

Compal Confidential

Fortworth Baniass EAL20 LA-2462 Schematic

uFC-PGA Dothan / Montara-GM+
M11P-128M VRAM / ICH4-M

2004-08-12

REV: 0.1

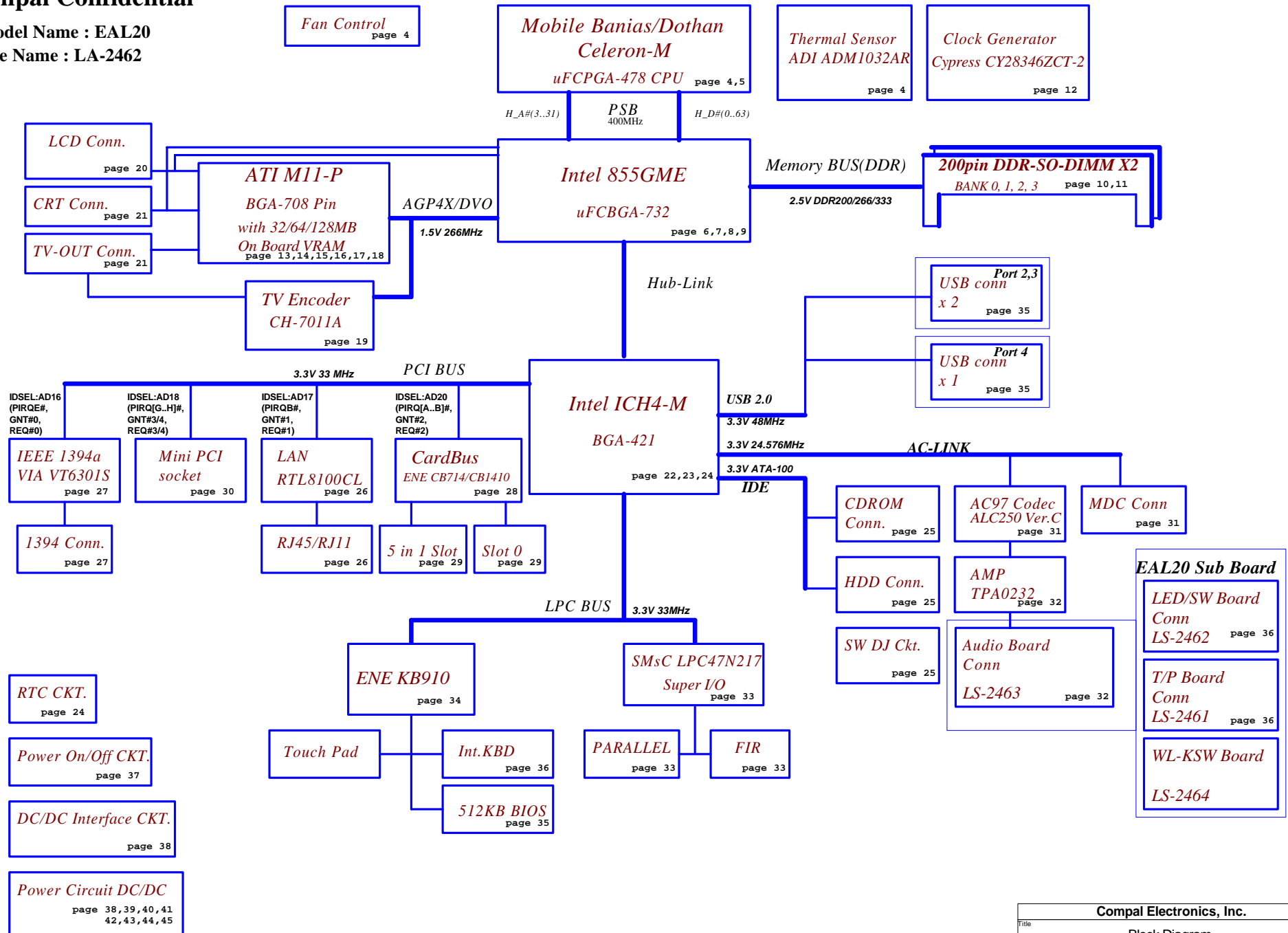
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
Title			
Cover Sheet			
Size	Document Number		Rev
	EAL20 LA-2462		0.1
Date:	Friday, September 17, 2004		Sheet 1 of 47

Compal Confidential

Model Name : EAL20

File Name : LA-2462



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Block Diagram			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	2 of 47

Voltage Rails

Power Plane	Description	S0-S1	S3	S5
VIN	Adapter power supply (19V)	NA	NA	NA
B+	AC or battery power rail for power circuit	NA	NA	NA
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+VCCP	1.05V rail for Processor I/O	ON	OFF	OFF
+1.25VS	1.25V switched power rail for DDR Vtt	ON	OFF	OFF
+VGA_CORE	1.2V/1.0V switched power rail for VGA core power	ON	OFF	OFF
+1.35VS	1.35V switched power rail for GMCH core power	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail for AGP interface	ON	OFF	OFF
+1.8VS	1.8V switched power rail for CPU PLL & Hub-Link	ON	OFF	OFF
+2.5V	2.5V power rail for system DDR	ON	ON	OFF
+2.5VS	2.5V power rail for VGA DDR	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V switched power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+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.

ICH4-M I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1 0 1 0 0 0 0 X
DDR SO-DIMM 1	A2	1 0 1 0 0 0 1 X
CLOCK GENERATOR (EXT.)	D2	1 1 0 1 0 0 1 X




KB910 I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
SM1 24C16	A0H	1 0 1 0 0 0 0 X b
SM1 SMART BATTERY	16H	0 0 0 1 0 1 1 X b
SM2 ADM0132 CPU THERMAL MONITOR	98H	1 0 0 1 1 0 0 X b
SM2 ALC250 AUDIO CODEC	00H	0 0 0 0 0 0 0 X b

External PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRO
1394	D0	AD16	0	E
LAN	D1	AD17	1	F
CARD BUS	D4	AD20	2	A
SIN1	D4	AD20	2	B
Mini-PCI	D2	AD18	3,4	G,H
AGP BUS	N/A	AGP_DEVSEL#	N/A	A

Symbol note:

-  :means digital ground.
 :means analog ground.
 @ :means reserved.

Fortworth Banias Comparison Table

Item	* Descrite	UMA	Page
VGA	ATI M11P	UMA	13 ~ 16
VRAM	128MB/64MB	NA	13 ~ 14
TV Encoder	NA	CH7011A	19

Board ID Table for AD channel

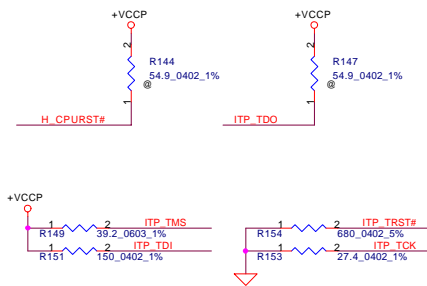
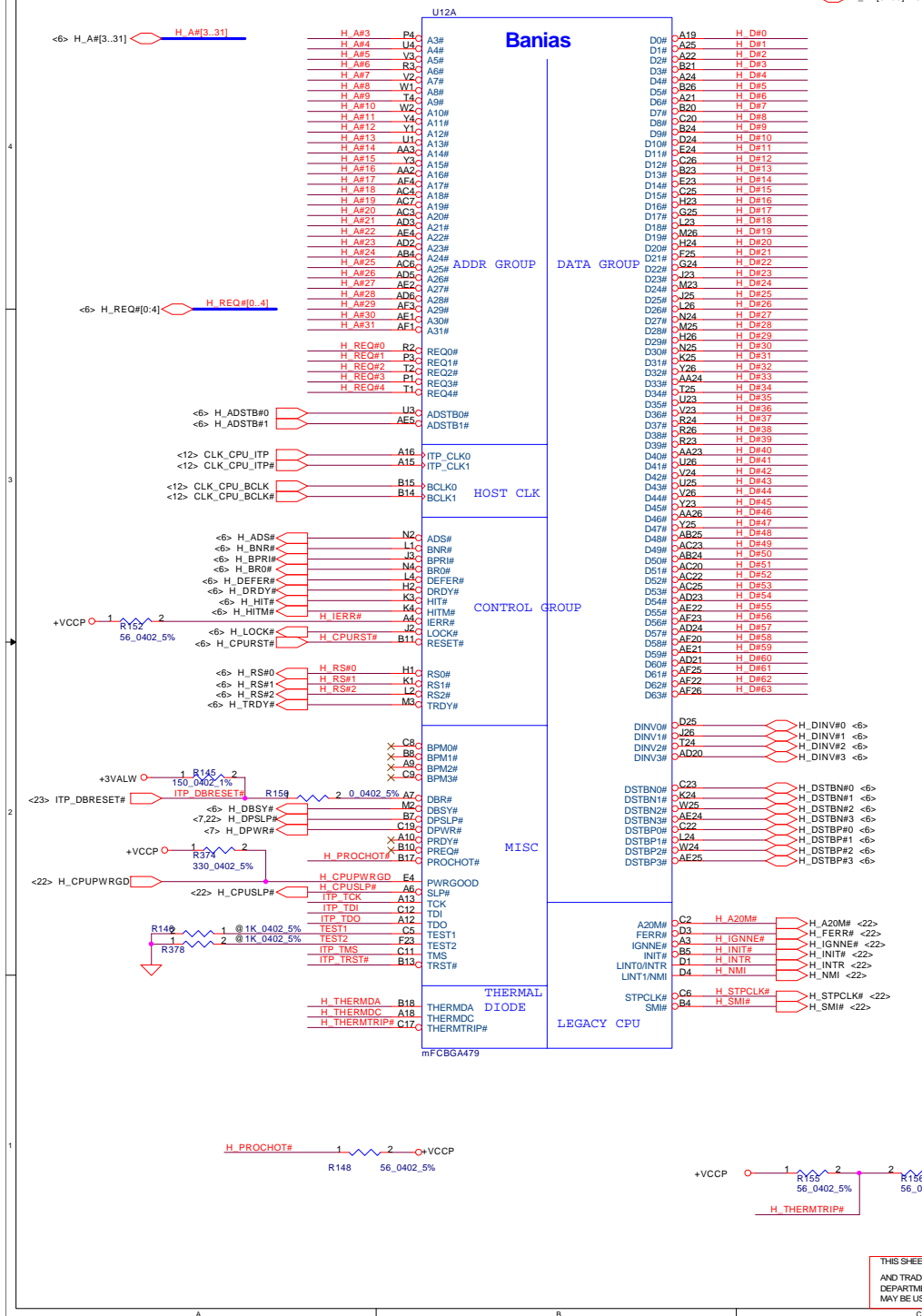
Vcc	3.3V +/- 5%			
Ra	10K +/- 5%			
BID/PID	Rb/Rc	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	1.412 V	1.486 V	1.560 V
2	18K +/- 5%	2.015 V	2.121 V	2.227 V
3	33K +/- 5%	2.406 V	2.533 V	2.659 V
4	56K +/- 5%	2.660 V	2.800 V	2.940 V
5	NC	3.135 V	3.300 V	3.465 V

Board ID	PCB Revision
* 0	0.1
1	0.2
2	0.3
3	0.4
4	0.5
5	
6	
7	

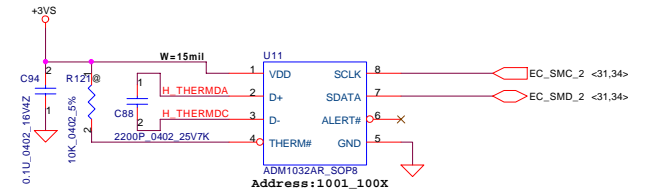
Compal Electronics, Inc.

Title			
Notes List			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	3 of 47

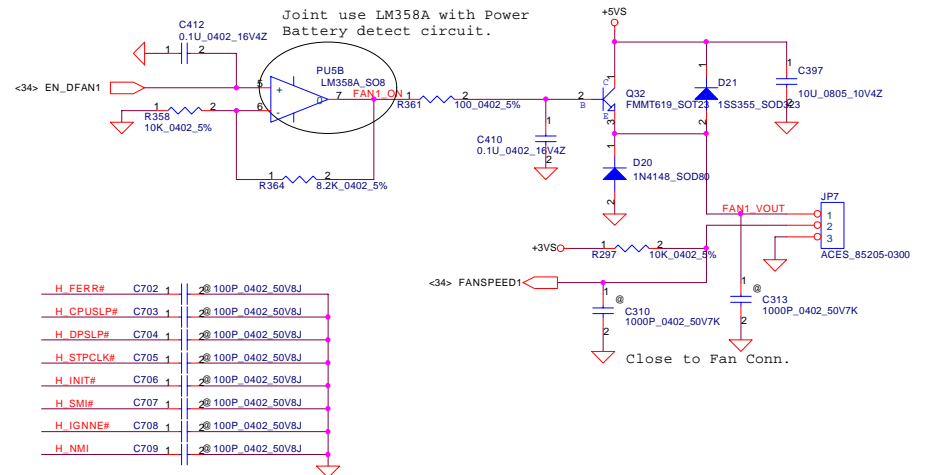
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



Thermal Sensor ADI ADM1032AR



Fan Control circuit



Dothan VCCA update(WW45 2003)
Dothan B-Step support 1.5V only for VCCA

Resistor placed within
0.5" of CPU pin.Trace
should be at least 25
mils away from any
other toggling signal.

Resistor placed within
0.5" of CPU pin.Trace
should be at least 25
mils away from any
other toggling signal.

Banias

POWER, GROUND, RESERVED SIGNALS AND NC

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

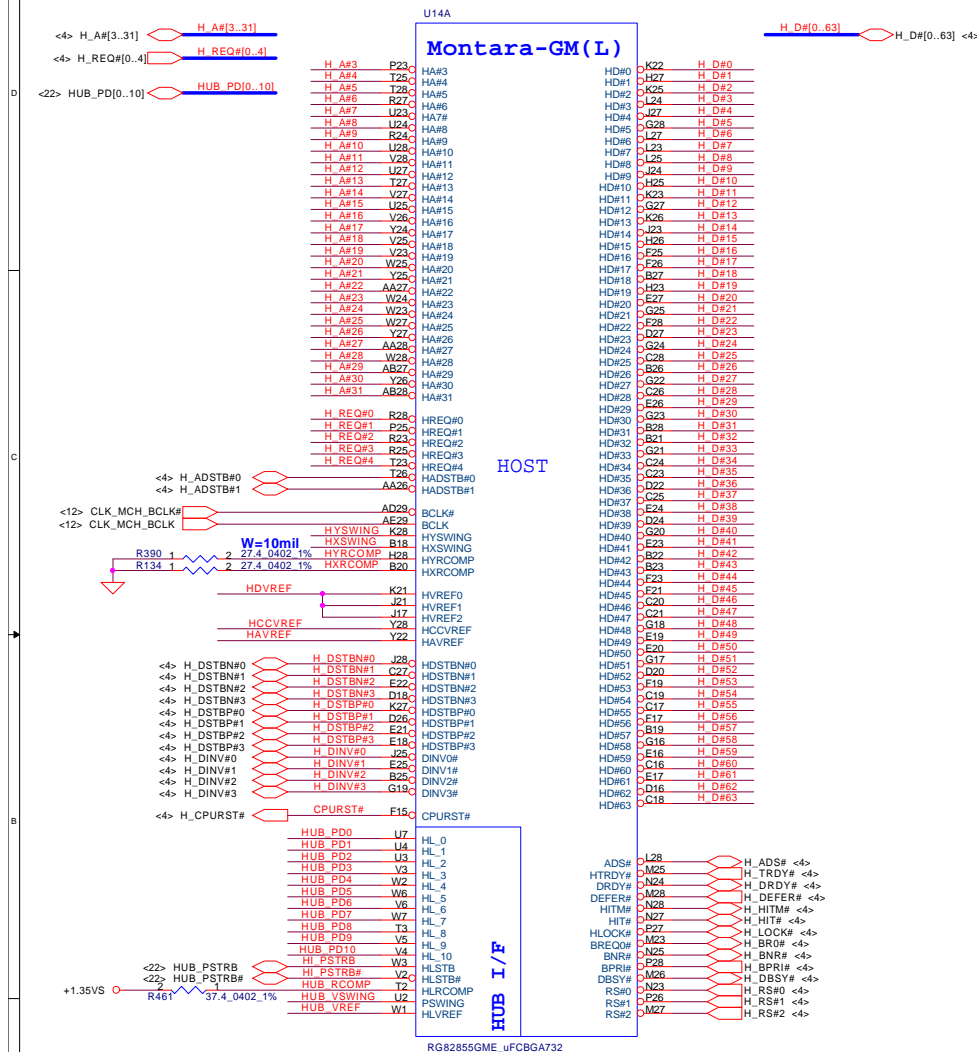
Compal Electronics, Inc.

INTEL CPU BANIAS (2 of 2)

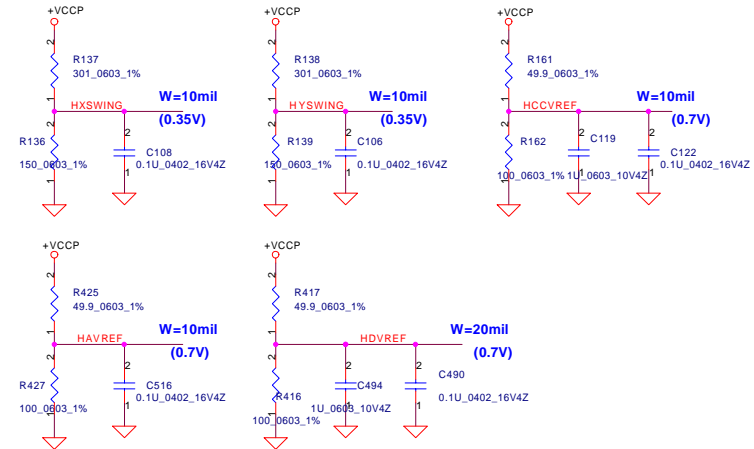
EAL20 LA-2462

Friday, September 17, 2004 Sheet 5 of 47

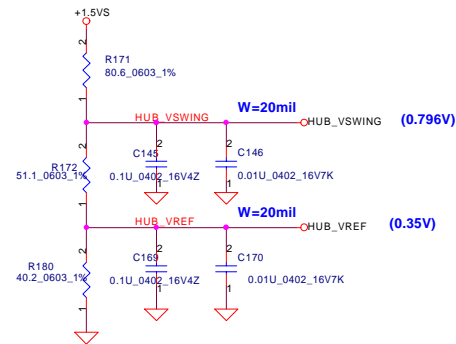
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.



HOST REF VOLTAGE



HUB I/F REF VOLTAGE



Compal Electronics, Inc.

Title			INTEL 855GME-HOST(1/4)
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	6 of 47

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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

U14B

Montara-GM(L)

DVOC_D0<11> DVOC_D0..11
 DVOC_D1<11> DVOC_D1..11
 AGP_SBA0<7> AGP_SBA0..7

DVOC_D0 R3
 DVOC_D1 R5
 DVOC_D2 R6
 DVOC_D3 R4
 DVOC_D4 P6
 DVOC_D5 P5
 DVOC_D6 P2
 DVOC_D7 P2
 DVOC_D8 N2
 DVOC_D9 N3
 DVOC_D10 M1
 DVOC_D11 M5

AGP_ADSTB0<13> AGP_ADSTB0#
 AGP_AD0<13> AGP_AD0
 AGP_AD1<13> AGP_CBE#1
 AGP_AD14<13> AGP_AD14

DVOC_CLK<13,19> DVOC_CLK
 DVOC_HSYNC<13,19> DVOC_HSYNC
 DVOC_VSYNC<13,19> DVOC_VSYNC
 AGP_AD18<13> AGP_AD18
 AGP_AD31<13> AGP_AD31

M12CCLK<13,19> M12CCLK
 M12CDATA<13,19> M12CDATA
 MDVICLK<13> MDVICLK
 MDVIDATA<13> MDVIDATA
 MDDCCLK<13> MDDCCLK
 MDDCDATA<13> MDDCDATA

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

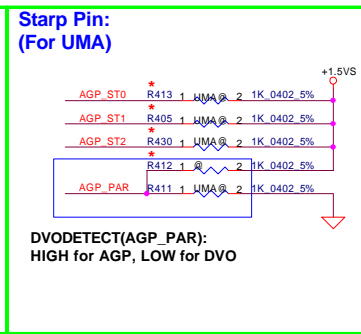
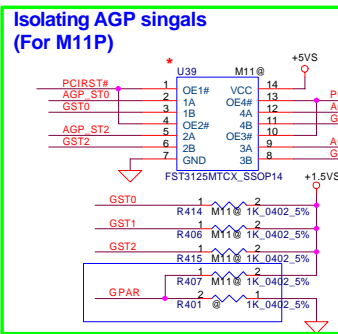
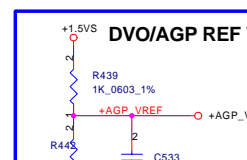
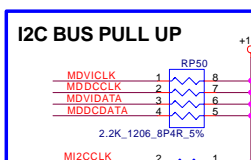
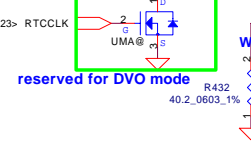
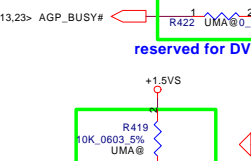
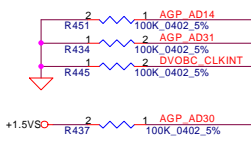
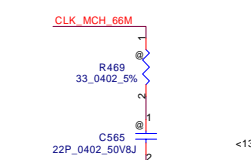
RG82855GME_UFCGA732

RG82855GME_UFCGA732

RG82855GME_UFCGA732

855GME DVO/AGP Pin Muxing

Ball	DVO Mode	AGP Mode
R3	DVOC_D0	GAD3
R5	DVOC_D1	GAD2
R6	DVOC_D2	GAD5
R4	DVOC_D3	GAD4
P6	DVOC_D4	GAD7
P5	DVOC_D5	GAD6
N5	DVOC_D6	GAD8
P2	DVOC_D7	GAD10
N2	DVOC_D8	GAD9
N3	DVOC_D9	GAD12
M1	DVOC_D10	GAD11
M5	DVOC_D11	GAD13
P3	DVOC_CLK	GAD14
P4	DVOC_HSYNC	GAD15
T6	DVOC_VSYNC	GAD16
T5	DVOC_VSYNC	GAD17
M2	DVOC_BCLK	GAD18
M3	DVOC_BCLK	GAD19
J3	DVOC_BCLK	GAD20
J2	DVOC_BCLK	GAD21
K6	DVOC_BCLK	GAD22
L5	DVOC_BCLK	GAD23
L3	DVOC_BCLK	GAD24
H5	DVOC_BCLK	GAD25
K7	DVOC_BCLK	GAD26
N6	DVOC_BCLK	GAD27
N7	DVOC_BCLK	GAD28
M6	DVOC_BCLK	GAD29
P7	DVOC_BCLK	GAD30
T7	DVOC_BCLK	GAD31
K5	DVOC_BCLK	GAD32
K1	DVOC_BCLK	GAD33
K3	DVOC_BCLK	GAD34
J6	DVOC_BCLK	GAD35
J5	DVOC_BCLK	GAD36
H2	DVOC_BCLK	GAD37
H1	DVOC_BCLK	GAD38
H3	DVOC_BCLK	GAD39
H4	DVOC_BCLK	GAD40
H6	DVOC_BCLK	GAD41
E5	DVOC_BCLK	GAD42
F5	DVOC_BCLK	GAD43
E2	DVOC_BCLK	GAD44
G5	DVOC_BCLK	GAD45
F4	DVOC_BCLK	GAD46
G6	DVOC_BCLK	GAD47
F6	DVOC_BCLK	GAD48
L7	DVOC_BCLK	GAD49
D5	DVOC_BCLK	GAD50
F3	DVOC_BCLK	GAD51
B2	DVOC_BCLK	GAD52
B3	DVOC_BCLK	GAD53
C2	DVOC_BCLK	GAD54
C3	DVOC_BCLK	GAD55
D2	DVOC_BCLK	GAD56
D3	DVOC_BCLK	GAD57
L4	DVOC_BCLK	GAD58



Sharp pin list

ST2	ST1	ST0	PSB/Mem/GFX
0	0	0	400 / 266 / 200
0	0	1	400 / 200 / 200
0	1	0	400 / 200 / 133
1	1	1	400 / 333 / 250 *

Compal Electronics, Inc.

INTEL 855GME-AGP&LVDS(2/4)

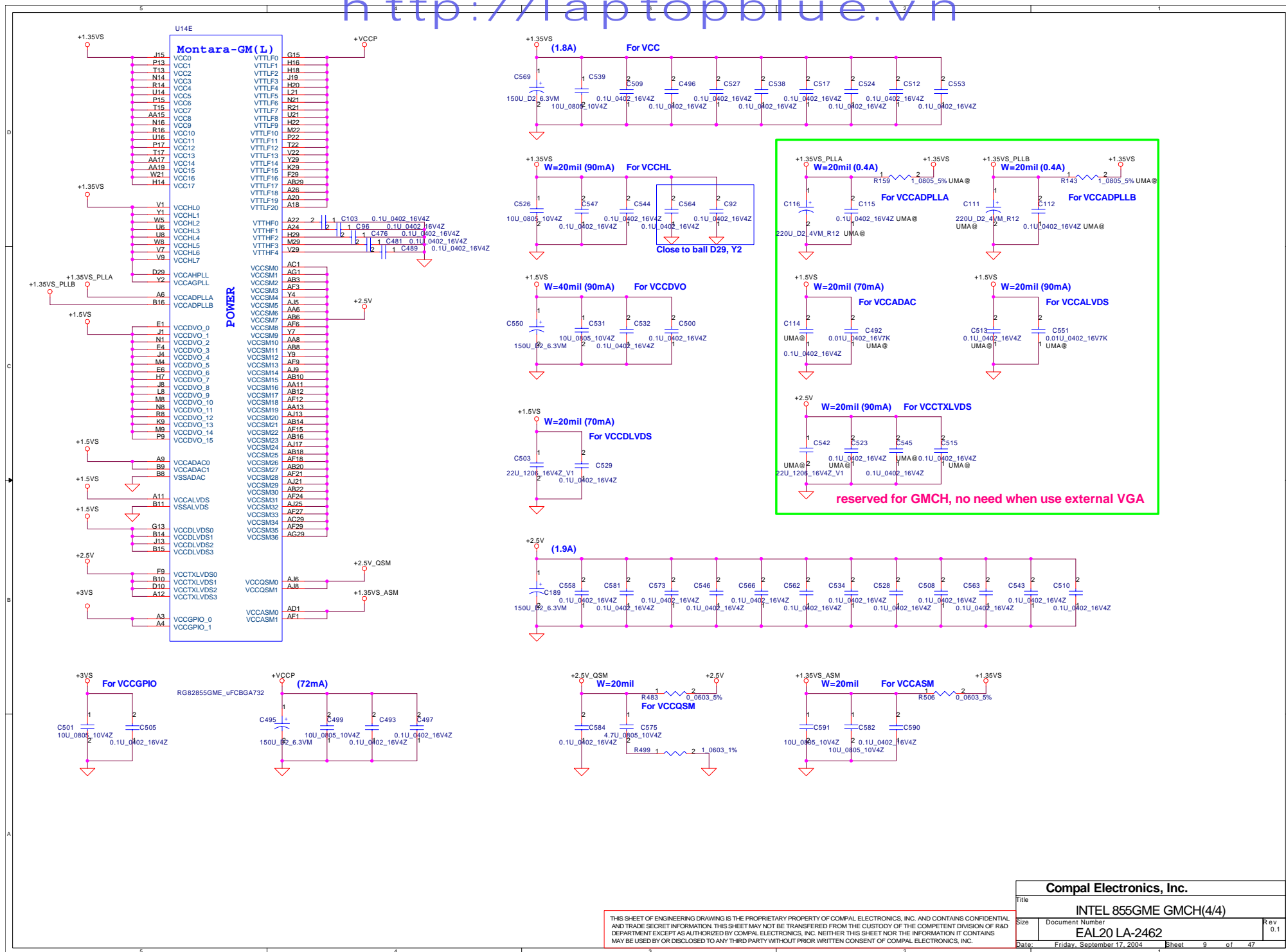
EAL20 LA-2462

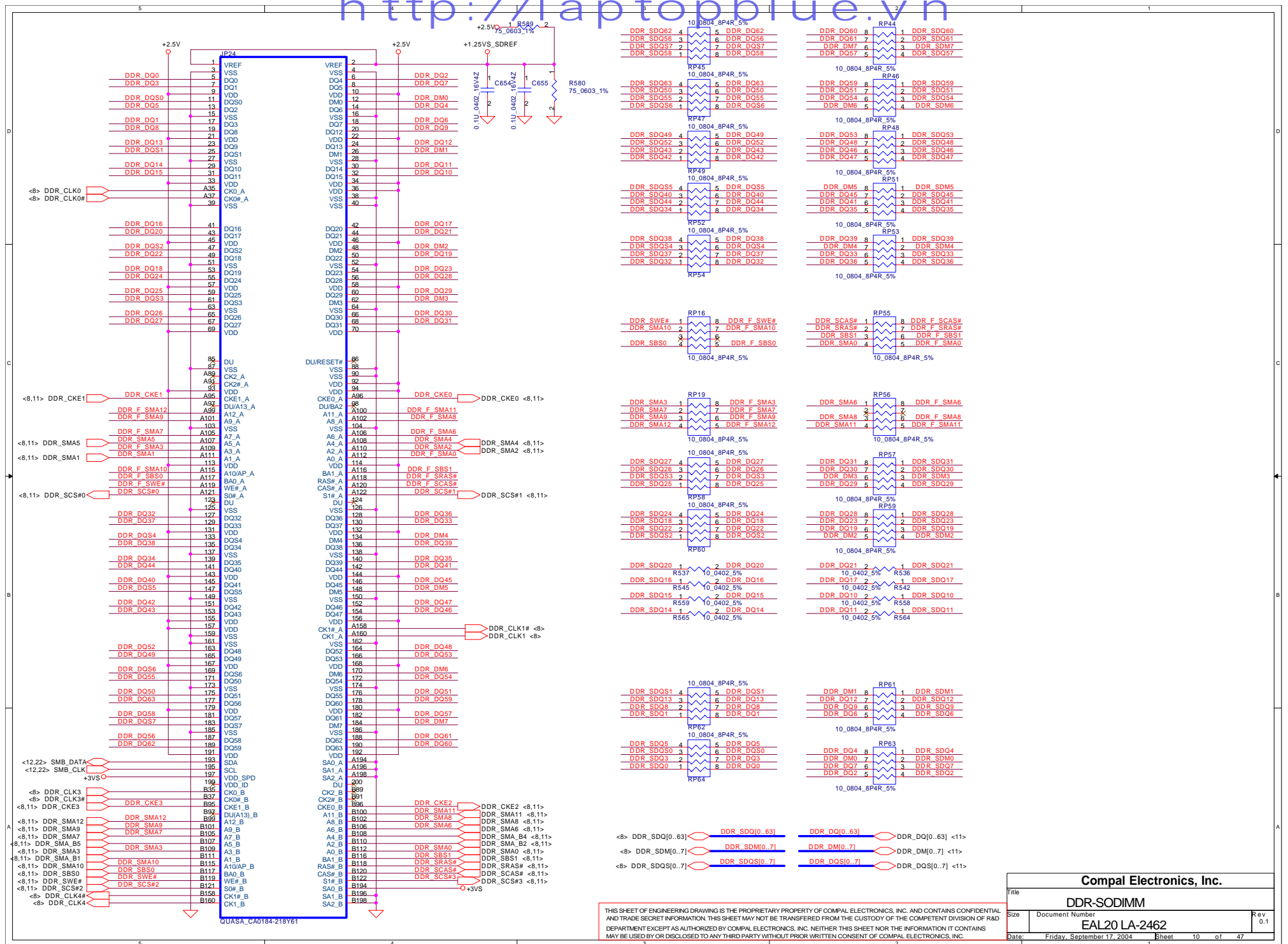
Friday, September 17, 2004

Sheet 7 of 47

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 WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

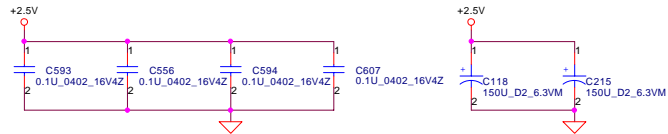




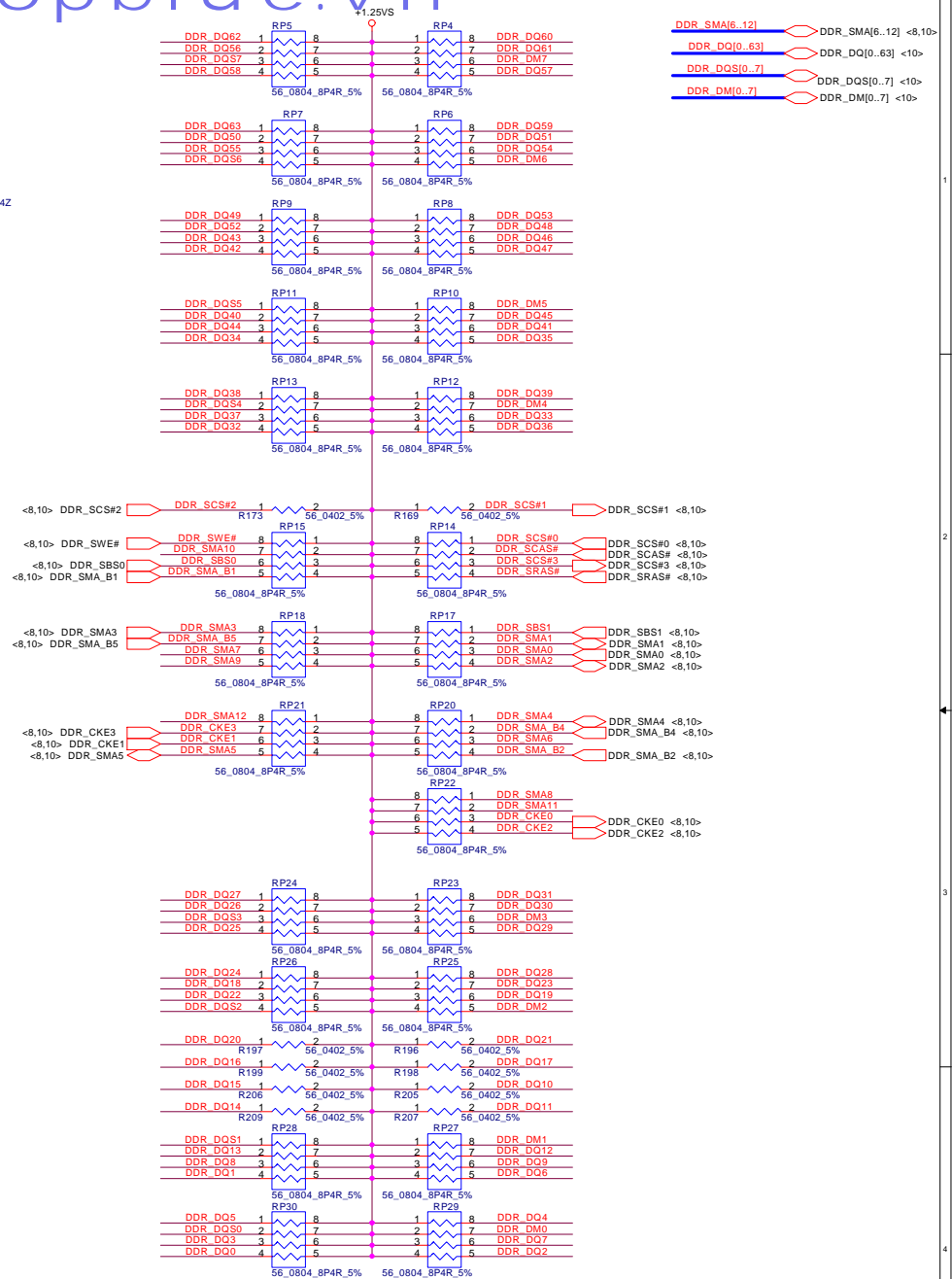


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

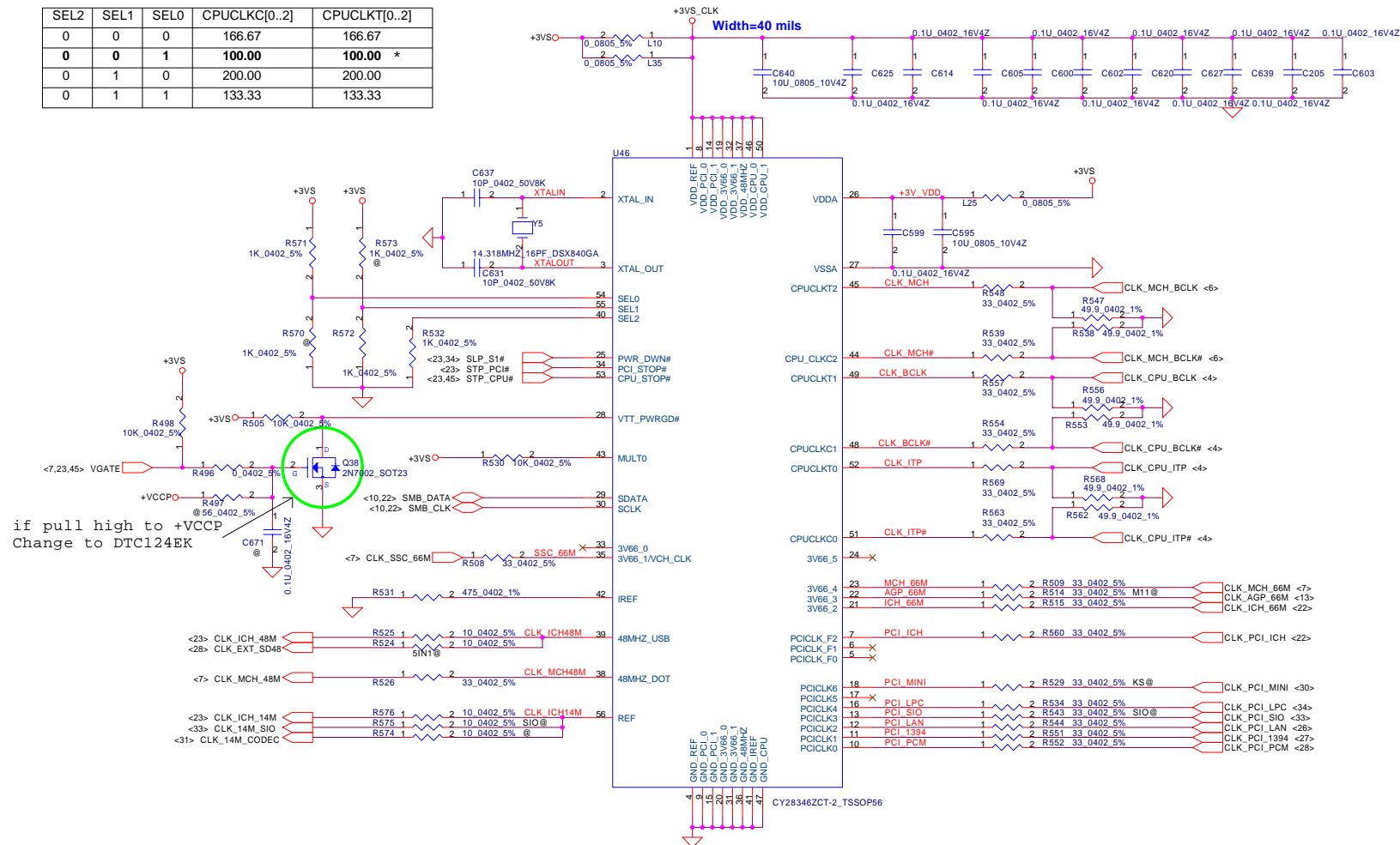
Compal Electronics, Inc.		
DDR-SODIMM		
Size	Document Number	Rev
	EAL20 LA-2462	0.1
Date:	Friday, September 17, 2004	Sheet 10 of 47











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

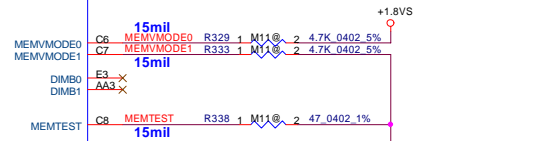
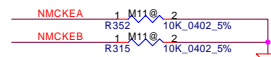
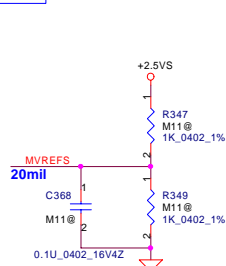
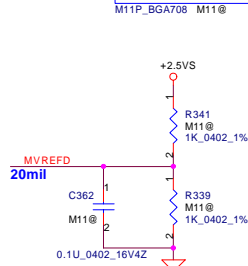
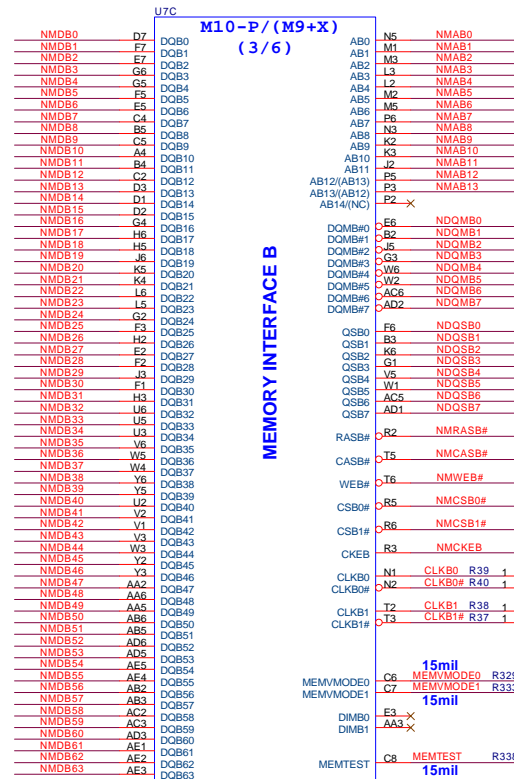
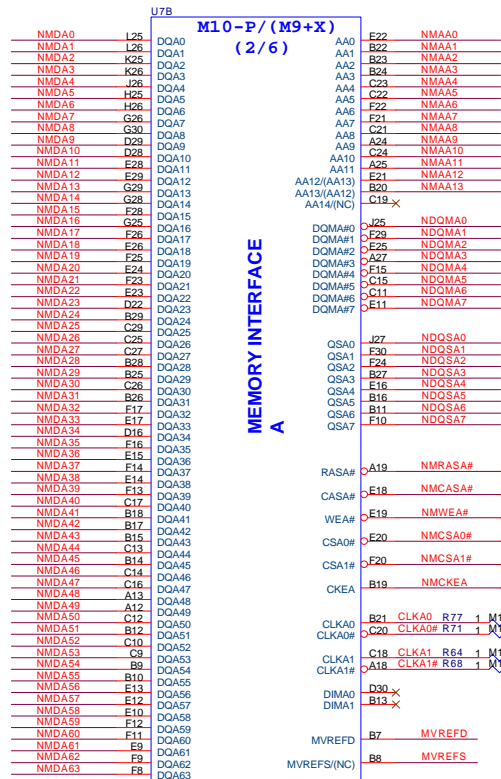


SEL2	SEL1	SEL0	CPUCLKC[0...2]	CPUCLKT[0...2]
0	0	0	166.67	166.67
0	0	1	100.00	100.00 *
0	1	0	200.00	200.00
0	1	1	133.33	133.33



<17> NMDA[0..63]  NMDA[0..63]
 <17> NMAA[0..13]  NMAA[0..13]
 <17> NDQMA[0..7]  NDQMA[0..7]
 <17> NDQSA[0..7]  NDQSA[0..7]

<18> NMDB[0..63]  NMDB[0..63]
 <18> NMAB[0..13]  NMAB[0..13]
 <18> NDQMB[0..7]  NDQMB[0..7]
 <18> NDQSB[0..7]  NDQSB[0..7]



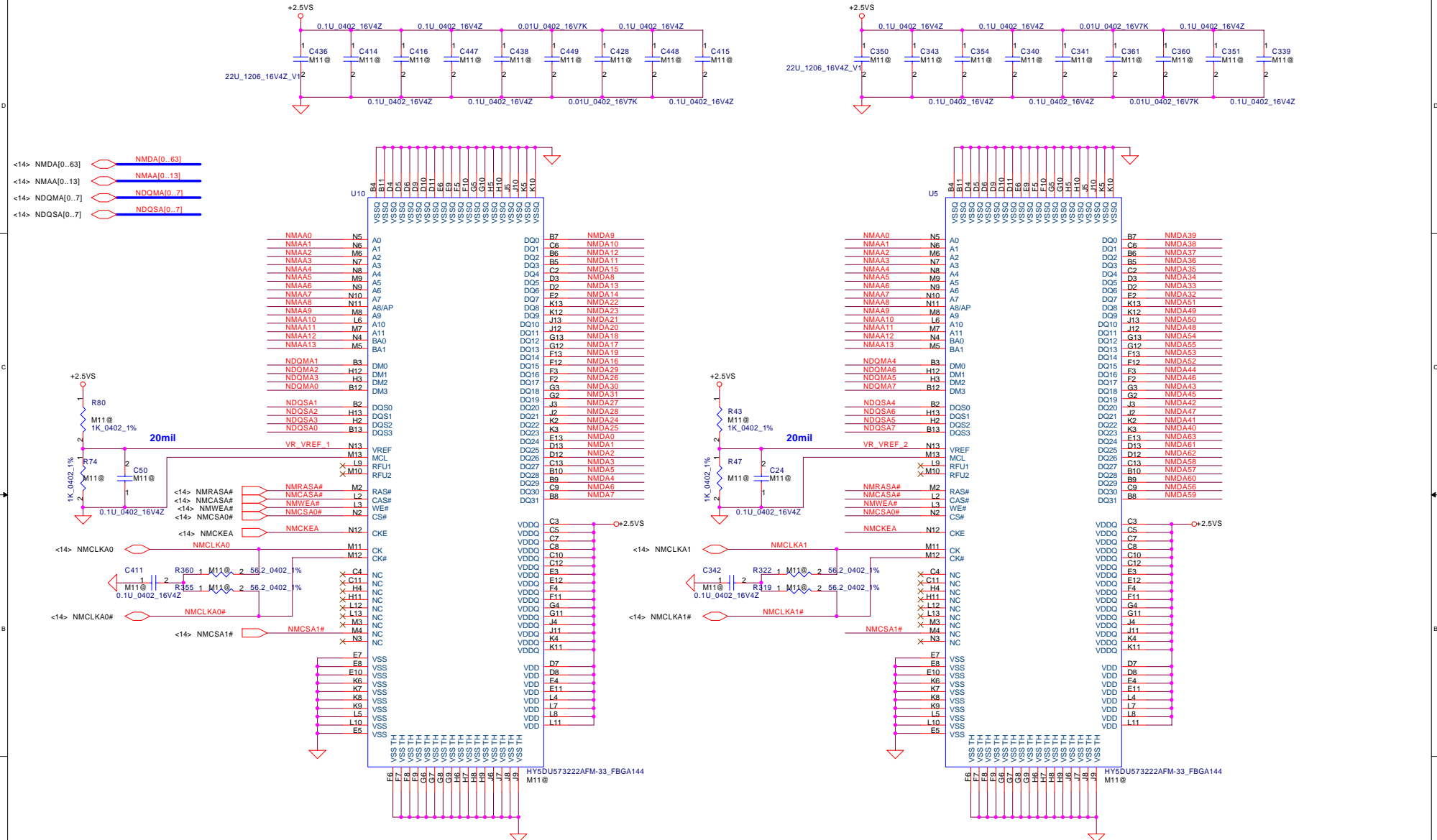
Compal Electronics, Inc.

ATI M10-P/M11-MEMORY(2/4)

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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

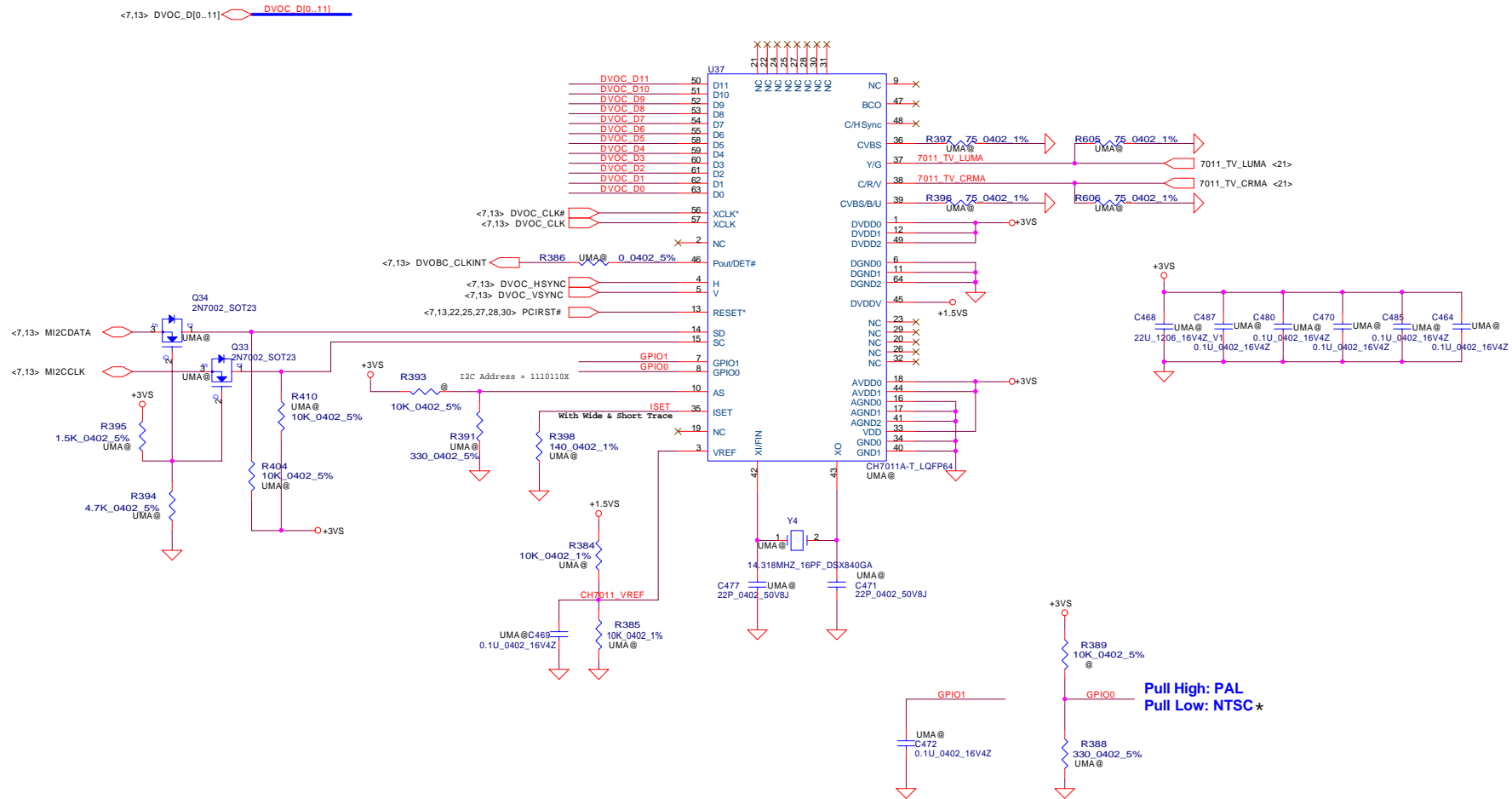
Size Document Number
Custom EAL20 LA-2462
Date: Friday, September 17, 2004 Sheet 14 of 47 Rev 0.1





TV Encoder

remove this page when use M11P

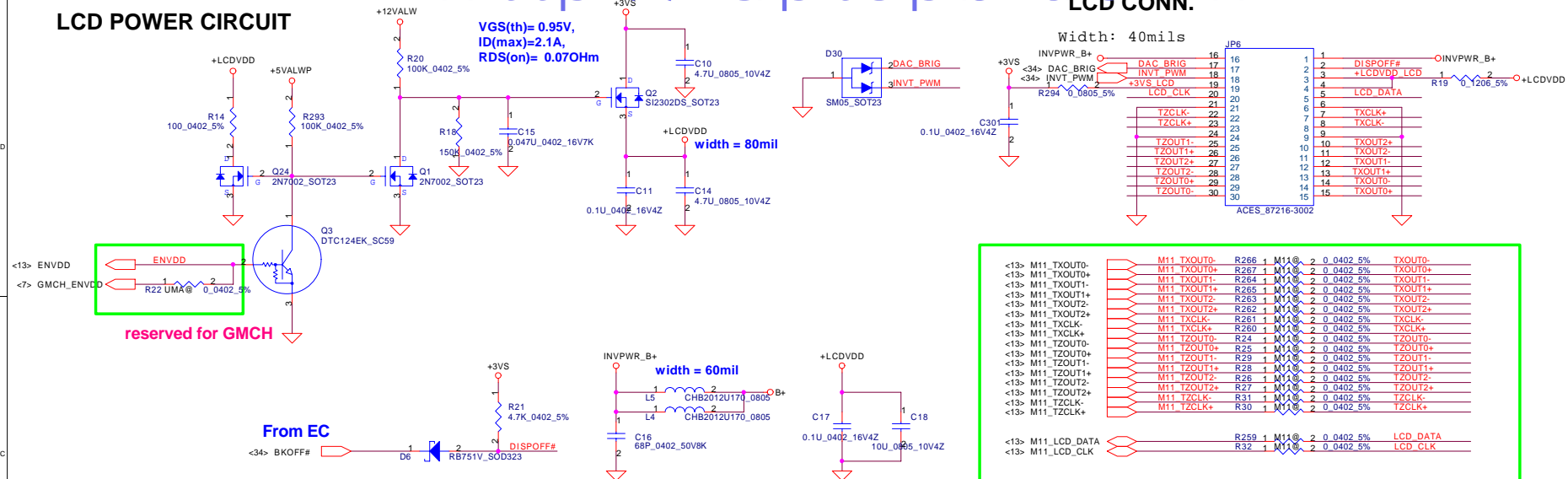


Pull High: PAL
Pull Low: NTSC★

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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

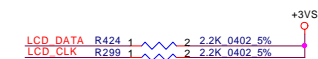
Compal Electronics, Inc.			
TV Encoder CH7011A			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	19 of 47

LCD POWER CIRCUIT



For ATI M11P

For GMCH



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title			
LCD CONN			
Size	Document Number		Rev
	EAL20 LA-2462		0.1
Customer			
Date:	Friday, September 17, 2004	Sheet	20 of 47

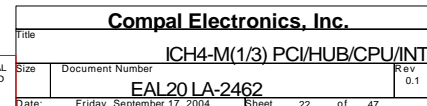


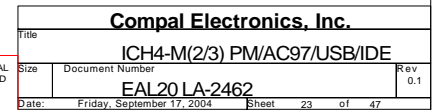
CRT & TV-OUT Connector

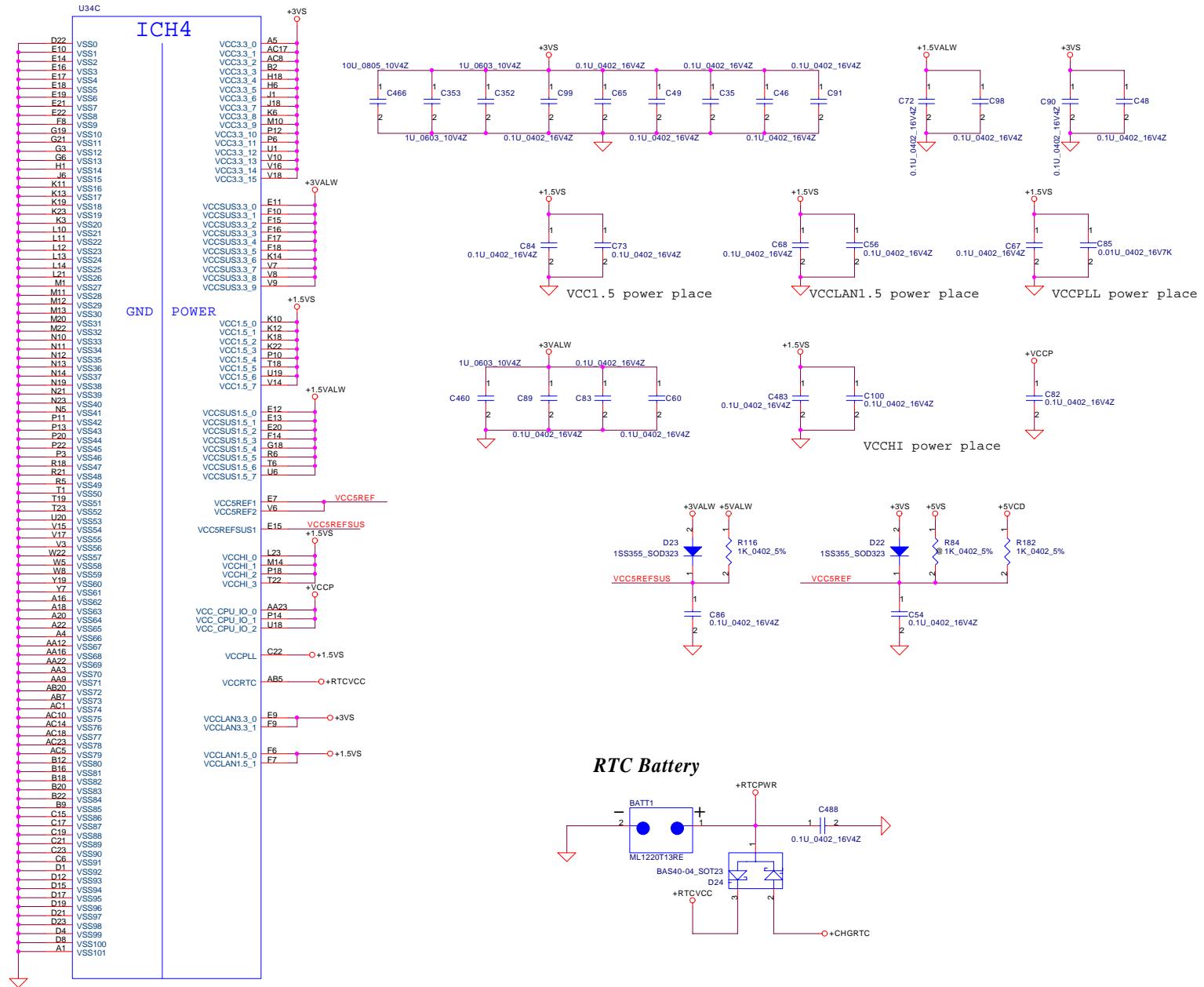
EAL20 LA-2462

Date: Friday, September 17, 2004 Sheet 21 of 47

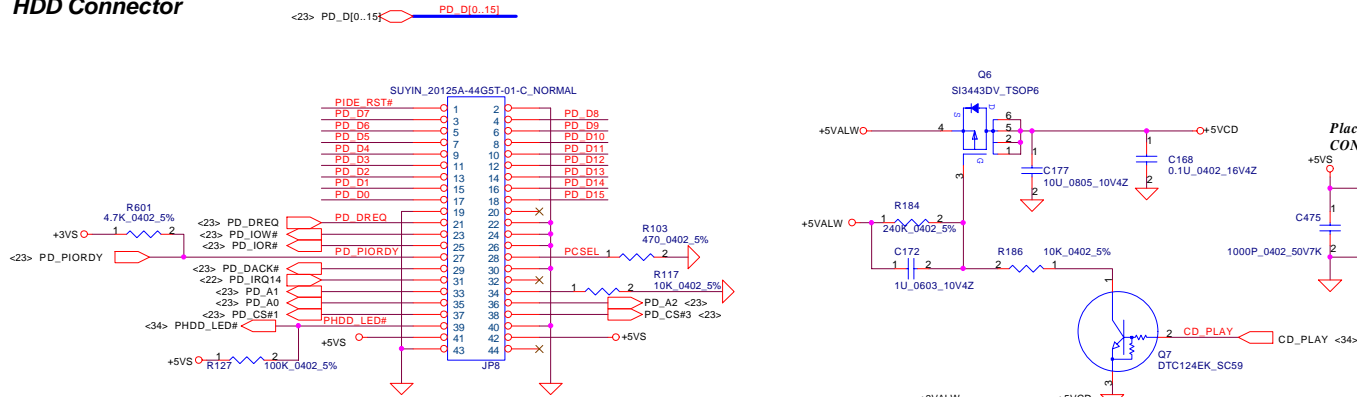
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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





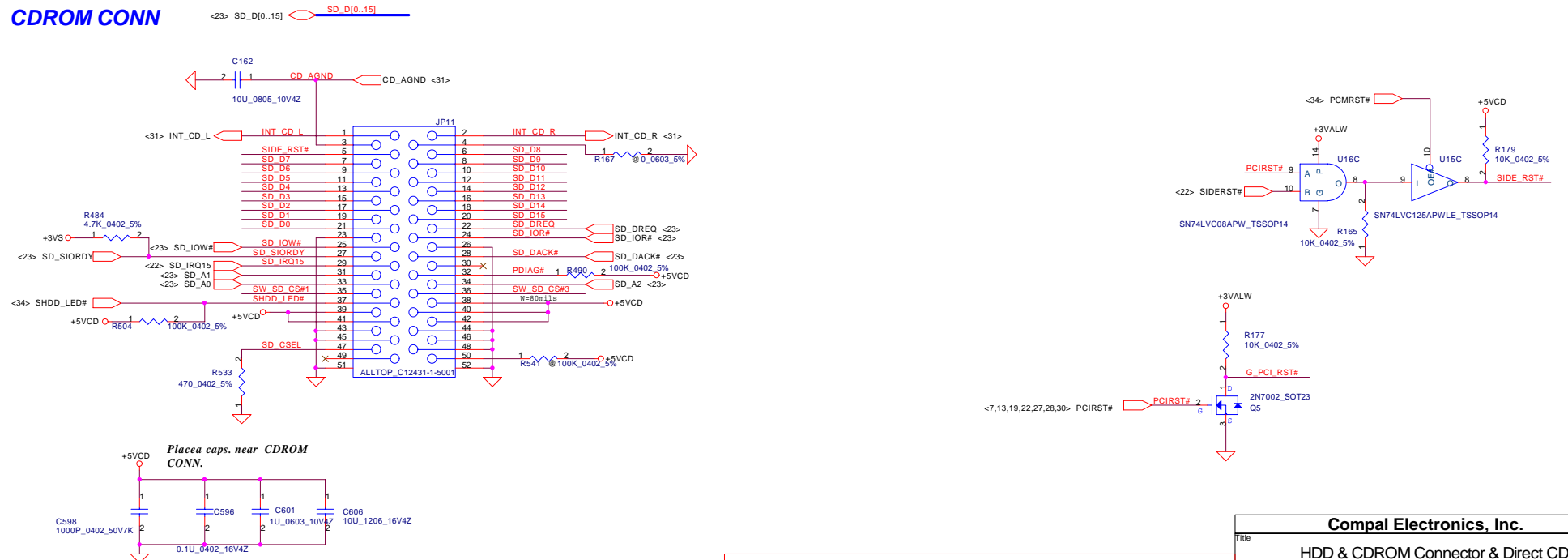


HDD Connector



This is reverse type conn, PIDE_RST# connect to pin44.
After connector library ready,
correct connection is PIDE_RST# connect to pin1!

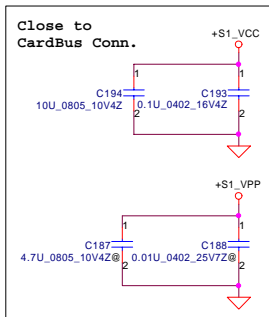
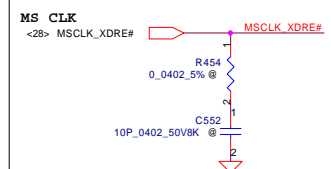
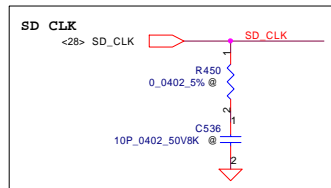
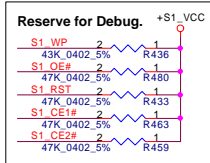
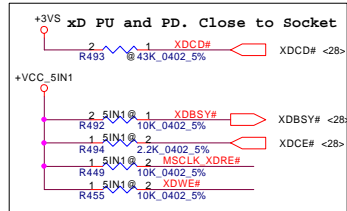
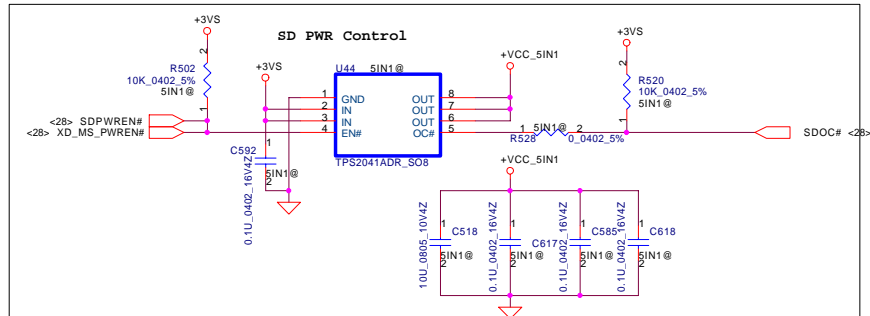
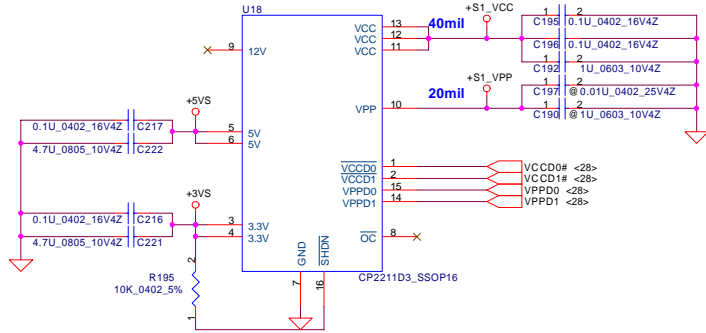
CDROM CONN



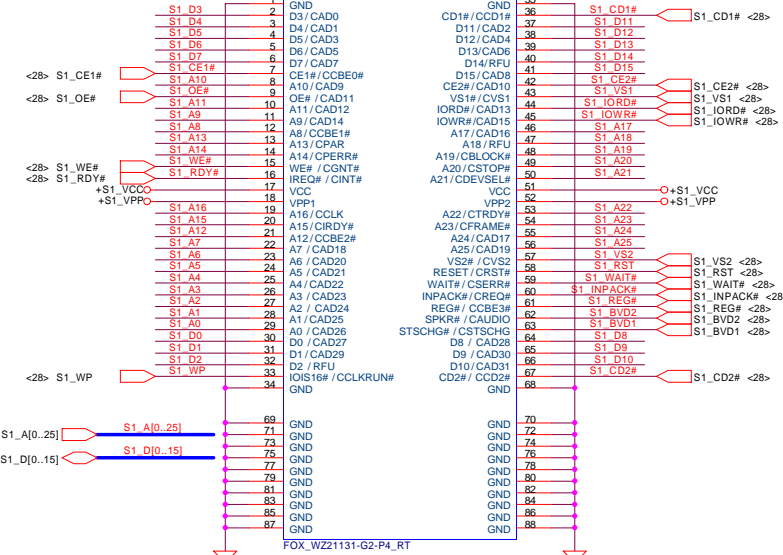
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.			
HDD & CDROM Connector & Direct CD			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	25 of 47

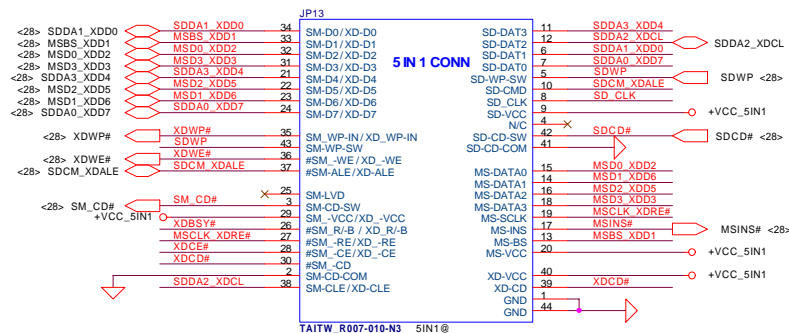
PCMCIA Power Controller



CardBus Socket



5in1 Socket

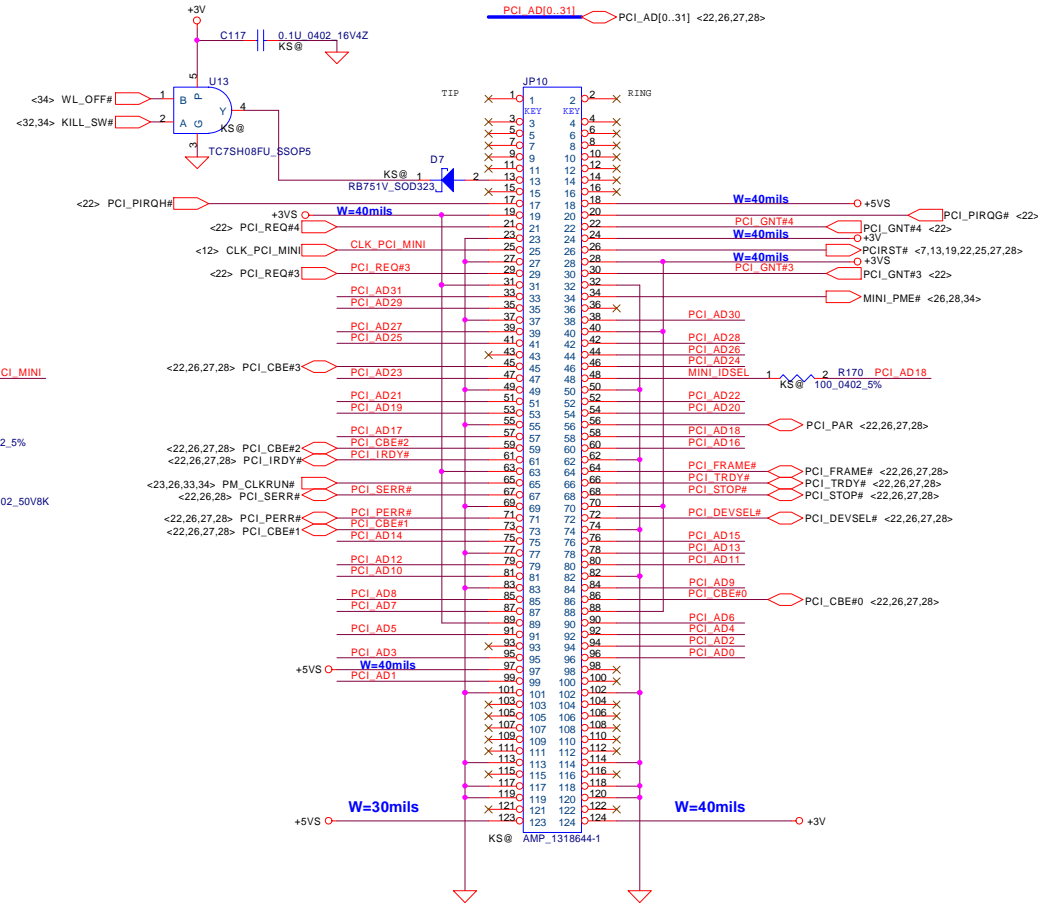
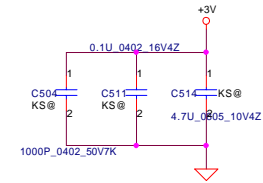
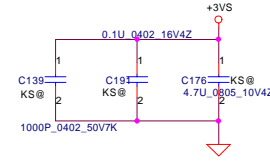
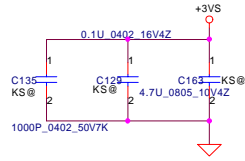
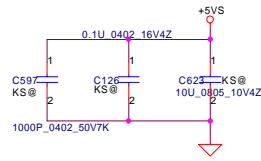


Compal Electronics, Inc.

Cardbus Slot & 5in1 Socket

Size	Document Number	Rev
Custom	EAL20 LA-2462	0.1
Date:	Friday, September 17, 2004	Sheet 29 of 47

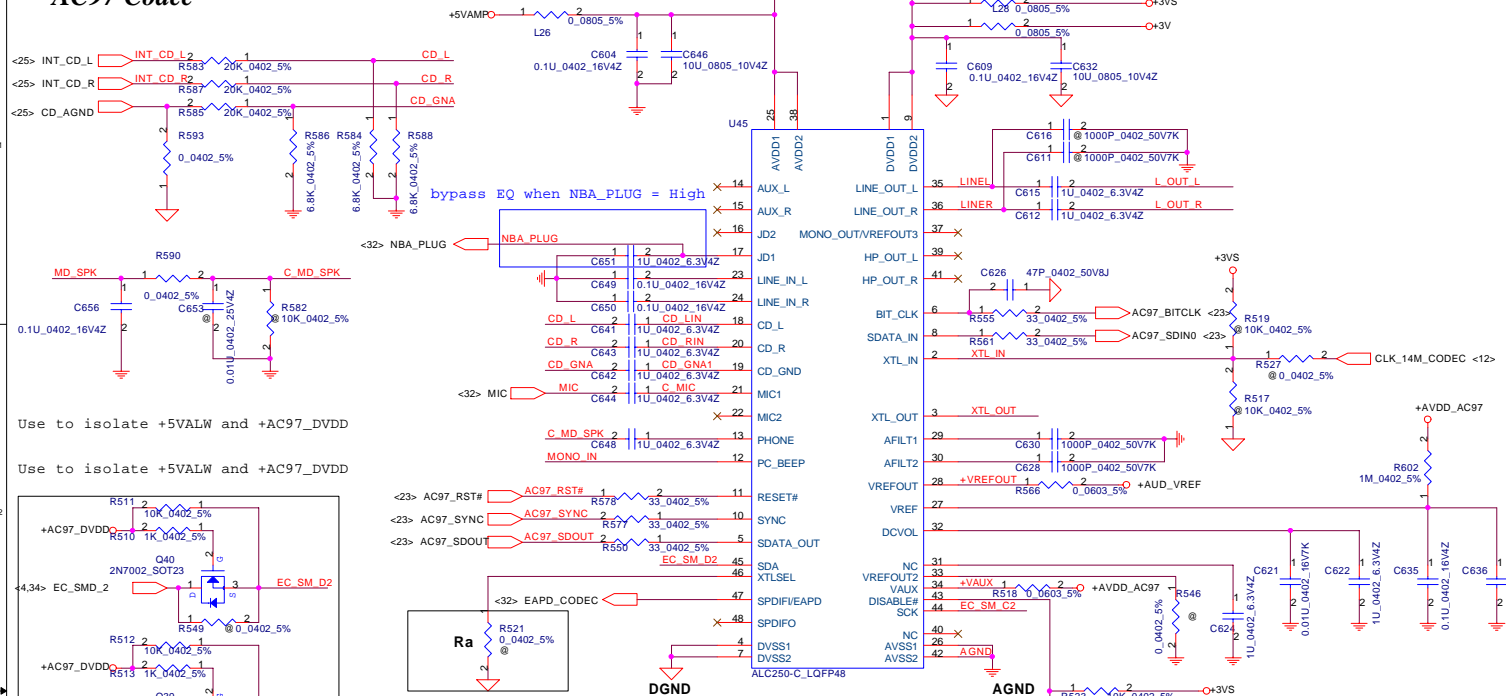
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

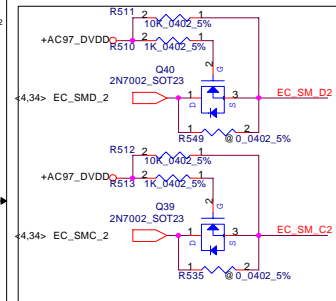
Compal Electronics, Inc.			
Title		Mini PCI Slot	
Size	Document Number	Rev	
		0.1	
Date:	Friday, September 17, 2004	Sheet	30 of 47

AC97 Codec



Use to isolate +5VALW and +AC97_DVDD

Use to isolate +5VALW and +AC97_DVDD



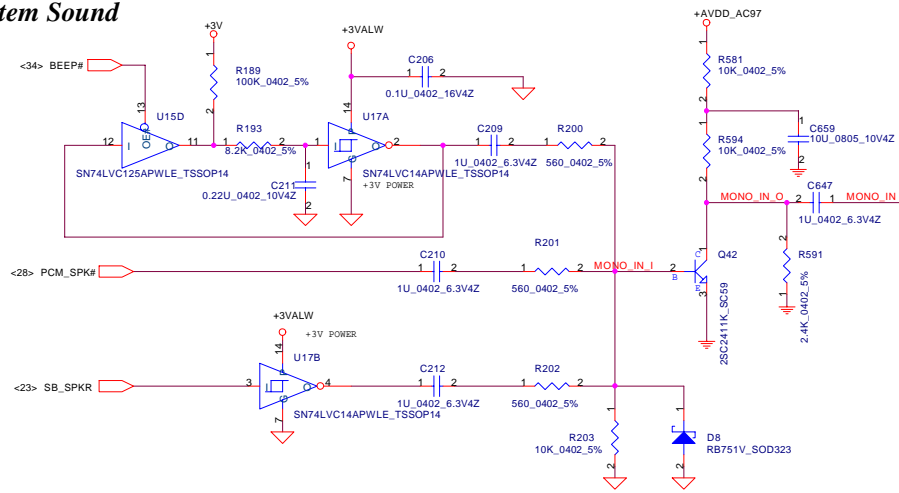
GND Connect AGND
Keep a 80mil bridge far away from DC-DC area

UnPoped:Clock source from X'tal
Poped: Clock source from Clock Gen

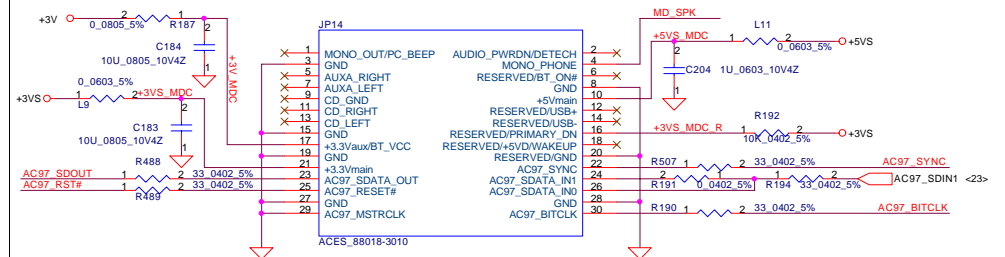
Place these components
close to Codec



System Sound

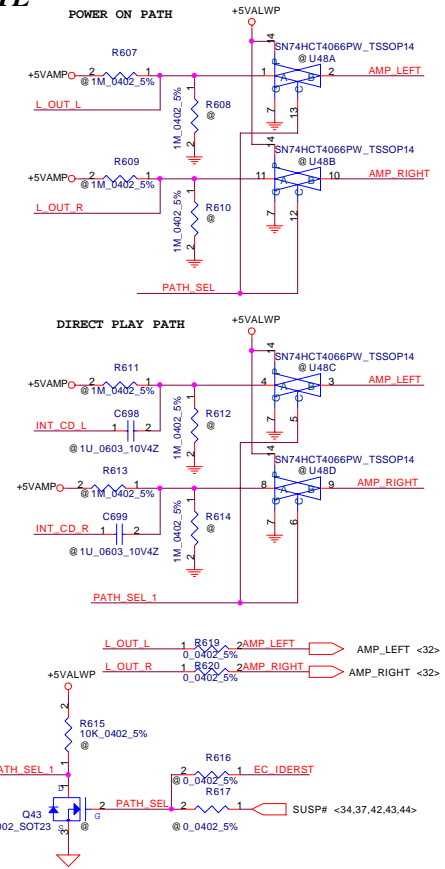


MDC Connector



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

<i>Direct CD</i>	
<i>CTL</i>	



Compal Electronics, Inc.

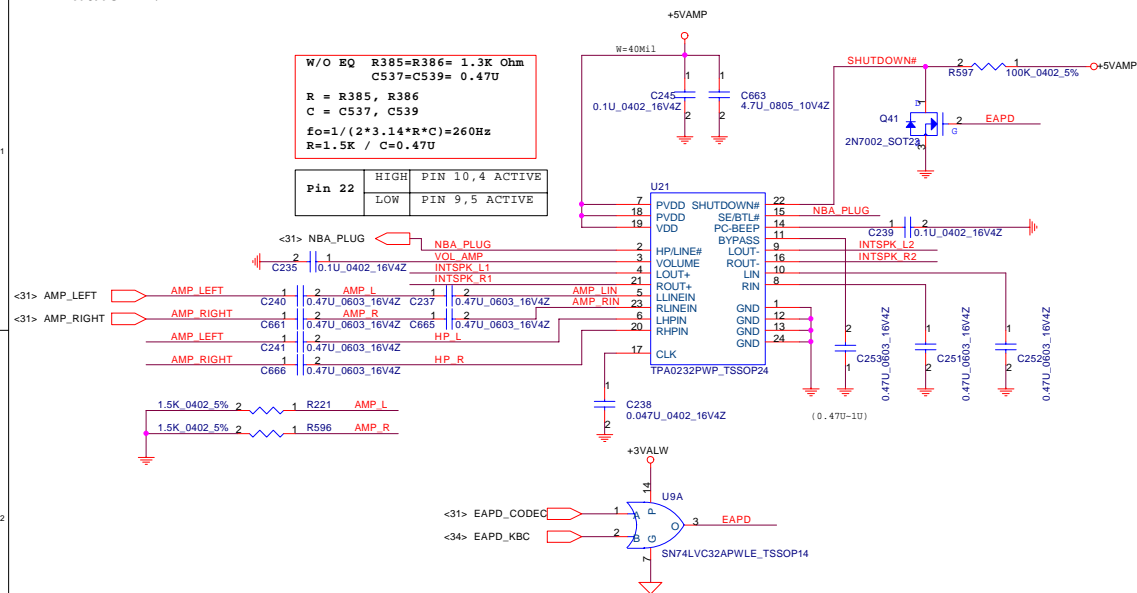
AC97 CODEC ALC250 Ver.C

EAL20 LA-2462

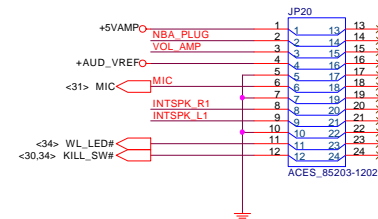
0.1

Custom: EAL20 LA-2462
 Date: Friday, September 17, 2004 Sheet 31 of 47

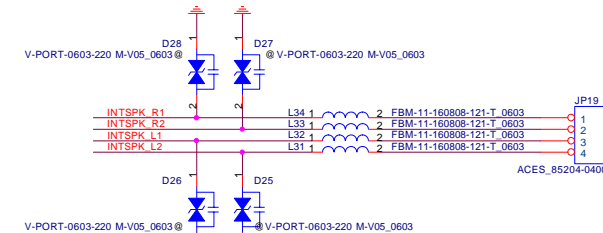
Audio AMP



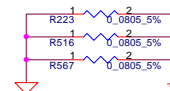
Audio Board Connector



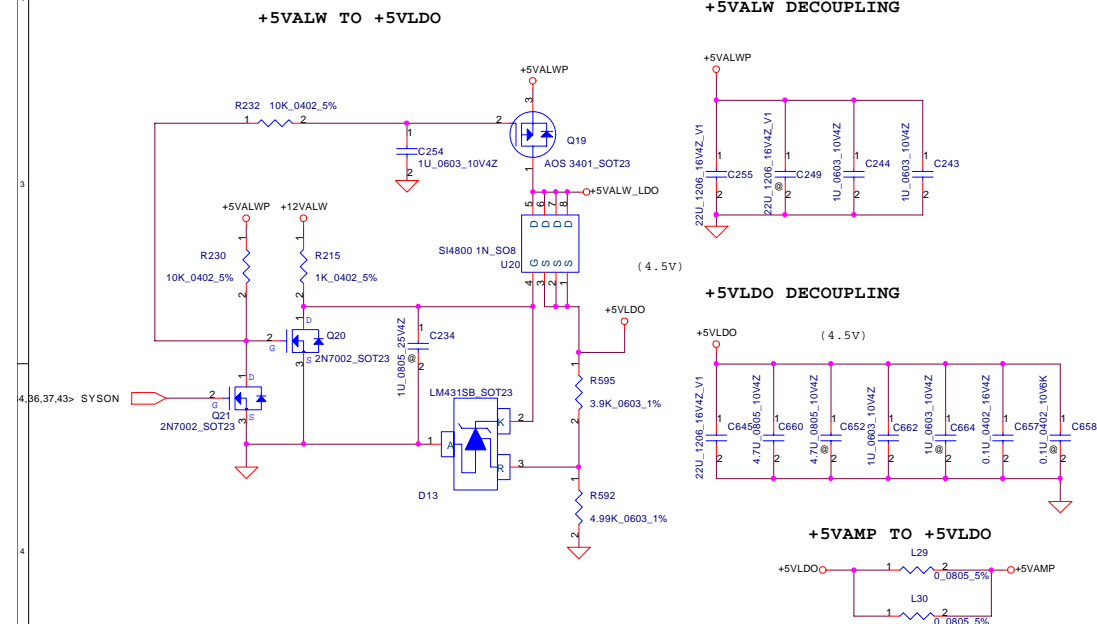
Speaker Connector



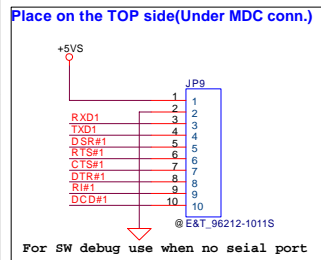
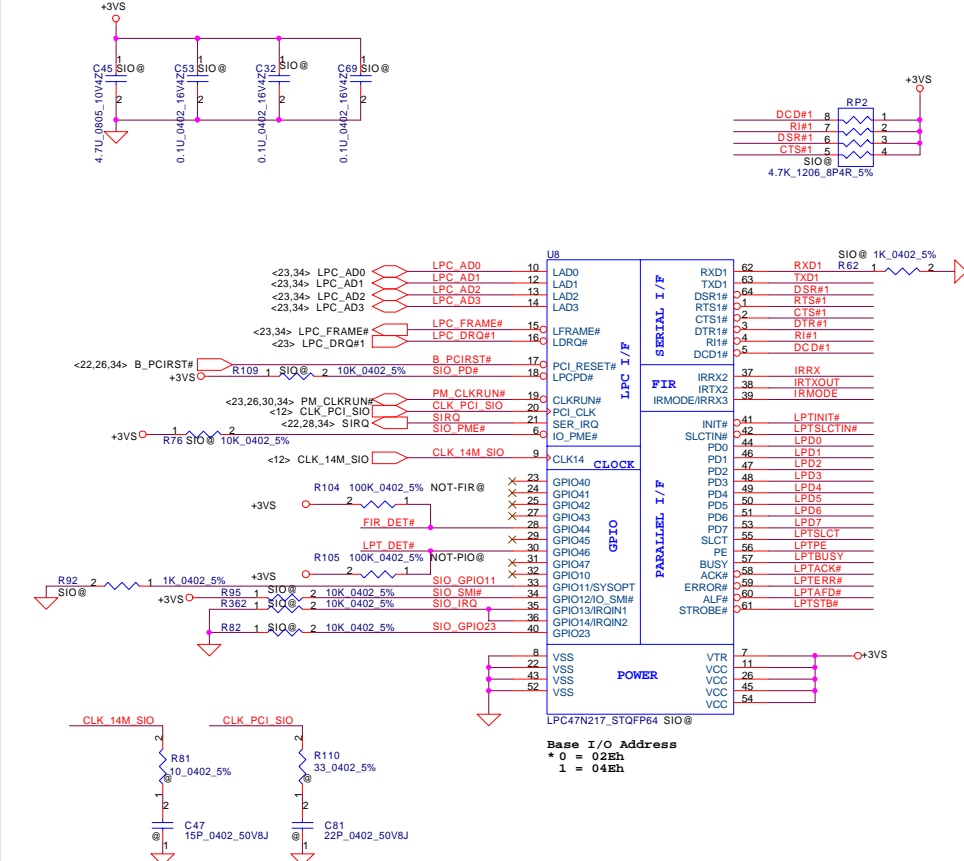
Moat Bridge



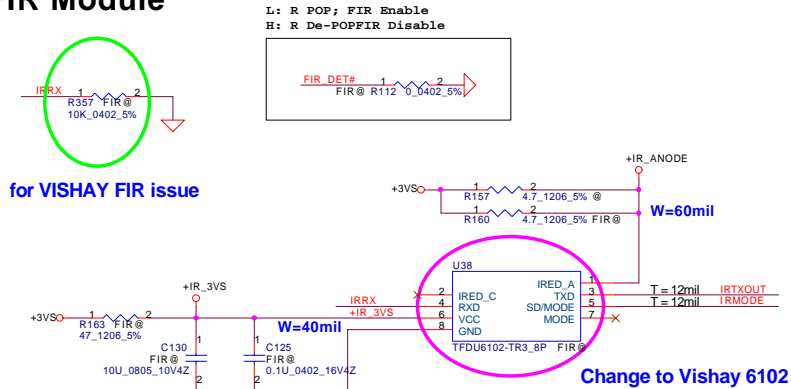
Regulator for AMP



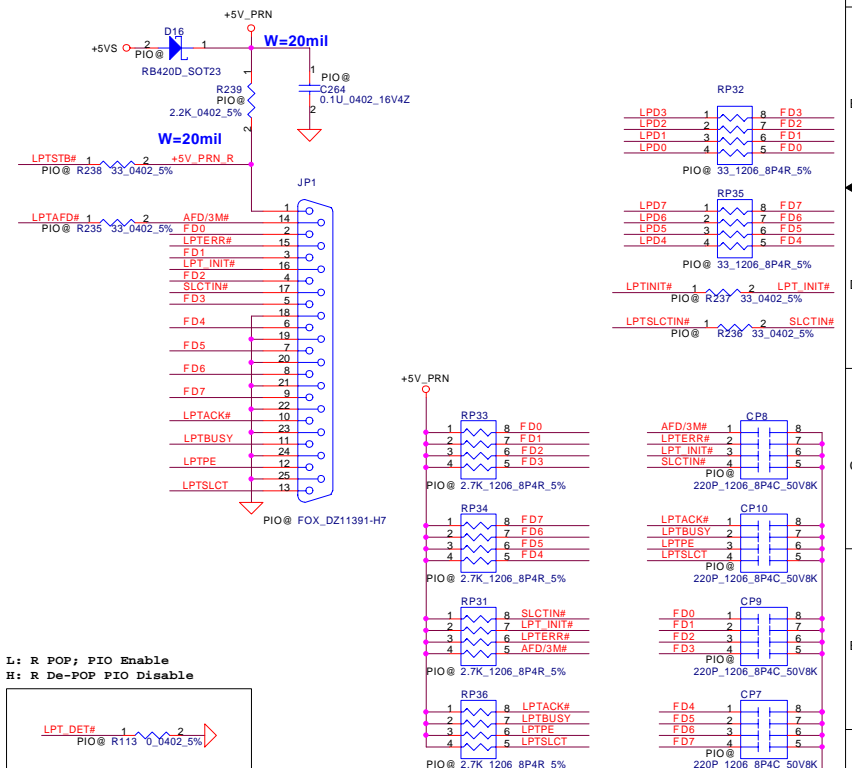
SUPER I/O SMsC LPC47N217



FIR Module



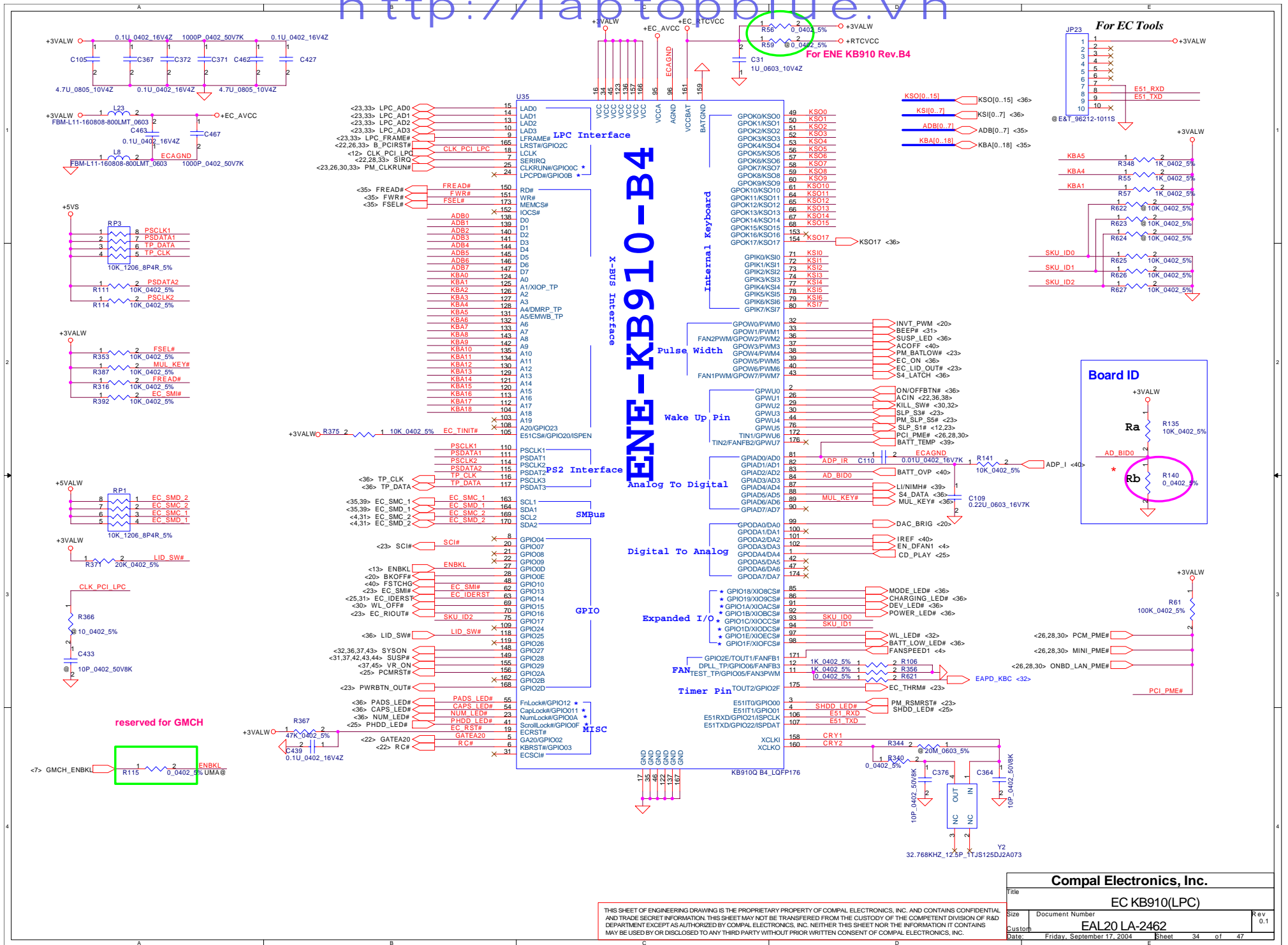
Parallel Port

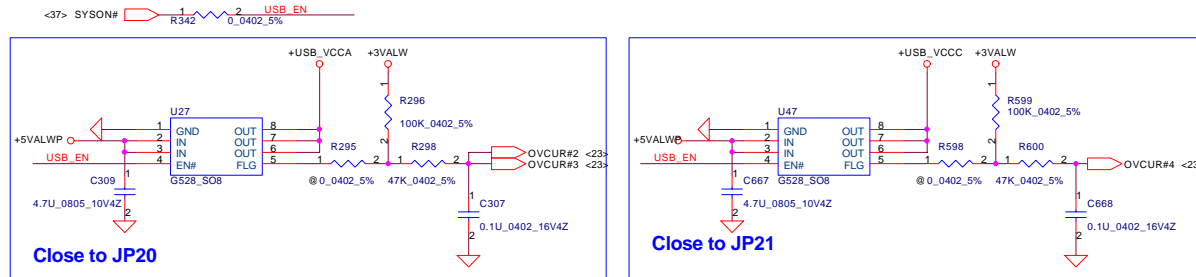


Compal Electronics, Inc.

Title	SMsC LAP47N217 SIO,PIO,FIR	Rev	0.1
Size	Document Number		
Customer	EAL20 LA-2462		
Date	Friday, September 17, 2004	Sheet	33 of 47

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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

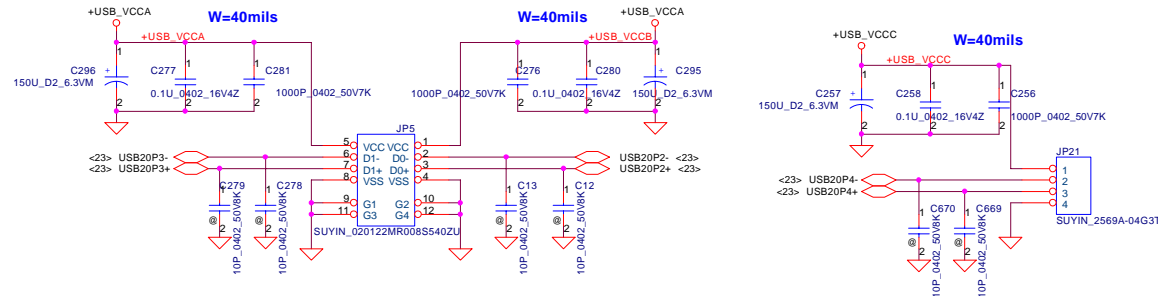




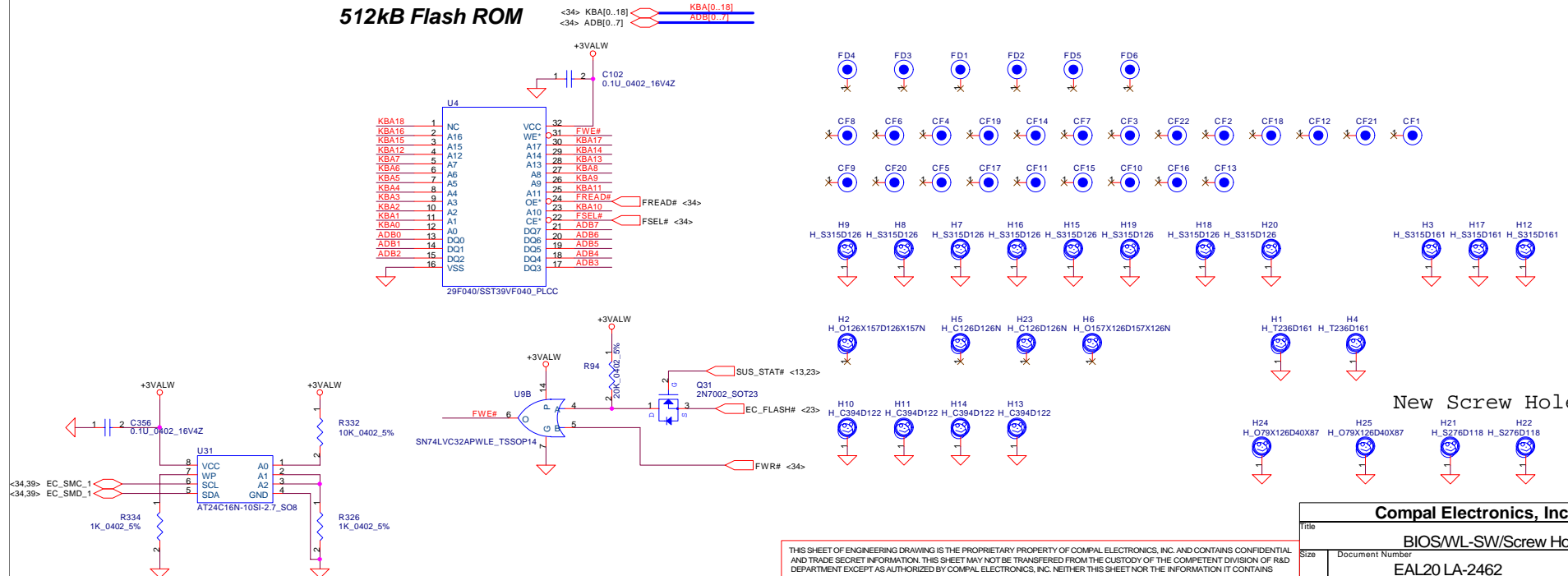
USB CONN. 1

USB CONN. 2

USB CONN. 3

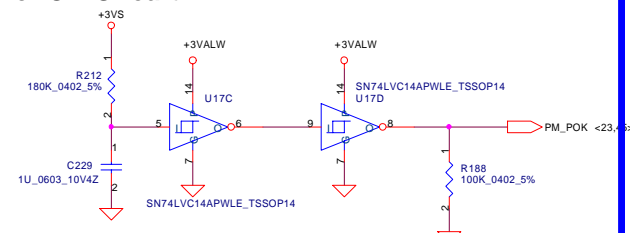
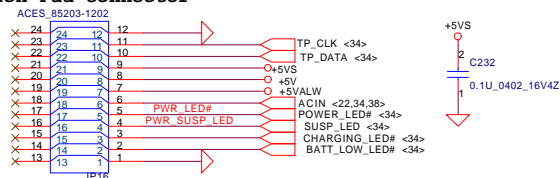
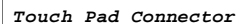
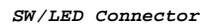


512kB Flash ROM



Compal Electronics, Inc.			
Title			
BIOS/WL-SW/Screw Hole/USB			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	35 of 47

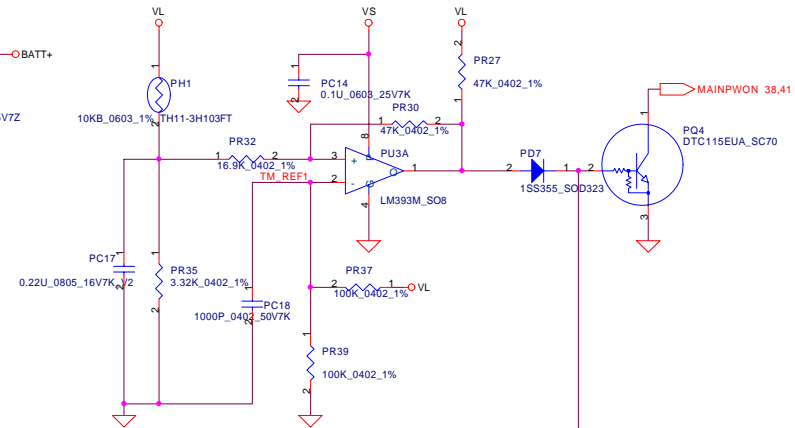
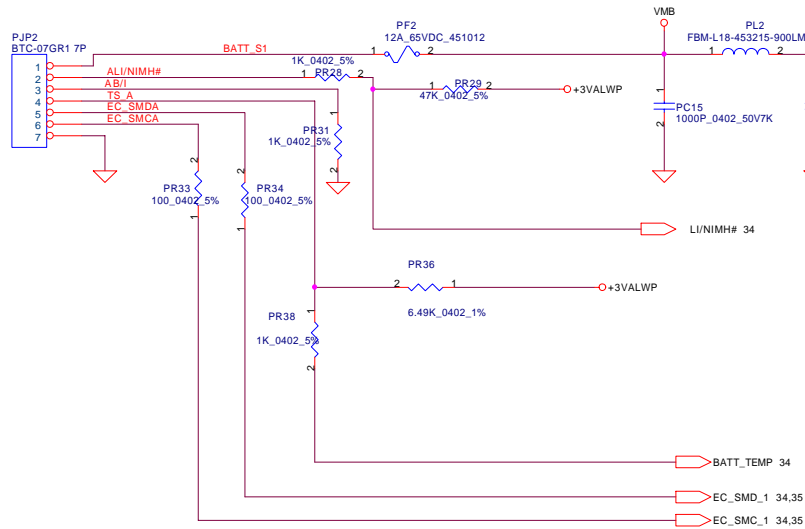
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



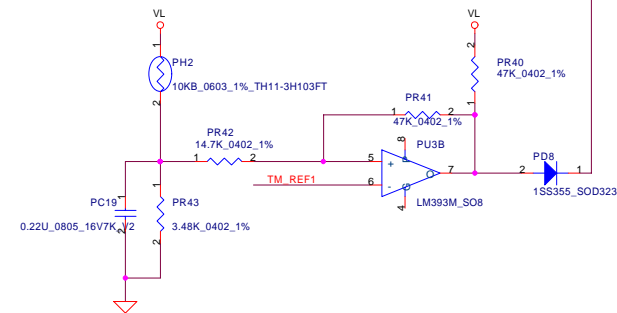
Title			
DC/DC Interface			
Size	Document Number		Rev
	EAL20 LA-2462		0.1
Date:	Friday, September 17, 2004	Sheet 37 of 47	

Compal Electronics, Inc.			
Title			
DCIN & DETECTOR			
Size	Document Number		Rev
	EAL20 LA-2462		0.1
Date:	Friday, September 17, 2004	Sheet	38 of 47

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



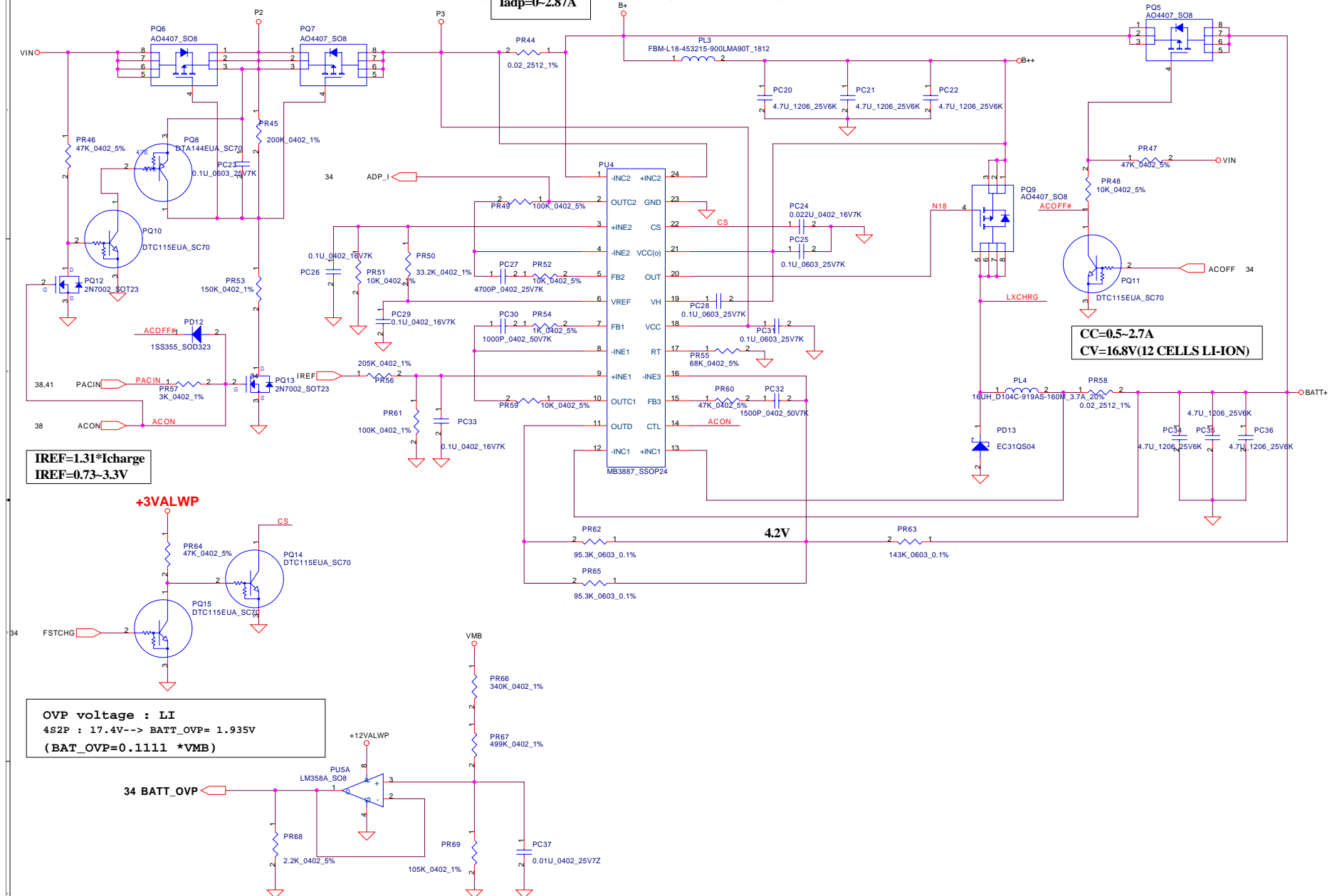
PH2 near main Battery CONN :
BAT. thermal protection at 79 degree C
Recovery at 45 degree C



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

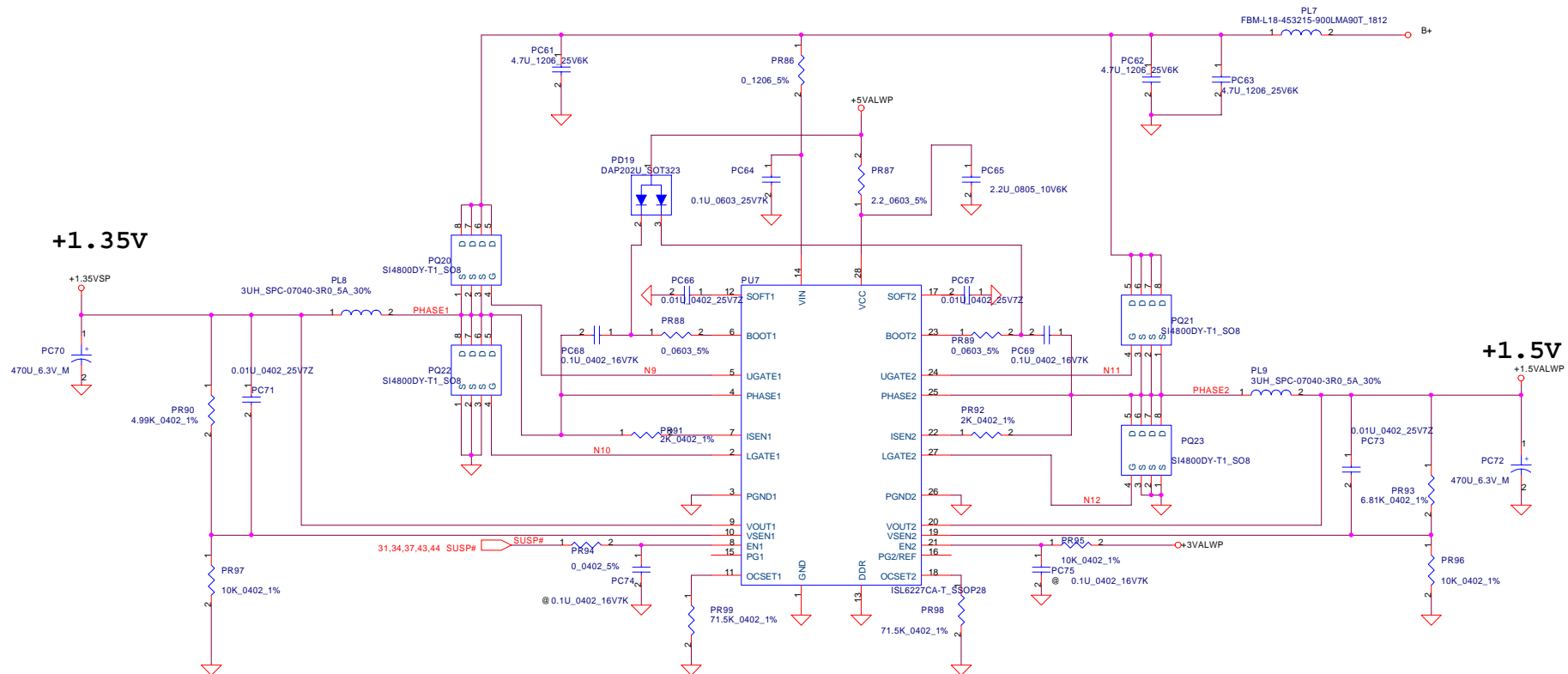
Title		
BATTERY CONN / OTP		
Size	Document Number	Rev
	EAL20 LA-2462	0.1
Date:	Friday, September 17, 2004	Sheet 39 of 47



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title			
CHARGER			
Size	Document Number	Rev	
	EAL20 LA-2462	0.1	
Date:	Friday, September 17, 2004	Sheet	40 of 47

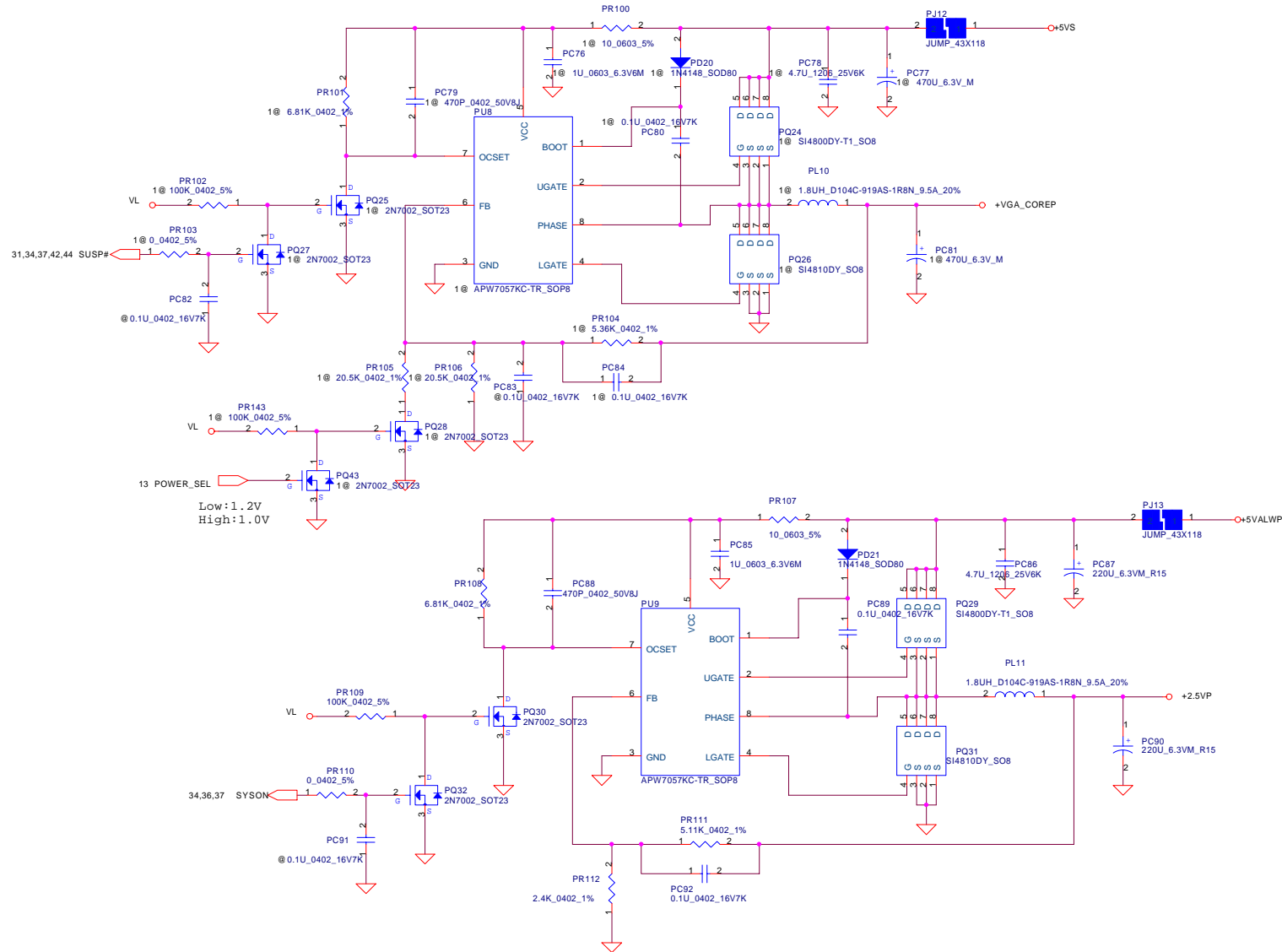




THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.

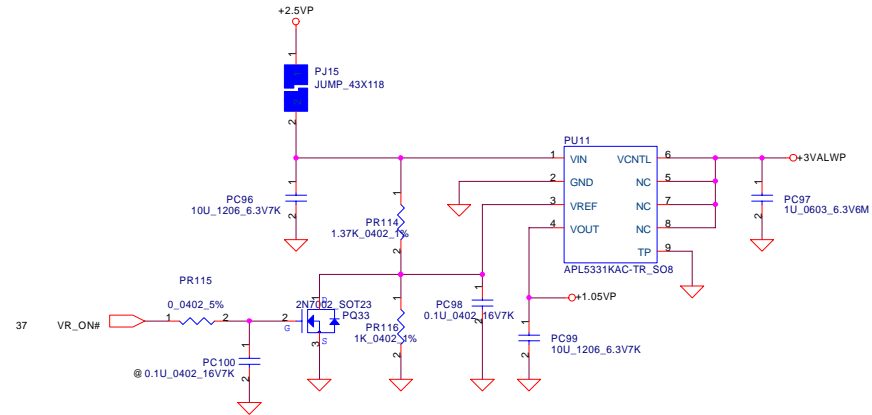
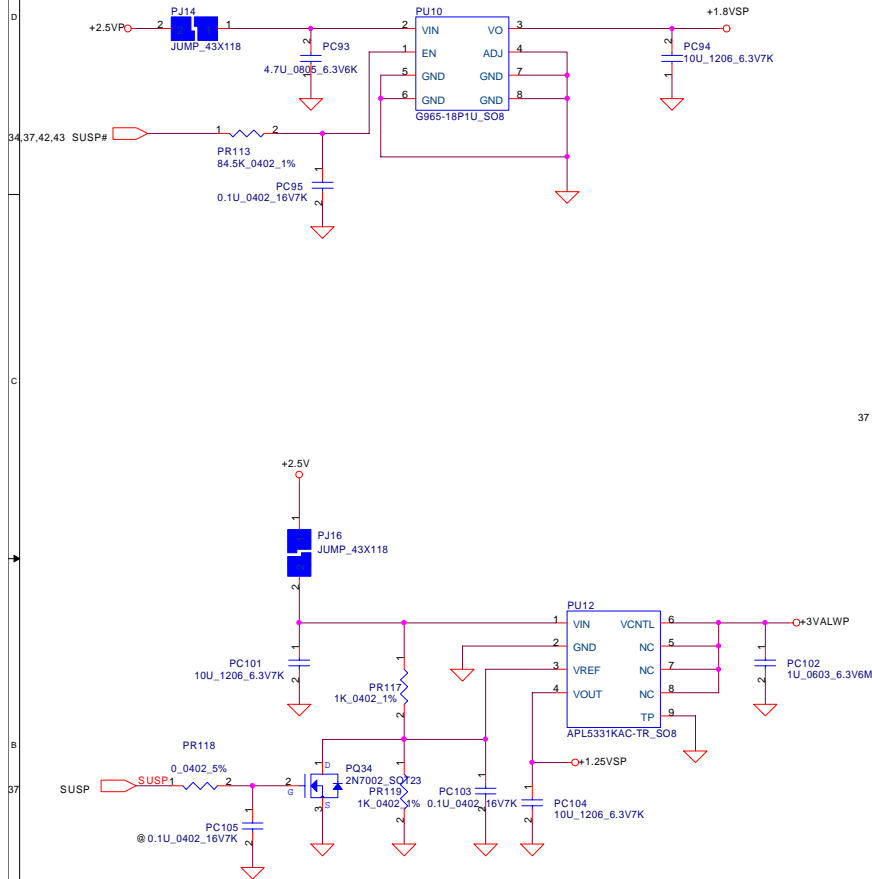
Title		
1.35V/1.5V		
Size	Document Number	Rev
	EAL20 LA-2462	0.1
Date:	Friday, September 17, 2004	Sheet 42 of 47



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.

Title			2.5V/VGA_CORE	
Size	Document Number		EAL20 LA-2462	
Date:	Friday, September 17, 2004		Sheet	43 of 47
			Rev	0.1



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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.			
Title		1.8V/1.25V/1.05V	
Size	Document Number	EAL20 LA-2462	Rev 0.1
Date:	Friday, September 17, 2004	Sheet 44 of 47	

EAL20 LA-2462 SCHEMATIC CHANGE LIST
REVISION 0.1

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
1	P04		Add C702 to C709.	
2	P32		Q21.2 CD_PLAY to SYSON.	
3	P28		Layout: reverse D12.	

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 IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

Compal Electronics, Inc.		
Title		
PIR LIST		
Size	Document Number	Rev
	EAL20 LA-2462	0.1
Date:	Friday, September 17, 2004	Sheet 47 of 47