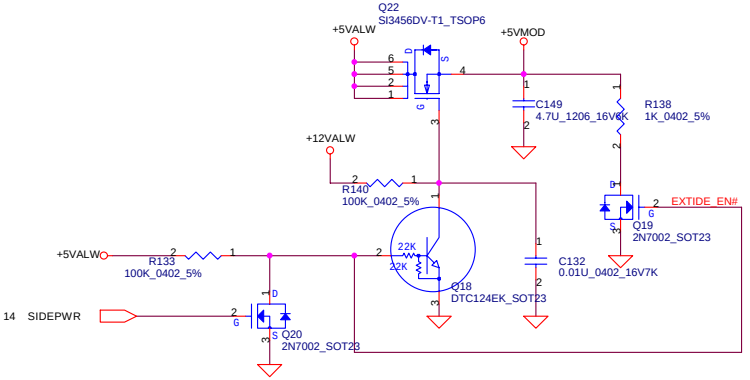




## CD-ROM Connector




***Placea caps. near CDROM CONN.***




SI3456DV: N CHANNEL
VGS: 4.5V, RDS: 65 mOHM
Id(MAX): 5.1A
VGS,+-20V



| | | |
|---|---|---|
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| Title: IDE/CD-ROM Module | | |
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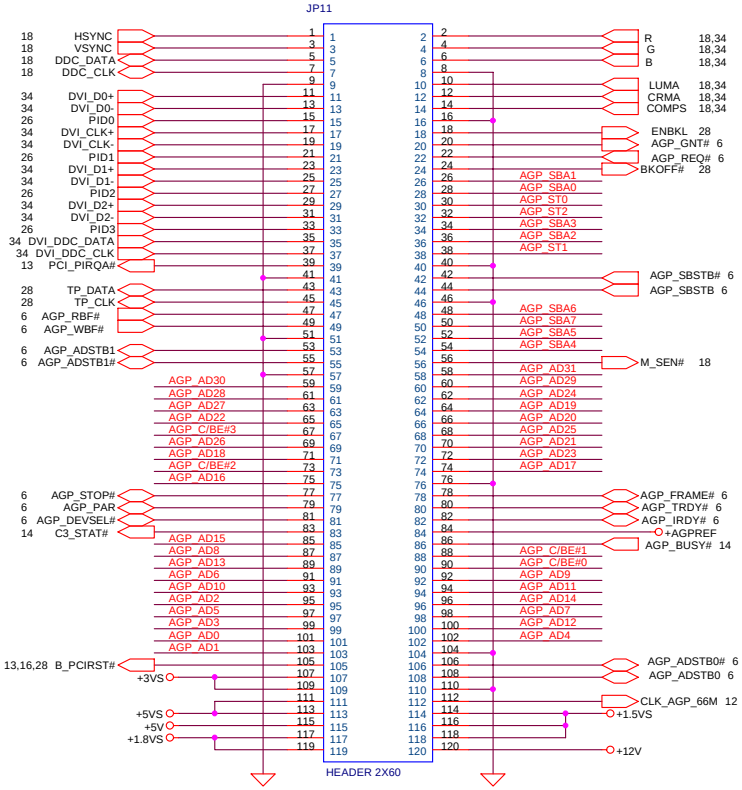


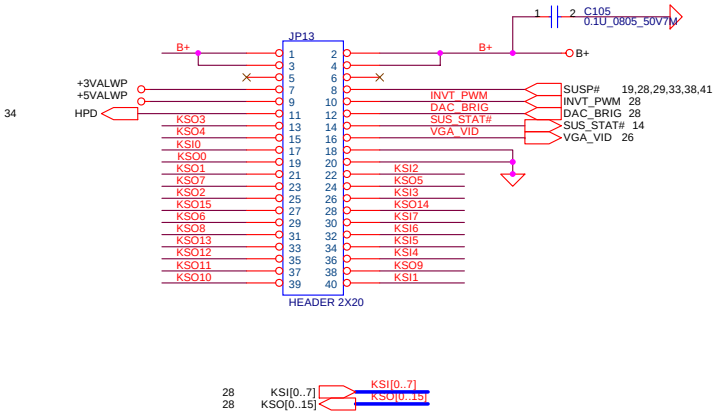





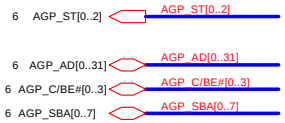


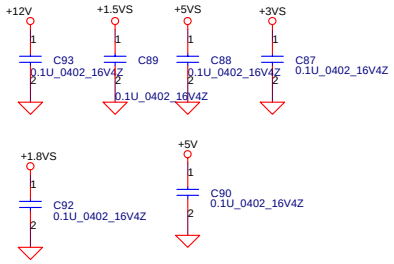




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| Compal Electronics, Inc. | |
| Title | AGPConn. |
| Size | Document Number: DCL56 LA2231 |
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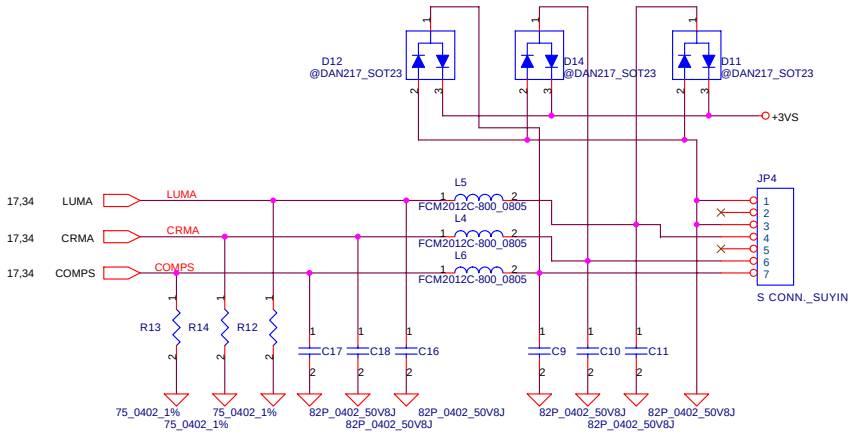
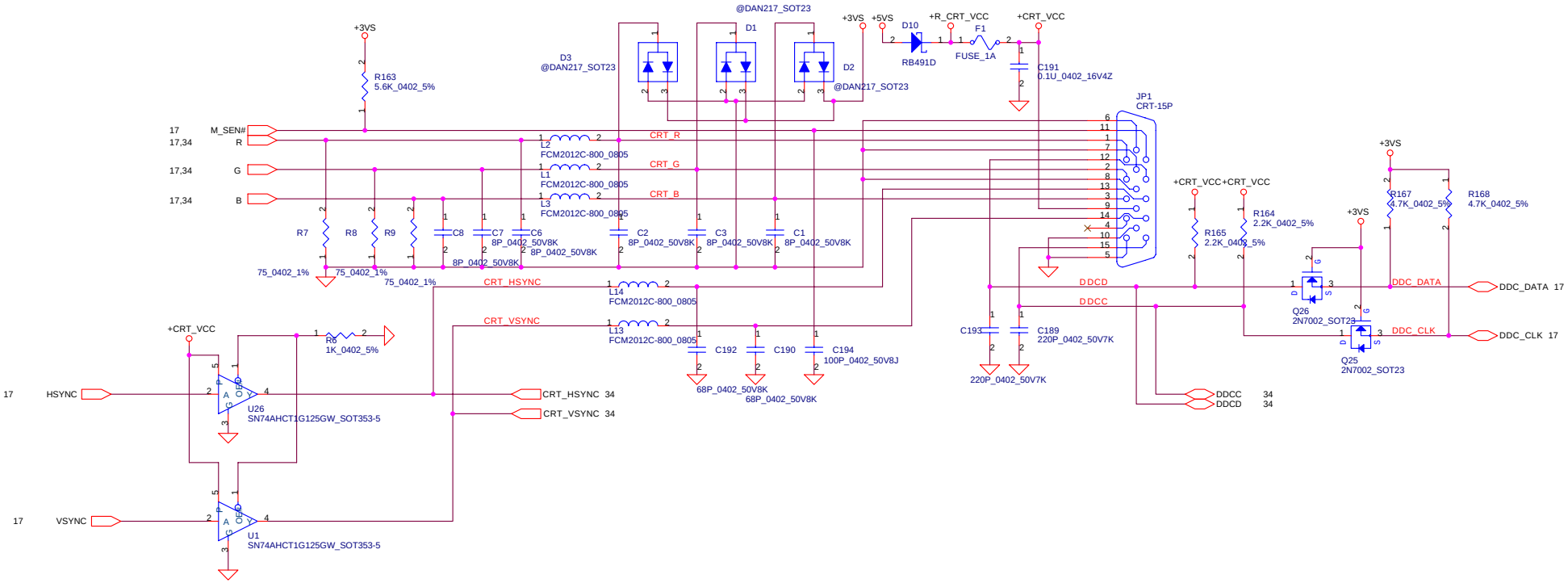



# CRT Connector



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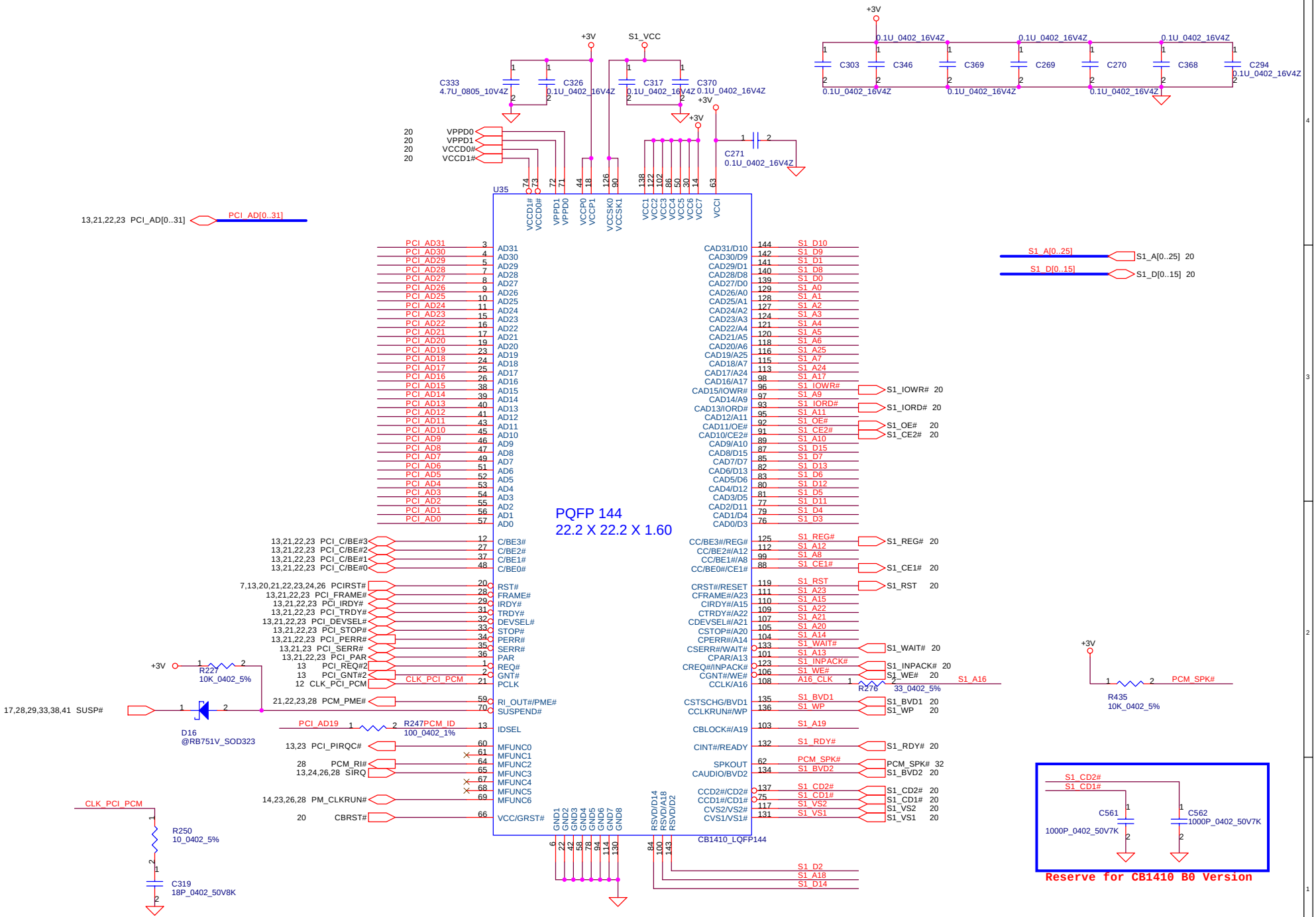
| Compal Electronics, Inc. | | |
| Title: AGPConn. & CRT | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 18 of 45 | |



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| | | |
|---|---|---|
| Title | PCMCIA controller ENE CB1410 | |
| Size | Document Number DCL56 LA2231 | Rev 0.3 |
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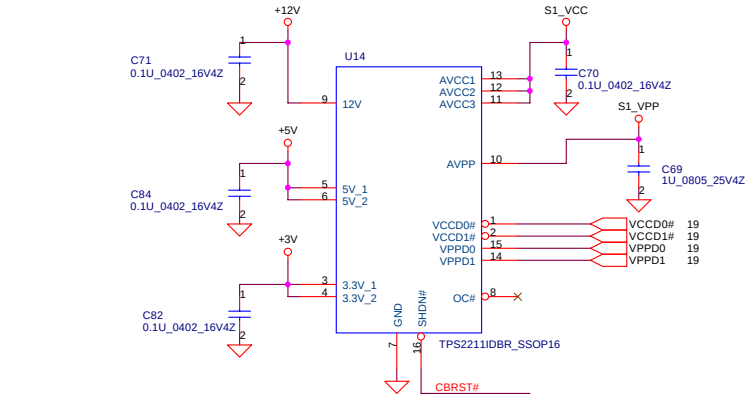
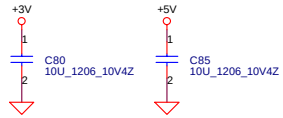
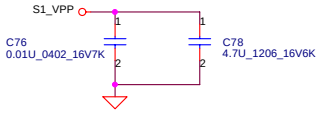
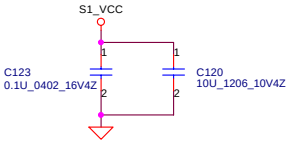
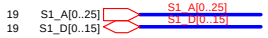
## PCMCIA Power Controller



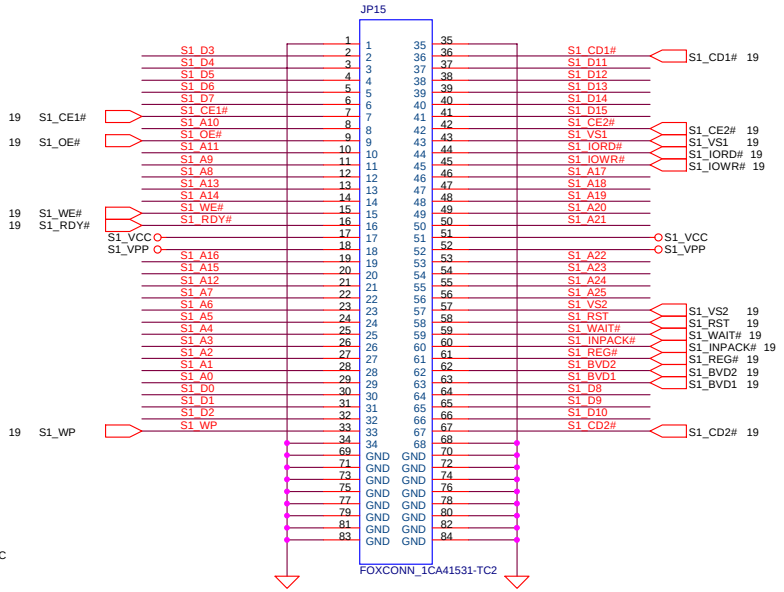



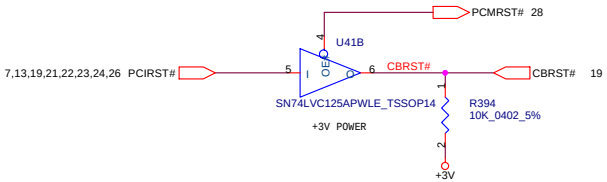



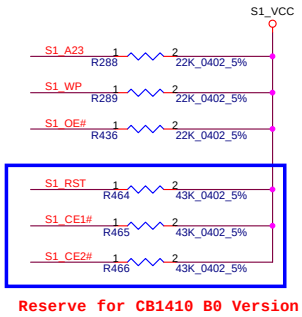




## CardBus Socket



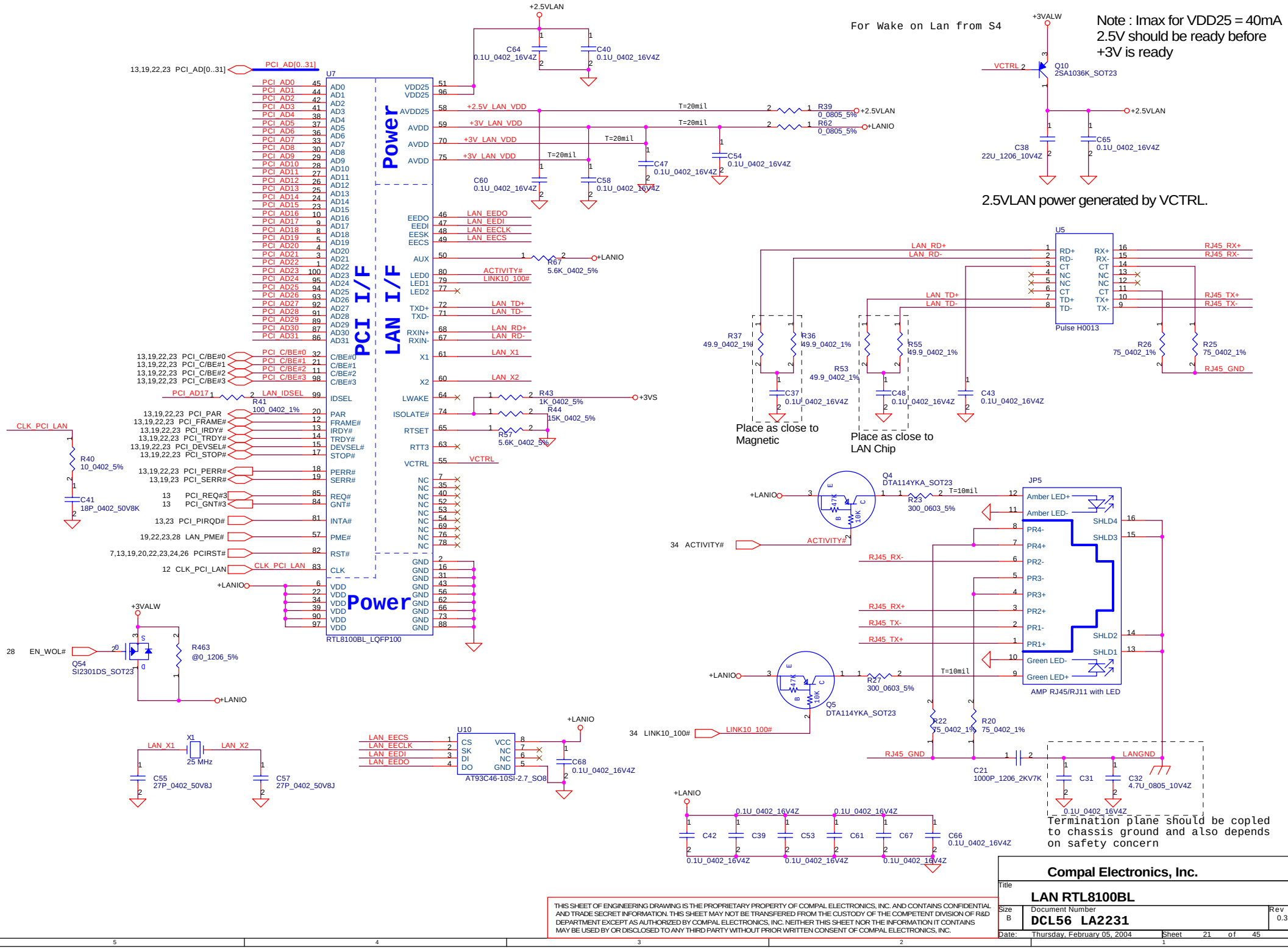




**Reserve for CB1410 B0 Version**



| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: CardBus Socket | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 20 of 45 | |

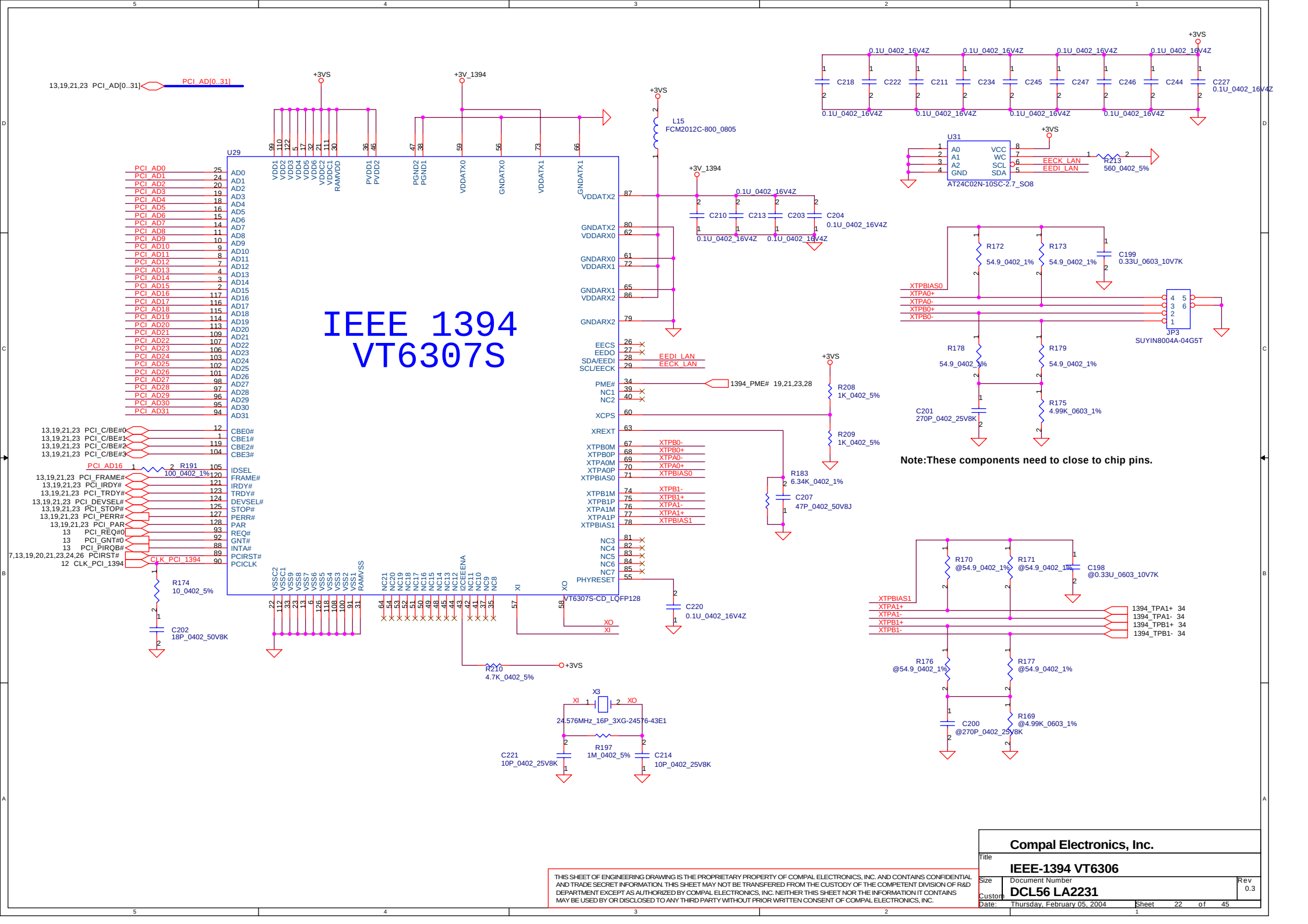



Compal Electronics, Inc.

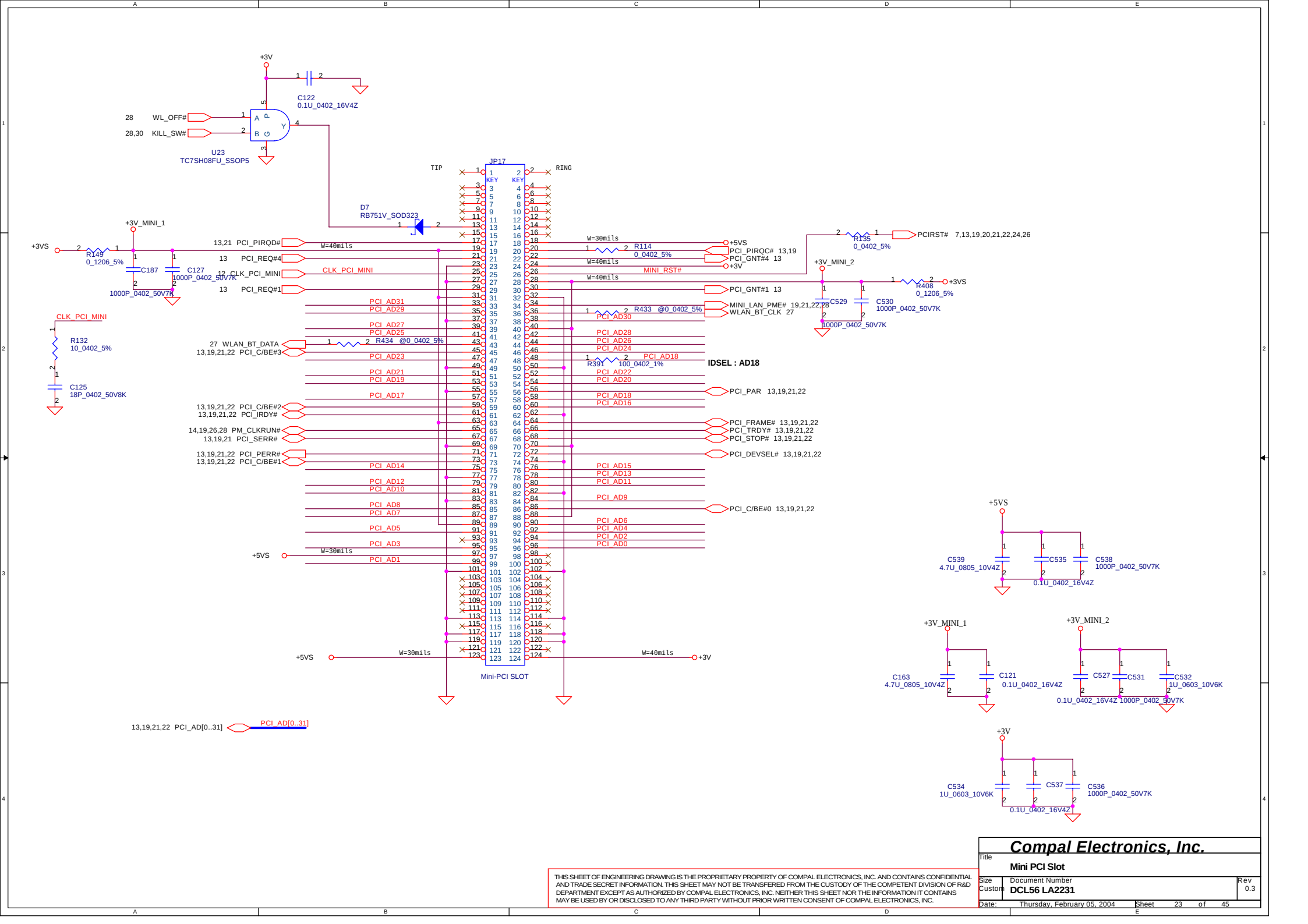
Title: LAN RTL8100BL

Size: B | Document Number: DCL56 LA2231 | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 21 of 45



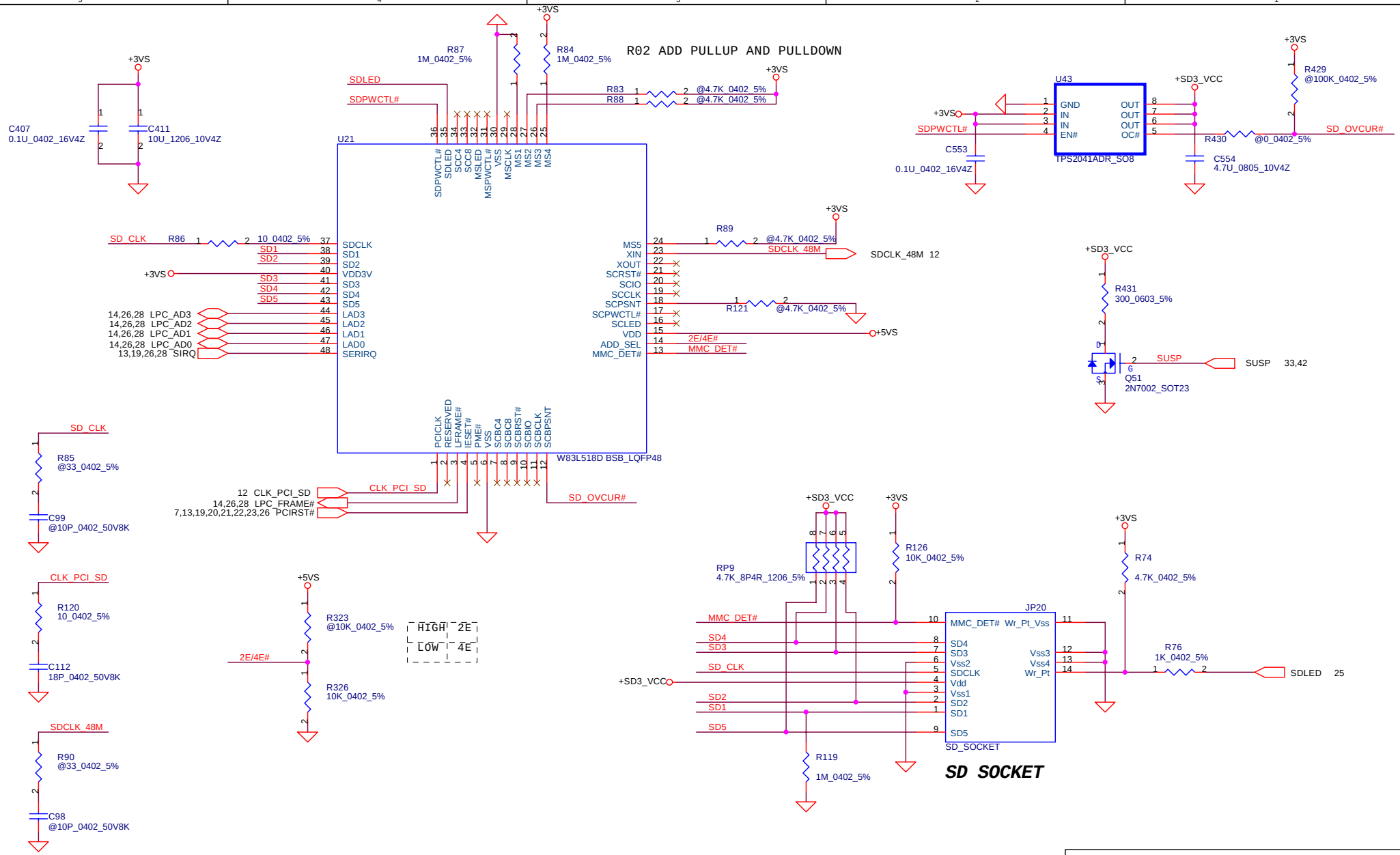

| | |
|---|---|
| Compal Electronics, Inc. | |
| Title | IEEE-1394 VT6306 |
| Size: Custom | Document Number: DCL56 LA2231 |
| Rev | 0.3 |
| Date: | Thursday, February 05, 2004 |
| Sheet | 22 of 45 |



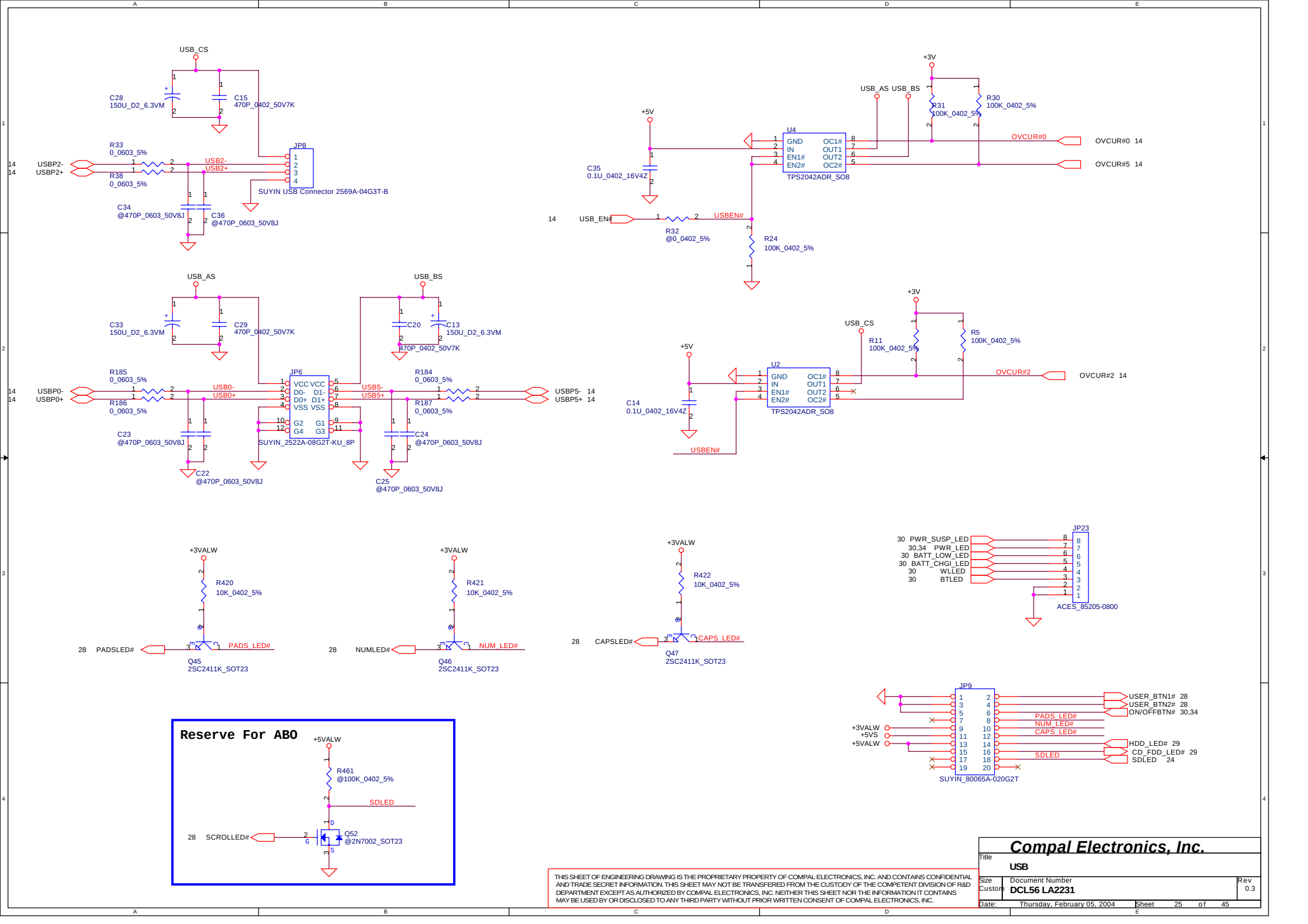



**Compal Electronics, Inc.**

| | | |
|---|---|---|
| Title | Mini PCI Slot | |
| Size: Custom | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 23 of 45 | |




| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: SD CARD Controller/Socket | | |
| Size: B | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 24 of 45 | |

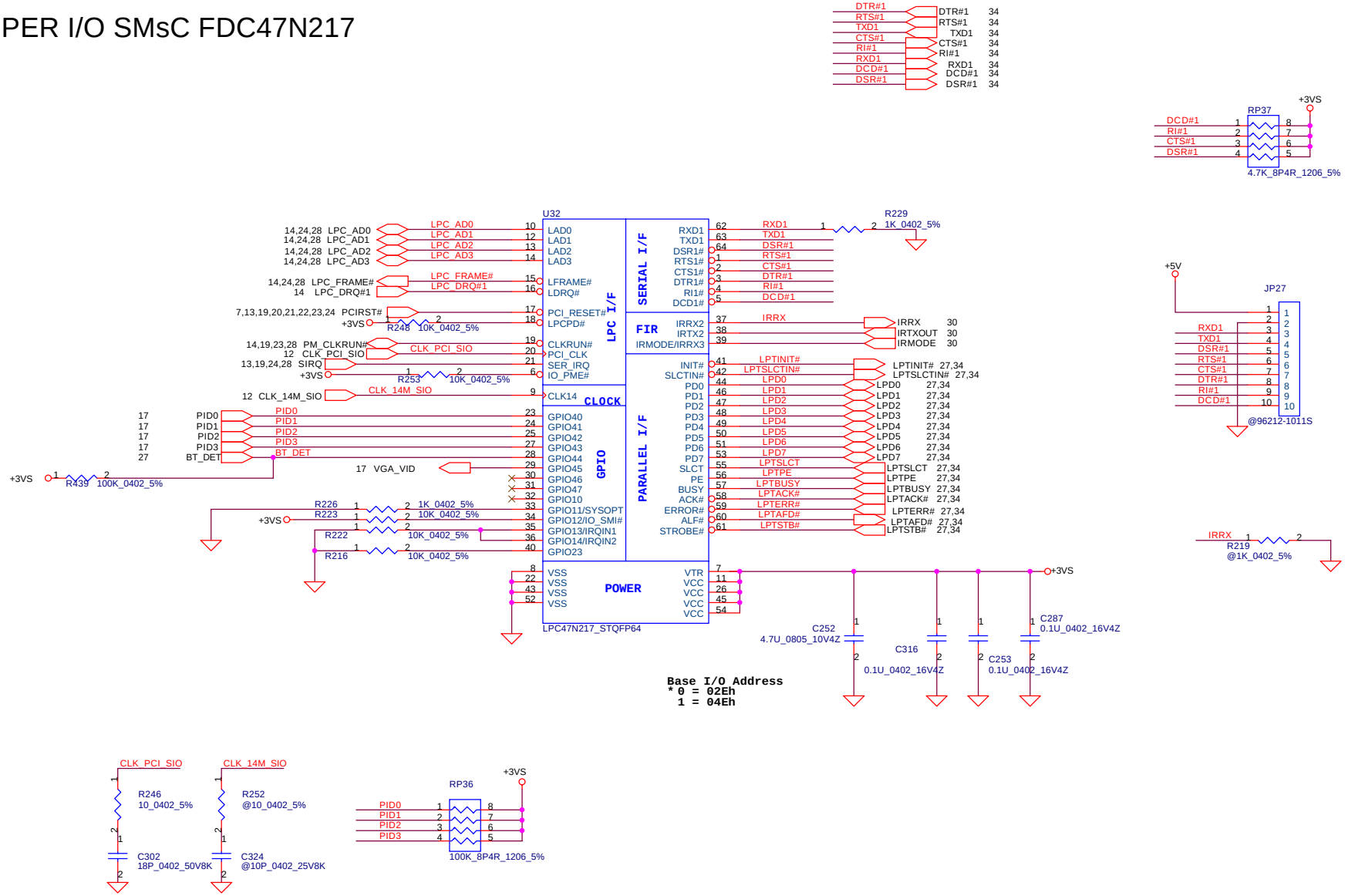





**Compal Electronics, Inc.**

| | | |
|---|---|---|
| Title | USB | |
| Size: Custom | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 25 of 45 | |

# SUPER I/O SMsC FDC47N217



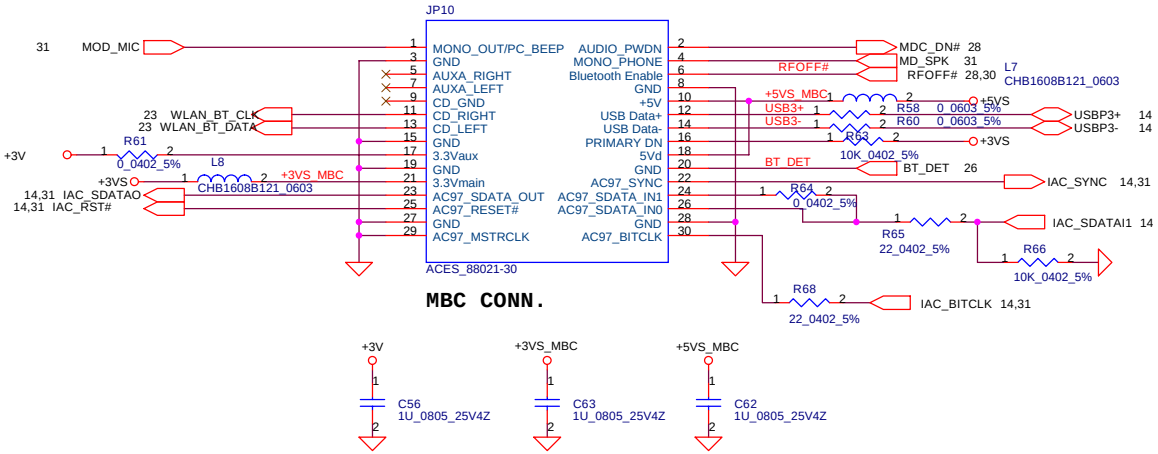



**Compal Electronics, Inc.**

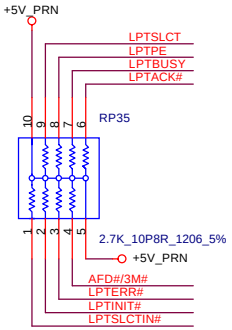
Title: SUPER I/O

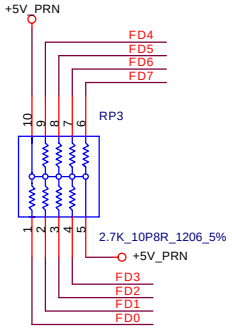
Size: B | Document Number: DCL56 LA2231 | Rev: 0.3

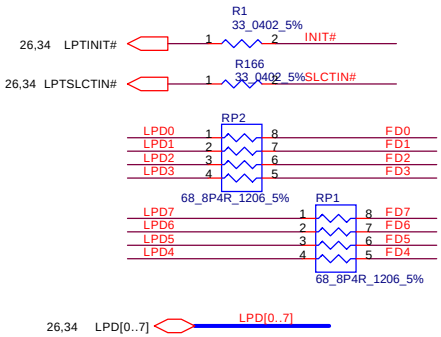
Date: Thursday, February 05, 2004 | Sheet 26 of 45

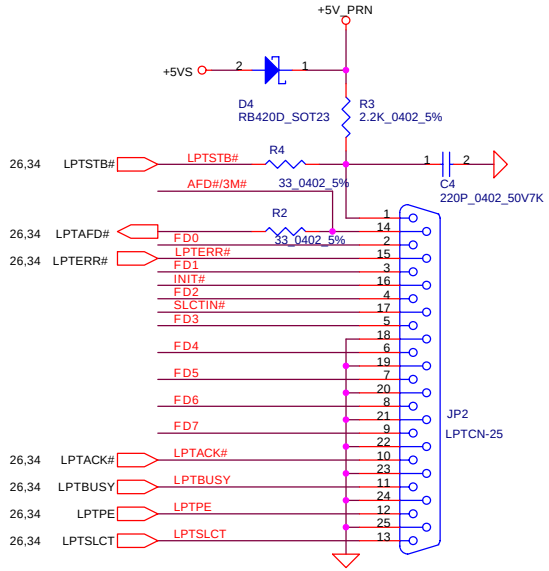


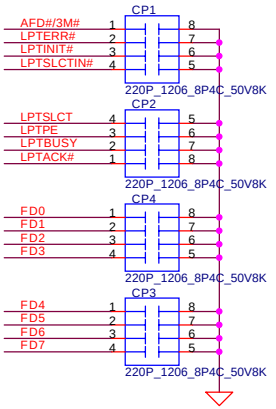

# PARALLEL PORT






**Compal Electronics, Inc.**

| | | |
|---|---|---|
| Title | PARALLEL/MDC PORT | |
| Size | Document Number DCL56 LA2231 | Rev 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 27 of 45 | |

KB910 B1 mount R458, B2 mount R457

U36

PC87591L-VPCN01 A2_LQFP176

Host interface
AD Input
DA output
PWM or PORTA
Key matrix scan
PORTB
PORTC
PORTD-1
PORTE
JTAG debug port
PS2 interface
PORTH
PORTI
PORTJ-1
PORTD-2
PORTJ-2
PORTK
PORTM
PORTL

## For EC Tools

JP14

@96212-1011S

| | I/O Address | |
|---|---|---|
| BADDR1(KBA3) | BADDR0(KBA2) | Index | Data |
| 0 | 0 | 2E | 2F |
| 0 | 1 | 4E | 4F |
| * 1 | 0 | (HCFGBAH, HCFGBAL) | (HCFGBAH, HCFGBAL)+1 |
| 1 | 1 | Reserved | |

| | ENV0 (KBA0) | ENV1 (KBA1) | TRIS (KBA4) |
|---|---|---|---|
| IRE | 0 | 0 | 0 |
| OBD | 0 | 1 | 0 |
| DEV | 1 | 0 | 0 |
| PROG | 1 | 1 | 0 |

SHBM(KBA5)=1: Enable shared memory with host BIOS
TRIS(KBA4)=1: While in IRE and OBD, float all the signals for clip-on ISE use

| | KB910 | 87591 |
|---|---|---|
| R282 | 0 | 120K |
| R283 | no stuff | 20M |

32.768KHZ_12.5P_1TJS125DJ2A073

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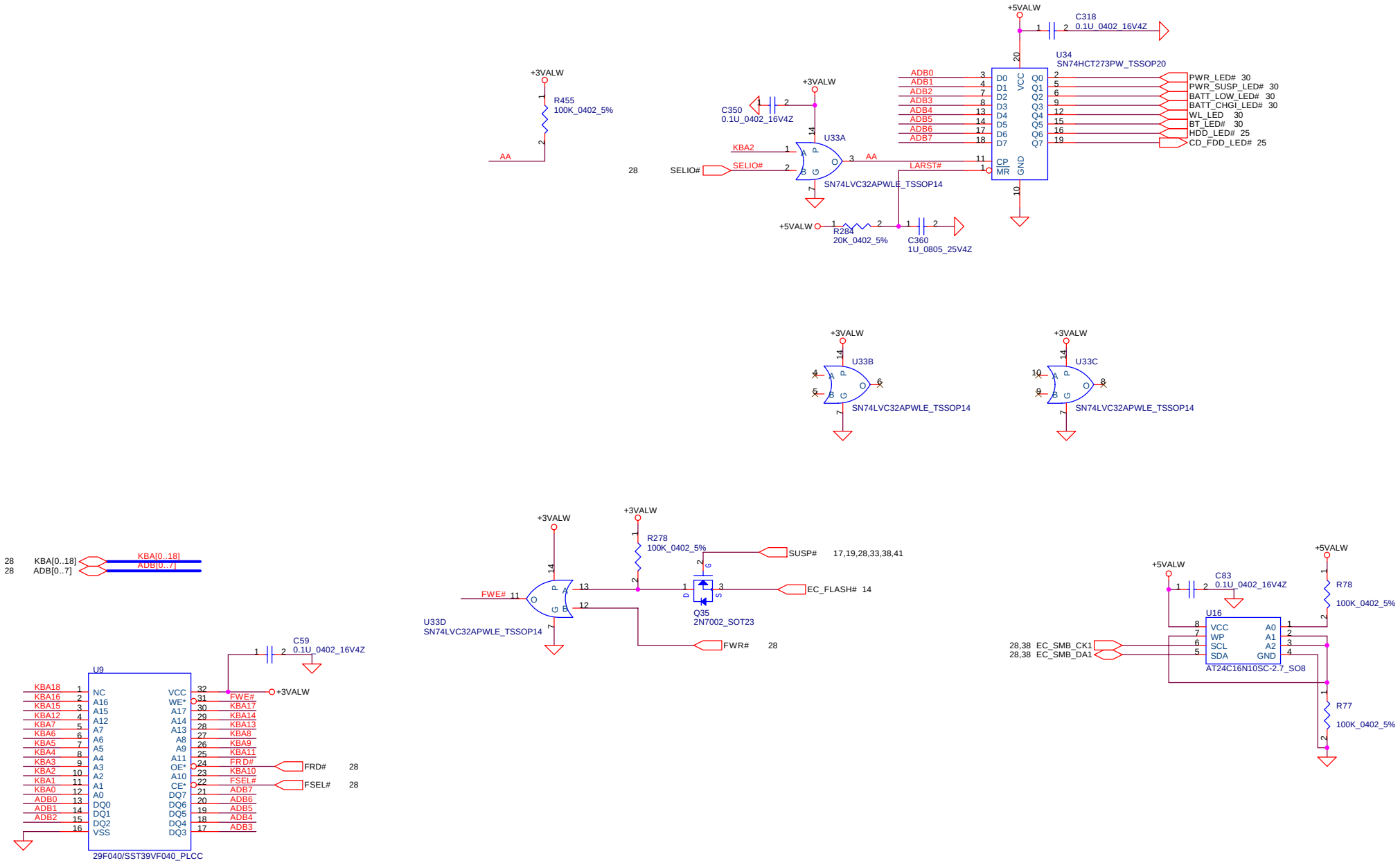
**Compal Electronics, Inc.**

Title: **EC PC87591**

Size: Custom | Document Number: **DCL56 LA2231** | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 28 of 45






**Compal Electronics, Inc.**

Title: **BIOS & EXT. I/O PORT**

| Size | Document Number | Rev |
|---|---|---|
| B | DCL56 LA2231 | 0.3 |

Date: Thursday, February 05, 2004 Sheet 29 of 45

## Power ON Circuit

28 LID_SW# — LID_SW# — SW1 (LID_SWITCH)

D26 @DAN217_SOT23

+3VALW

U41D SN74LVC125APWLE_TSSOP14

+3V POWER

+3VS

R376 180K_0402_5%

U39D SN74LVC14APWLE_TSSOP14

U39C SN74LVC14APWLE_TSSOP14

C441 1U_0805_25V4Z

R377 100K_0402_5%

SYS_PWROK 14

U39F SN74LVC14APWLE_TSSOP14

U39E SN74LVC14APWLE_TSSOP14

U47B LM358A_SO8

## Kill SWITCH

D25 DAN217_SOT23

R411 100K_0402_5%

KILL_SW# — KILL_SW# 23,28

R412 @0_0402_5%

RFOFF# 27,28

SW3 DS-1200-02

## RTC Battery

BATT1 ML1220T13RE

RTCPWR

+RTCVCC

CHGRTC

D24 BAS40-04_SOT23

SW2 @STS-05

ON/OFFBTN#

25,34 ON/OFFBTN#

## Power BTN

D6 DAN202U_SC70

R287 100K_0402_5%

ON/OFF# 28

51ON# 35

R335 4.7K_0402_5%

R336 33K_0402_5%

Q37 DTC124EK_SOT23

C417

D21 RLZ20A_LL34

1000P_0402_50V7K

28 EC_ON

Q16 2N7002_SOT23

## Fan Control circuit

+12V

C560 0.1U_0402_16V4Z

EN_FAN

R460 10K_0402_5%

U47A LM358A_SO8

R458 100_0402_1%

R459 8.2K_0402_5%

C212 0.1U_0402_16V4Z

28 EC_EN_FAN1

28 EC_EN_FAN2

R437 0_0402_5%

R438 @0_0402_5%

C205 @0.1U_0402_16V4Z

U28 @LMV321M5X_SOT23-5

R181 @13K_0603_1%

R182 @7.32K _0402_1%

R28 @3.6K_0402_5%

R457 @0_0402_5%

C30 0.1U_0402_16V4Z

D5 @1N4148_SOT23

Q3 @2SA1036K_SOT23

Q28 FMMT619_SOT23

C12 10U_1206_10V4Z

D15 1SS355_SOD323

FAN2

D13 1N4148_SOT23

JP7 ACES_85205-0300

R196 10K_0402_5%

28 FAN1_TACH

## Suspend LED(Amber)

29 PWR_SUSP_LED#

Q11 @DTA114YKA_SOT23

R69 @240_0603_5%

25 PWR_SUSP_LED

## Power LED(Green)

Q2 DTA114YKA_SOT23

PWR_LED# 29

R16 240_0603_5%

PWR_LED 25,34

## Wireless LED(Amber)

R418 100K_0402_5%

Q9 DTA114YKA_SOT23

29 WL_LED

Q44 2N7002_SOT23

R35 240_0603_5%

25 WLLED

## FIR Module

+3VS

R59 4.7_1206_5%

R56 4.7_1206_5%

IR_ANODE

R54 47_1206_5%

26 IRRX

IRRX

IR_3VS

U8 IR_VISHAY_TFDU6101E-TR4_8P

IRED_A

IRED_C

TXD

RXD

SD/MODE

MODE

VCC

GND

IRTXOUT

IRMODE

IRTXOUT 26

IRMODE 26

R42 @0_0402_5%

C50 10U_1206_10V4Z

C52 0.1U_0402_16V4Z

SD/MODE: SHUTDOWN MODE, HIGH ACTIVE

MODE: HIGH/LOW SPEED SELECT

## BATT Low LED(Amber)

29 BATT_LOW_LED#

Q14 @DTA114YKA_SOT23

R72 @240_0603_5%

25 BATT_LOW_LED

## BATT Charge LED(Green)

Q12 DTA114YKA_SOT23

BATT_CHGI_LED# 29

R75 240_0603_5%

BATT_CHGI_LED 25

## Bluetooth LED(Blue)

29 BT_LED#

Q53 DTA114YKA_SOT23

R462 240_0603_5%

25 BTLED



| | |
|---|---|
| Compal Electronics, Inc. | |
| Title | Power OK/Reset/RTC battery/Lid Switch/Int. KB |
| Size | Document Number: DCL56 LA2231 — Rev 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 30 of 45 |

# AC97 Codec

| R740 | MODE |
|---|---|
| Stuff | 14.318MHz External |
| **No-Stuff** | **24.576MHz Crystal or External Colck** |



+5VS +5VS U40 VIN VOUT DELAY SENSE or ADJ ERROR CNOISE SD GND SI9182DH-AD_MSOP8 +VDDA +VDDA C484 4.7U_0805_10V4Z C480 0.1U_0402_16V4Z C472 0.1U_0402_16V4Z R400 150K_0603_1% C485 4.7U_0805_10V4Z R401 51K_0603_1%

+AUD_VREF C133 0.1U_0402_16V4Z C129 4.7U_0805_10V4Z

+AVDD_AC97 L18 +VDDA CHB2012U170_0805 C444 0.1U_0402_16V4Z C475 10U_1206_10V4Z +3VS C432 0.1U_0402_16V4Z C430 10U_1206_10V4Z

R349 0_0805_5% R344 0_0805_5% R403 0_0805_5%

U38 ALC202 E_LQFP48

AVDD1 AVDD2 DVDD1 DVDD2

AUX_L AUX_R VIDEO_L VIDEO_R LINE_IN_L LINE_IN_R CD_L CD_R CD_GND MIC1 MIC2 PHONE PC_BEEP RESET# SYNC SDATA_OUT NC XTLSEL EAPD SPDIFO DVSS1 DVSS2

LINE_OUT_L LINE_OUT_R MONO_OUT TRUE_LOUT_L TRUE_LOUT_R BIT_CLK SDATA_IN XTL_IN XTL_OUT AFILT1 AFILT2 VREFOUT VREF VRDA VRAD DCVOL VAUX GPIO0 GPIO1 NC AVSS1 AVSS2

32 NBA_PLUG R456 HP_SENSE 0_0402_5%

C547 0.1U_0402_16V4Z C548 0.1U_0402_16V4Z C440 0.1U_0402_16V4Z C124 0.1U_0402_16V4Z C126 0.1U_0402_16V4Z C128 0.1U_0402_16V4Z HP_SENSE

C451 1000P_0402_50V7K C464 1000P_0402_50V7K C466 4.7U_0805_10V4Z C453 4.7U_0805_10V4Z C448 1U_0603_10V6K C447 1000P_0402_50V7K LINEL LINER LEFT RIGHT LEFT 32 RIGHT 32 MOD_MIC 27

R380 6.8K_0402_5% R389 6.8K_0402_5% C445 1U_0603_10V6K 34 LINEIN_L 34 LINEIN_R C140 @1U_0603_10V6K C474 @1U_0603_10V6K

16 INT_CD_L CDROM_L R382 20K_0402_5% 16 INT_CD_R CDROM_R C452 1U_0603_10V6K R388 20K_0402_5% CD_L_R CD_R_R CD_GNA C443 1U_0603_10V6K C454 1U_0603_10V6K C449 1U_0603_10V6K

R359 22_0402_5% C425 @22P_0402_50V8J IAC_BITCLK 14,27 R358 22_0402_5% R357 @10K_0402_5% IAC_SDATAI0 14

R360 @1M_0402_5% Y2 24.576MHz_16P_3XG-24576-43E1 C426 22P_0402_50V8J C427 22P_0402_50V8J C477 1000P_0402_50V7K C478 1000P_0402_50V7K R398 0_0402_5% +AUD_VREF

0.01U_0402_16V7K C439 32 MIC MIC C447 MIC 1U_0603_10V6K +AUD_VREF C134 0.1U_0402_16V4Z C438 C_MD_SPK 1U_0603_10V6K R374 2.4K_0402_5% 27 MD_SPK R373 10K_0402_5%

32 MONO_IN

14,27 IAC_RST# R356 100_0402_1%

14,27 IAC_SYNC

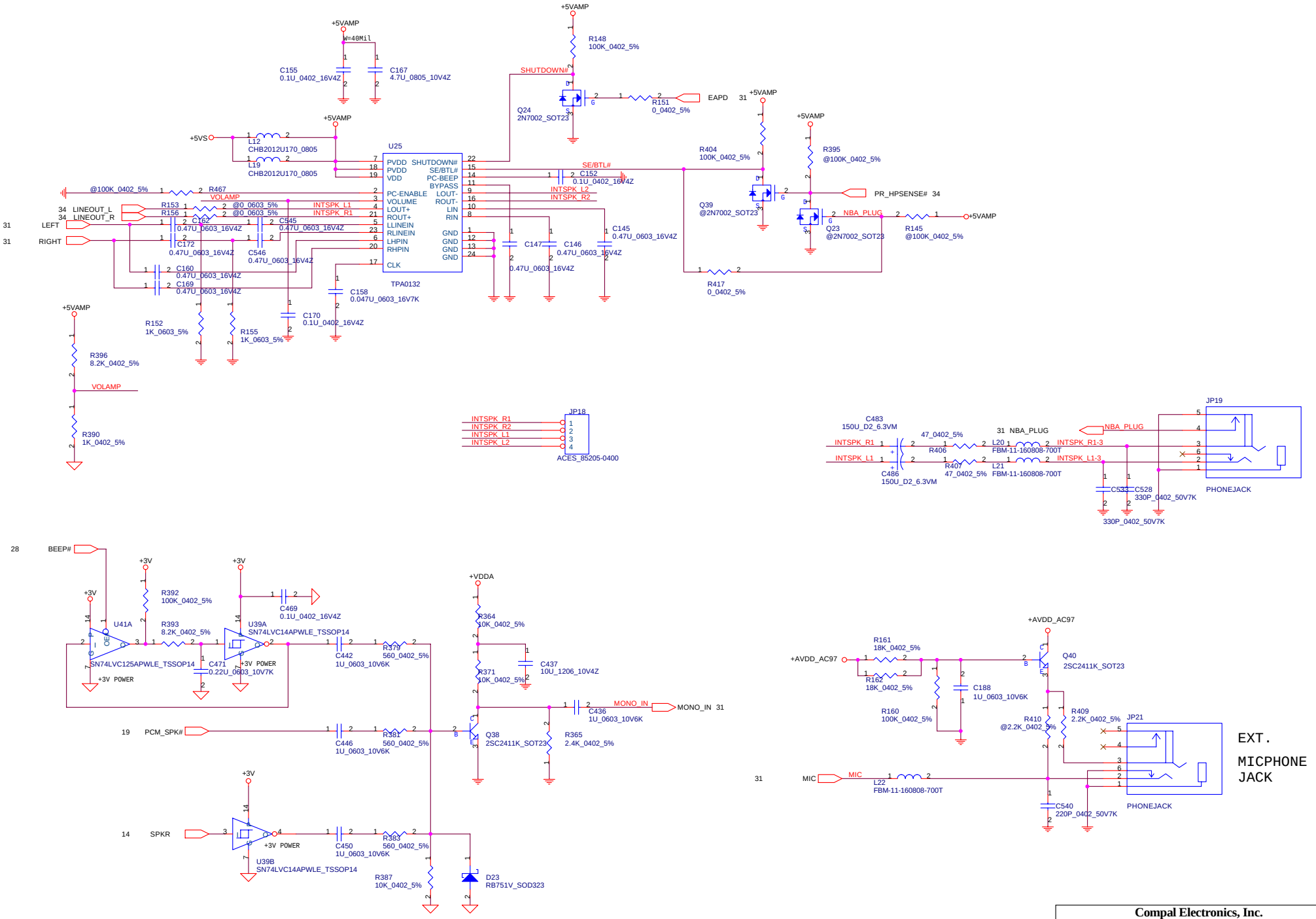
14,27 IAC_SDATAO

32 EAPD R375 @0_0402_5% 34 SPDIF R378 @0_0402_5%

C476 C482 4.7U_1206_16V6K C473 C481 1U_0603_10V6K 0.1U_0402_16V4Z R397 @0_0402_5% C479 @0.01U_0402_16V7K 1U_0603_10V6K

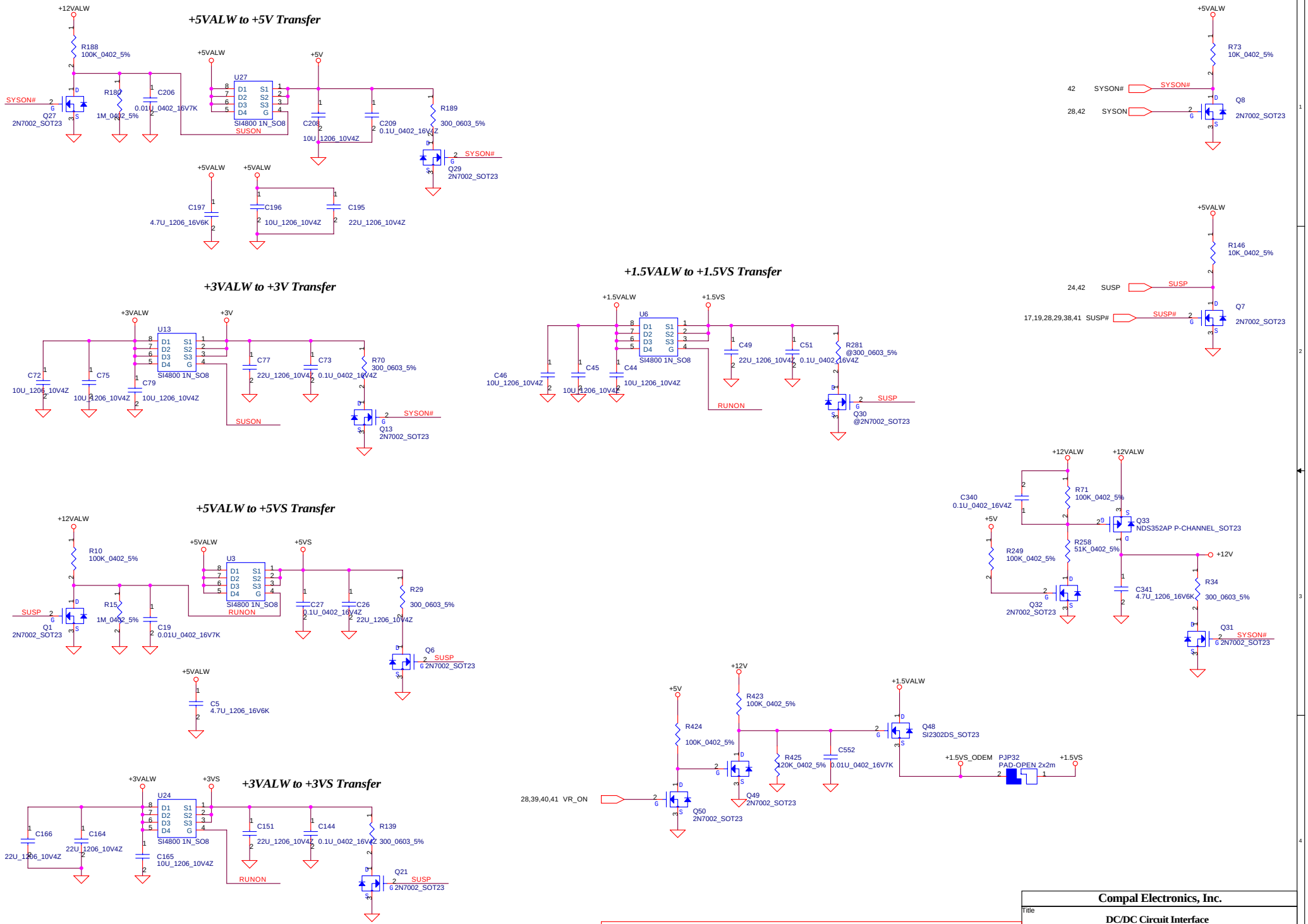
16 CD_AGND R385 20K_0402_5% R384 @0_0402_5% CD_GNA R386 6.8K_0402_5%

| | | | |
|---|---|---|---|
| Compal Electronics, Inc. | | | |
| Title: AC97 Codec | | | |
| Size: B | Document Number: DCL56 LA2231 | | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 31 of 45 | | |



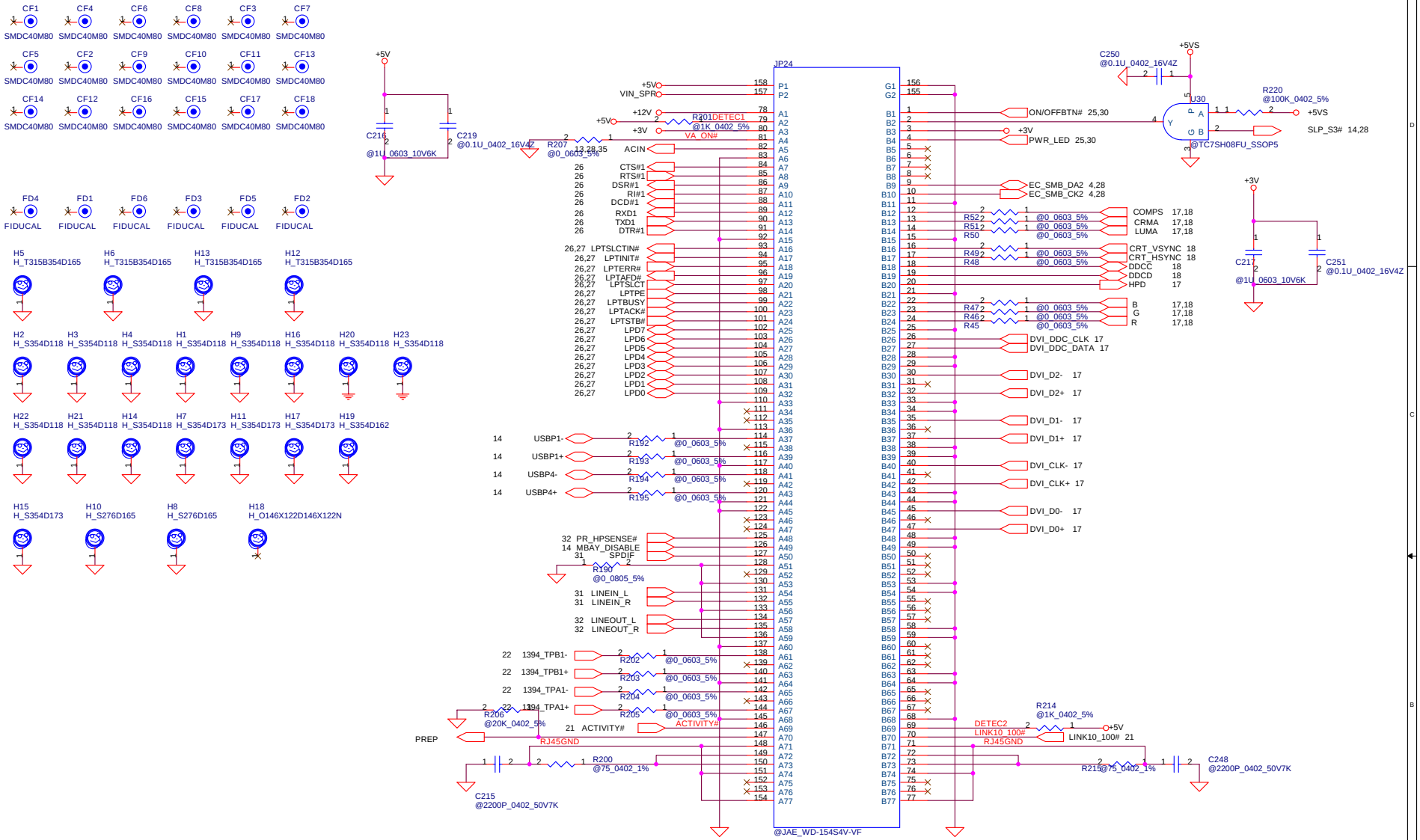



| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: AMP & Audio Jack | | |
| Size | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 32 of 45 | |






| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title | DC/DC Circuit Interface | |
| Size | Document Number DCL56 LA2231 | Rev 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 33 of 45 | |



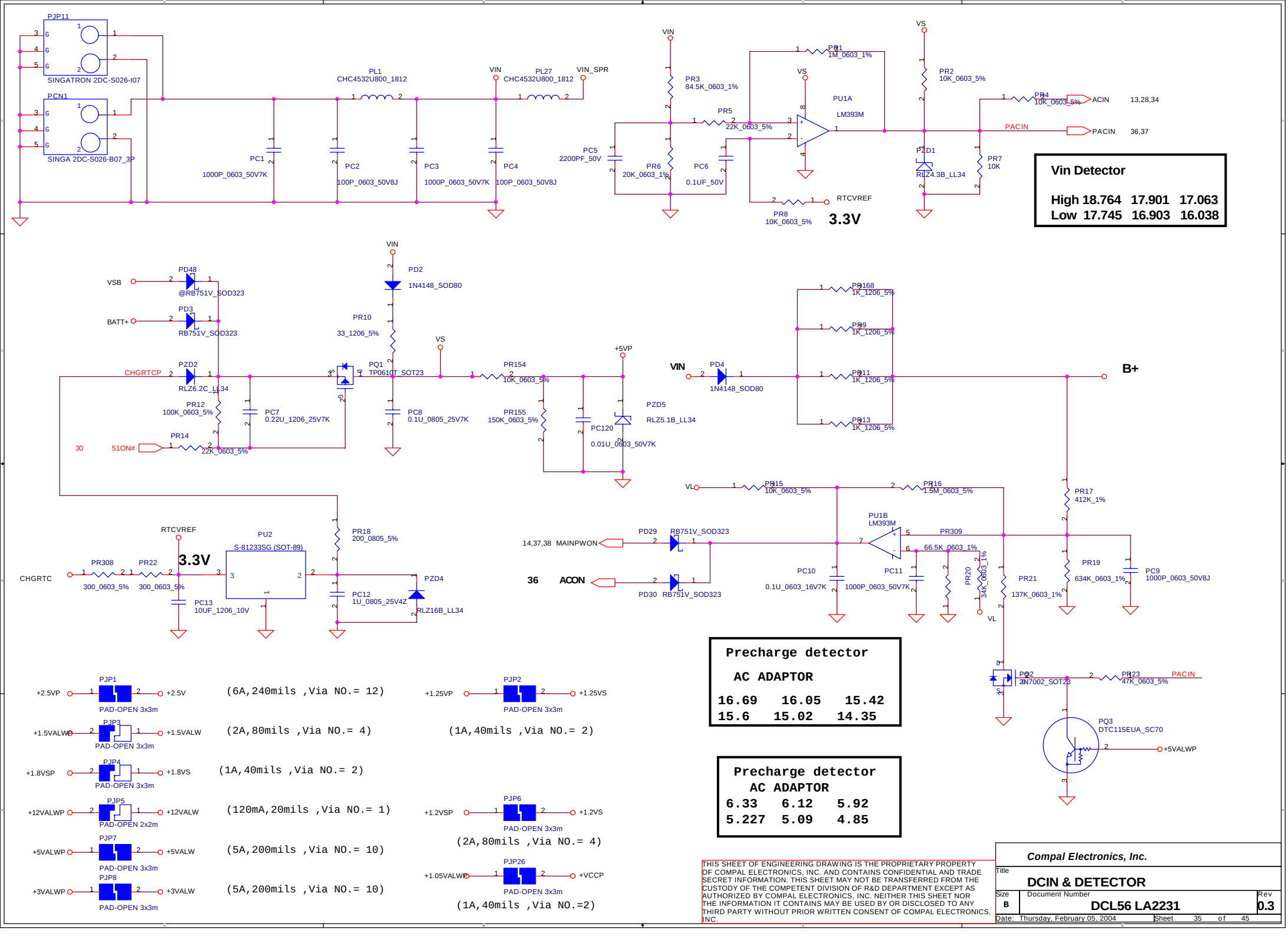



**Compal Electronics, Inc.**

Title: **Skew Hole**

Size | Document Number: **DCL56 LA2231** | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 34 of 45



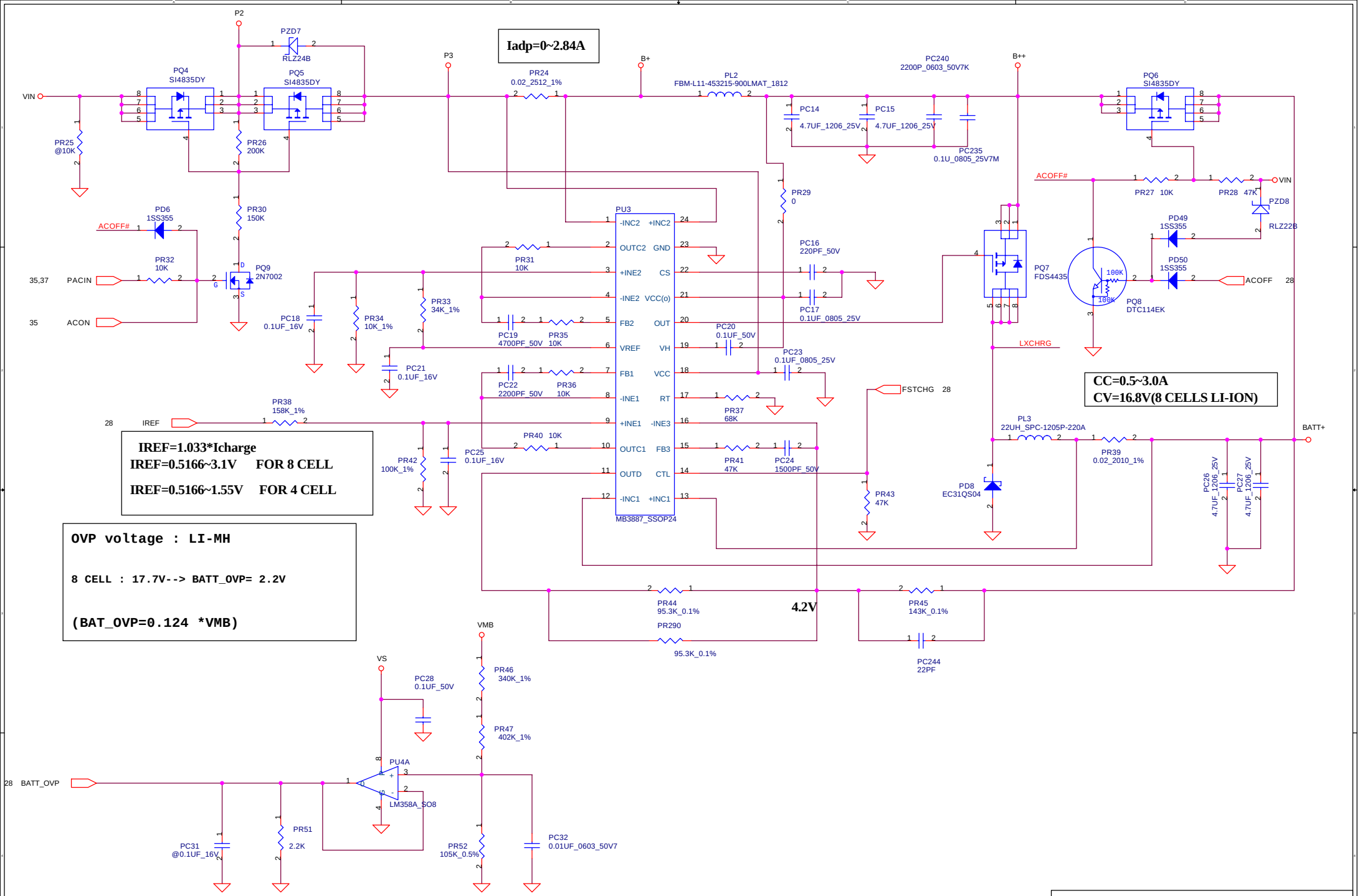



Compal Electronics, Inc.

Title: DCIN & DETECTOR

Size: B | Document Number: DCL56 LA2231 | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 35 of 45



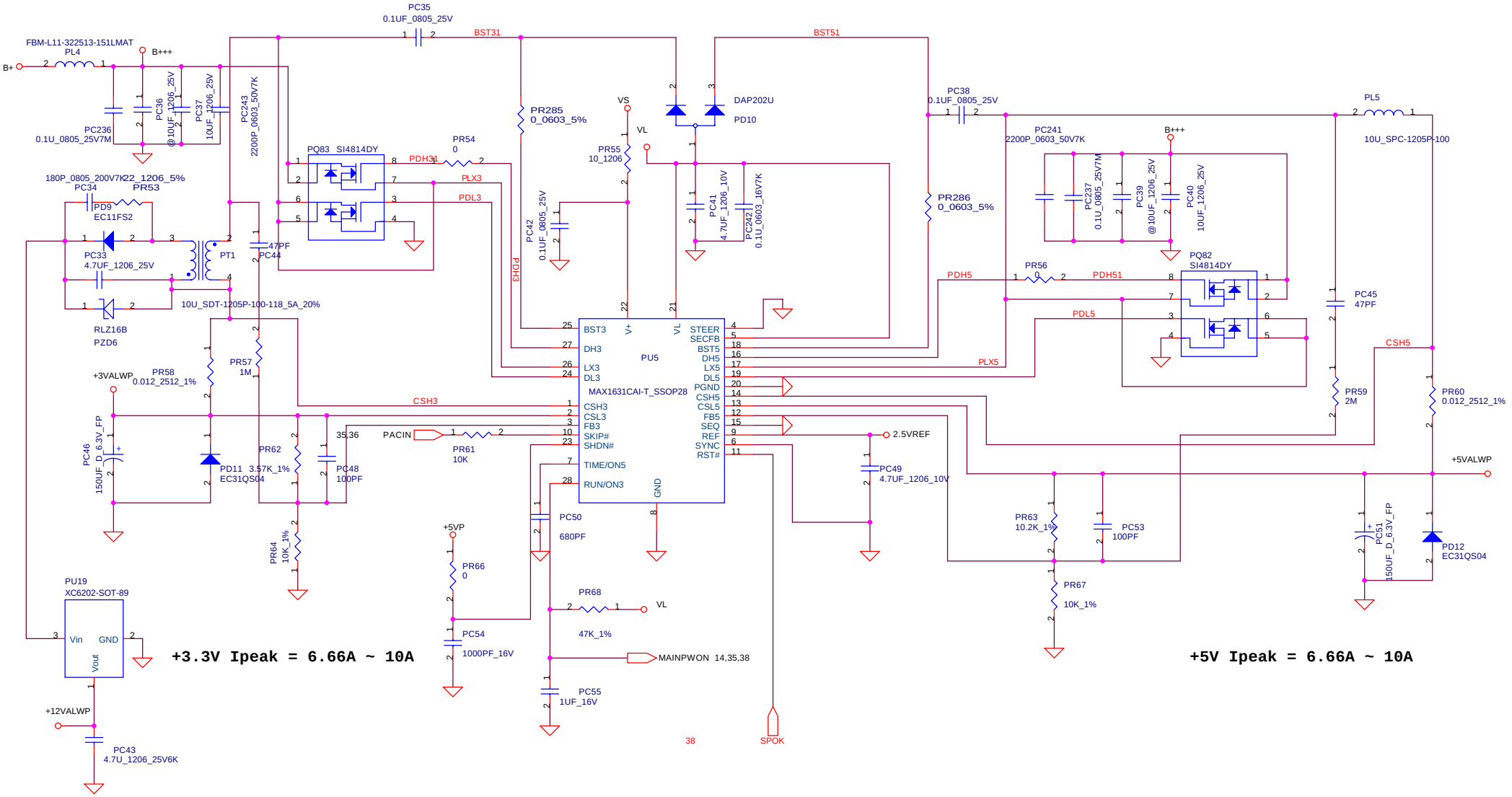



Compal Electronics, Inc.

Title: CHARGER

Size: B | Document Number: DCL56 LA2231 | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 36 of 45



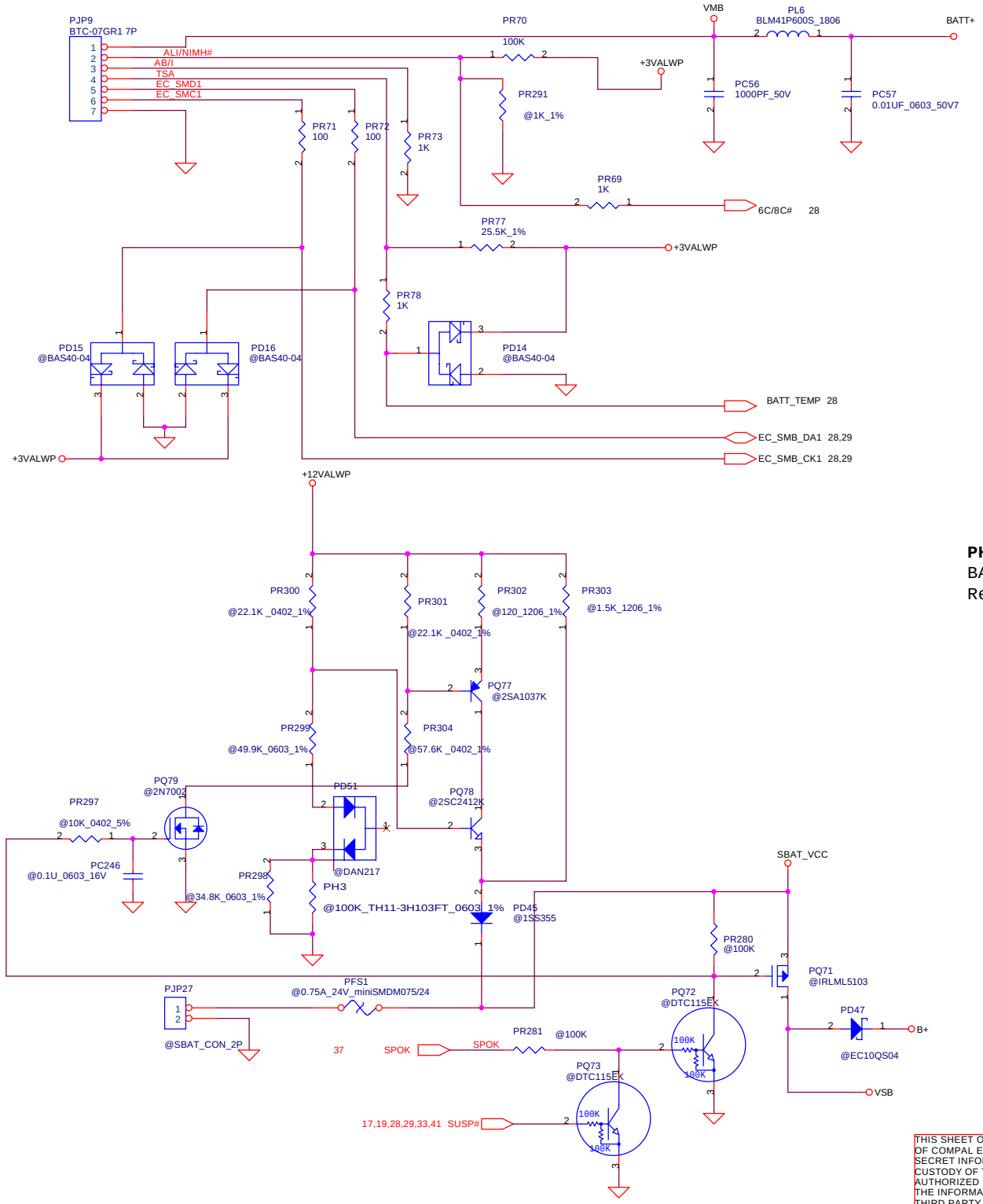



Compal Electronics, Inc.

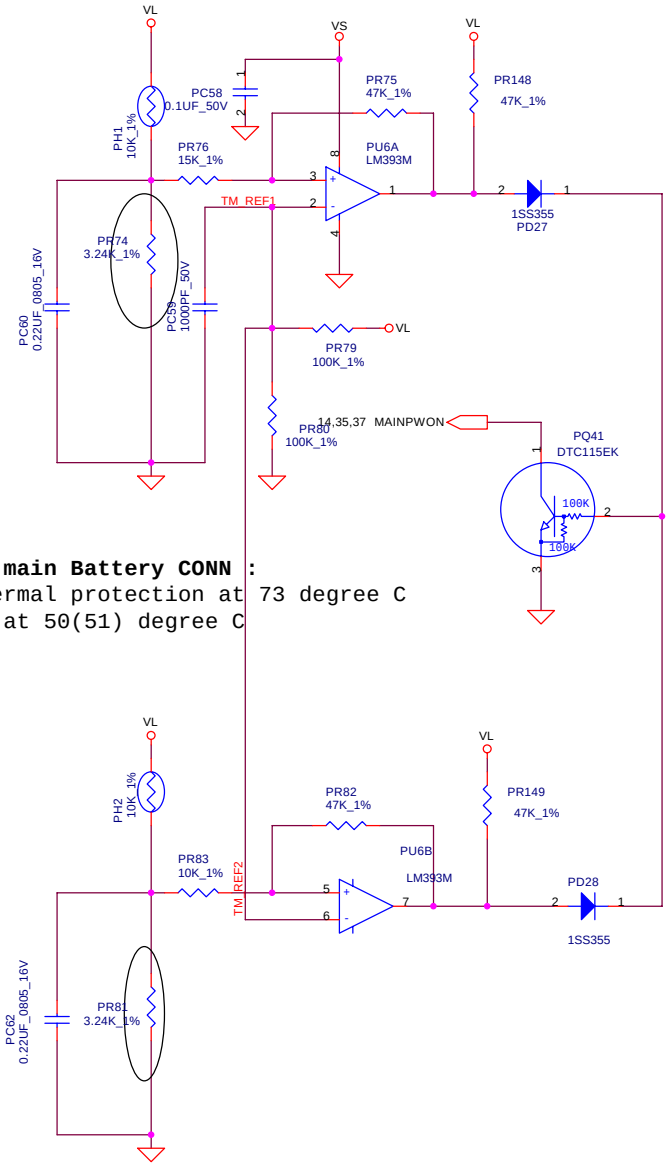
Title: 5V/3.3V/12V

Size: B | Document Number: DCL56 LA2231 | Rev: 0.3

Date: Thursday, February 05, 2004 | Sheet 37 of 45




**PH1 under CPU botten side :**
CPU thermal protection at 82 degree C
Recovery at 48 degree C



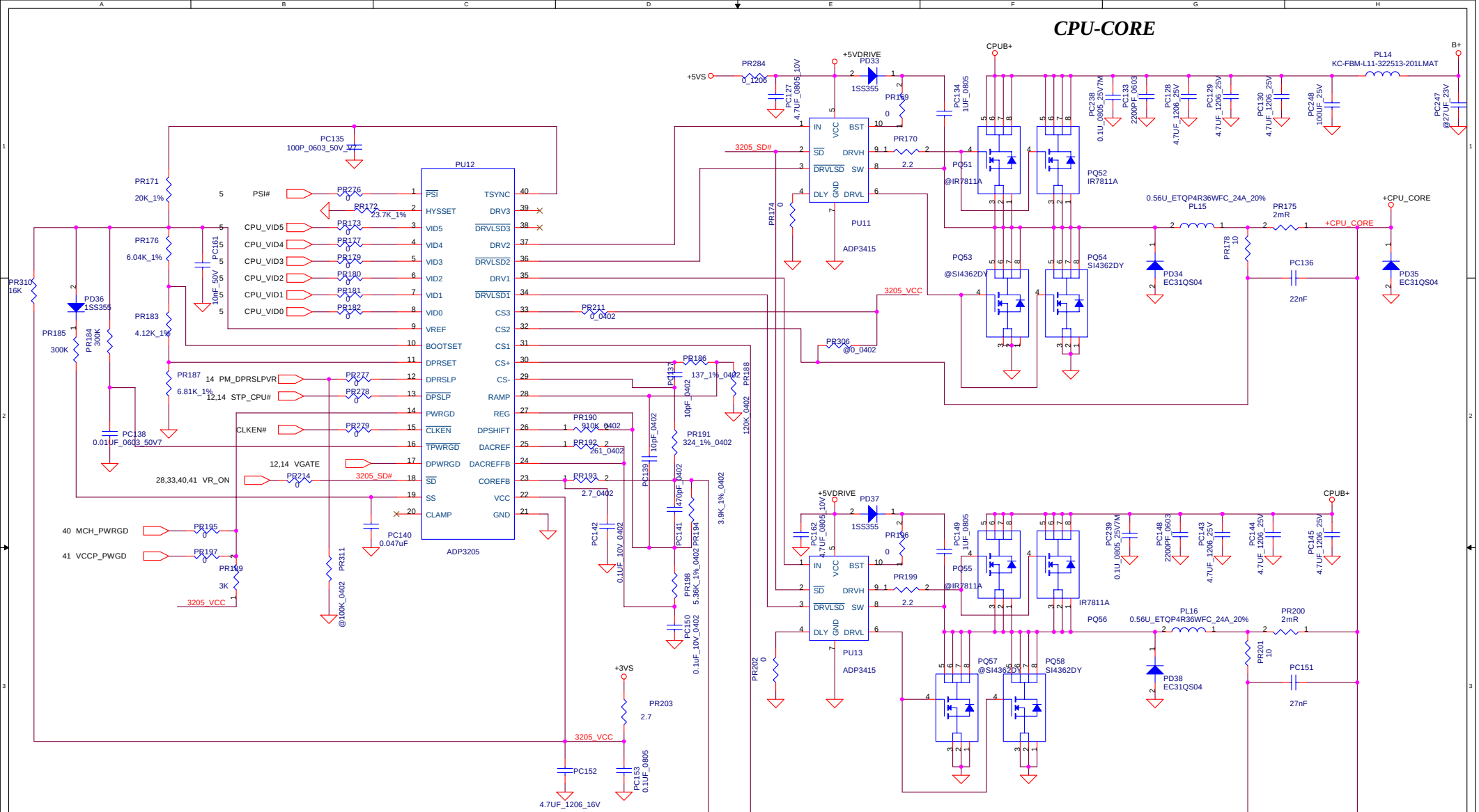

**PH2 near main Battery CONN :**
BAT. thermal protection at 73 degree C
Recovery at 50(51) degree C






| | |
|---|---|
| Compal Electronics, Inc. | |
| Title | BATTERY CONN / OTP/1.2V |
| Size: B | Document Number: DCL56 LA2231 |
| Rev | 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 38 of 45 |

# CPU-CORE

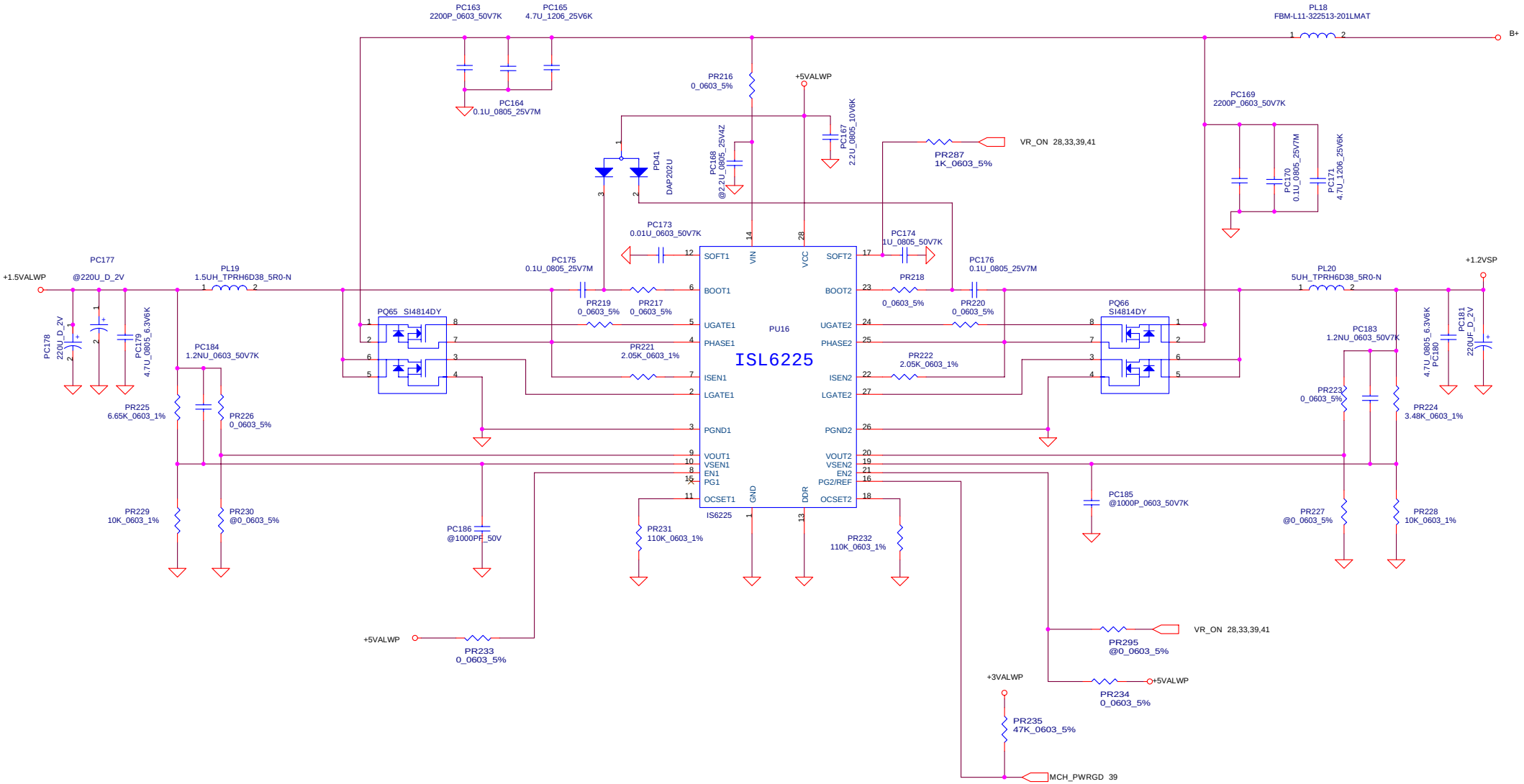





**Compal Electronics, Inc.**

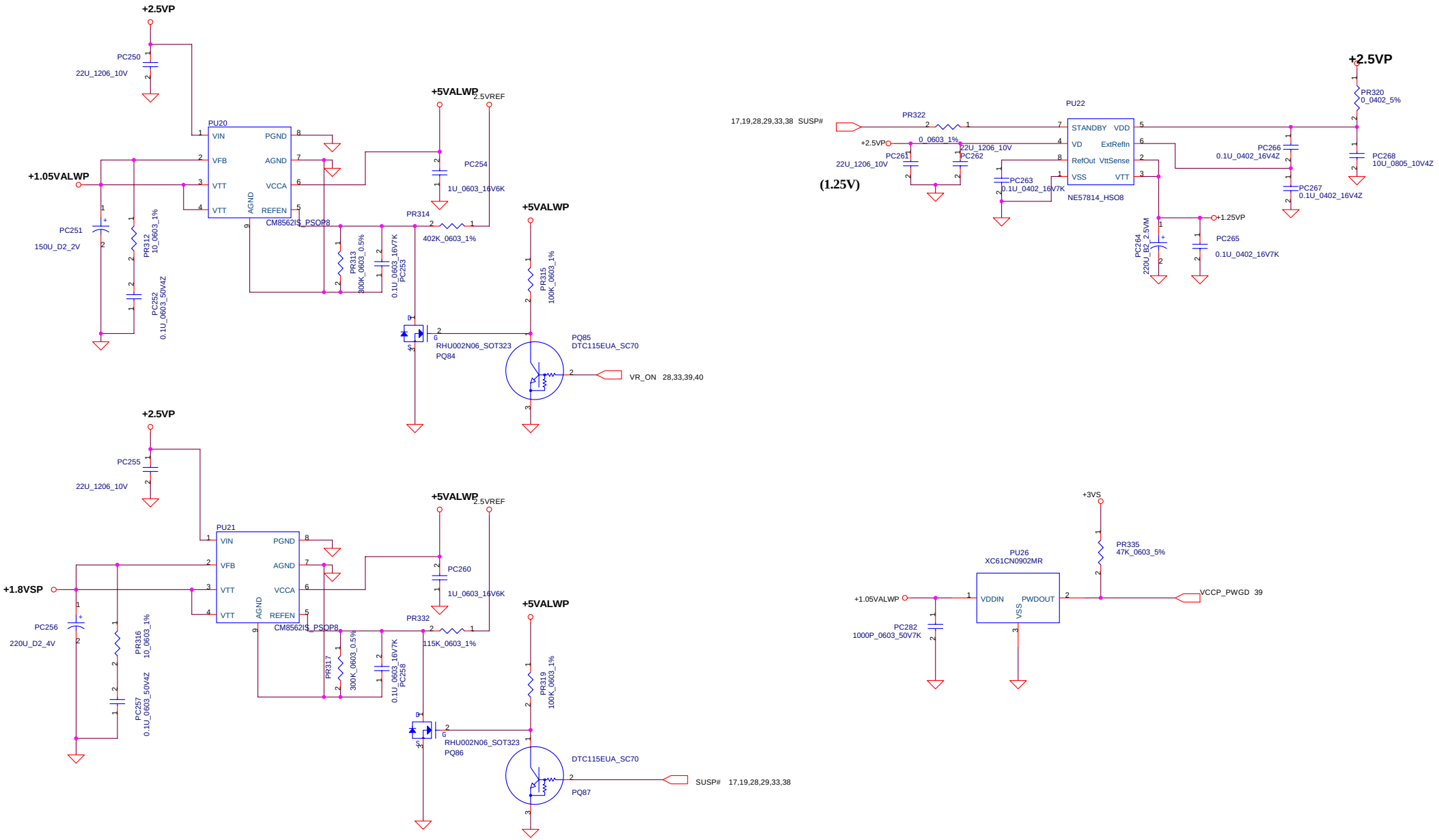
| | | |
|---|---|---|
| Title | +VCC_H_CORE | |
| Size: B | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 39 of 45 | |

# +1.5VALWPV/+1.2VSP



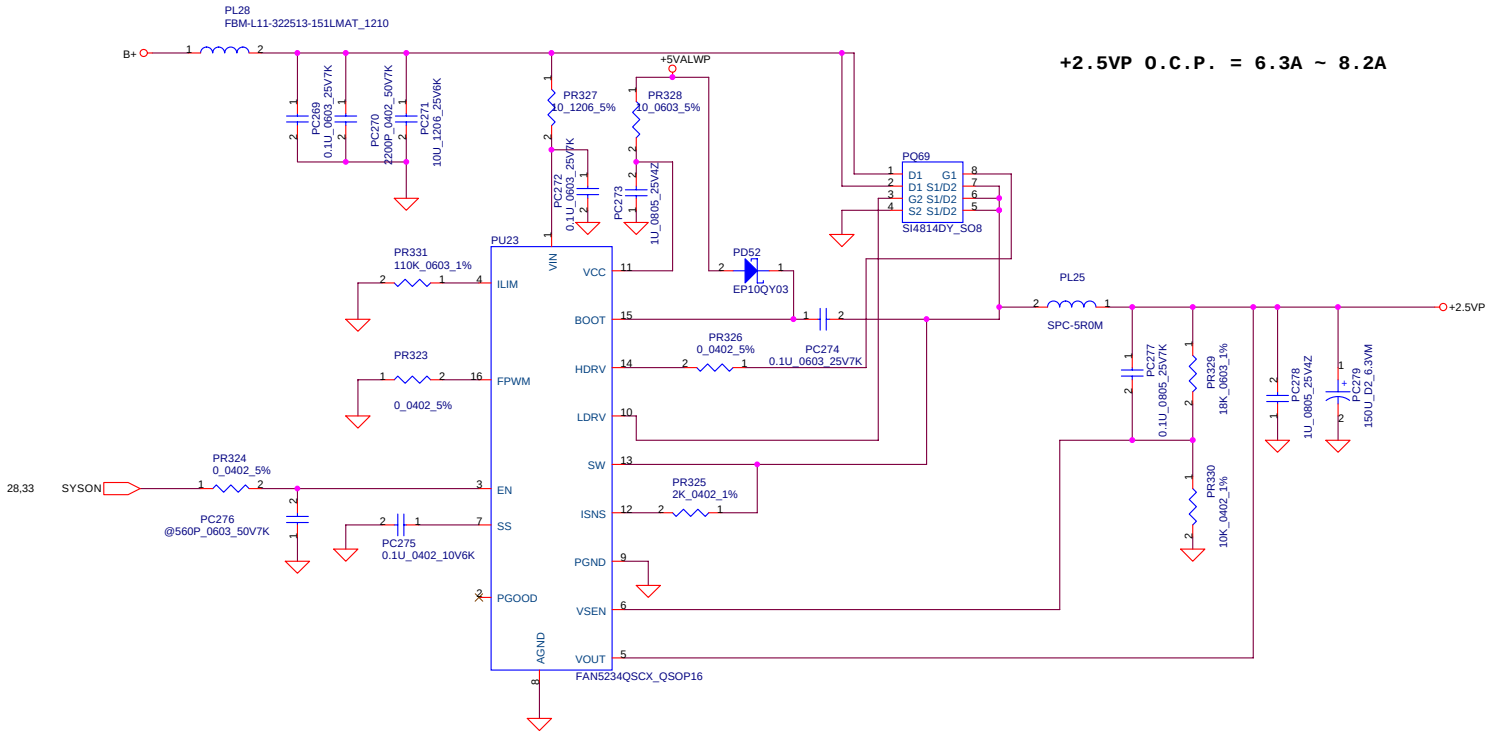


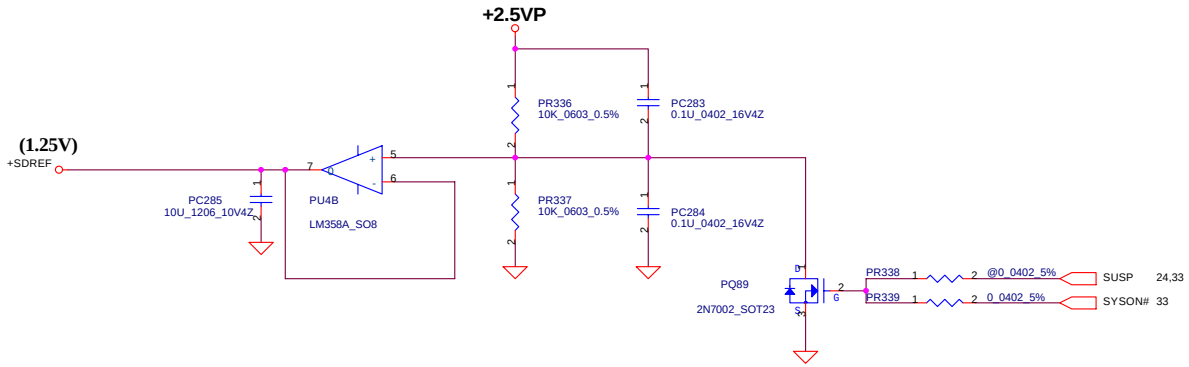

| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: 1.5V & 1.2V | | |
| Size: B | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 40 of 45 | |






| | | |
|---|---|---|
| Compal Electronics, Inc. | | |
| Title: 1.8V & 1.05V | | |
| Size: B | Document Number: DCL56 LA2231 | Rev: 0.3 |
| Date: Thursday, February 05, 2004 | Sheet 41 of 45 | |



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| Compal Electronics, Inc. | | |
| Title: 2.5V & 1.25V | | |
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# *Version change list (P.I.R. List)*



| Item | Fixed Issue | Reason for change | Rev. | PG# | Modify List | VER | Phase |
|---|---|---|---|---|---|---|---|
| 1. | IDE reset signal level error | Change signal level from 3V to 5V | | P16 | Delete D8,D9,R144,R147<br>Add U44,U45 | | DVT |
| 2. | LED light not enough | Change VCC from +3VALW to +5VALW | | P25 | Add Q45,Q46,Q47<br>Add R420,R421,R422 | | DVT |
| 3. | Change flash ROM size | Change from 4Mb to 8Mb | | P29 | Delete U9<br>Add U42 | | DVT |
| 4. | Change flash ROM size | Change from 8Mb to 4Mb | | P29 | Delete U42, C549, R419, JP28<br>Add U9, C59 | | PVT |
| 5. | Change USB Power | Change USB Power from +5VALW to +5V | | P25 | Change U2.2, U4.2 form +5VALW to +5V | | PVT |
| 6. | Noise when system boot | Change PCM_SPK# sequence | | P19 | Add R435 on PCM_SPK# and pull up to +3V | | PVT |
| 7. | Some CF card can't read | Pull up S1_OE# | | P20 | Add R436 on S1_OE# to pull up to S1_VCC | | PVT |
| 8. | Change FAN Connector | Change FAN Connector | | P30 | Change FAN Connector JP7 from 4-Pin to 3-Pin | | PVT |
| 9. | Add Bluetooth Detect Pin | Add Bluetooth Detect Pin | | P30 | Add Bluetooth Detect Pin form Super I/O GPIO20 to JP10 Pin20 | | PVT |

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



***for PWR***

| Item | Fixed Issue | Reason for change | Rev. | PG# | Modify List | VER | Phase |
|---|---|---|---|---|---|---|---|
| 1 | | change cpu core from two phase to one phase | | 39 | 1.delete<br>PC127,PU11,PD33,PR169,PR170,<br>PC134,PR174,PQ51,PQ52,PQ53,<br>PQ54,PC128,PC129,PC130,PC238,<br>PC133,PD34,PR175,PC136,PR178<br>2.add PR306:0, PQ76:SI4362,<br>PL28:0.6U<br>3.Change PR200 from 2m(CYNTEC) to 1m (DALE)<br>PC51 from 22nF to 33nF<br>PR190 from 620K to 910K<br>PR188 from 240k to 390k<br>PC143,PC144,PC145 from 4.7U from 10U | | DVT |
| 2 | | For new version FAN5236 &ISL6225, modify enable function | | 40,41,42 | 1. delete PR287, PR234, PR288, PR254, PR289, PR274<br>2. add PR295: 0, PR296: 0, PR297<br>3. change PC143,PC144,PC 145 from 4.7U to 10u | | DVT |
| 3 | | modify for 3.3v to reduce power loss | | 37 | Change PC34 from 470PF to 180PF | | DVT |
| 4 | | modify 5V reference | | 37 | change PR63 from 10k to 10.2k | | DVT |
| 5 | | modify charging current | | 35 | Change PR22 from 200 to 300<br>Add PR308 from 300 | | DVT |
| 6 | | modify bridge battery charging current | | 38 | 1. Add PR300:22.1K, PR301: 22.1K, PR302:442,<br>PR303:6.8K, PQ77:2SA1037K, PQ78: 2SC2412K,<br>PH3:100K ,PD51:DAN217, PQ79:<br>2N7002,PR299:49.9K, PR304 :57.6K, PC246:<br>0.1U, PR297:10K<br>2. Delete PD46 | | DVT |
| 7 | | modify and to reduce 5VALWPS,3VALWPS output recover edge voltage | | 37 | 1.Change PD12 from EP10QY03 to EC10QS04<br>PD11 from EP10QY03 to EC10QS04<br>PU13(ADP3415 driver) VCC from +5VALWP<br>to +5VS<br>PU12(ADP3205 controller) VCC from<br>+3VALWP to+3VS<br>2.Delete PQ10,PQ11:SI4800DY,<br>PQ12,PQ13:SI4810DY, PC46,PC56<br>Add PQ82,PQ83:SI4814DY | | DVT |
| 8 | | modify precharge circuit | | 35 | 1.Change PR17 from 150k to 412k<br>PR19 from 2.4M to 634K<br>PR20 from 10K to 34K<br>PR21 from 75K to 137K<br>2 Add PR309 :66.5K | | DVT |
| 9 | | modify battery OVP:8 cell:2.2V<br>6 cell 1.8V | | 36 | 1 change PR47 from 174k to 402k | | |

**Compal Electronics, Inc.**

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



***for PWR***

| Item | Fixed Issue | Reason for change | Rev. | PG# | Modify List | VER | Phase |
|---|---|---|---|---|---|---|---|
| 1 | | change cpu core from two phase to one phase | | 39 | 1.ADD PC127,PU11,PD33,PR169,PR170, PC134,PR174,PQ51,PQ52,PQ53, PQ54,PC128,PC129,PC130,PC238, PC133,PD34,PR175,PC136,PR178<br>2.DELETE PR306:0, PQ76:SI4362, PL28:0.6U<br>3.Change PR175,PR200 from 1m (DALE) TO 2m(CYNTEC), PC151,PC136 from 33nF to 22nF, PR188 from 240k to 120k , ADD PC128,PC129,PC130 : 4.7U<br>4.Change PR186 from 56 TO 137(Frequency from 300k to 250kHZ), 5. ChangePR188 from 240k to 120k(Vcore from 1.46 to 1.466v,vid code=1.468v when Io=0A), PR187 change from 3.4k to 3.48k(Vboot=1.2v,and Vc4from0.741 to 0.752v) | | PVT |
| 2 | | Change new version FAN5236d &ISL6225b to ISL6225CA&FAN5236, modify enable function | | 40,41,42 | 1. ADD PR287, PR234, PR288, PR254, PR289, PR274 2. DELETE PR295: 0, PR296: 0, PR297 3.ADD PR287,PR288,PR289 4.Change PC174,PC198,PC222 FROM 0.01U TO 4.7U 16V | | PVT |
| 3 | | modify FAN5236 RC feed back compasation | | 40,41,42 | PC183,PC184,PC207,PC208:FROM 0.01UF TO 1.2NF | | PVT |
| 4 | | change cpu core cap to 6*4.7uF 1210 not 3*10uF due to 10uF cap height >2mm | | 39 | PC128,PC129,PC130,PC143,PC144,PC145FROM 10UF TO 4.7UNF | | PVT |
| 5 | | modify bridge battery charging current: | | 38 | change PR302 be120 1206,PR303 be1.5k 1206 | | PVT |
| 6 | | modify PU17,PU18 max current,OCP | | 40,41 | change PR221,PR222,PR241,PR242 fom 1.27k(0603) to 1.05k(1206) | | PVT |
| 7 | | modify charger CP point :from from 61.5W to 54W | | 36 | change PR332 fom 21K(0603) to 26.1K(0603) | | PVT |
| 8 | | modify and confirm PU12 Vref build time | | 39 | INCREASE PR310 10KB between PU12Vref(PIN9) to PU12 VCC | | |
| 9 | | FOR bridge battery safety, add PTC as protection | | 38 | add PFS1 0.75A/24V | | |

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| Title: PIR | | | |
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