

Compal Confidential

EFL50/ EFT51 Schematics Document

Intel Dothan/ Celeron M/ Alviso GM(PM) / DDR-2 / ICH6-M

(Daughter Card: ATi M24P/ M26P)

2005 / 03 / 08 (B-Test EVT)

Rev:0.2

Page Index

=====

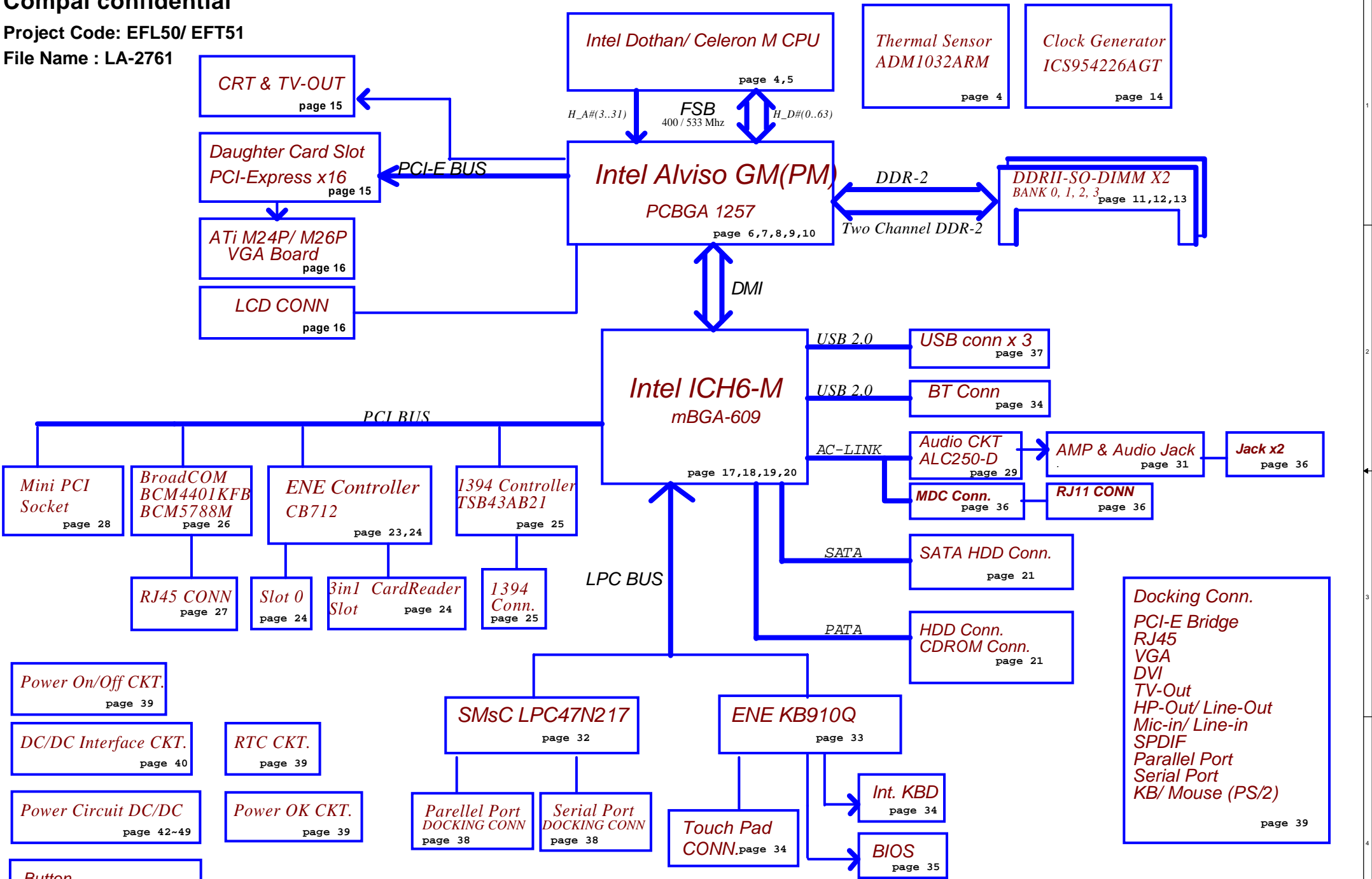
- P01-Cover Page
- P02-Block Diagram
- P03-Notes List
- P04-Dothan(1/2)
- P05-Dothan(2/2)
- P06-Alviso HOST(1/5)
- P07-Alviso DDR(2/5)
- P08-Alviso PCI-E(3/5)
- P09-Alviso POWER(4/5)
- P10-Alviso POWER(5/5)
- P11-DDRI-SODIMMO
- P12-DDRI-SODIMM1
- P13-DDR Decoupling
- P14-Clock Generator
- P15-CRT Conn.
- P16-VGA / LCD Conn.
- P17-ICH6(1/4)_HUB,PCI,HOST
- P18-ICH6(2/4)_CPU,AC97,IDE,LPC
- P19-ICH6(3/4)_USB,PM,LAN,GPIO
- P20-ICH6(4/4)_POWER&GND
- P21-HDD/CDROM
- P22-DVI / TV_Out Conn
- P23-PCMCIA ENE CB1410 & CB714
- P24-PCMCIA SOCKET
- P25-TI 1394A TSB43AB21A
- P26-LAN BCM5788M
- P27-LAN Magnetic & RJ45/RJ11
- P28-Mimi-PCI Slot
- P29-AC97 Codec_ALC250D
- P30-Audio Line in Switch
- P31-AMP & Audio Jack
- P32-Super IO SMC217
- P33-ENE-KB910
- P34-MDC / BT / KBD / TP Conn.
- P35-BIOS & I/O Port & SATA HDD
- P36-RJ11/LID Switch / Fan / FIR
- P37-USB2.0 Conn
- P38-Docking Conn.
- P39-PWR_OK / RTC
- P40-DC INTERFACE
- P41-Screws
- P42-PWR-DCIN / Precharge
- P43-PWR-Charger
- P44-PWR-Battery Select
- P45-PWR-3V/5V/12V
- P46-PWR-GMCH_CORE/1.8V/0.9V
- P47-PWR-1.5V/2.5V
- P48-PWR-CPU_CORE
- P49-PWR-OTP
- P50-PWR-PIR

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Cover Sheet	
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	EFL50 LA-2761
Date:				Wednesday, April 20, 2005	Sheet 1 of 51

Compal confidential

Project Code: EFL50/ EFT51

File Name : LA-2761



Security Classification	Compal Secret Data			Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Block Diagrams	
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				Rev
Custom	EFL50 LA-2761				0.2
Date:	Wednesday, April 20, 2005	Sheet	2	of	51

Voltage Rails

Power Plane	Description	S1	S3	S4/ S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+DDRVTT	0.9V switched power rail for DDR terminator	ON	OFF	OFF
+1.5VALW	1.5V always on power rail	ON	ON	ON*
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+DDRCC	1.8V power rail for DDR	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+5VMOD	5V switched power rail for Module Bay	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

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

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
CardBus	AD20	2	PIRQA/PIRQB
1394	AD16	0	PIRQE
SD	AD20	2	PIRQA/PIRQB
Mini-PCI	AD18	1	PIRQG/PIRQH
LAN	AD17	3	PIRQF

EC SM Bus1 address

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

ICH6M SM Bus address

Device	Address
Clock Generator (ICS 954226AGT)	1101 001Xb
DDR# DIMM0	1001 000Xb
DDR# DIMM2	1001 010Xb

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1 (Power On Suspend)		LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra / Rc	100K +/- 5%			
Board ID	Rb / Rd	V _{AD_BID} min	V _{AD_BID} typ	V _{AD_BID} max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BOARD ID Table

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

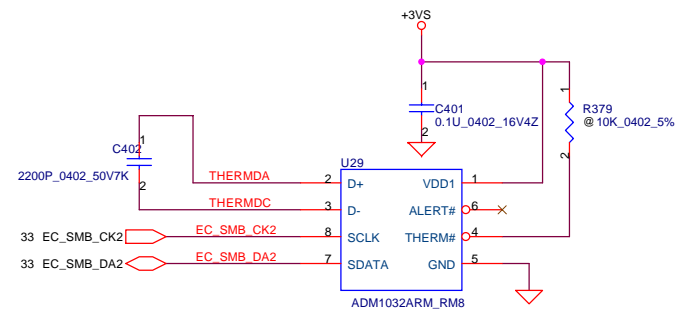
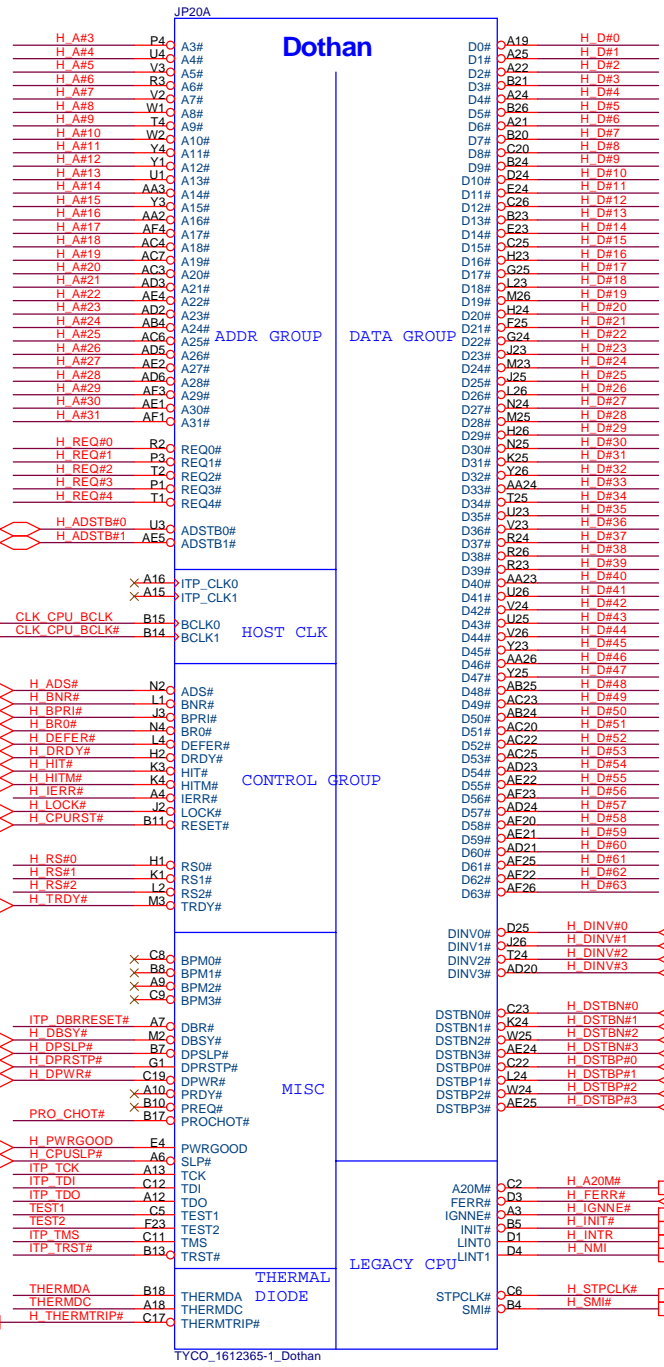
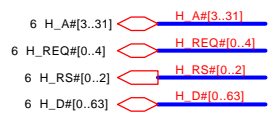
SKU ID Table

SKU ID	SKU
0	
1	
2	
3	
4	
5	
6	
7	

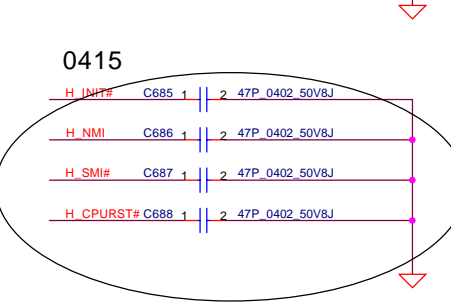
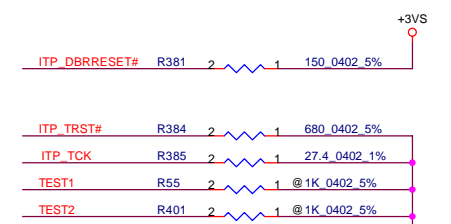
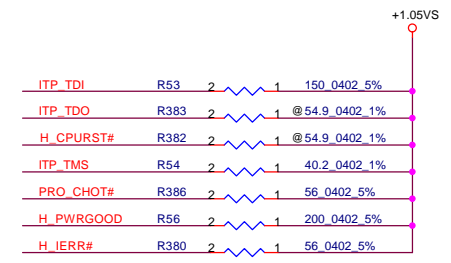
BTO Option Table

BTO Item	BOM Structure
UMA	GM@
Discrete	PM@
LAN 10/100	4401@
LAN GIGA	5788@
1 Spindle	1S@
2 Spindle	2S@
2 Spindle with SATA	2SS@
2 Spindle with PATA	2SP@
1 Spindle with SATA	1SS@
1 Spindle with PATA	1SP@
With Docking	WD@
Without Docking	ND@
With 1394	1394@
With 1394 4pin	1394<4>@
With 1394 6pin	1394<6>@

Security Classification	Compal Secret Data		Title
Issued Date	2005/03/08	Deciphered Date	2006/03/08
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.			Notes
Size Custom	Document Number	Rev	
	EFL50 LA-2761	0.2	
Date:	Wednesday, April 20, 2005	Sheet	3 of 51

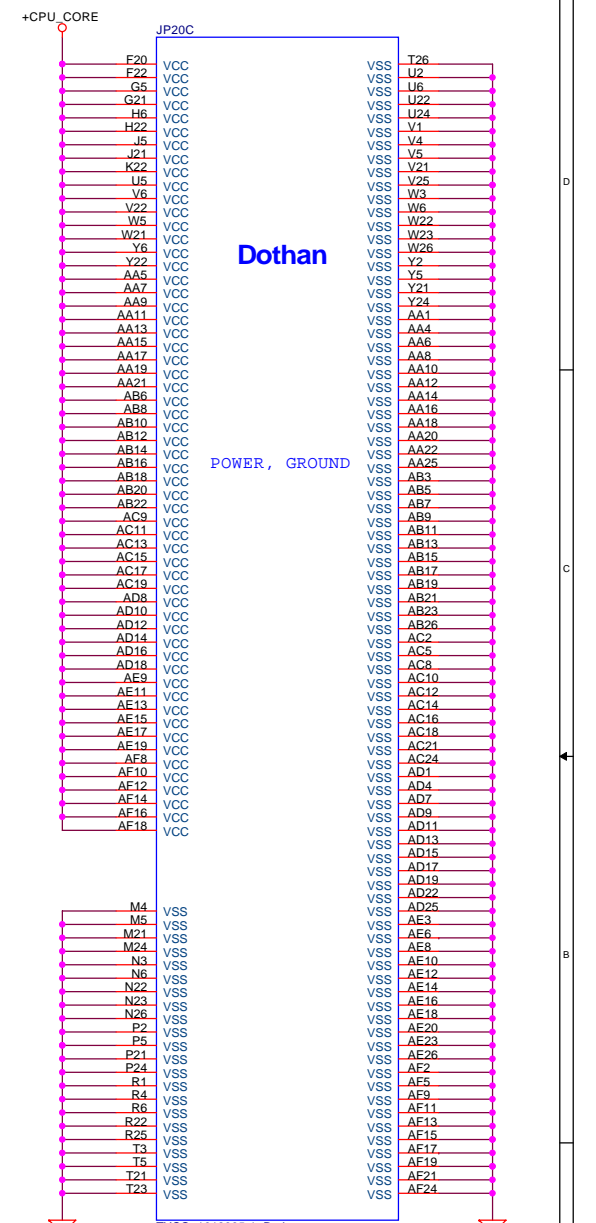
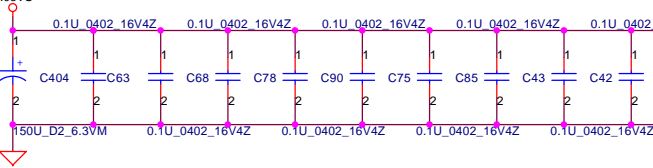
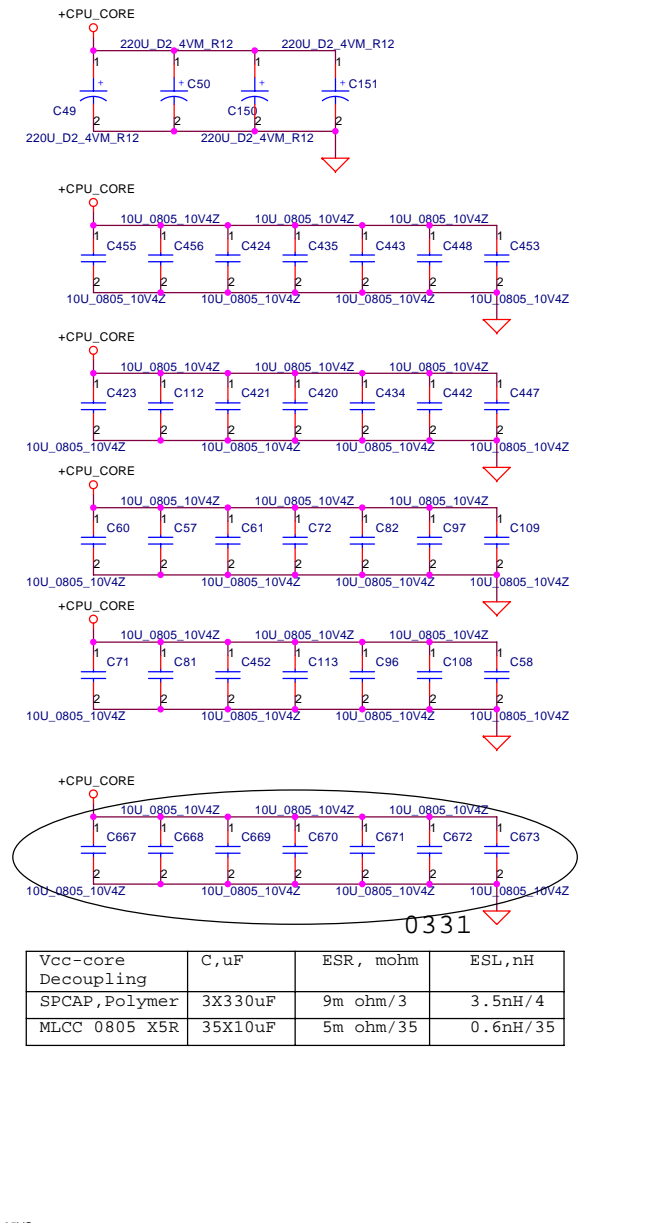
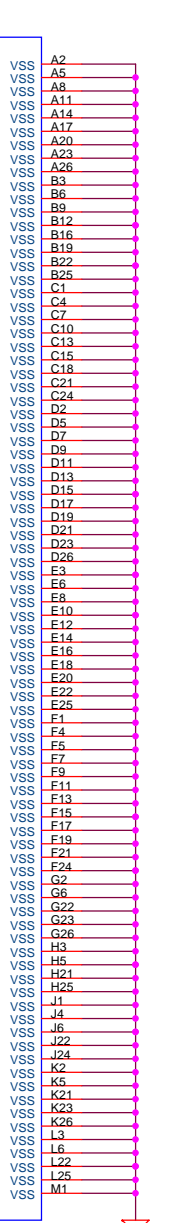
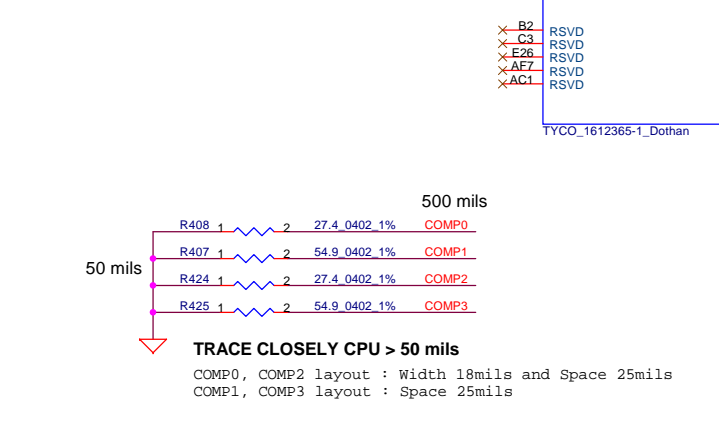
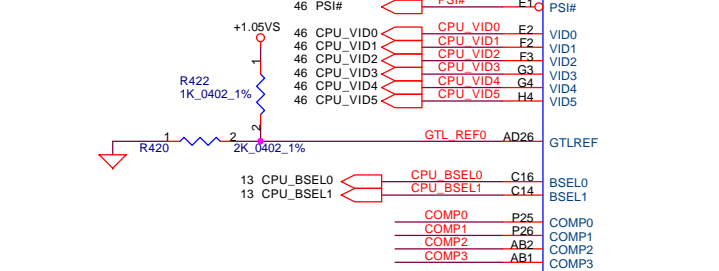
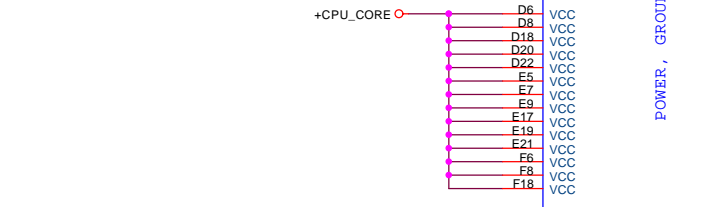
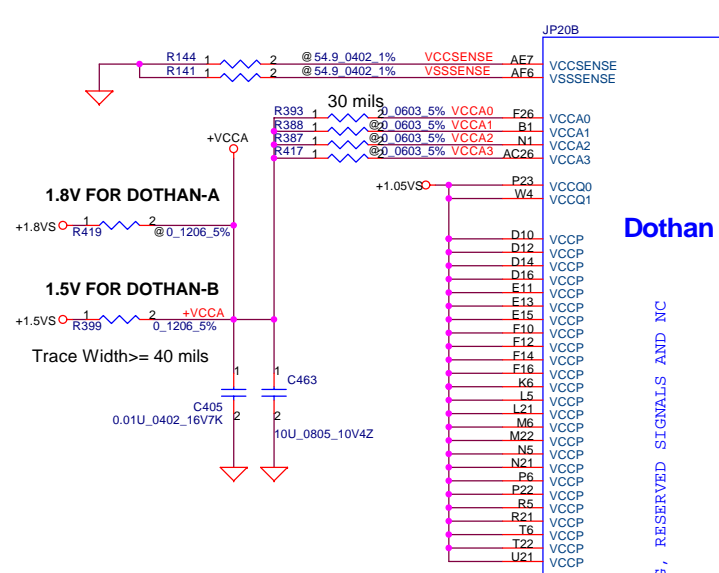


SMBus Address: 1001110X (b)



THERMDA & THERMDC Trace / Space = 10 / 10 mil

Security Classification	Compal Secret Data		Title
Issued Date	2005/03/08	Deciphered Date	2006/03/08
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.			Dothan Processor in mFCPGA479 Size: Custom Document Number: EFL50 LA-2761 Date: Wednesday, April 20, 2005 Sheet: 4 of 51 Rev: 0.2



Vcc-core Decoupling	C, uF	ESR, mohm	ESL, nH
SPCAP, Polymer	3X330uF	9m ohm/3	3.5nH/4
MLCC 0805 X5R	35X10uF	5m ohm/35	0.6nH/35

Dothan

Dothan

POWER, GROUND, RESERVED SIGNALS AND NC

POWER, GROUND

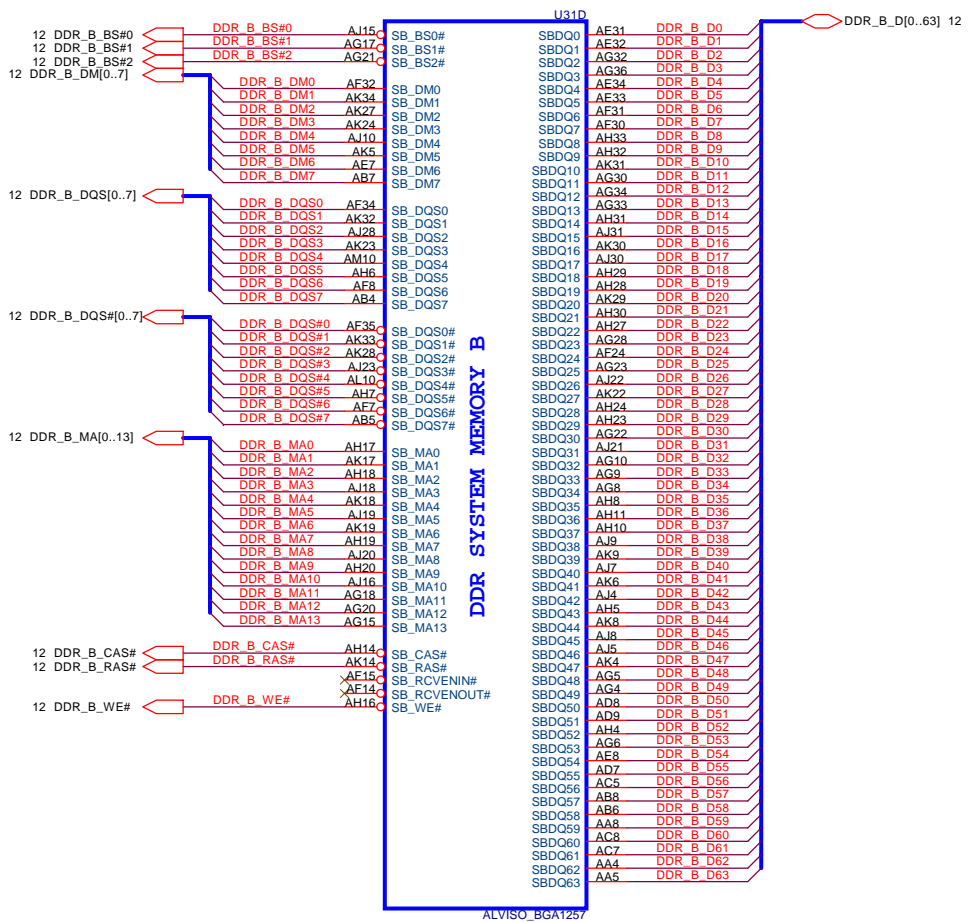
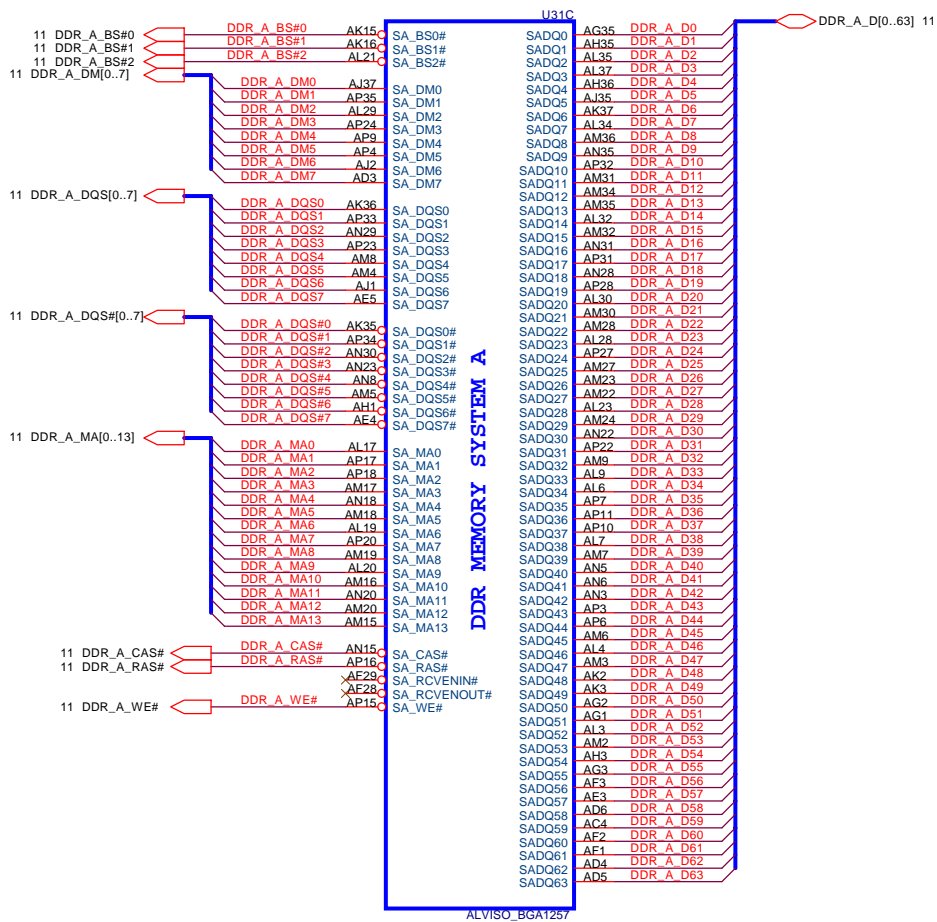
500 mils

50 mils

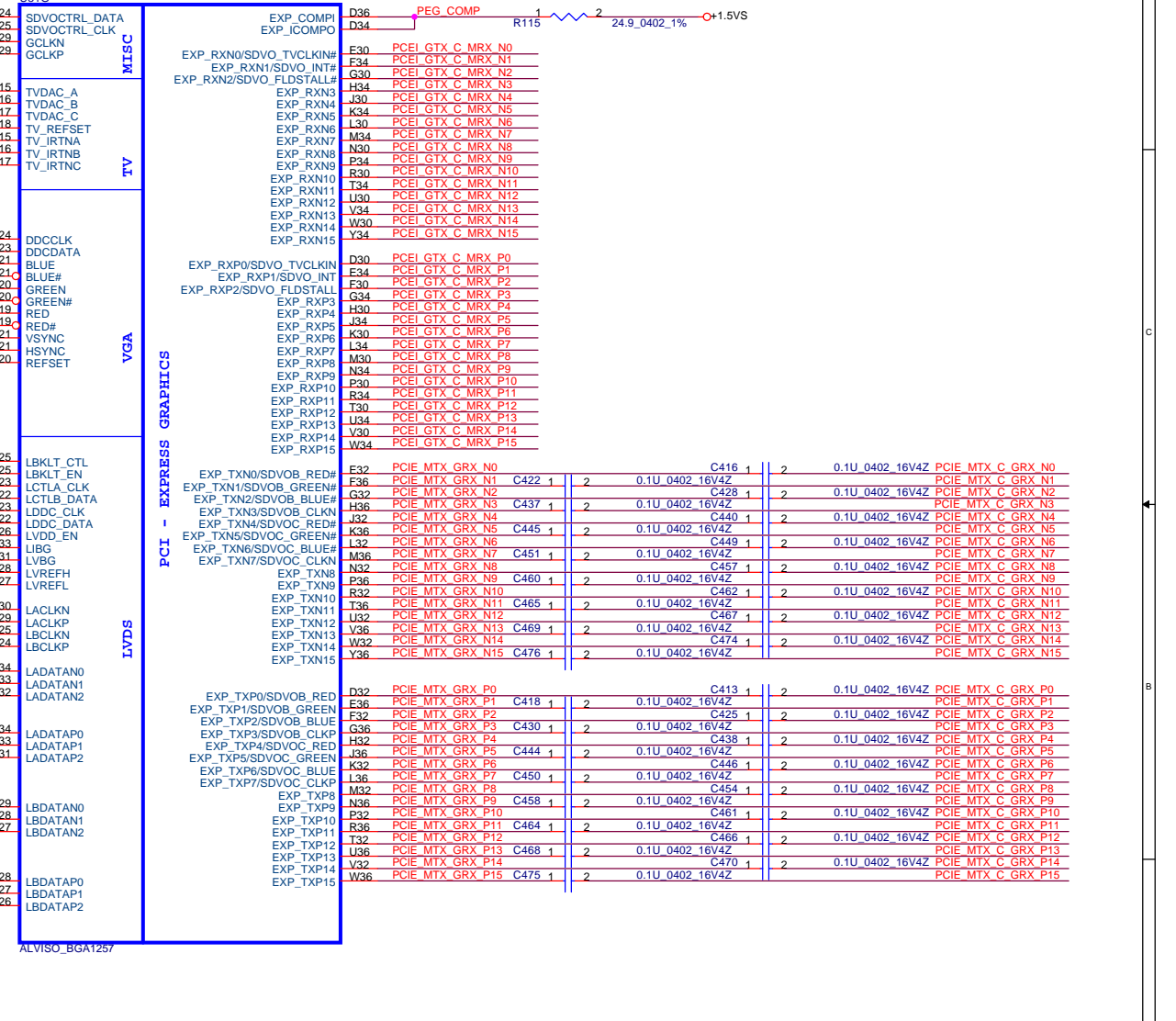
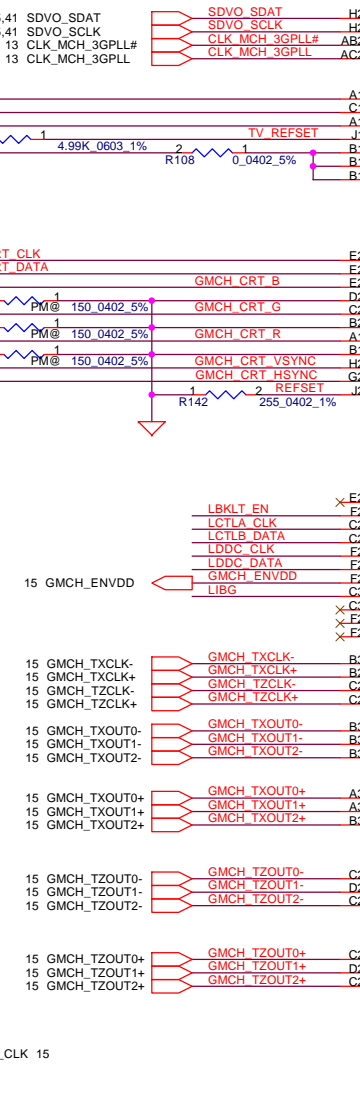
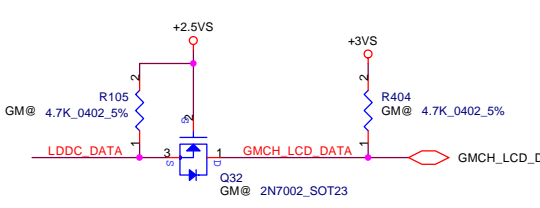
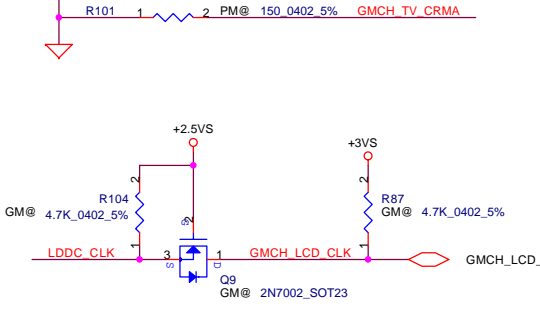
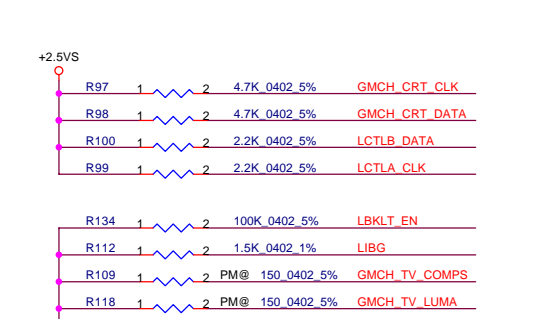
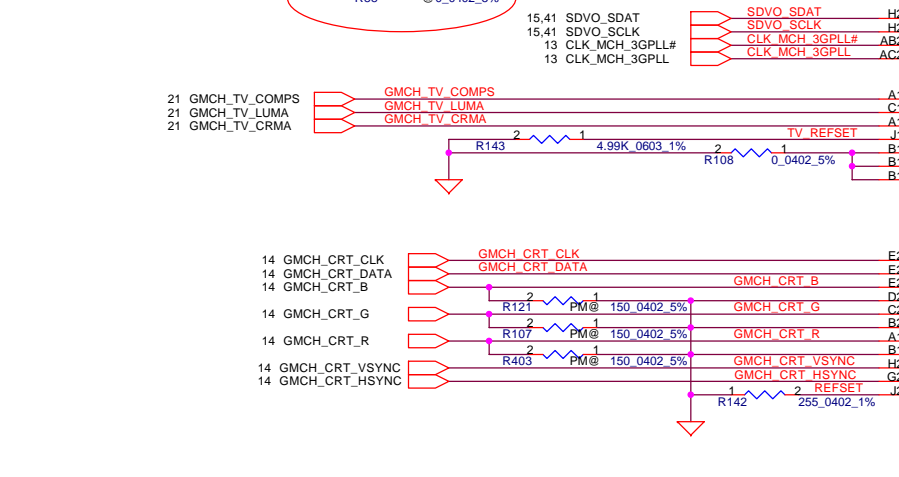
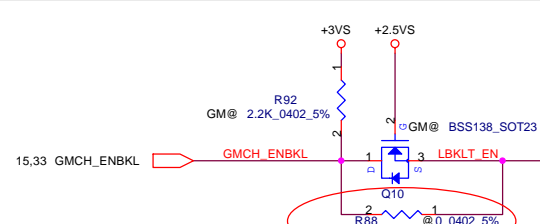
TRACE CLOSELY CPU > 50 mils

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

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Dothan Processor in mFCPGA479	
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			Rev	
Custom	EFL50 LA-2761			0.2	
Date:	Wednesday, April 20, 2005	Sheet	5	of	51

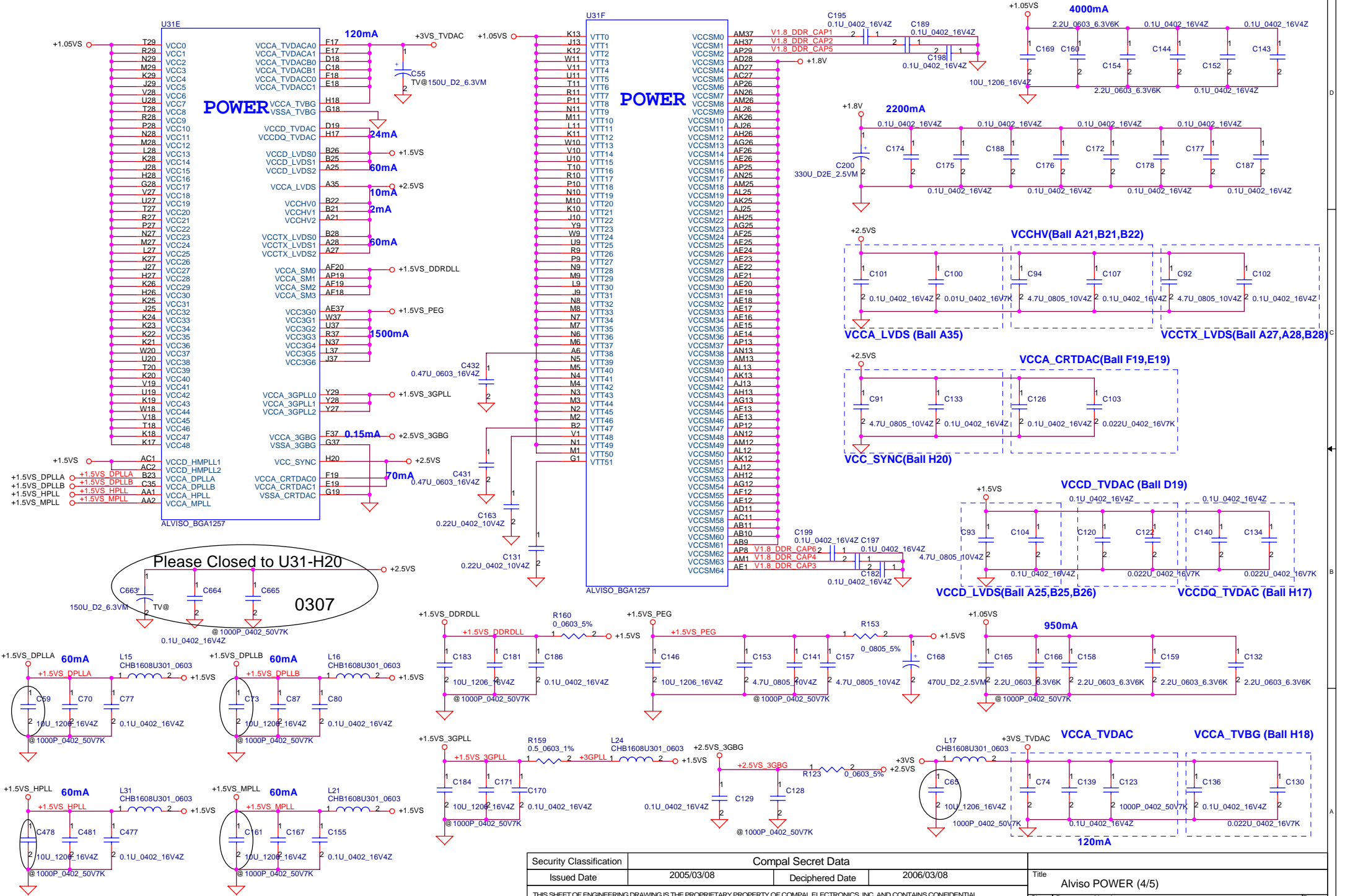


Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Alviso DDR (2/5)	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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 Custom	Document Number	Date		Sheet	Rev
	EFL50 LA-2761	Wednesday, April 20, 2005		7 of 51	0.2

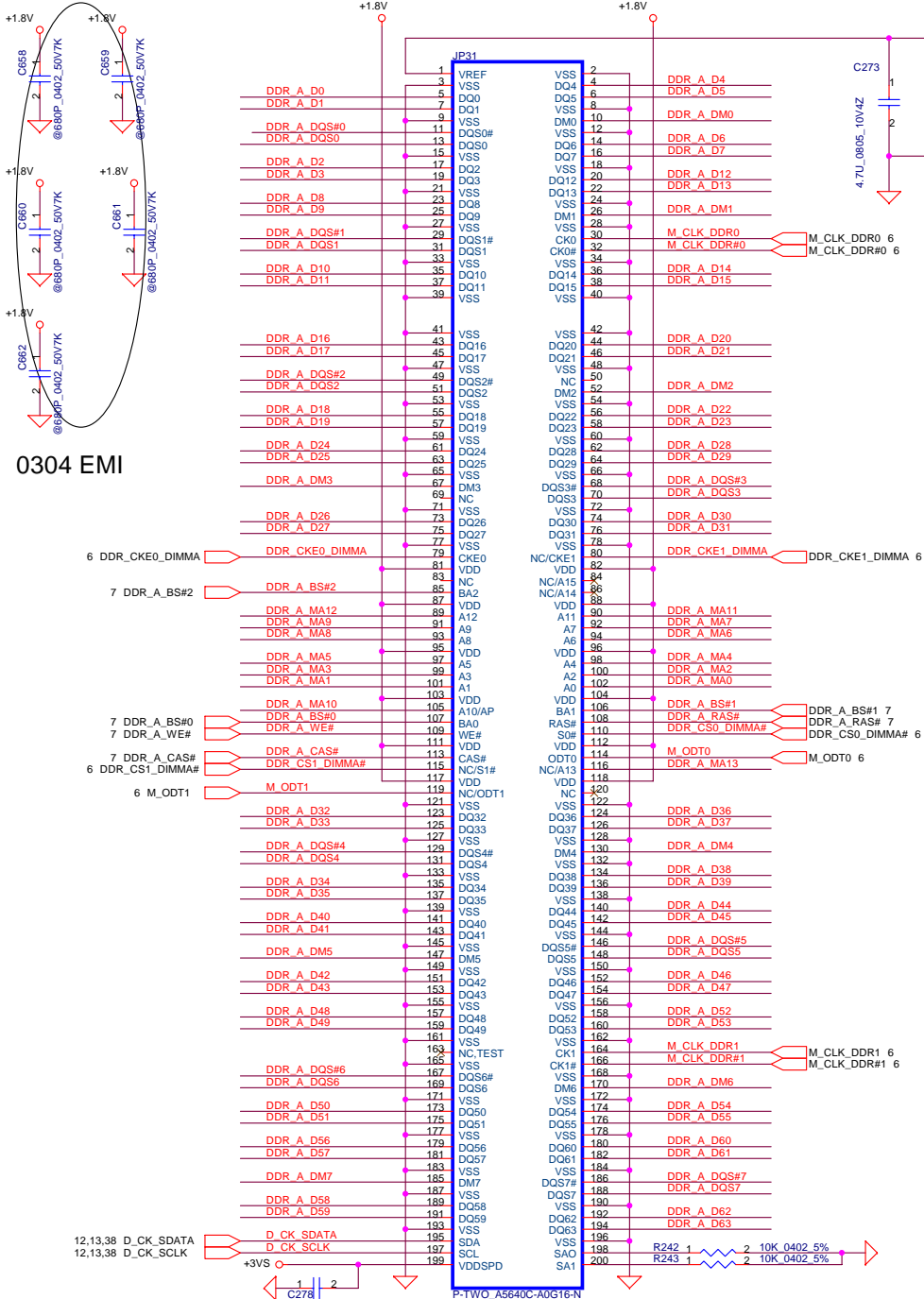


- 15,41 PCIE_MTX_C_GRX_N[0..15] PCIE_MTX_C_GRX_N[0..15]
- 15,41 PCIE_MTX_C_GRX_P[0..15] PCIE_MTX_C_GRX_P[0..15]
- 15,41 PCIE_GTX_C_MRX_N[0..15] PCIE_GTX_C_MRX_N[0..15]
- 15,41 PCIE_GTX_C_MRX_P[0..15] PCIE_GTX_C_MRX_P[0..15]

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	Alviso PCI-E (3/5)	
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
				B	EFL50 LA-2761
				Date:	Wednesday, April 20, 2005
				Sheet	8 of 51
				Rev	0.2

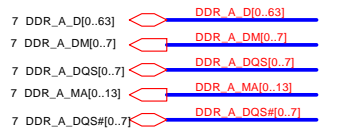


Security Classification		Compal Secret Data		Title	
Issued Date		2005/03/08	Deciphered Date	2006/03/08	Alviso POWER (4/5)
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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			Rev	
Custom	EFL50 LA-2761			0.2	
Date:	Wednesday, April 20, 2005	Sheet	9	of	51

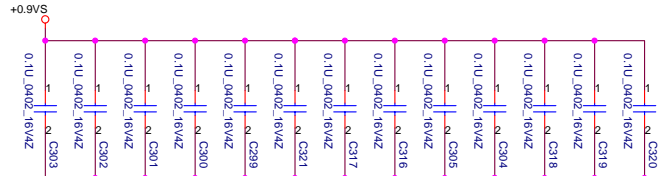
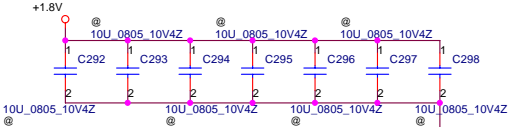


0304 EMI

Address: 1001 000X b

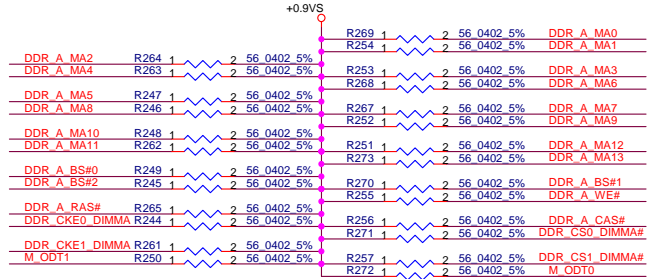


Layout Note:
Place near DIMM



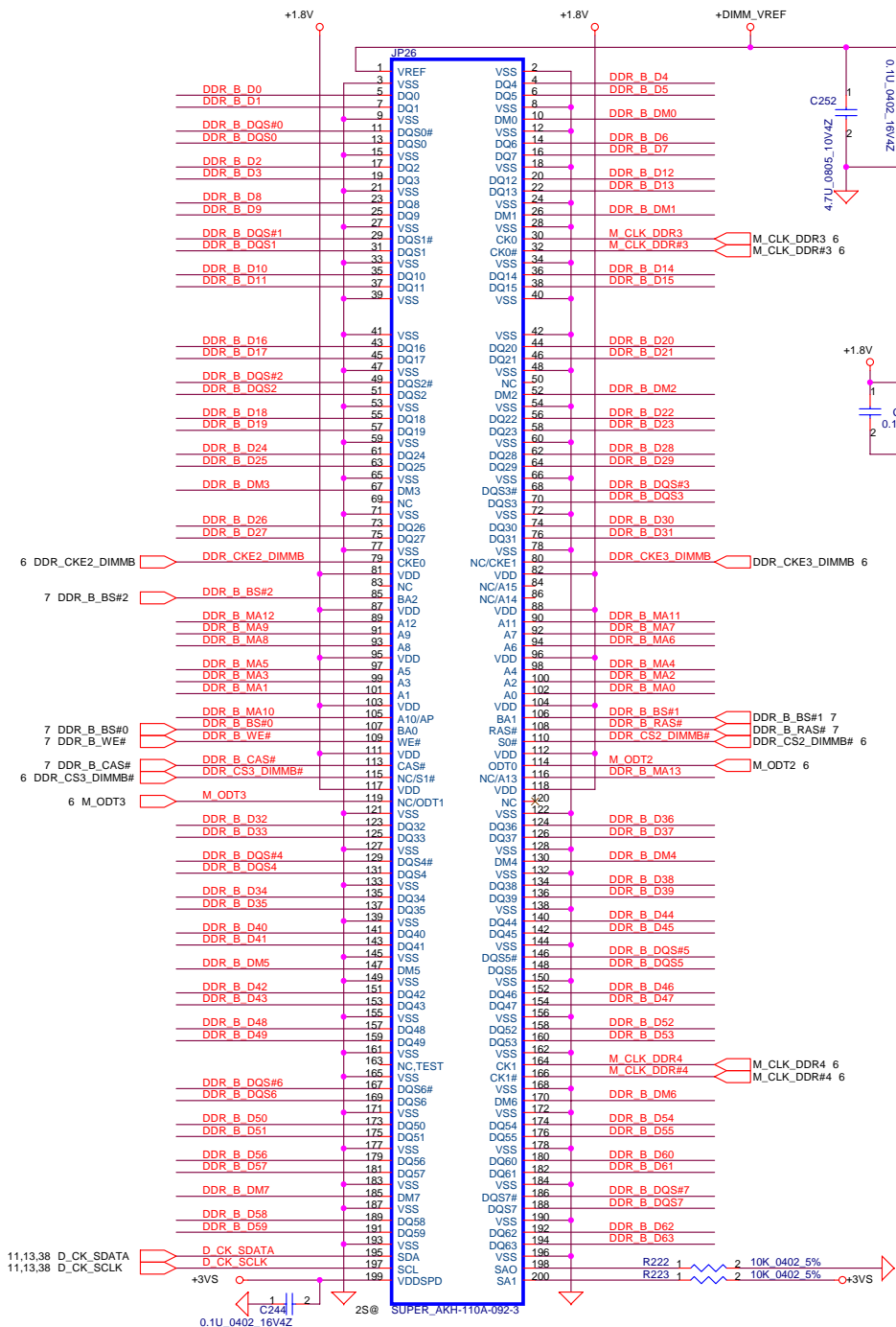
Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9VS

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



Layout Note:
Place these resistor closely DIMM0, all trace length Max=1.3"

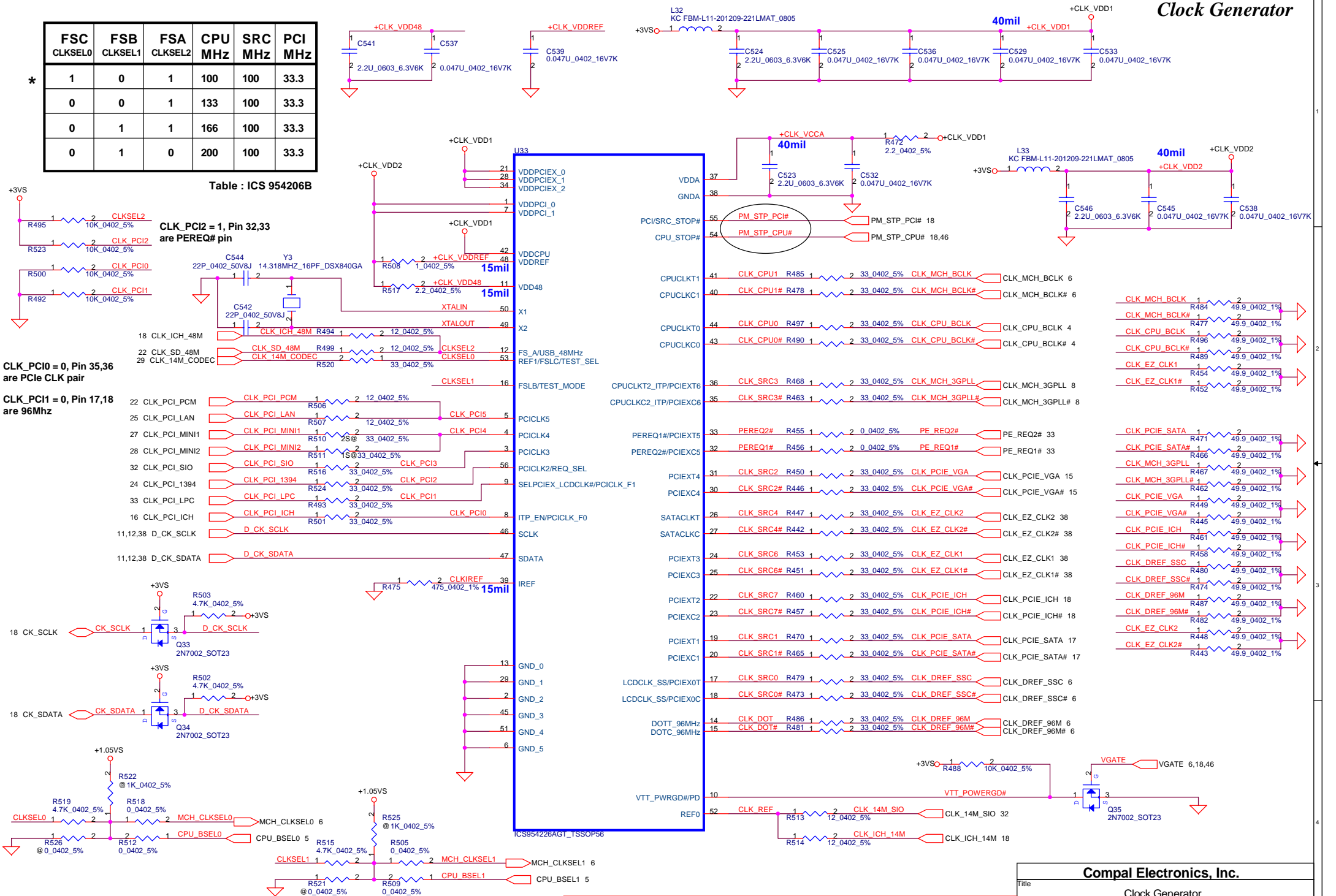
Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	DDRII- SODIMM SLOT0	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 Custom	Document Number
				EFL50 LA-2761	Rev 0.2
Date:				Wednesday, April 20, 2005	Sheet 11 of 51



Clock Generator

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

Table : ICS 954206B



*
CLK_PCI2 = 1, Pin 32,33 are PEREQ# pin
CLK_PCI0 = 0, Pin 35,36 are PCIe CLK pair
CLK_PCI1 = 0, Pin 17,18 are 96MHz

CLK_PCI2 = 1, Pin 32,33 are PEREQ# pin

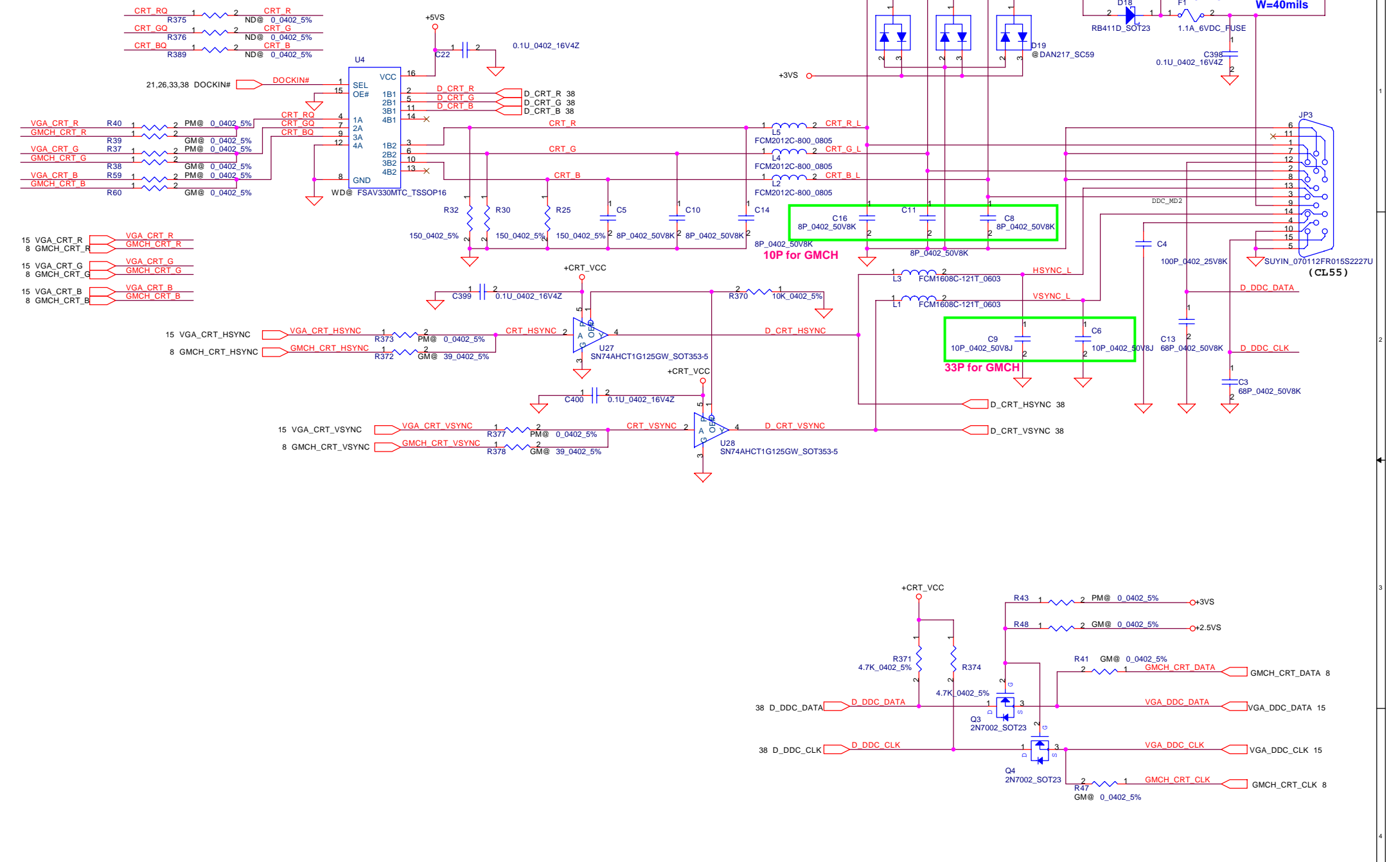
CLK_PCI0 = 0, Pin 35,36 are PCIe CLK pair

CLK_PCI1 = 0, Pin 17,18 are 96MHz

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 Clock Generator		
Size	Document Number EFL50 LA-2761	Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet 13 of 51

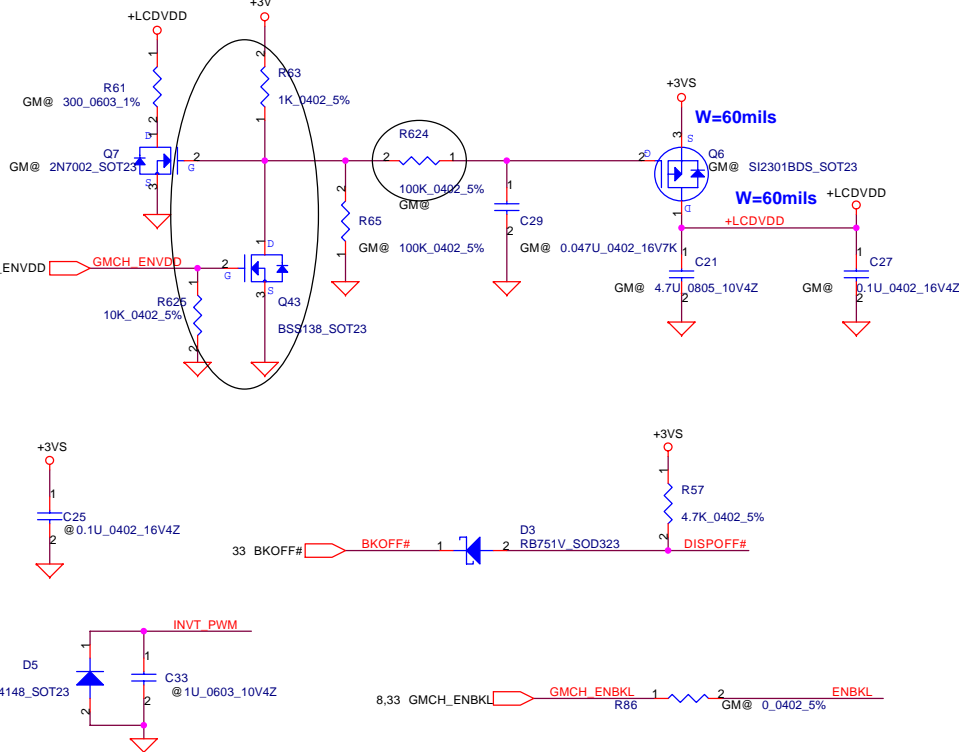
CRT Connector



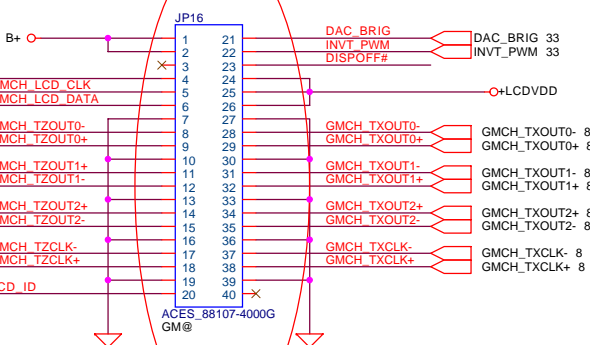
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

Compal Electronics, Inc.		
Title CRT & TVout Connector		
Size	Document Number EFL50 LA-2761	Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet 14 of 51

LCD POWER CIRCUIT

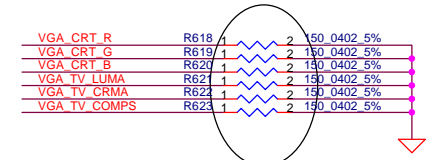


LCD/PANEL BD. Conn.



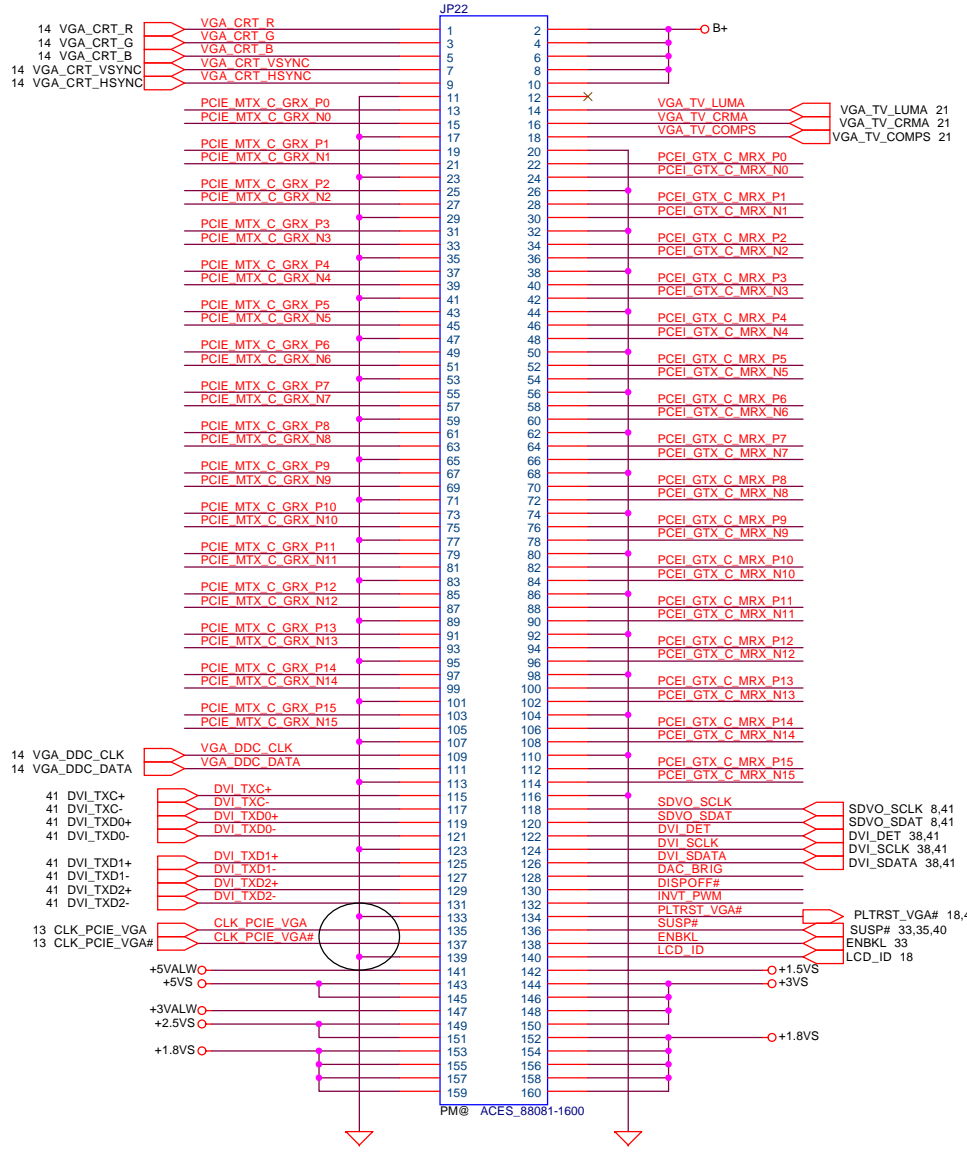
Reverse for Layout

- 8,41 PCIe_GTX_C_MRX_N[0..15] ← PCIe GTX C MRX N[0..15]
- 8,41 PCIe_GTX_C_MRX_P[0..15] ← PCIe GTX C MRX P[0..15]
- 8,41 PCIe_MTX_C_GRX_N[0..15] ← PCIe MTX C GRX N[0..15]
- 8,41 PCIe_MTX_C_GRX_P[0..15] ← PCIe MTX C GRX P[0..15]



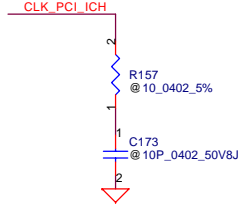
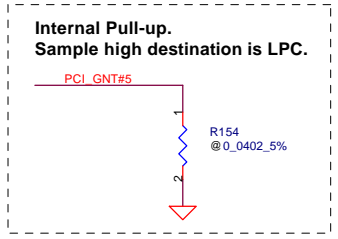
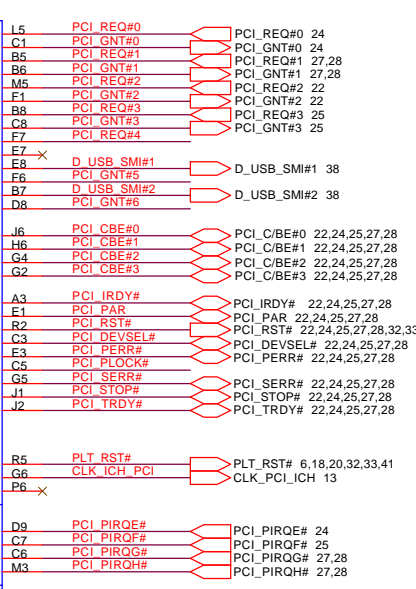
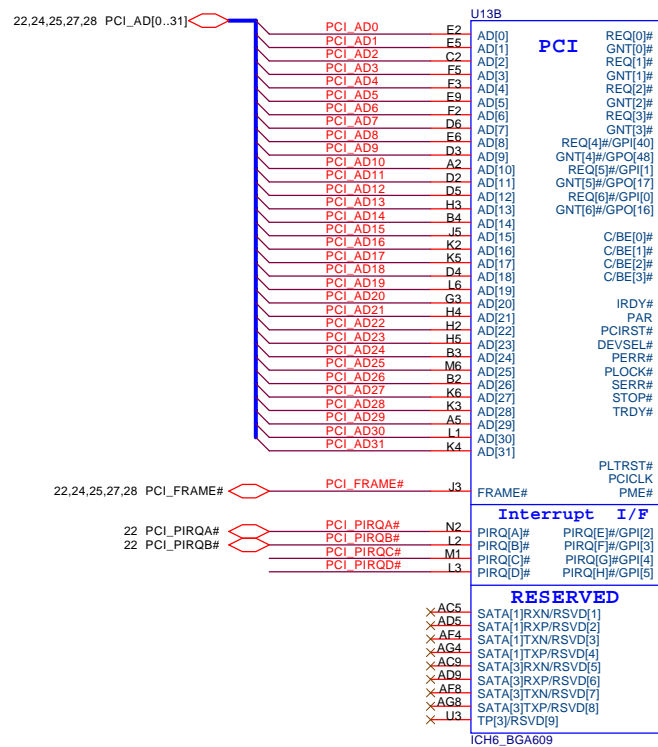
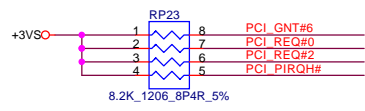
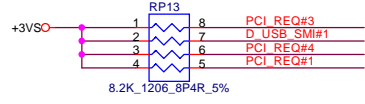
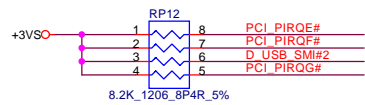
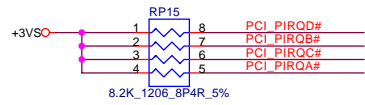
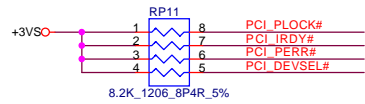
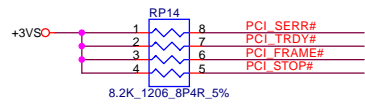
2005/01/24

VGA BOARD Conn.

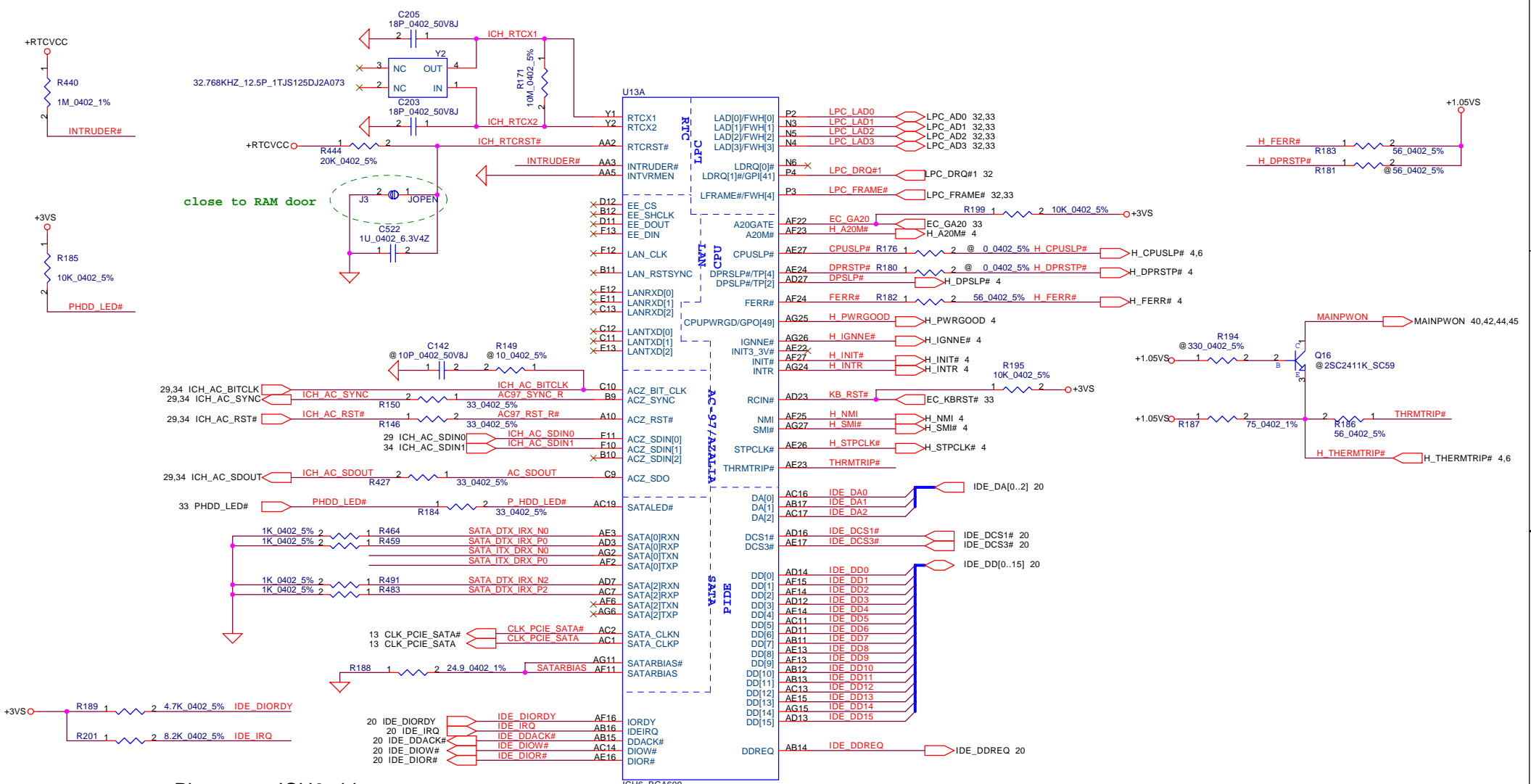


Compal Electronics, Inc.		
Title	VGA / LCD CONN.	
Size	Document Number	Rev
	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 15 of 51

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.



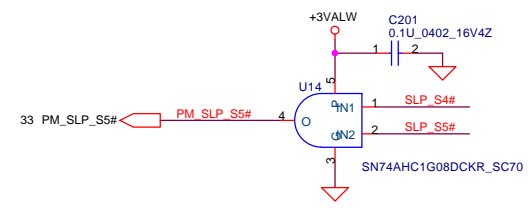
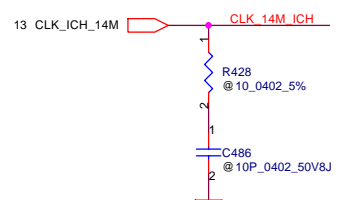
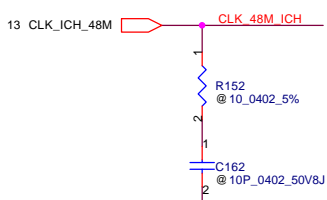
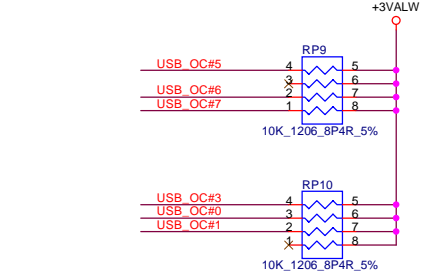
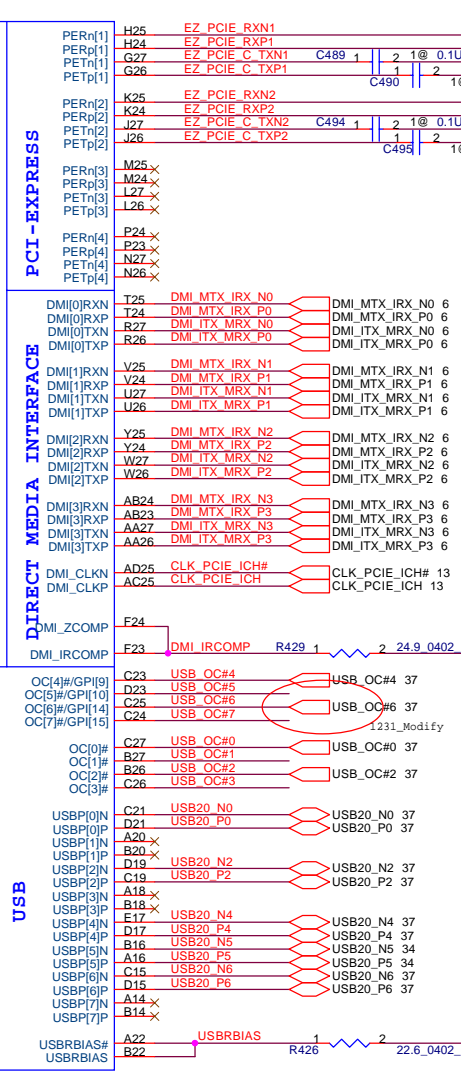
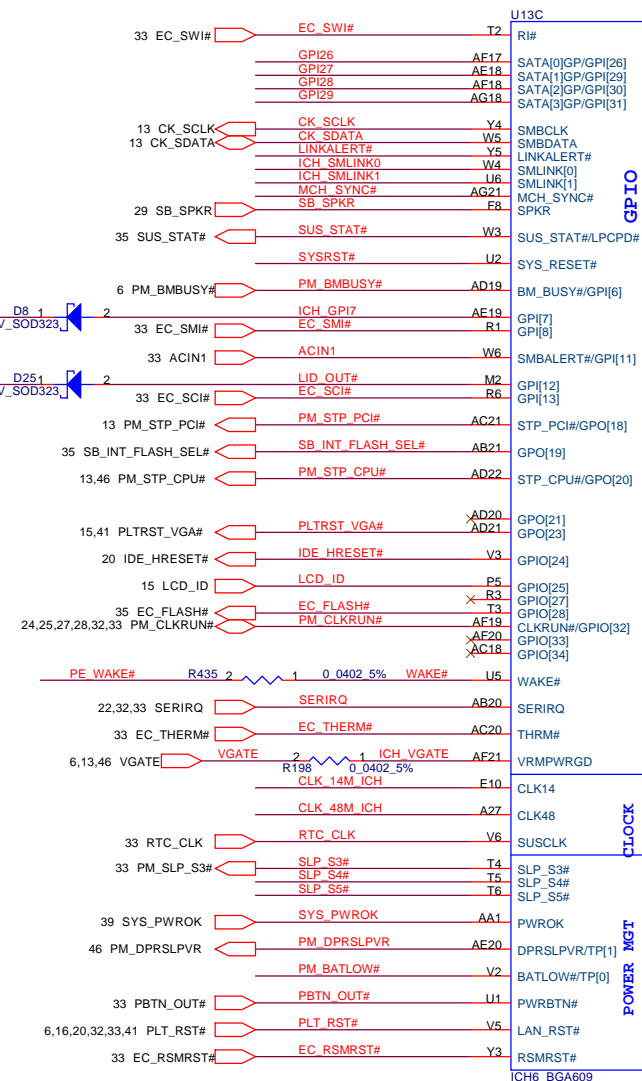
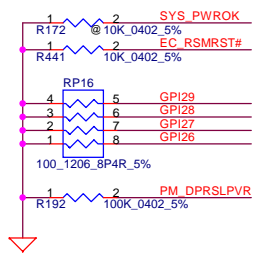
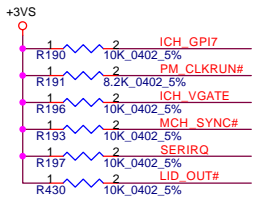
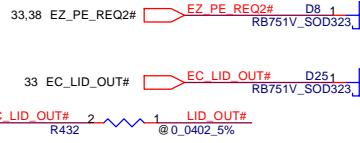
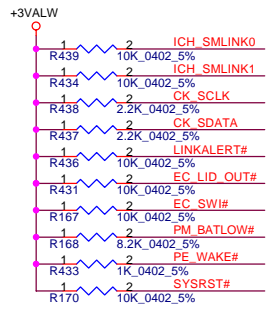
close to RAM door

Place near ICH6 side.

SATA_DTX_IRX_N0	2	1	SATA_DTX_C_IRX_N0	SATA_DTX_C_IRX_N0 20
	C531		0.01U_0402_16V7K	
SATA_DTX_IRX_P0	2	1	SATA_DTX_C_IRX_P0	SATA_DTX_C_IRX_P0 20
	C530		0.01U_0402_16V7K	
SATA_ITX_DRX_N0	2	1	SATA_ITX_C_DRX_N0	SATA_ITX_C_DRX_N0 20
	C535		0.01U_0402_16V7K	
SATA_ITX_DRX_P0	2	1	SATA_ITX_C_DRX_P0	SATA_ITX_C_DRX_P0 20
	C534		0.01U_0402_16V7K	

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.

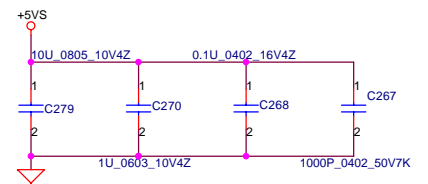
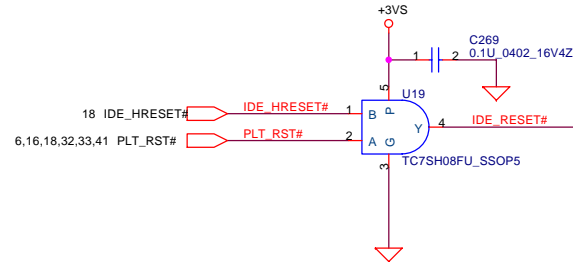
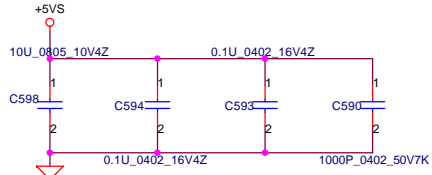
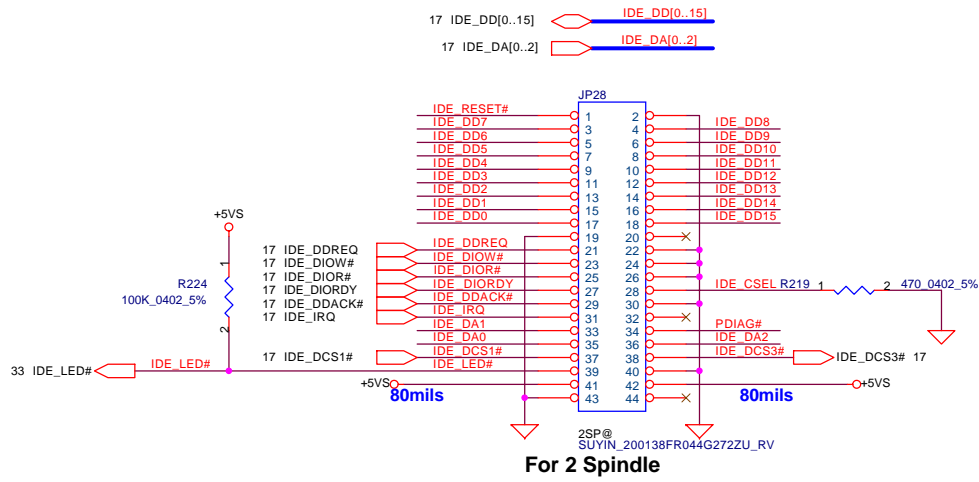
Compal Electronics, Inc.			
Title ICH6(2/4)			
Size	Document Number	Rev	
	EFL50 LA-2761	0.2	
Date:	Wednesday, April 20, 2005	Sheet	17 of 51



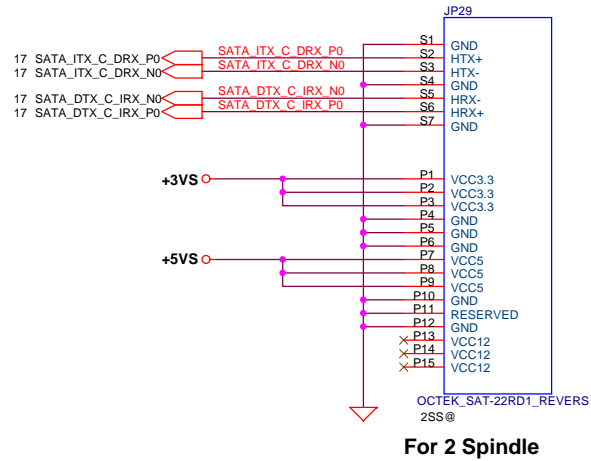
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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: ICH6(3/4)		
Size	Document Number	Rev
	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 18 of 51

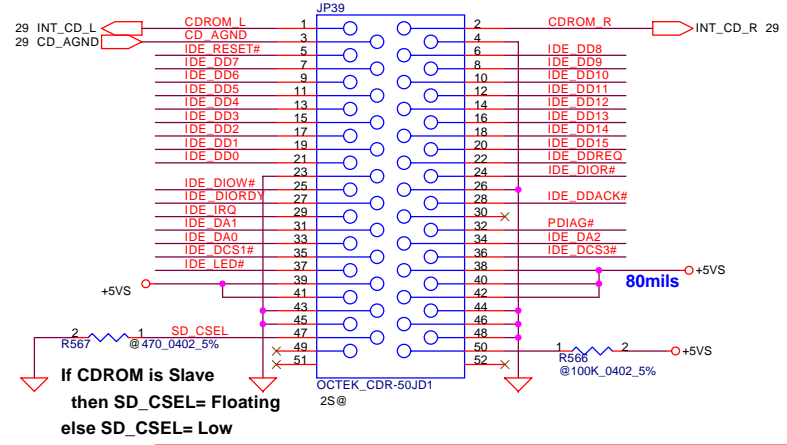
HDD CONN



SATA HDD CONN

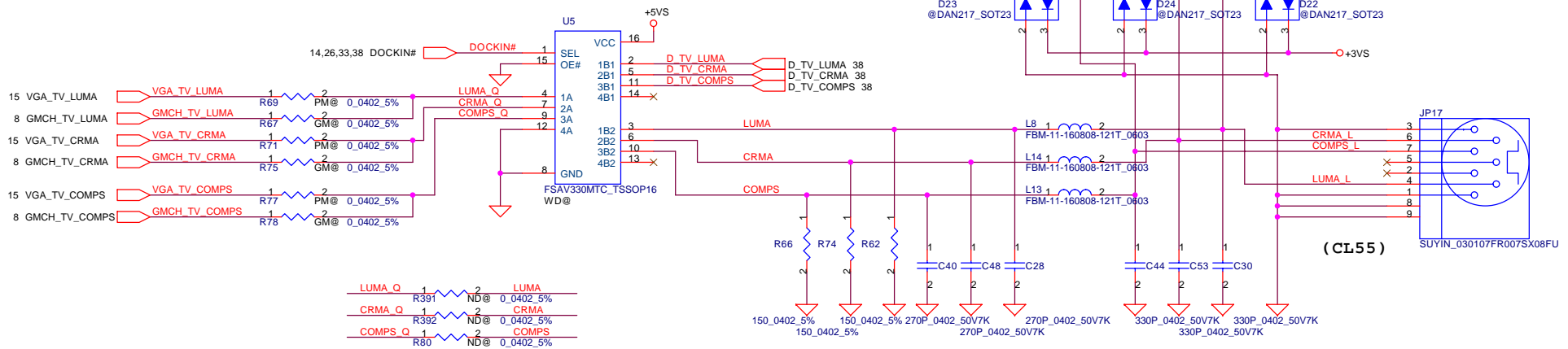


CDROM CONN



Compal Electronics, Inc.		
Title HDD & CDROM Connector		
Size	Document Number EFL50 LA-2761	Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet 20 of 51

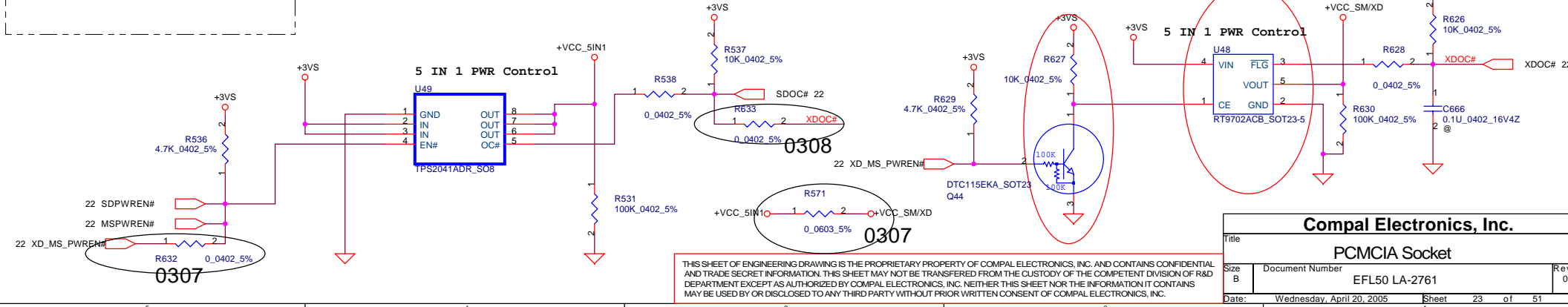
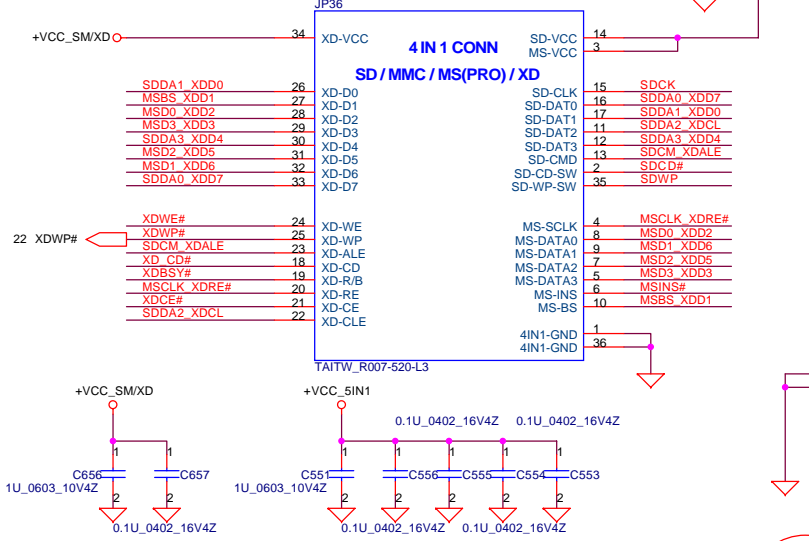
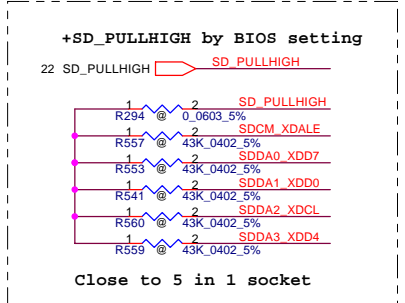
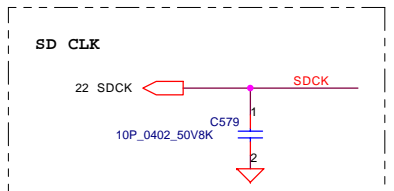
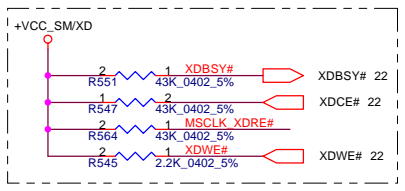
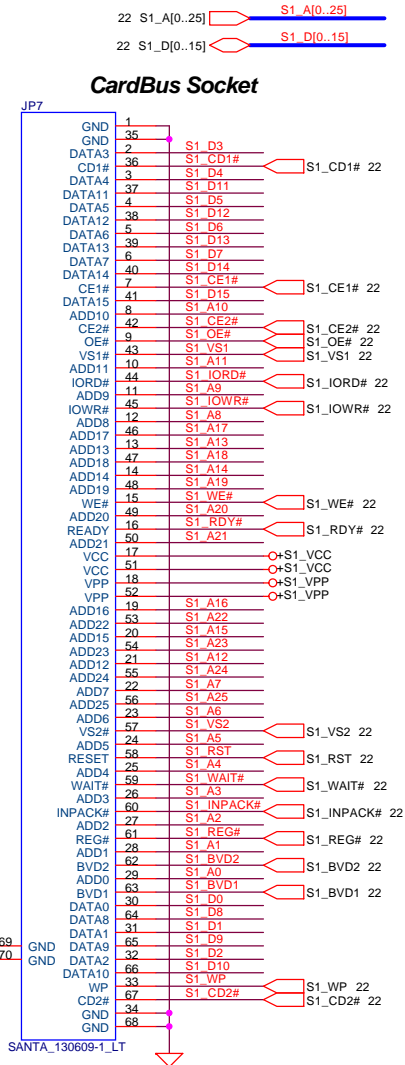
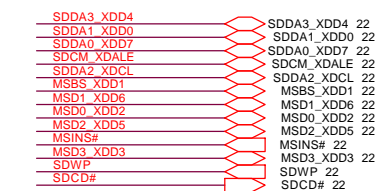
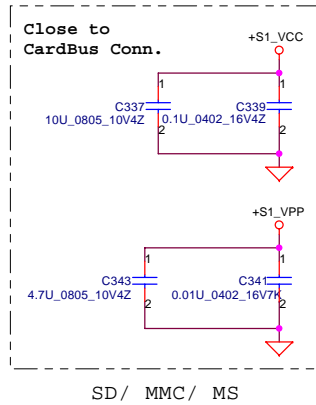
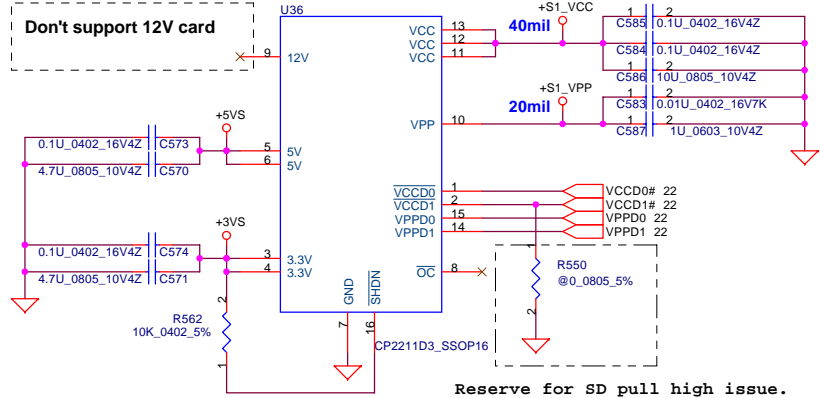
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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 PATA / SATA HDD Connector		
Size	Document Number EFL50 LA-2761	Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet 21 of 51

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.

PCMCIA Power Controller



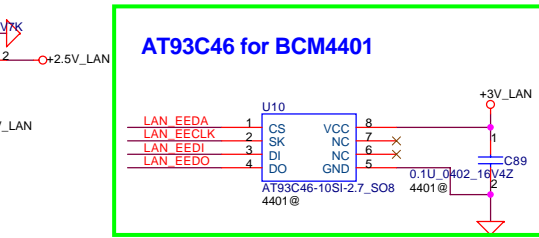
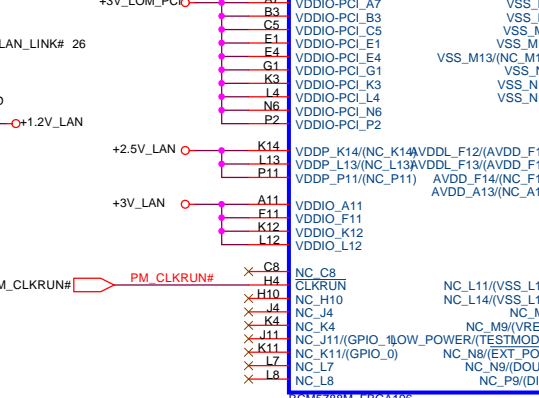
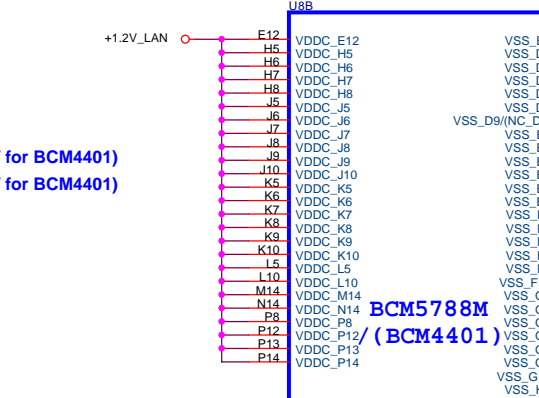
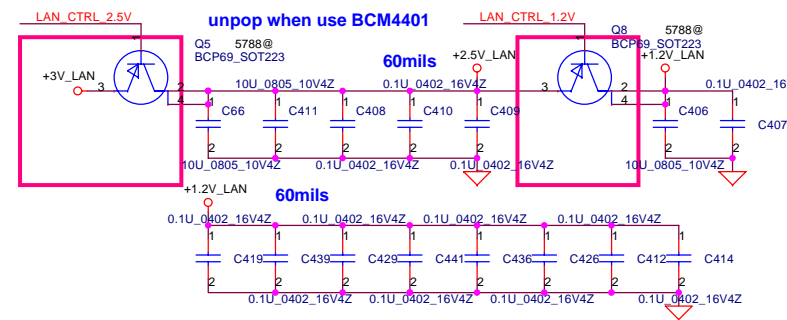
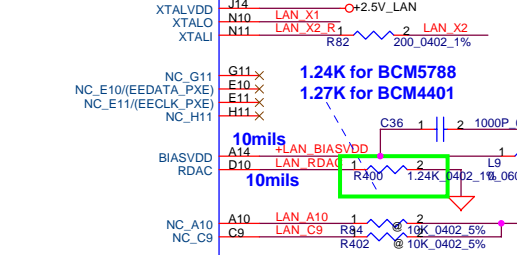
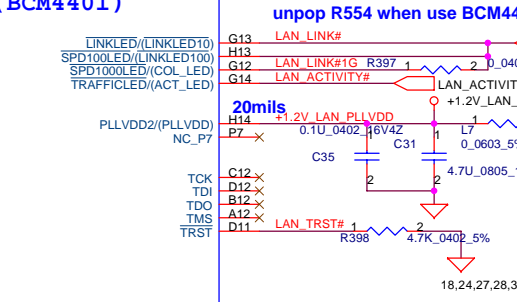
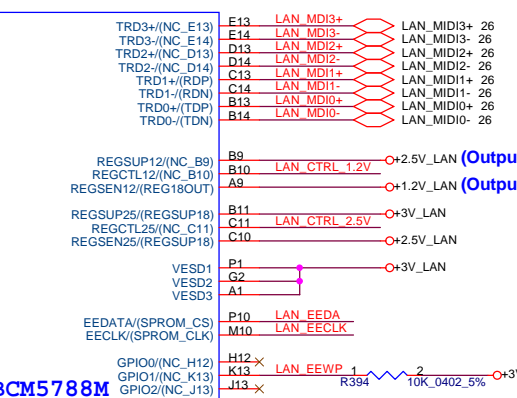
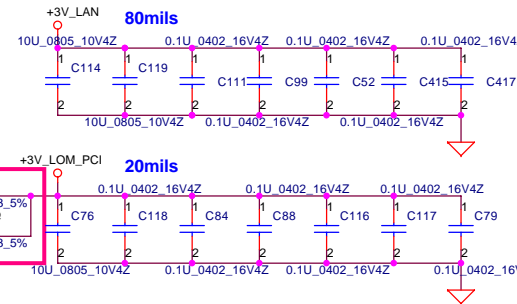
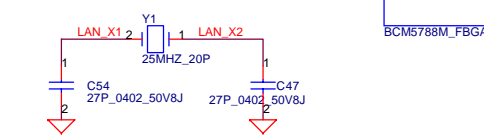
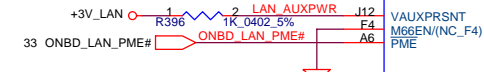
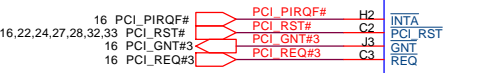
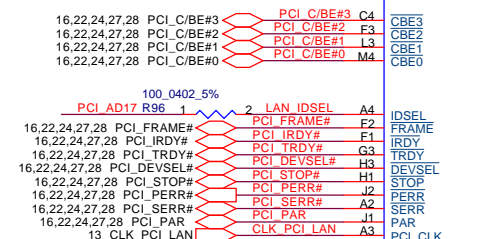
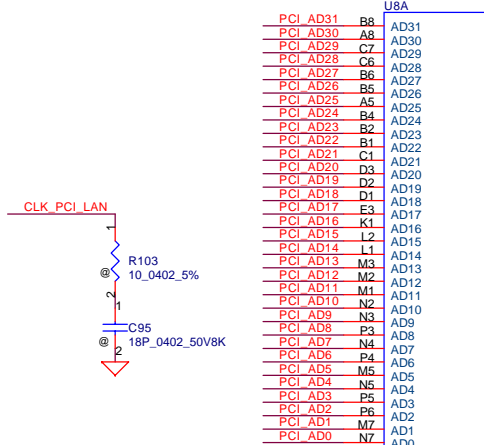
Compal Electronics, Inc.		
Title: PCMCIA Socket		
Size: B	Document Number: EFL50 LA-2761	Rev: 0.2
Date: Wednesday, April 20, 2005	Sheet: 23	of: 51

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.

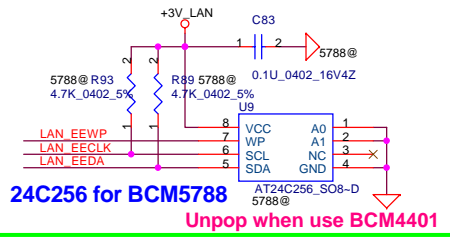
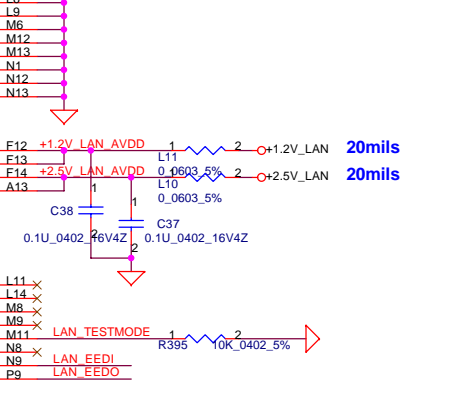
EN_WOL# = Low,
System can wake on LAN
(keep Low when Power On)

VGS(th) = -0.45V
IDmax = 2.3A

16,22,24,27,28 PCI_AD[0..31]



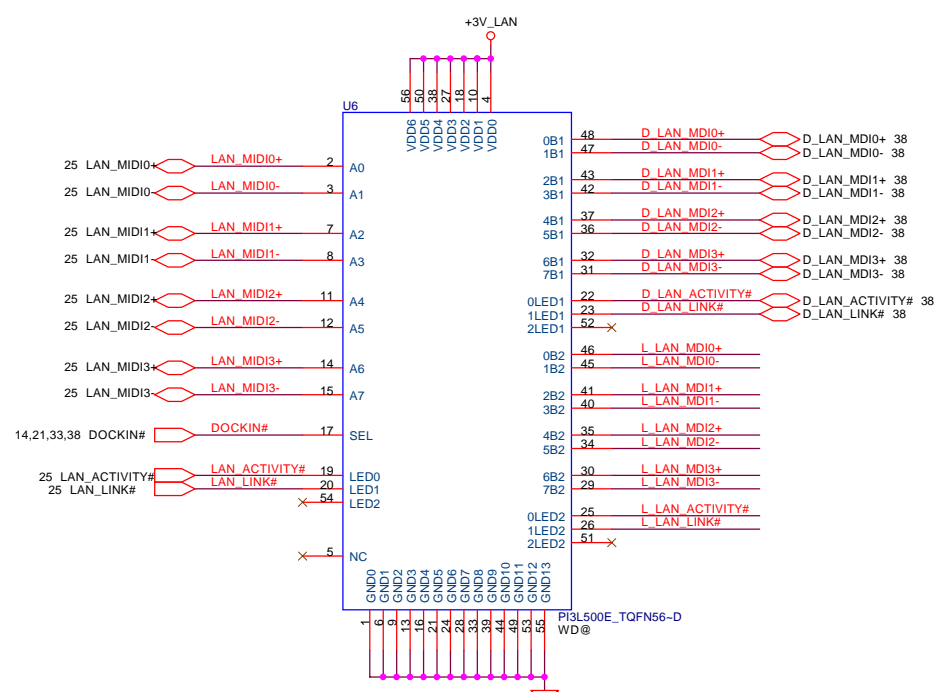
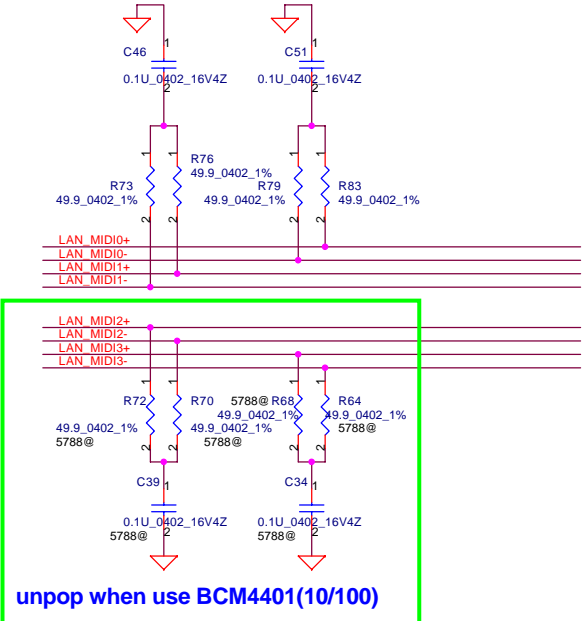
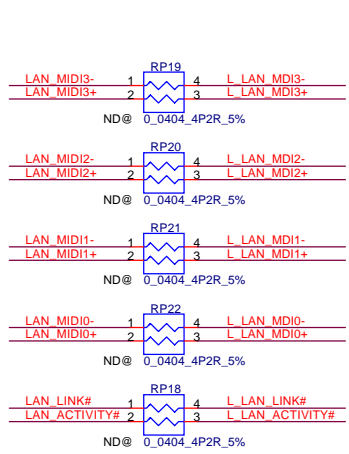
	5788	4401
L18		Pop
L19	Pop	
Q17	Pop	
Q18	Pop	
R318	1.24K	1.27K
U18		Pop
C424		Pop
U19	Pop	
R319	Pop	
R320	Pop	
C423	Pop	



Unpop when use BCM4401

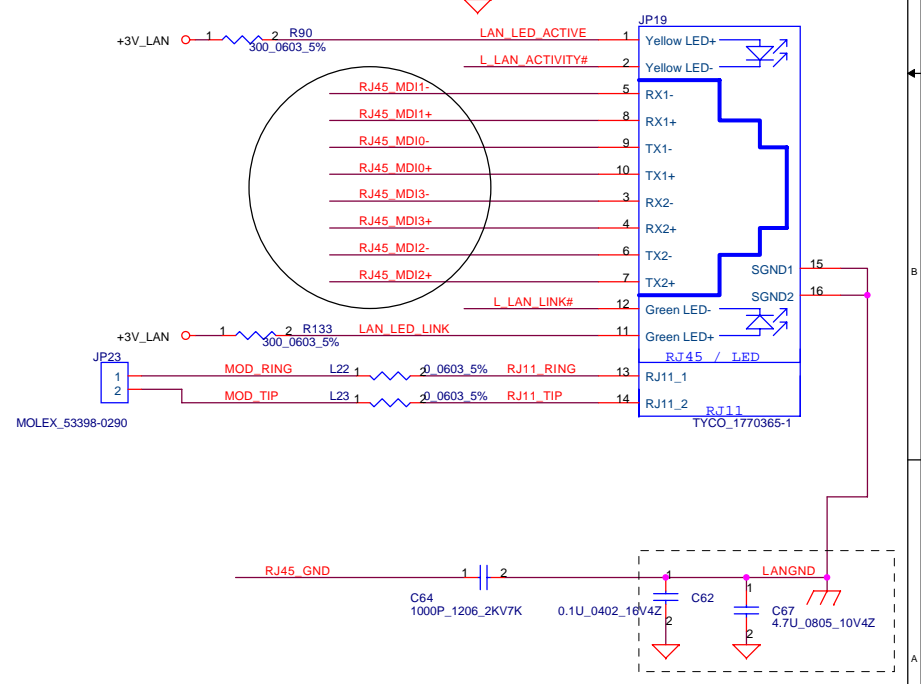
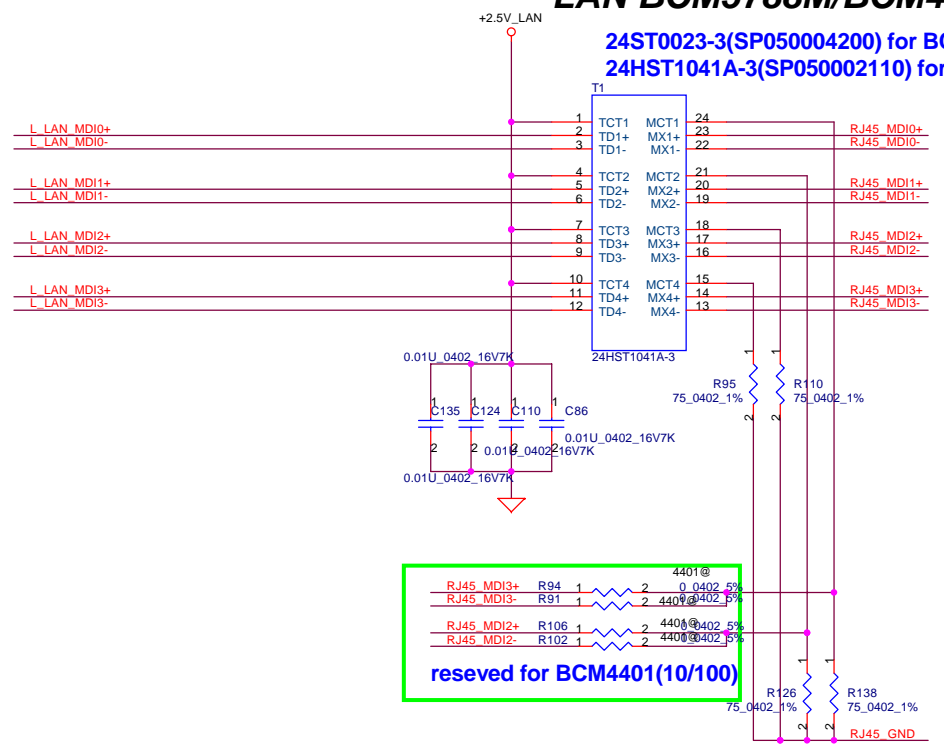
Title		
LAN BCM5788M		
Size	Document Number	Rev
B	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 25 of 51

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.



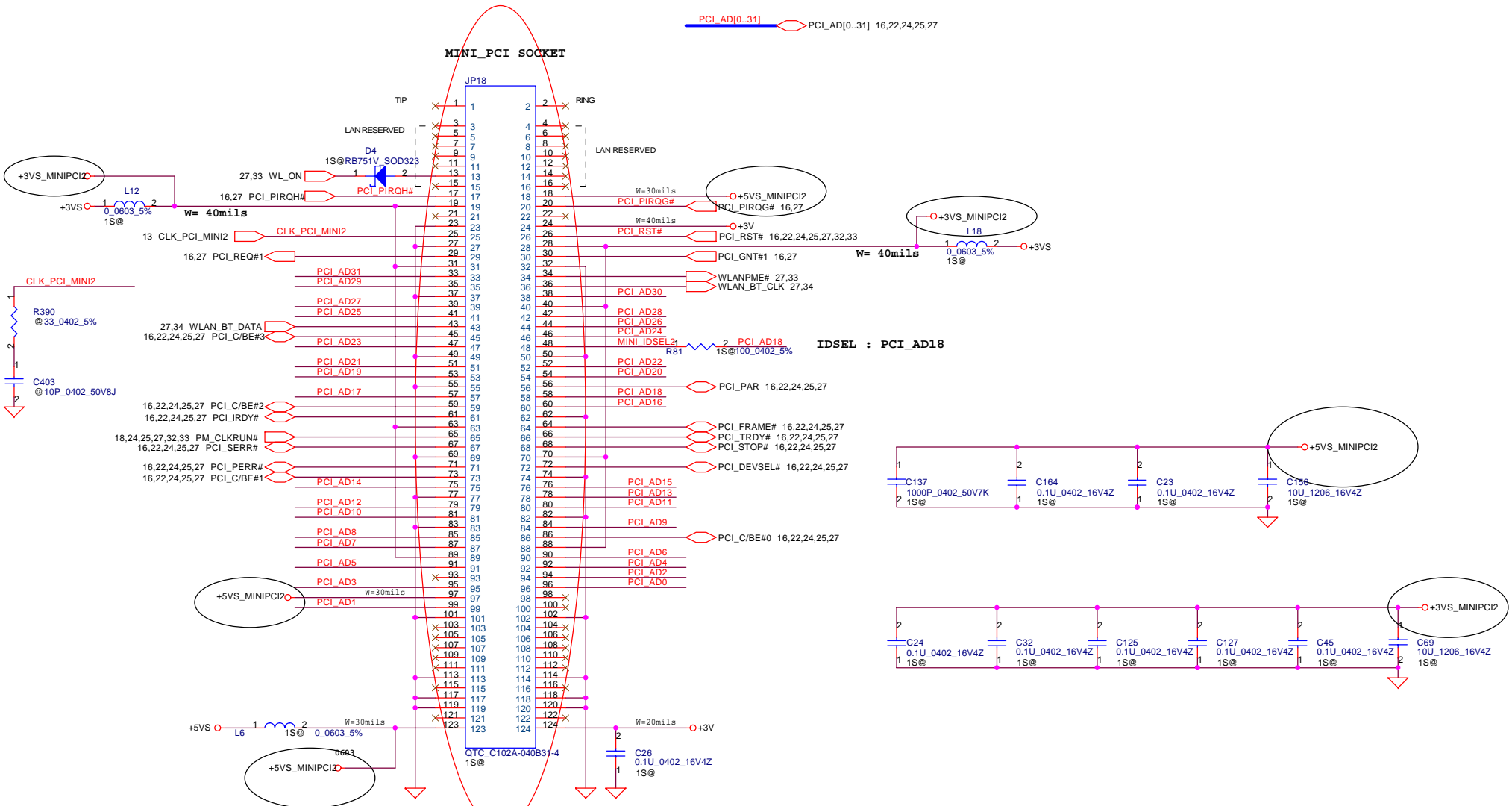
LAN BCM5788M/BCM4401KFB

24ST0023-3(SP050004200) for BCM4401(10/100)
 24HST1041A-3(SP050002110) for BCM5788M(GbE)



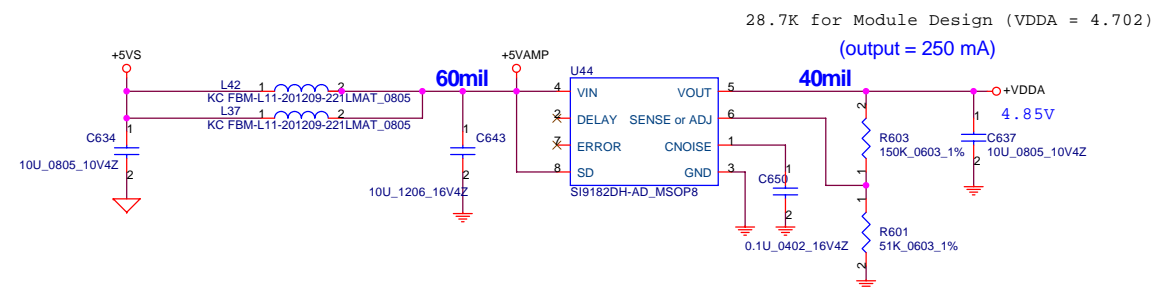
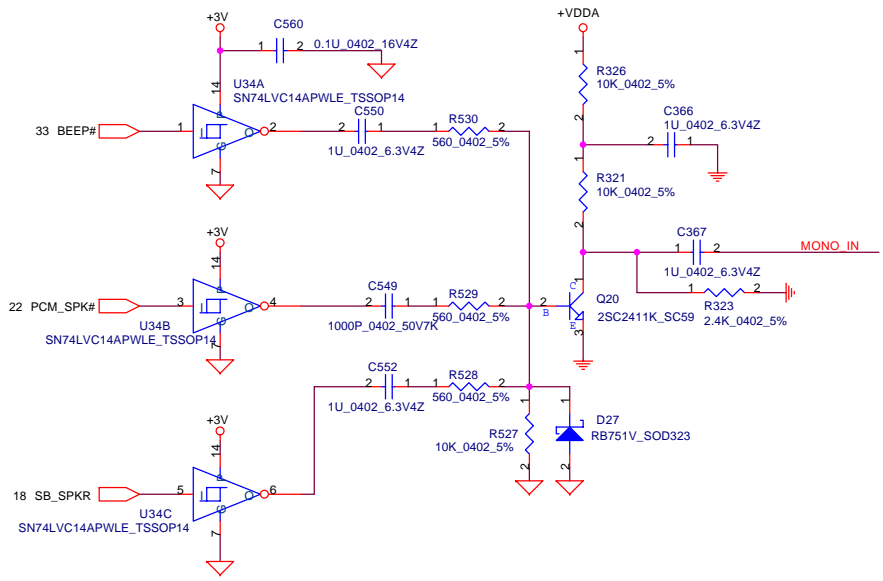
Compal Electronics, Inc.			
Title			
LAN Magnetic & RJ45/RJ11			
Size	Document Number	Rev	
B	EFL50 LA-2761	0.2	
Date:	Wednesday, April 20, 2005	Sheet	26 of 51

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.

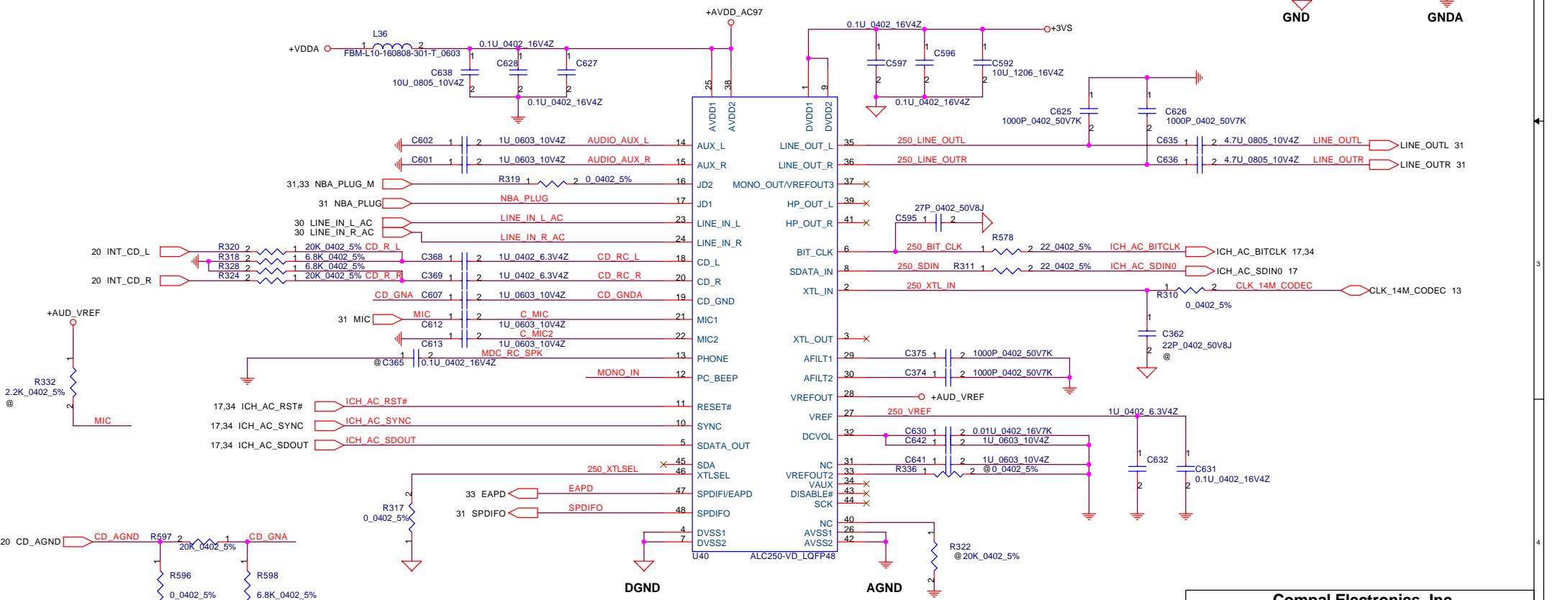


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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	
	EFL50 LA2761	0.2	
Date:	Wednesday, April 20, 2005	Sheet	28 of 51



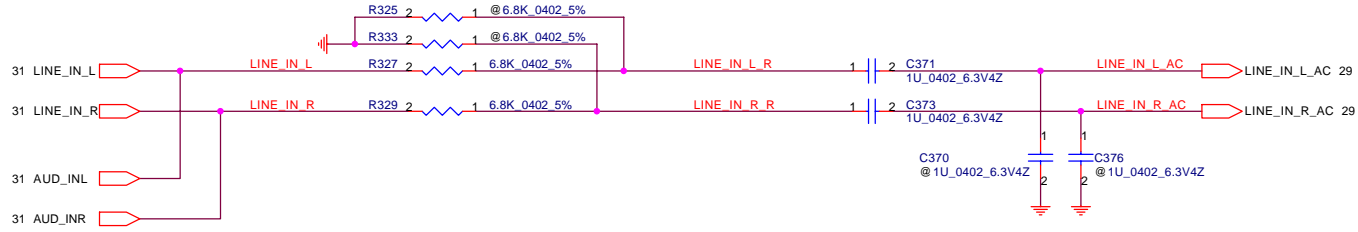
AC97 Codec



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

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.

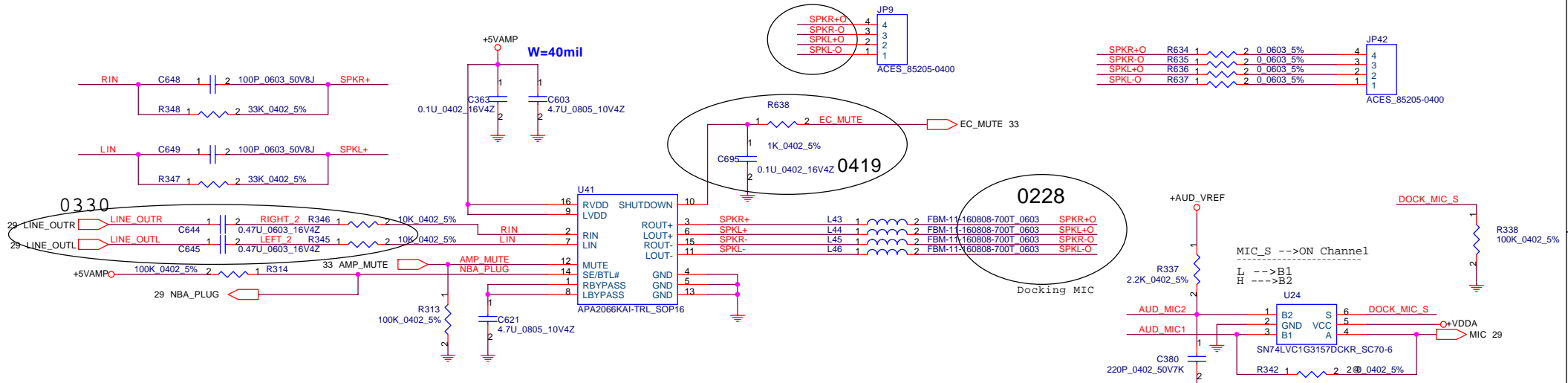
Compal Electronics, Inc.			
AC97 CODEC			
Title	EFL50 LA2761		
Size	Document Number	Rev 0.2	
Date:	Wednesday, April 20, 2005	Sheet 29	of 51



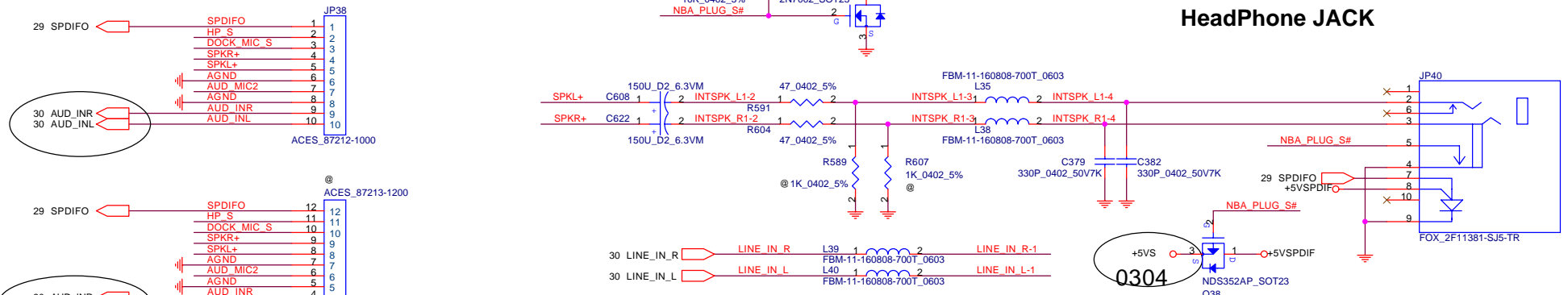
PROPRIETARY NOTE THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, 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			
Audio Line Switch			
Size	Document Number	Rev	
	EFL50 LA-2761	0.2	
Date:	Wednesday, April 20, 2005	Sheet	30 of 51

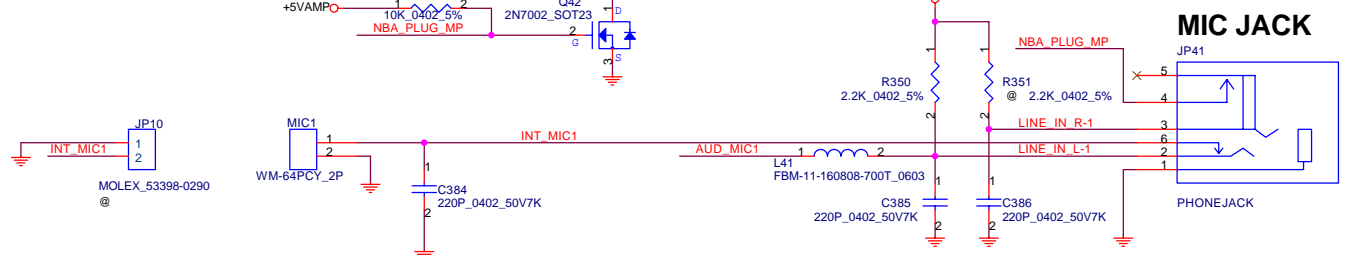
Speaker Conn.



HeadPhone JACK



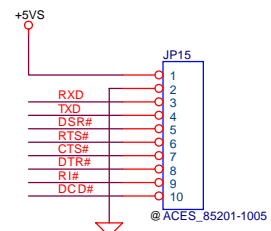
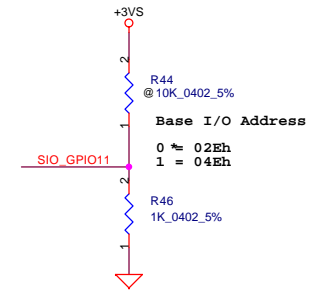
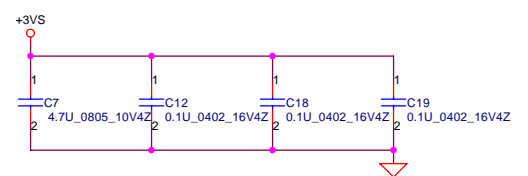
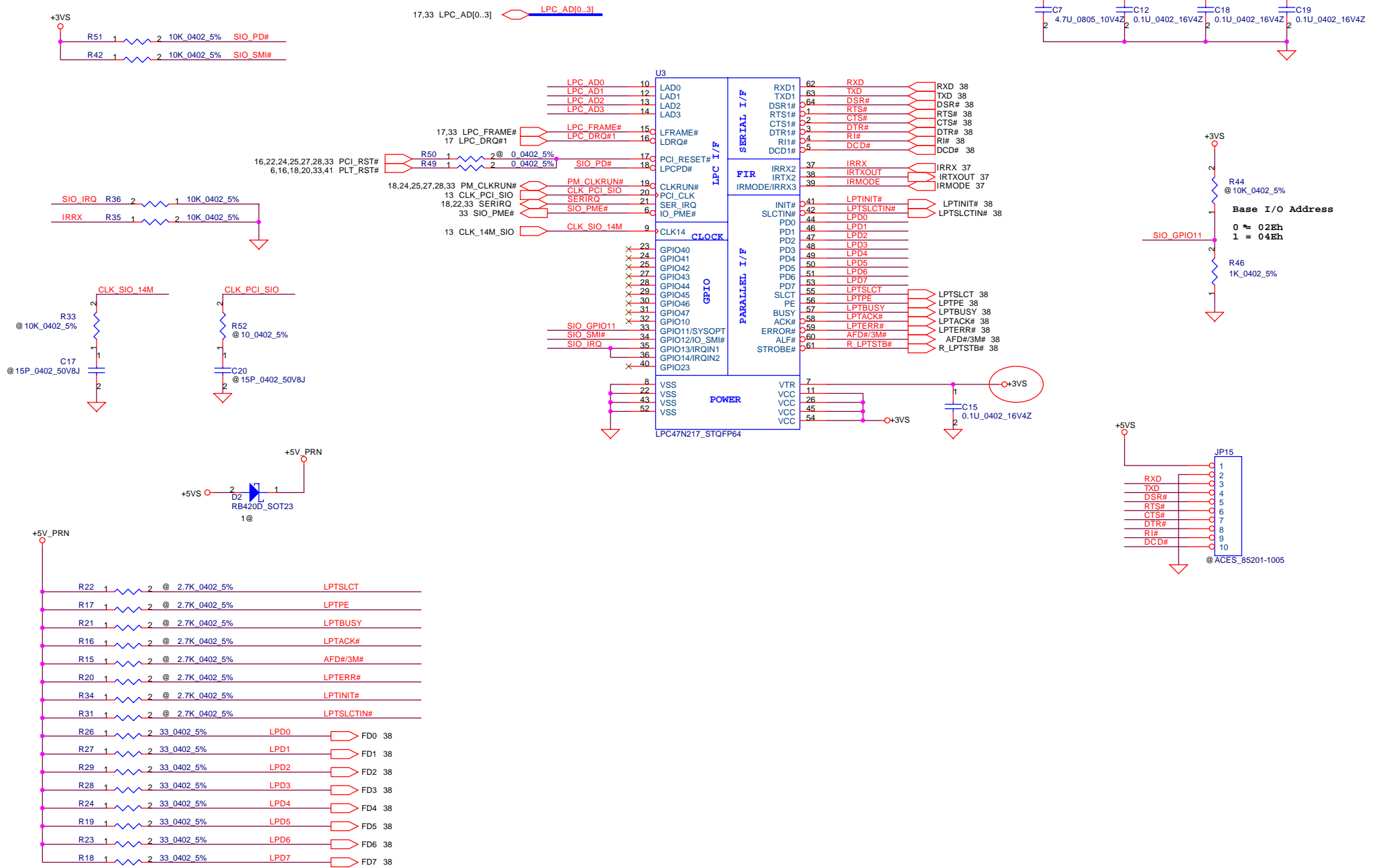
MIC JACK



Compal Electronics, Inc.		
Title: AMP & Audio Jack		
Size	Document Number	Rev
	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 31 of 51

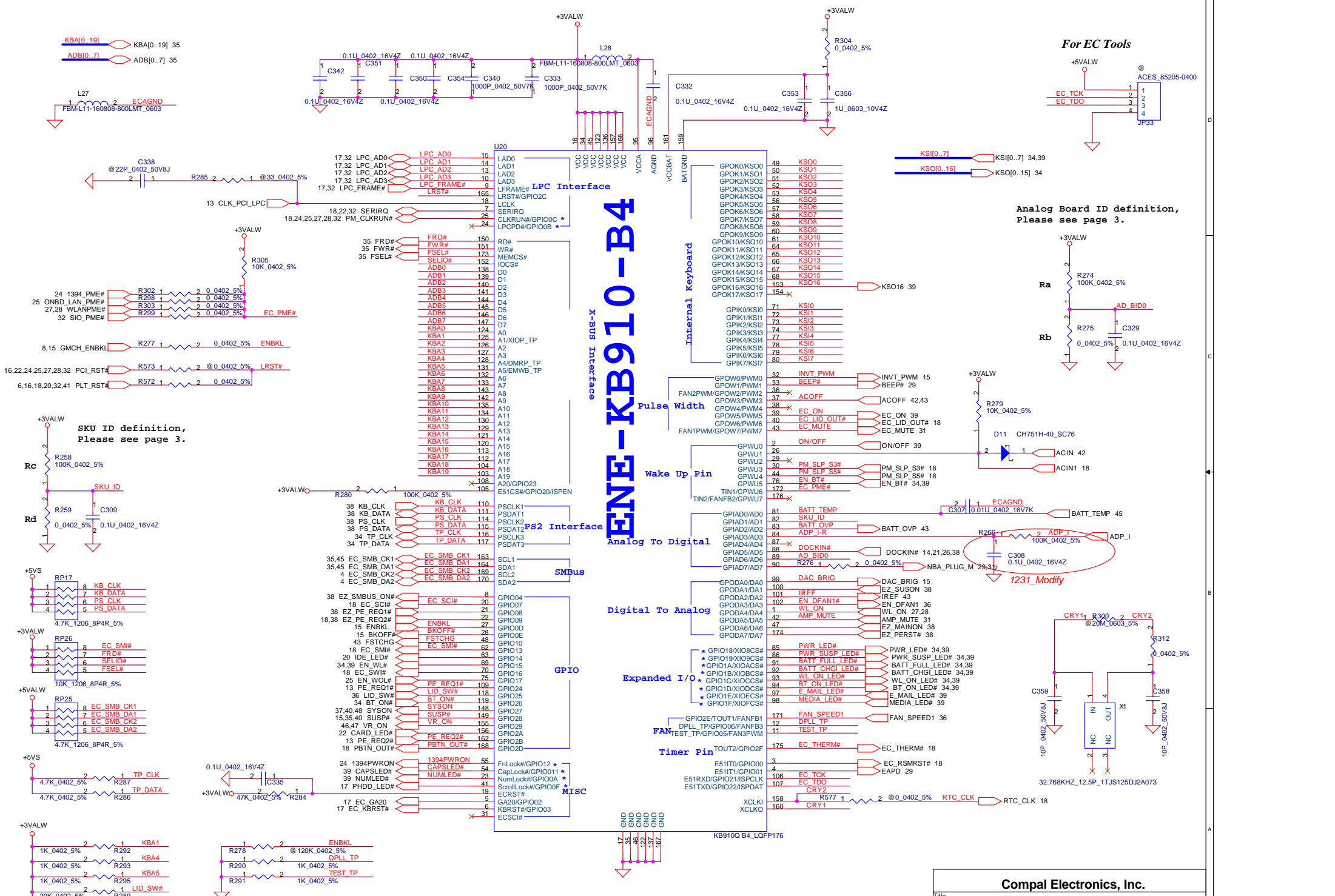
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

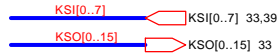
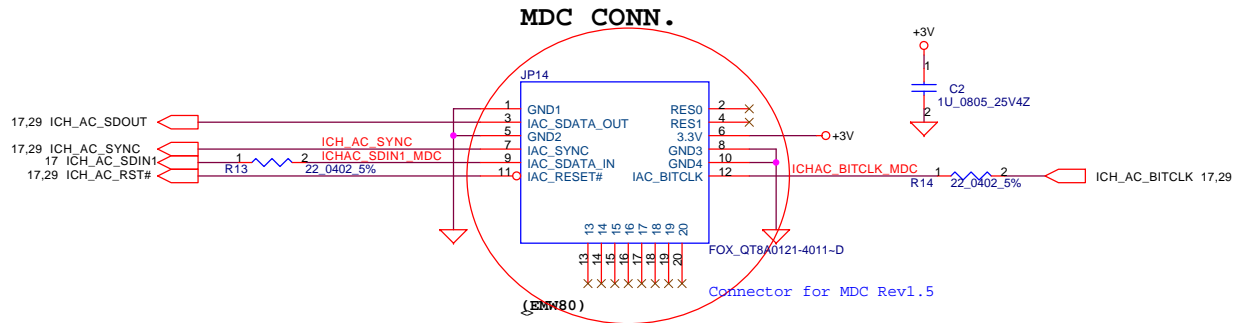
SUPER I/O SMsC LPC47N217



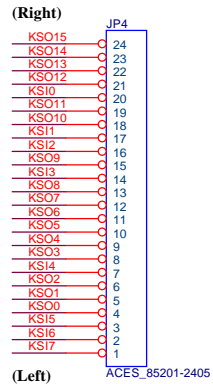
Compal Electronics, Ltd.		
LPC-Super I/O 217		
Title		
Size	Document Number	Rev
	EFL50 LA2751	0.2
Date:	Wednesday, April 20, 2005	Sheet 32 of 51

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.

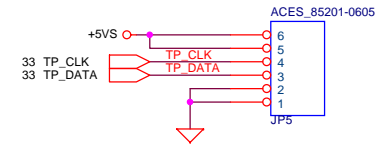




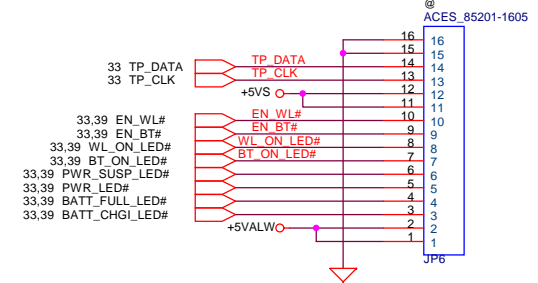
INT_KBD CONN.



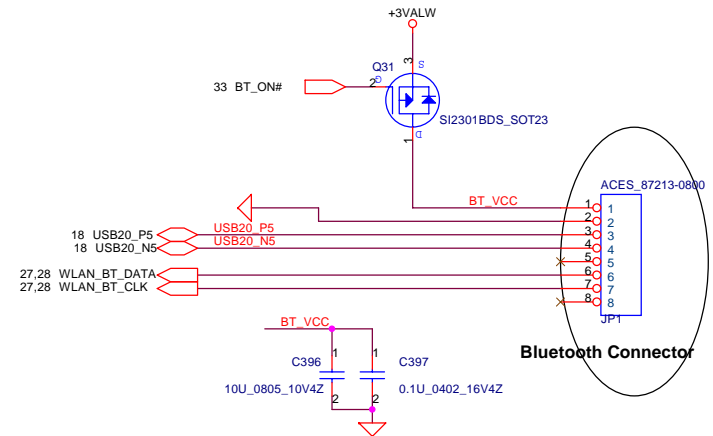
TO M/B



TO M/B



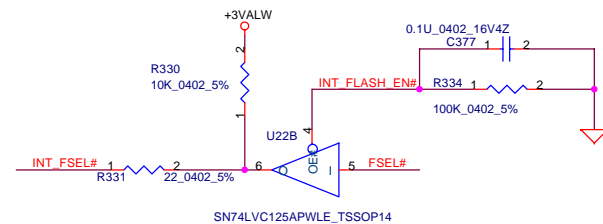
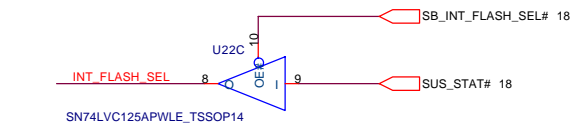
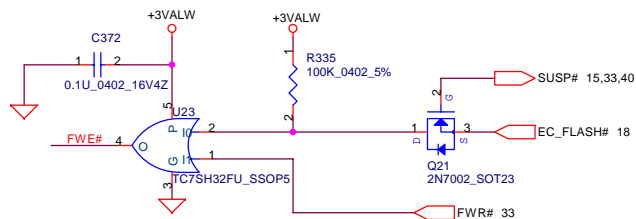
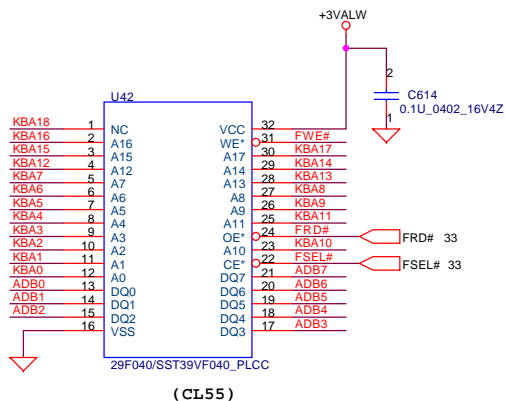
BlueTooth Interface



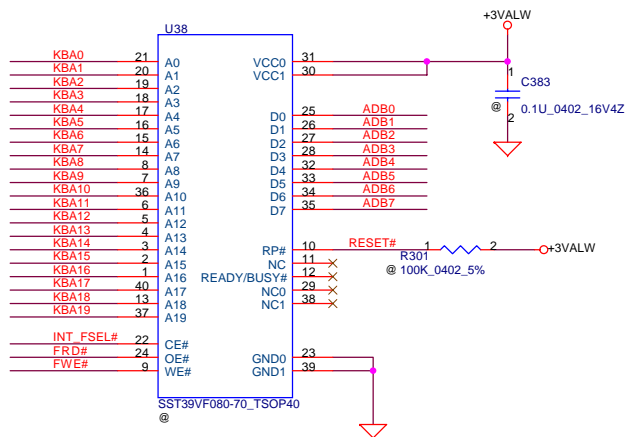
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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 MDC / BT / KBD / TP			
Size	Document Number	EFL50 LA2761	
Date:	Wednesday, April 20, 2005	Sheet	34 of 51
			Rev 0.2

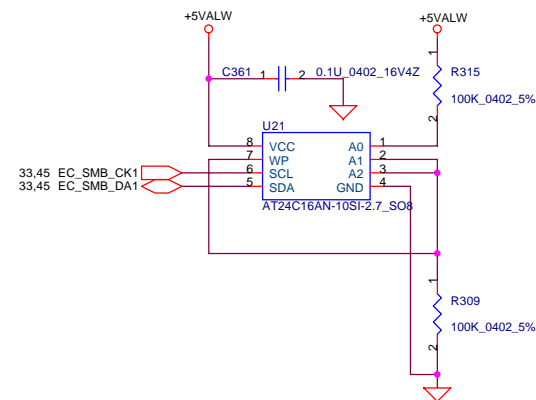
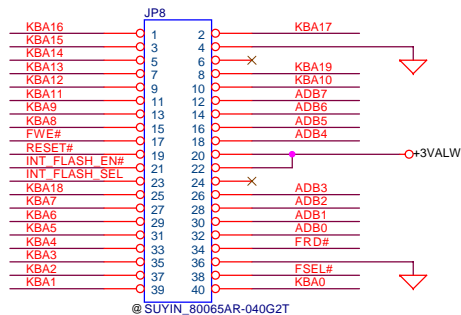
33 KBA[0..19] KBA[0..19]
 33 ADB[0..7] ADB[0..7]



1MB Flash ROM



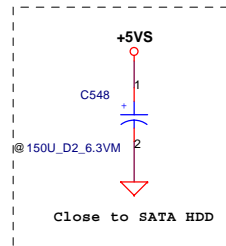
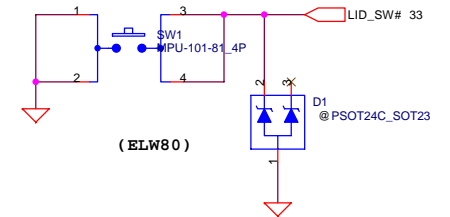
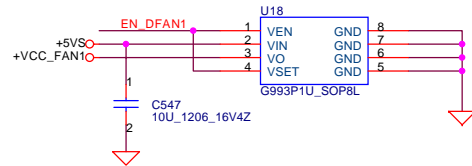
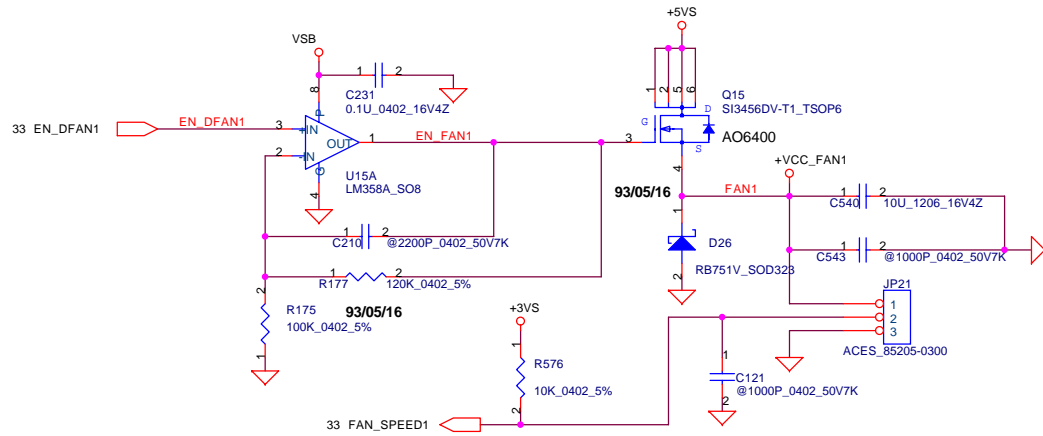
1MB ROM Socket



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.

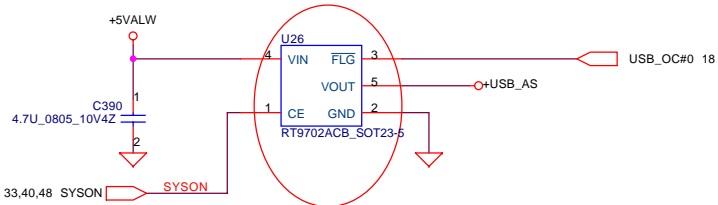
Compal Electronics, Inc.			
BIOS & EXT. I/O PORT & SATA HDD			
Title	Document Number		
Size	EFL50 LA-2761		Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet	35 of 51

FAN Conn

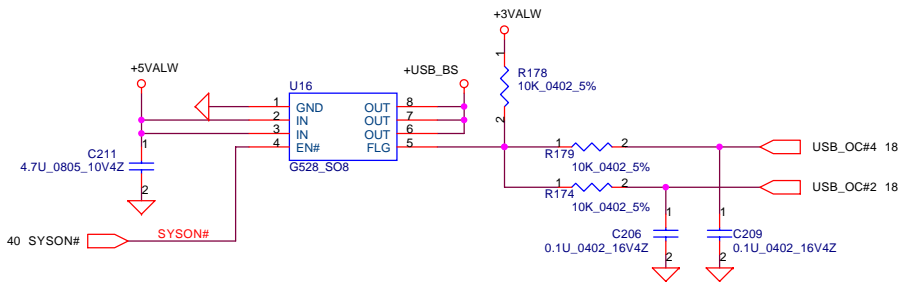


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

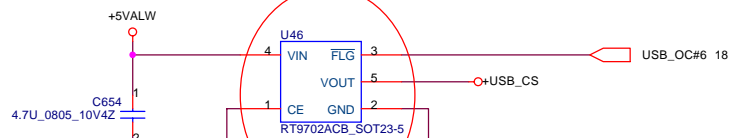
Compal Electronics, Inc.		
Title		
FAN / FIR / RJ11/Lid Switch		
Size	Document Number	Rev
	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 36 of 51



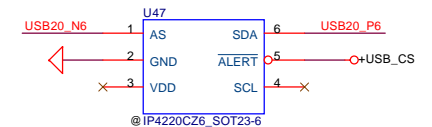
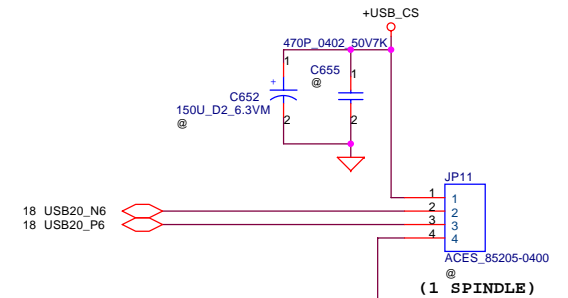
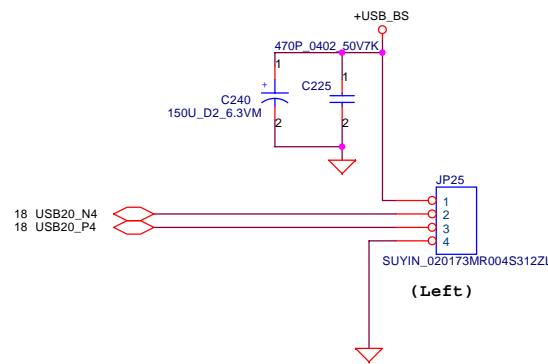
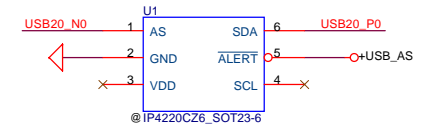
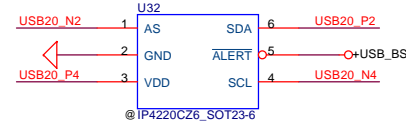
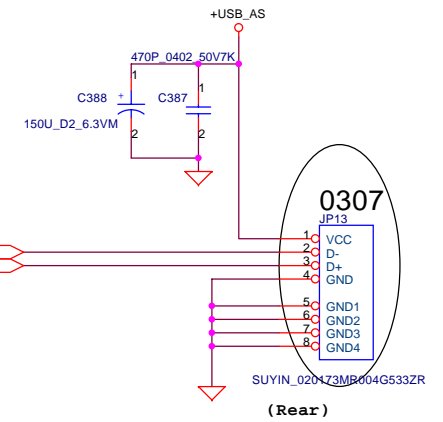
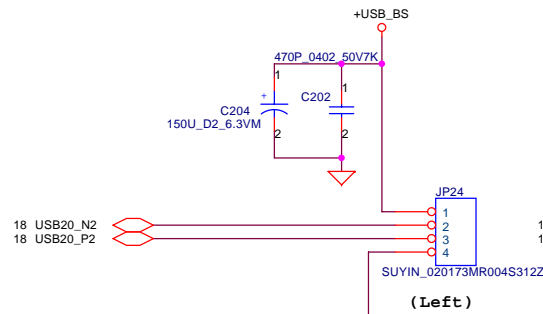
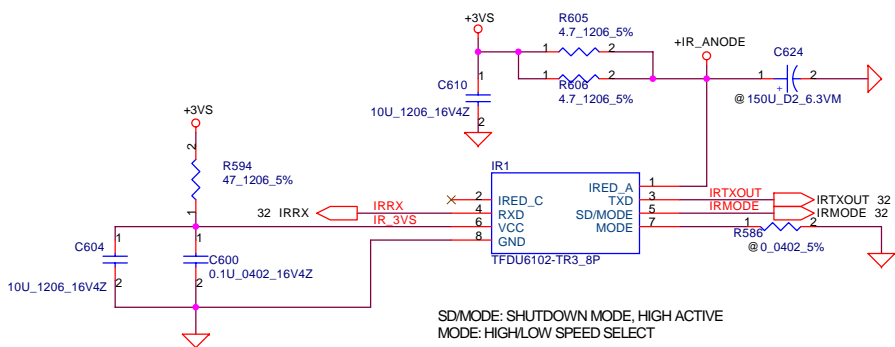
Cost-Down from G528 to RT9702



Cost-Down from G528 to RT9702



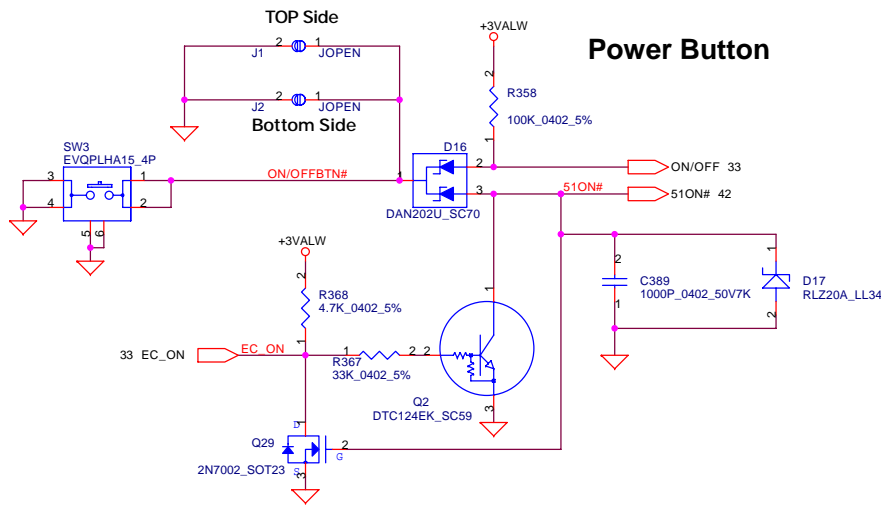
FIR Module



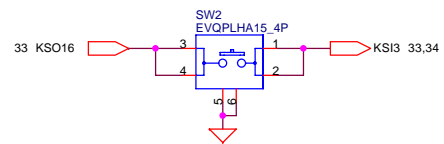
Compal Electronics, Inc.

Title		
USB Conn		
Size	Document Number	Rev
	EFL50 LA-2761	0.2
Date:	Wednesday, April 20, 2005	Sheet 37 of 51

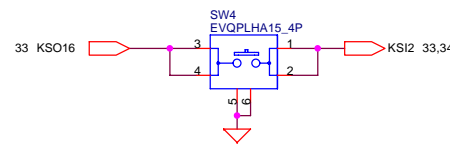
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



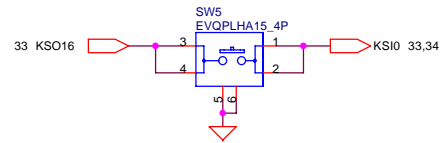
E-Mail_BTN



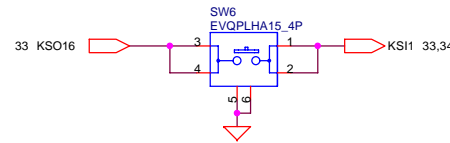
Internet_BTN



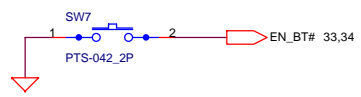
e/eManager_BTN



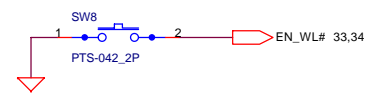
Launch Manager_BTN



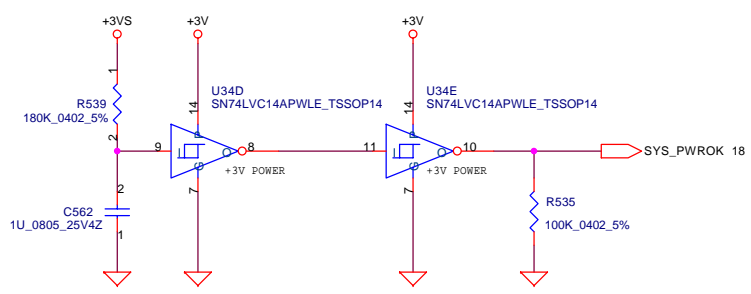
BlueTooth_BTN



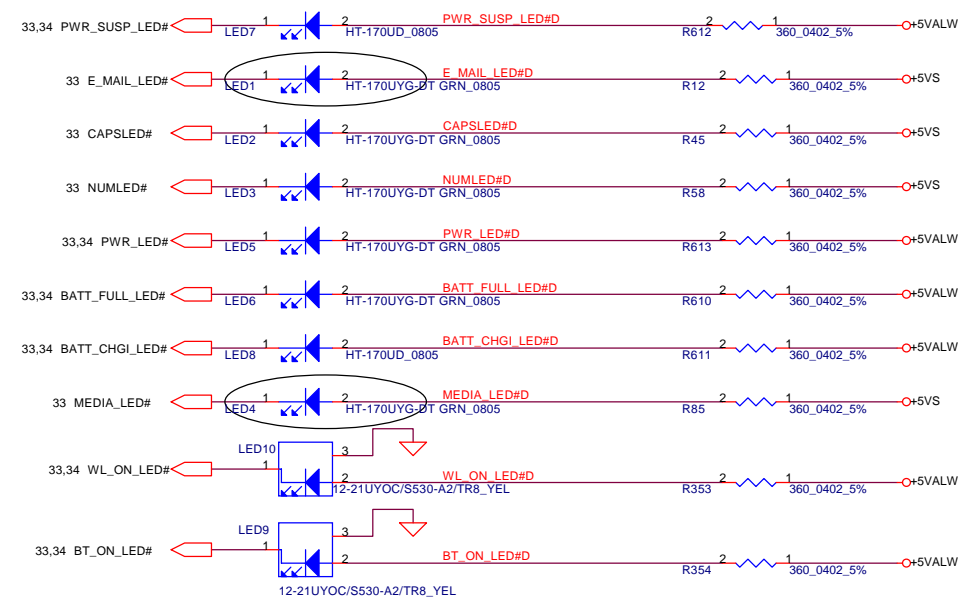
Wireless_BTN



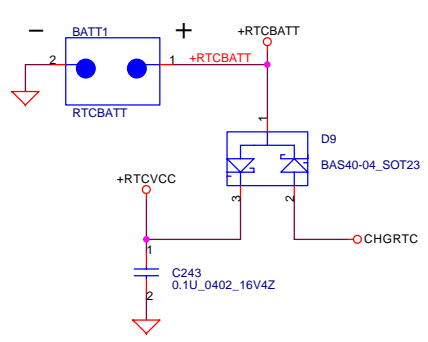
Power ON Circuit



LED Indicator

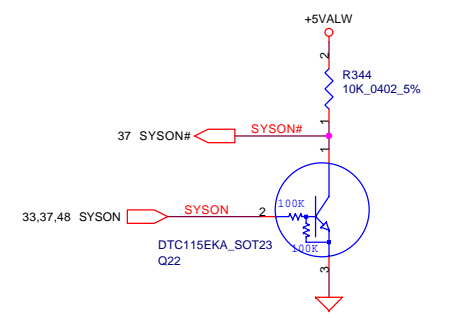
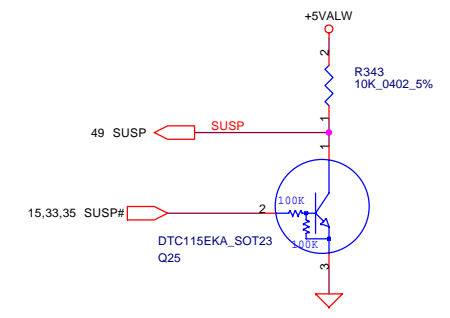
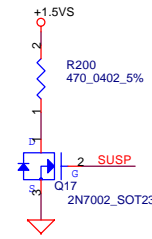
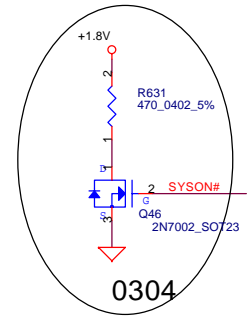
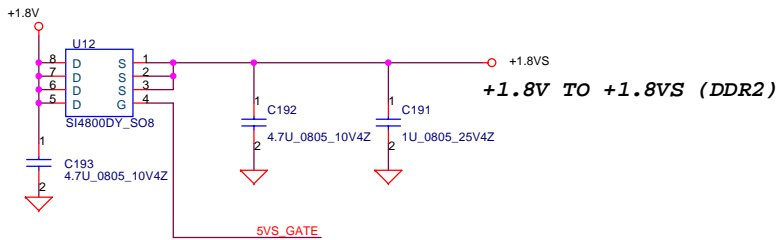
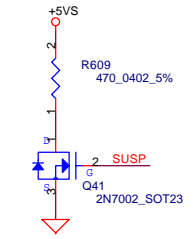
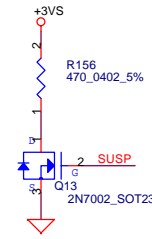
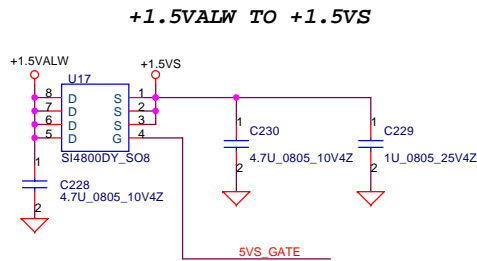
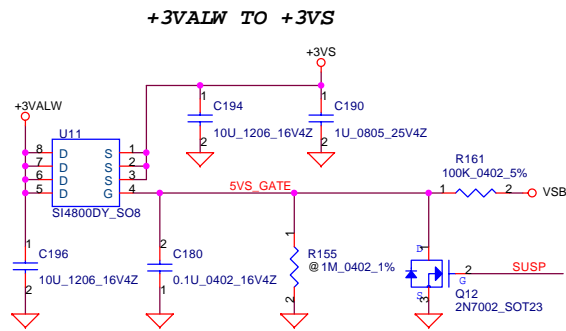
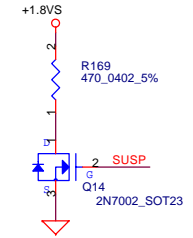
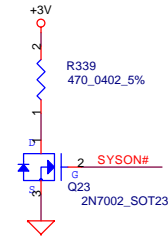
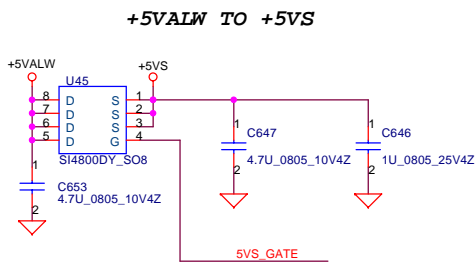
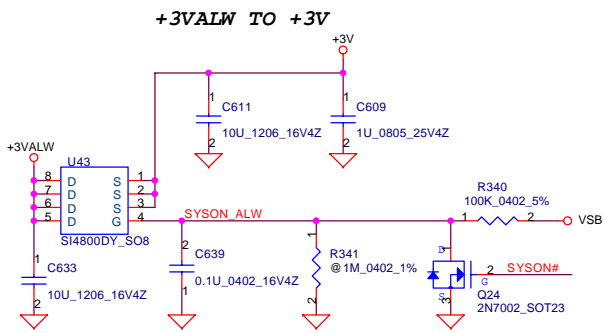


RTC Battery



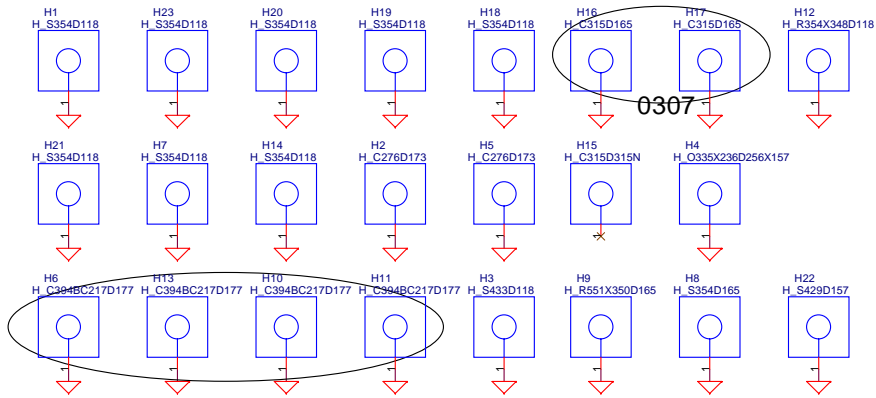
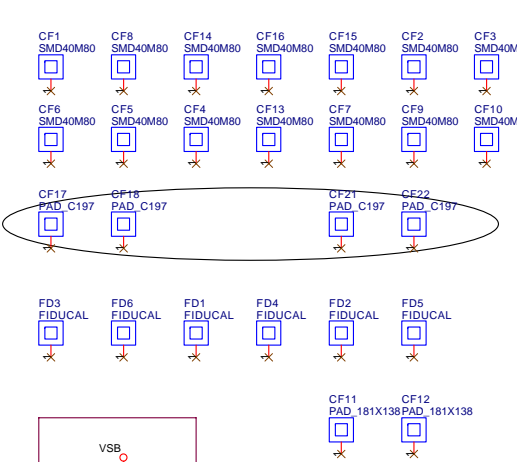
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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			
Power OK/Reset/RTC battery			
Size	Document Number	EFL50 LA-2761	Rev 0.2
Date:	Wednesday, April 20, 2005	Sheet 39 of 51	

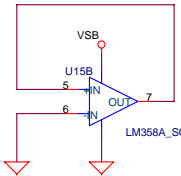


PROPRIETARY NOTE THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, 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.

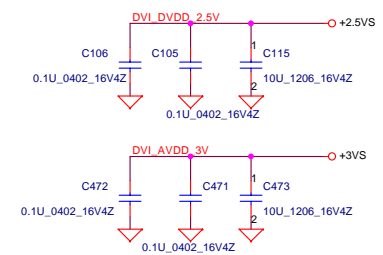
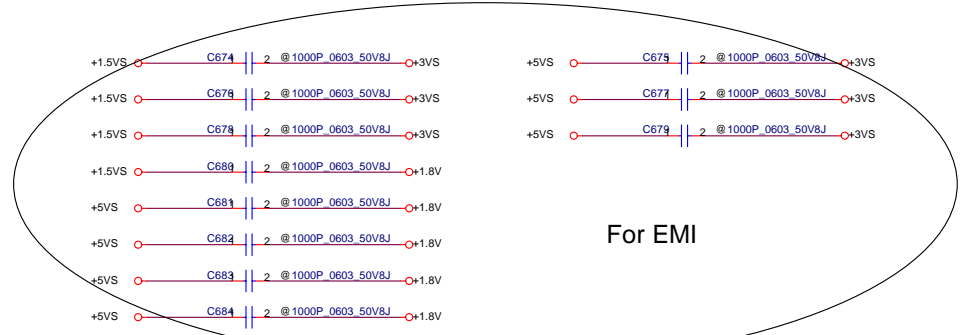
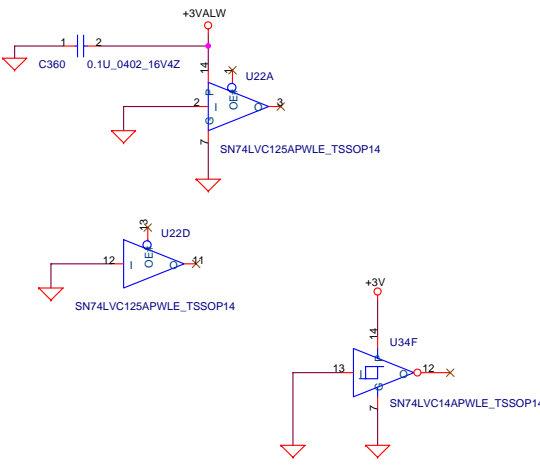
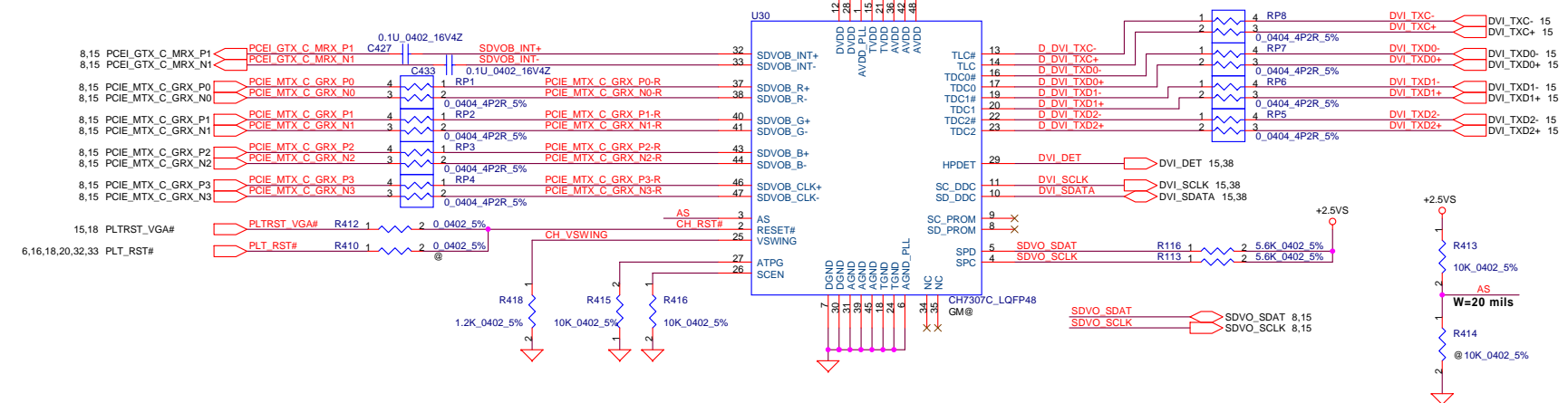
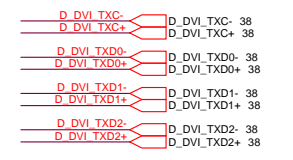
Compal Electronics, Inc.			
POWER CONTROL CKT			
Size B	Document Number	Rev 0.2	
	EFL50 LA-2761		
Date:	Wednesday, April 20, 2005	Sheet 40	of 51



Chip_Name	Label_Name
EXP_TXP0/SDVOB_RED	PCIE_MTX_C_GRX_P0
EXP_TXN0/SDVOB_RED#	PCIE_MTX_C_GRX_N0
EXP_TXP1/SDVOB_GREEN	PCIE_MTX_C_GRX_P1
EXP_TXN1/SDVOB_GREEN#	PCIE_MTX_C_GRX_N1
EXP_TXP2/SDVOB_BLUE	PCIE_MTX_C_GRX_P2
EXP_TXN2/SDVOB_BLUE#	PCIE_MTX_C_GRX_N2
EXP_TXP3/SDVOB_CLKP	PCIE_MTX_C_GRX_P3
EXP_TXN3/SDVOB_CLKN	PCIE_MTX_C_GRX_N3
EXP_RXP1/SDVO_INT	PCEI_GTX_C_MRX_P1
EXP_RXN1/SDVO_INT#	PCEI_GTX_C_MRX_N1

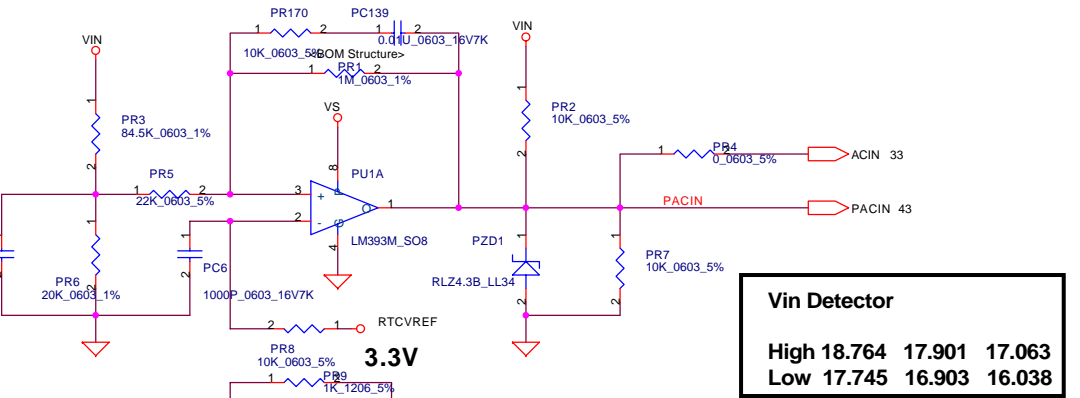
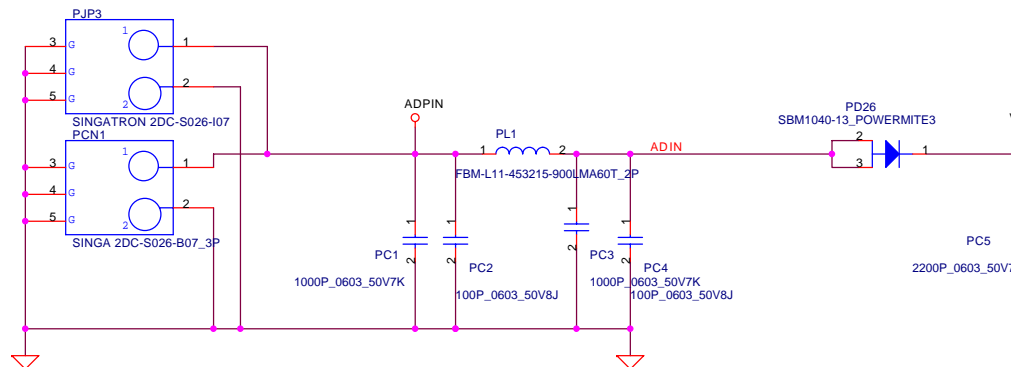


DVI CONTROLLER

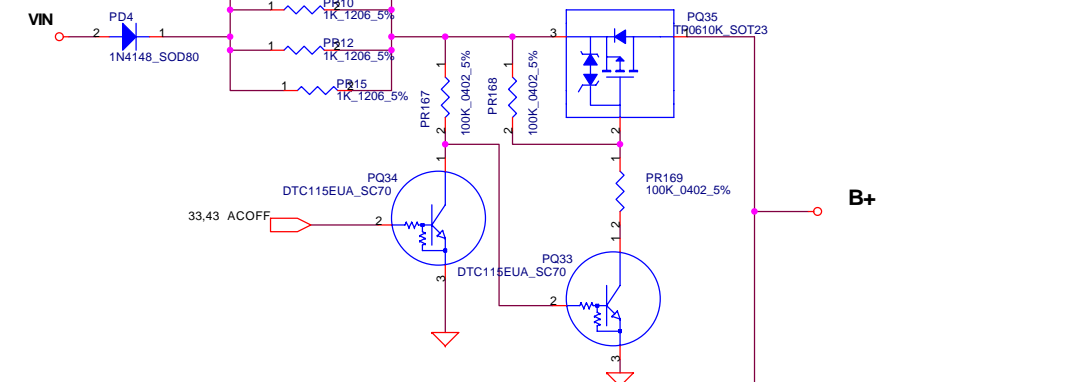
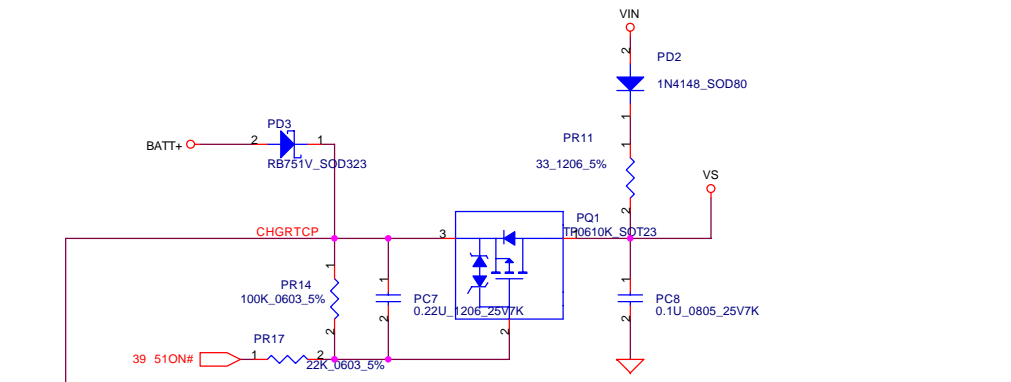


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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: Screws and CH7307		
Size: Document Number	EFL50 LA-2761	
Date: Wednesday, April 20, 2005	Sheet: 41	of 51
		Rev: 0.2

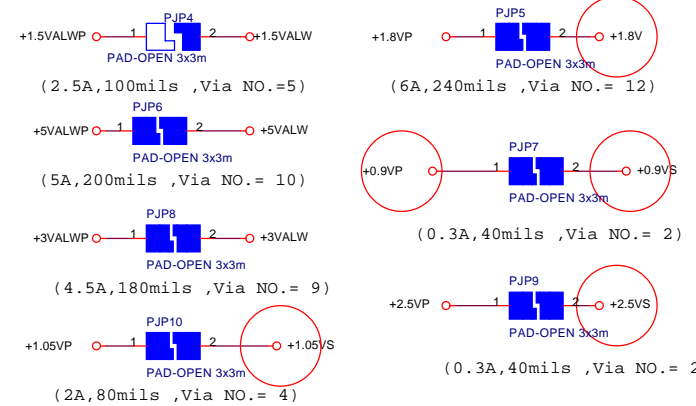
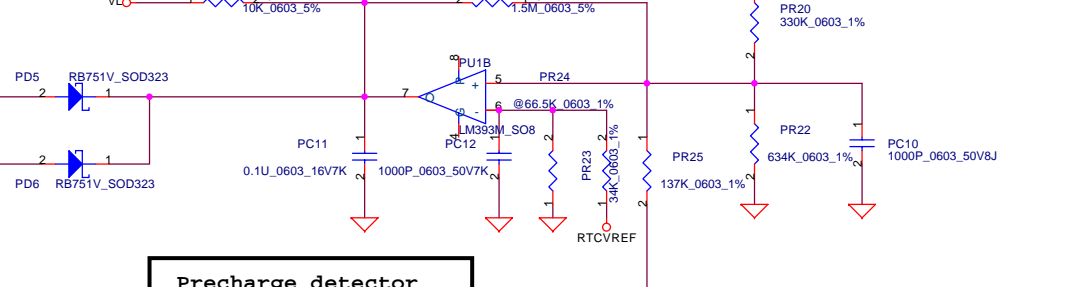
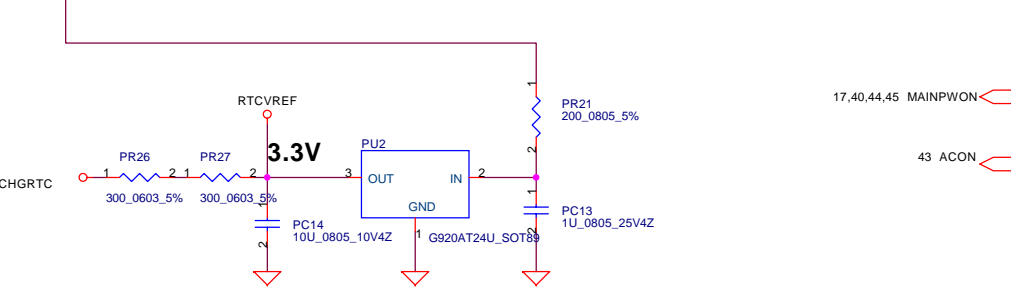


Vin Detector		
High	18.764	17.901 17.063
Low	17.745	16.903 16.038



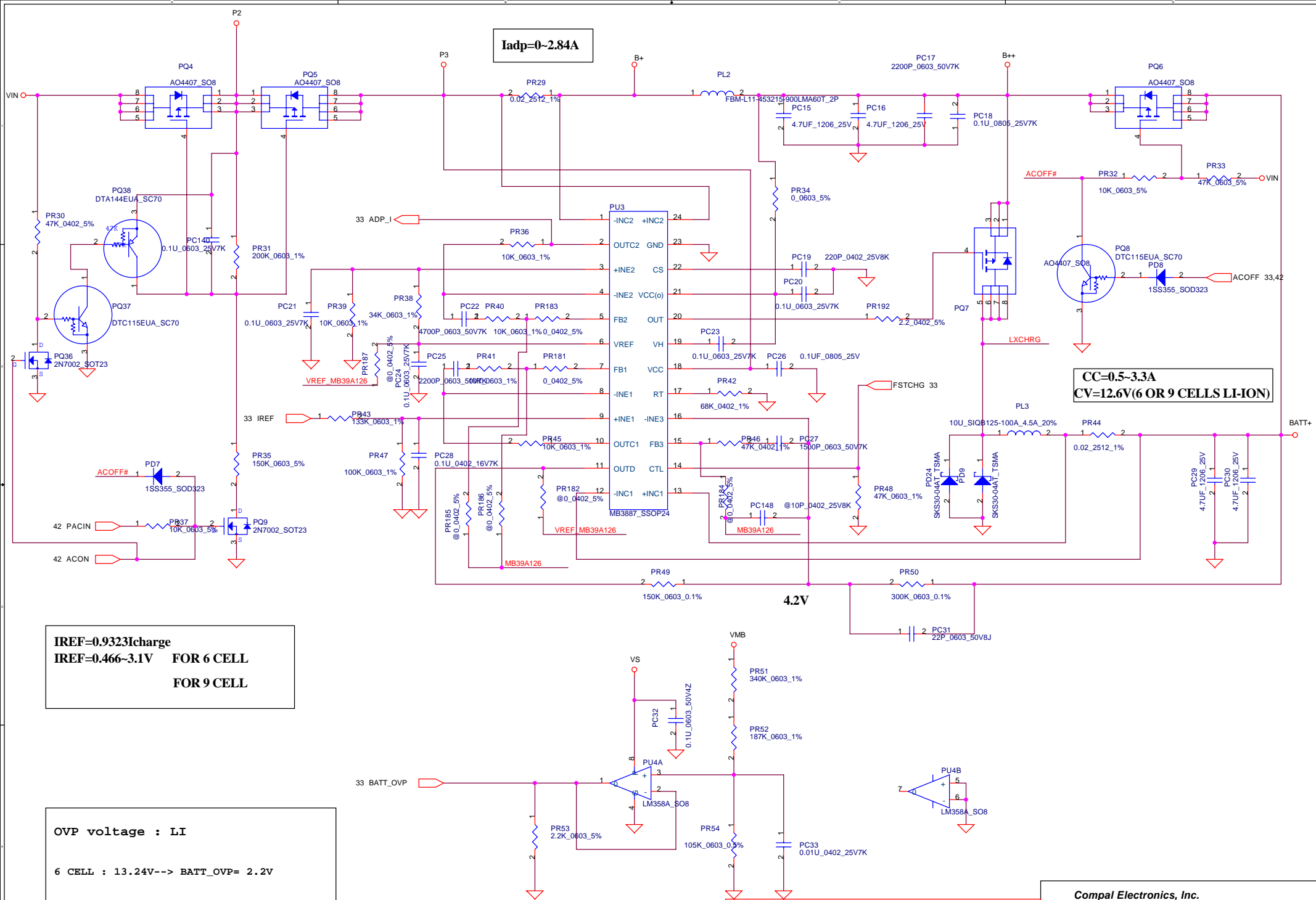
Precharge detector AC ADAPTOR		
14.04	13.70	13.40
12.90	12.60	12.40

Precharge detector BATTERY		
5.85	5.74	5.64
4.74	4.65	4.60



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 DCIN & DETECTOR		
Size B	Document Number EFL50 LA-2761	Rev 0.1
Date: Wednesday, April 20, 2005	Sheet 42	of 51



I_{adp}=0~2.84A

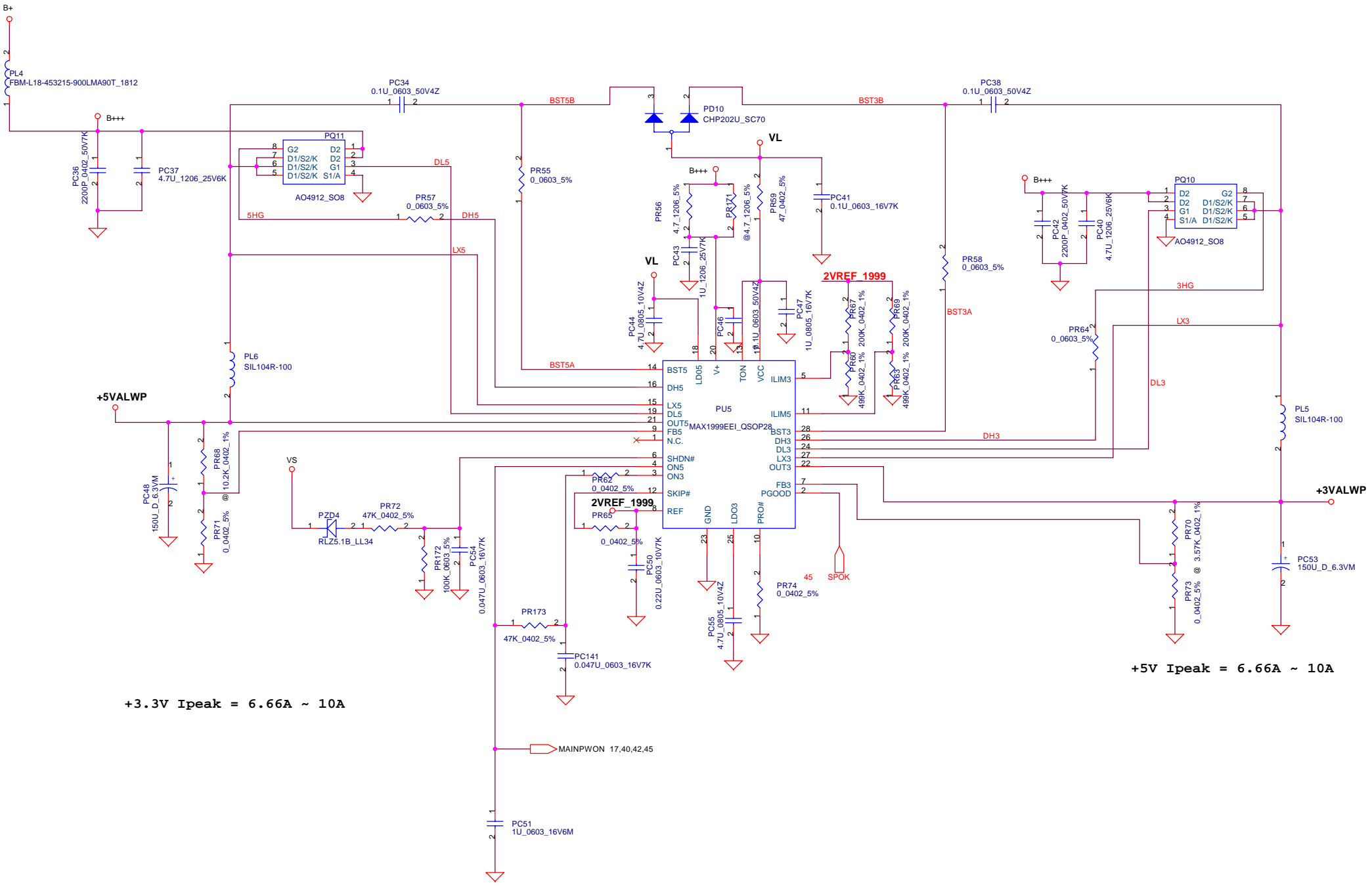
**CC=0.5-3.3A
CV=12.6V(6 OR 9 CELLS LI-ION)**

**I_{REF}=0.9323I_{charge}
I_{REF}=0.466~3.1V FOR 6 CELL
FOR 9 CELL**

OVP voltage : LI
6 CELL : 13.24V--> BATT_OVP= 2.2V
(BAT_OVP=0.124 *VMB)

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.

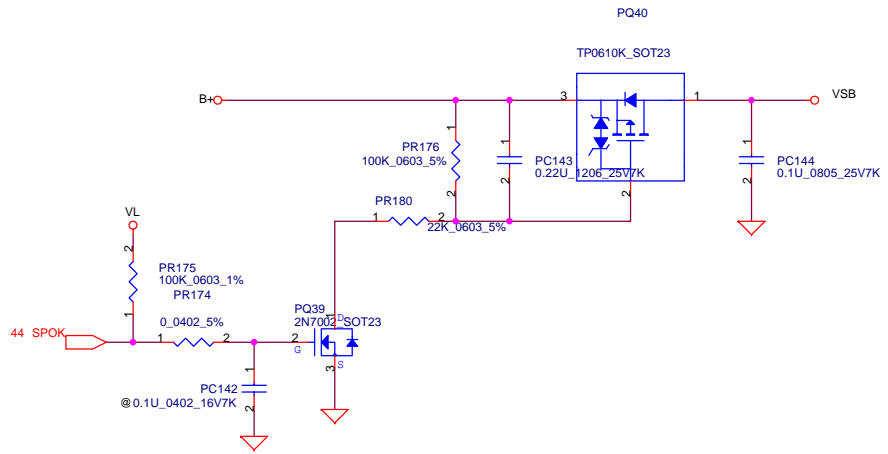
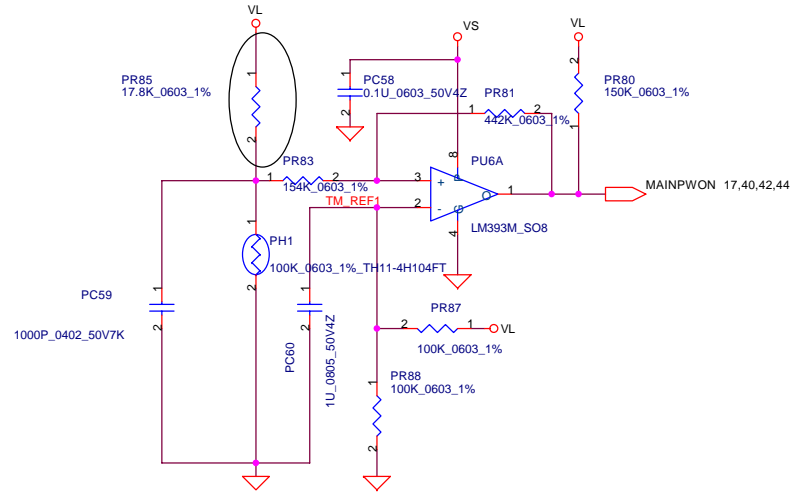
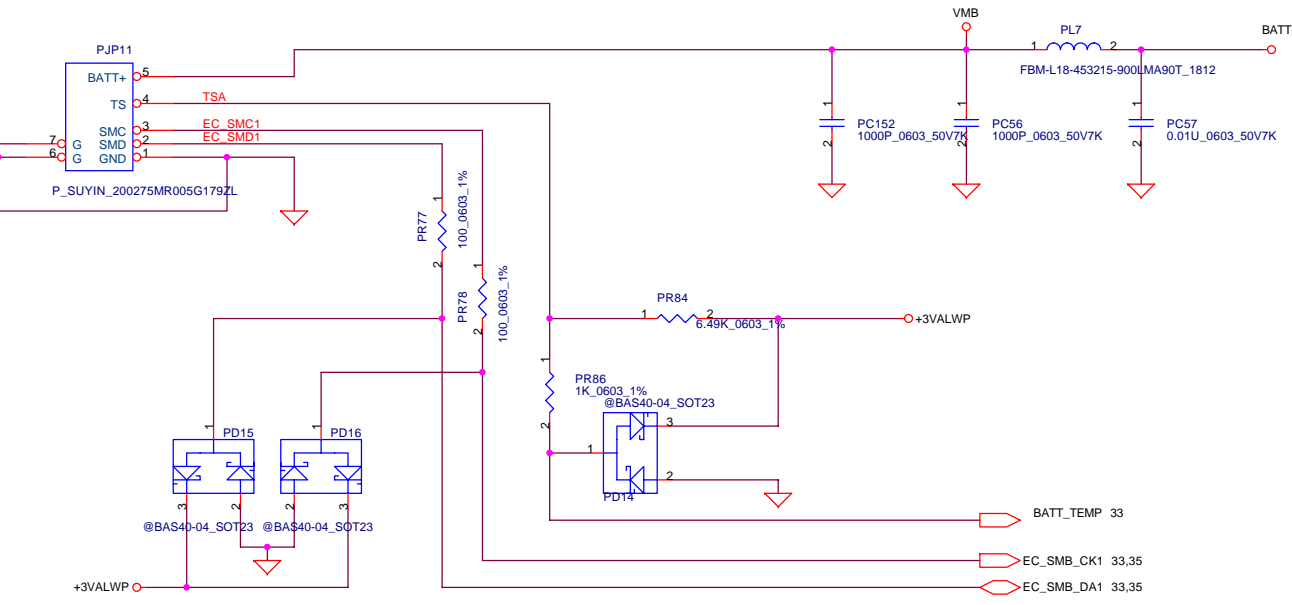
Compal Electronics, Inc.		
Title CHARGER		
Size B	Document Number EFL50 LA-2761	Rev 0.1
Date: Wednesday, April 20, 2005	Sheet 43	of 51



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.

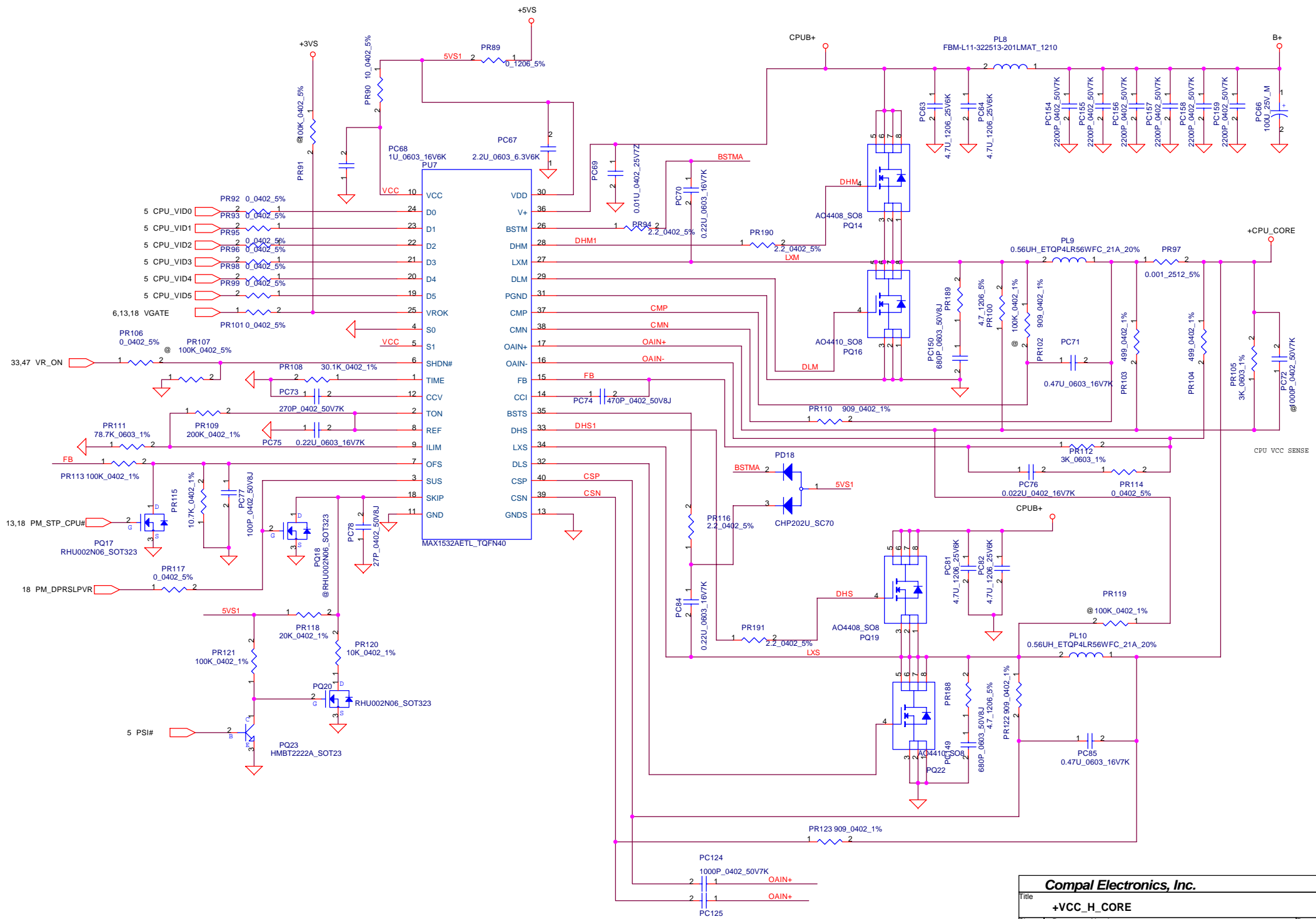
Compal Electronics, Inc.		
Title		
5V/3.3V/12V		
Size	Document Number	Rev
	EFL50 LA-2761	0.1
Date: Wednesday, April 20, 2005	Sheet	44 of 51

PH1 under CPU botten side :
 CPU thermal protection at 80 degree C
 Recovery at 44(45) degree C



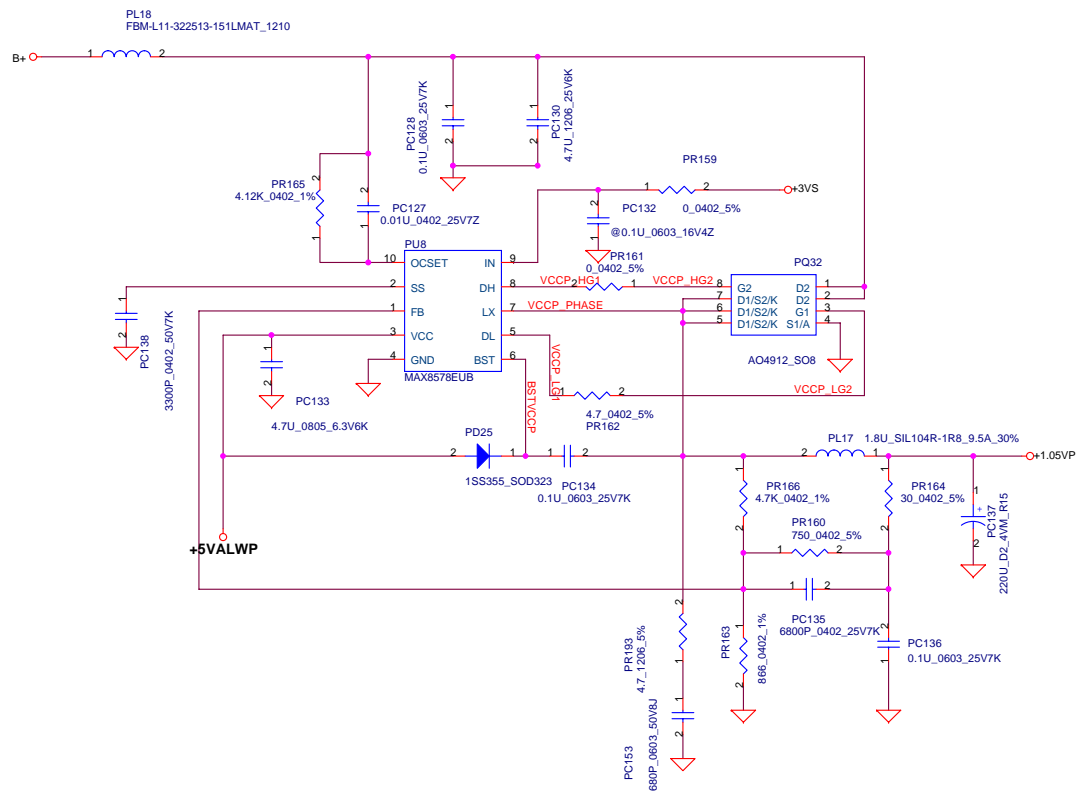
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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/1.2V		
Size B	Document Number EFL50 LA-2761	Rev 0.1
Date: Wednesday, April 20, 2005	Sheet 45	of 51



Compal Electronics, Inc.		
Title	+VCC_H_CORE	
Size	Document Number	Rev
B	EFL50 LA-2761	0.1
Date:	Wednesday, April 20, 2005	Sheet 46 of 51

1000P_0402_50V7K

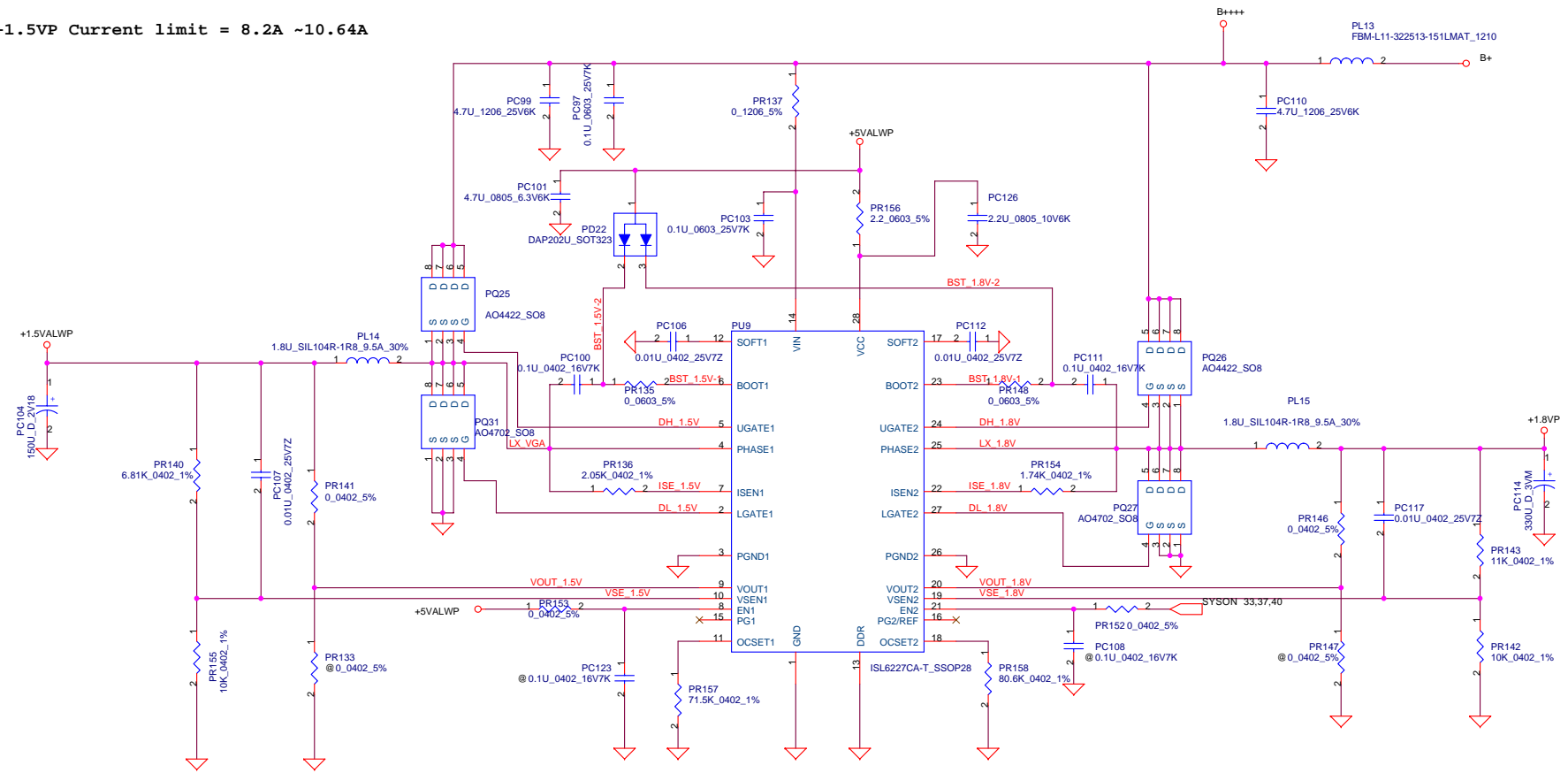


THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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		
1.5V & 1.8V		
Size	Document Number	Rev
B	EFL50 LA-2761	0.1
Date: Wednesday, April 20, 2005	Sheet 47 of 51	

+1.8VP O.C.P. = 8.1A ~ 10.36A

+1.5VP Current limit = 8.2A ~ 10.64A



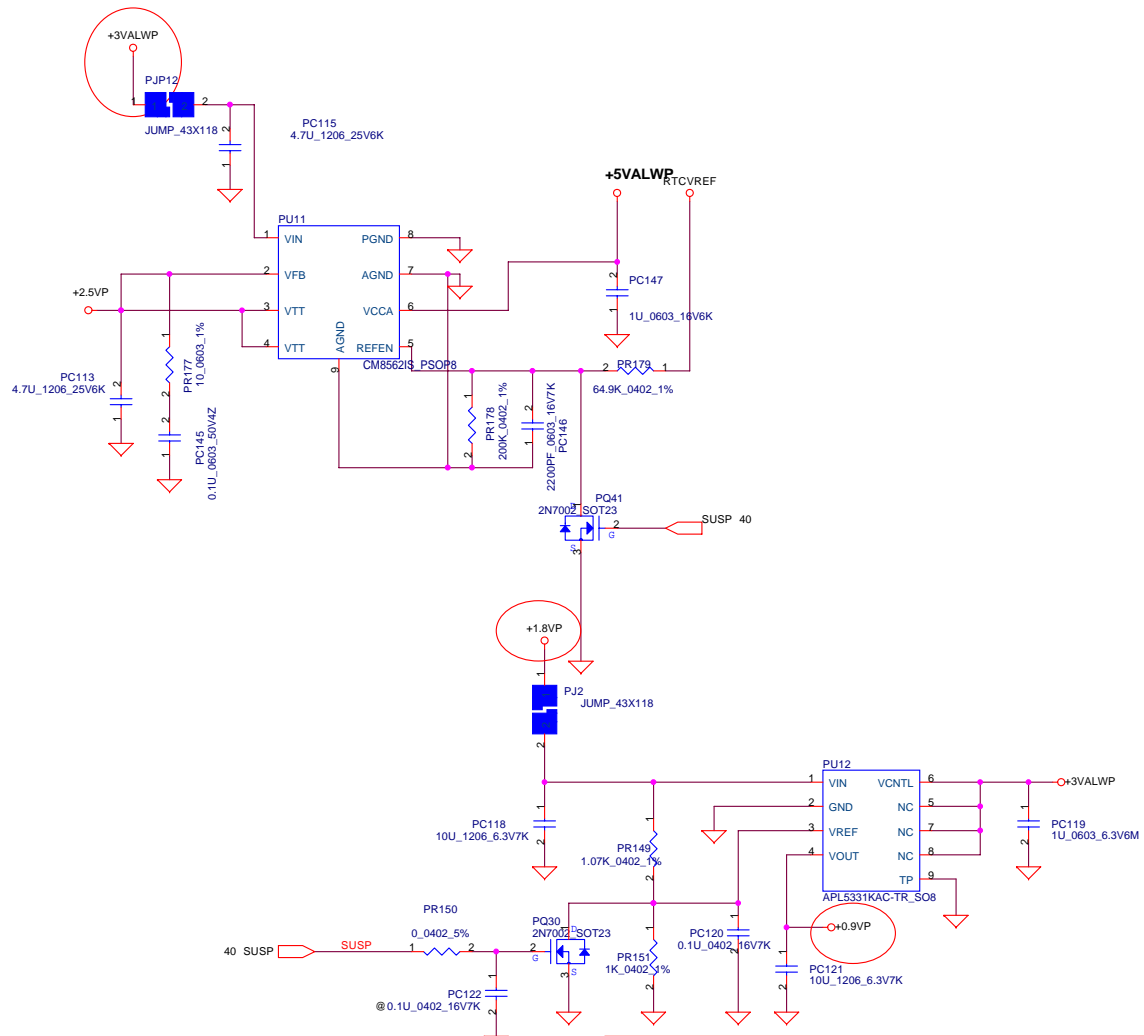
915PM(DISCRETE)	PR143=11K 1.8VP=1.867V
915GM (UMA)	PR143=10.5K 1.8VP=1.8V

Compal Electronics, Inc.

Title: **1.5VP**

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 OR REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

Size: B Document Number: **EFL50 LA-2761** Rev: U.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		
1.8VP/0.9VP/2.5VP		
Size	Document Number	Rev
B	EFL50 LA-2761	0.1
Date:	Wednesday, April 20, 2005	Sheet 49 of 51

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

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	VER	Phase
1	Add C663, C664, C665	For +2.5V (VCC_SYNC)	0.2	9			
2	Add C658, C659, C660, C661, C662	For EMI Solution	0.2	11			
3	Change L43, L44, L45, L46 Net	Improve Audio	0.2	31			
4							
5							
6							
7							
8							
9							

Security Classification		Compal Secret Data		Title	
Issued Date	2005/03/08	Deciphered Date	2006/03/08	PIR (HW)	
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 Custom	Document Number EFL50 LA-2761
				Date:	Wednesday, April 20, 2005
				Sheet	50 of 51
				Rev	0.2

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

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	VER	Phase
1		Modify PU8 IC		47	1. change PU8 from MAX8576 to MAX8578 2.delete PC132		DVT
2		Modify 1.05VP voltage level		47	1. change PR166 from 7.15k to 4.7k , PC135 from 6800P to 0.047u 0603		DVT
3		change precharge detect point		42	1. change PR20 from 412k to 330k		DVT
4		Modify disable precharge respond time		42	1. change PR167/PR168/PR169 from 470k to 100k		DVT
5		PD16 PIN2 AND PIN3 are wrong		45	1. modify PD16 schematic,and delete PD16(only reserve)		DVT
6		for decrease BATT connector EMI		45	1. add PC151/PC152/PC153 :680PF		DVT
7		for decrease CPU CORE switching ring effect and add EMI solution : snubber		46	1. change PR94/PR116 from 0 to 2.2 add PR189//PR188 4.7 1206 ,add PC150/PC149 680P		DVT
8		for decreaseVCCP ripple		47	1. change PC137 from 150u 35m to 220u 15m		DVT2
9		add EMI solution		45 46 43	1. add PC152 1. add PR190/191:2.2 1. add PR192:2.2		DVT2
10		add EMI solution		47	1. add PL18 FBM L11		PVT
11		add EMI solution in 1.05VP power regulator		47	1. add PC153=680PF ,PR193=4.7		PVT
8							
9							