

12/21 Add PJP1 for DCIN Cable on 45 Level
One for 14W DCIN , PN: DC301001Y00
Another for 15W DCIN , PN: DC301001V00

05/20 Add DAZ PCB Panel P/N

Compal Confidential

JHXXX Schematics Document

Intel Penryn Processor with Cantiga + DDRII + ICH9M

(With nVIDIA MXM/B)

2008-06-03

REV: 1.0

Security Classification		Compal Secret Data		Compal Electronics, Inc.							
Issued Date		2007/08/18	Deciphered Date	2008/8/18		Title					
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.						Cover Page					
						Size B	Document Number			Rev	
						JHXXX M/B LA-4241P Schematic					0.4
						Date:	Tuesday, June 03, 2008		Sheet	1	of 49

Compal Confidential

Model Name : JHXXX

File Name : LA-4241P

Fan Control
page 4

Intel Penryn Processor
uPGA-478 Package
page 4, 5, 6

Thermal Sensor
ADT7421
page 4

Clock Generator
ICS9LPRS387
page 16

LCD Conn.
page 18

HDMI
page 25

CRT
page 19

MXM II VGA/B
page 17

H_A#(3..35)

FSB
667/800MHz

H_D#(0..63)

Intel Cantiga
uFCBGA-1329
page 7, 8, 9, 10, 11, 12, 13

Memory BUS(DDR2)
Dual Channel
1.8V DDR2 533/667

200pin DDR2-SO-DIMM X2
BANK 0, 1, 2, 3
page 14, 15

DMI
X4 mode

PCI-Express

Intel ICH9-M
BGA-676
page 20, 21, 22, 23

USB conn x3
TO I/O/B
page 35

Bluetooth
Conn
page 34

CMOS Camera
page 40

Finger Print
Conn
page 40

3.3V 48MHz

USB

3.3V 24.576MHz/48Mhz

HD Audio

S-ATA

port 0

GMCH HDA
page 8

MDC 1.5
Conn
page 40

HDA Codec
ALC268
page 36

S-ATA HDD
Conn.
page 24

S-ATA ODD
Conn.
page 24

Audio AMP
page 37

LPC BUS

ENE KB926
page 32

Touch Pad
page 34

Int.KBD
page 33

BIOS
page 34

SCREW
page 39

New Card
Socket
page 31

MINI Card x3
WLAN,
TV-Tuner
Robson
page 30

LAN(GbE)
RTL8111C/8102E
page 28

RJ45
page 29

Card Reader
JMB385
page 26

3 in 1
socket
page 26

RTC CKT.
page 21

Power On/Off CKT.
page 35

DC/DC Interface CKT.
page 41

Power Circuit DC/DC
page 41, 42, 43, 45
46, 47, 48

CHARGER
page 44

Function/B
Power USB/B
page 33

USB I/O Conn.
CIR
LID SW
Debug port
page 35

TPM
LED
page 40

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title		
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 B	Document Number	Rev
					JHXXX M/B LA-4241P Schematic	0.4
				Date:	Friday, April 11, 2008	Sheet 2 of 49

Voltage Rails

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

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

PROJECT ID Table

	ID1	ID0
JHT00 (00@)	R361	R357
JHT01 (01@)	R361	R355
JHL90 (10@)	R360	R357
JHL91 (11@)	R360	R355

MIC ID Table

R	Structure
R585 Single MIC	SINGLE@
R583 Array MIC	DUAL@

EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADI ADM1032	1001 100X b
EEPROM(24C16/02)	1010 000X b	NVIDIA NB8X	

EC SM Bus2 address

ICH9M SM Bus address

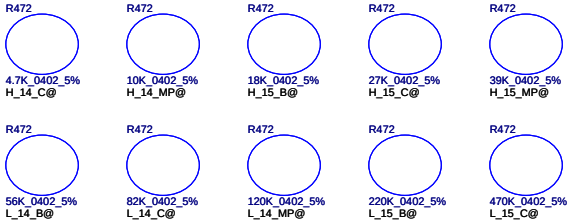
Device	Address
Clock Generator (ICS9LPRS325AKLFT_MLF72)	1101 001Xb
DDR DIMM0	1010 000Xb
DDR DIMM1	1010 010Xb

SKU ID Table

Vcc	3.3V +/- 5%
Rb	47K +/- 5%

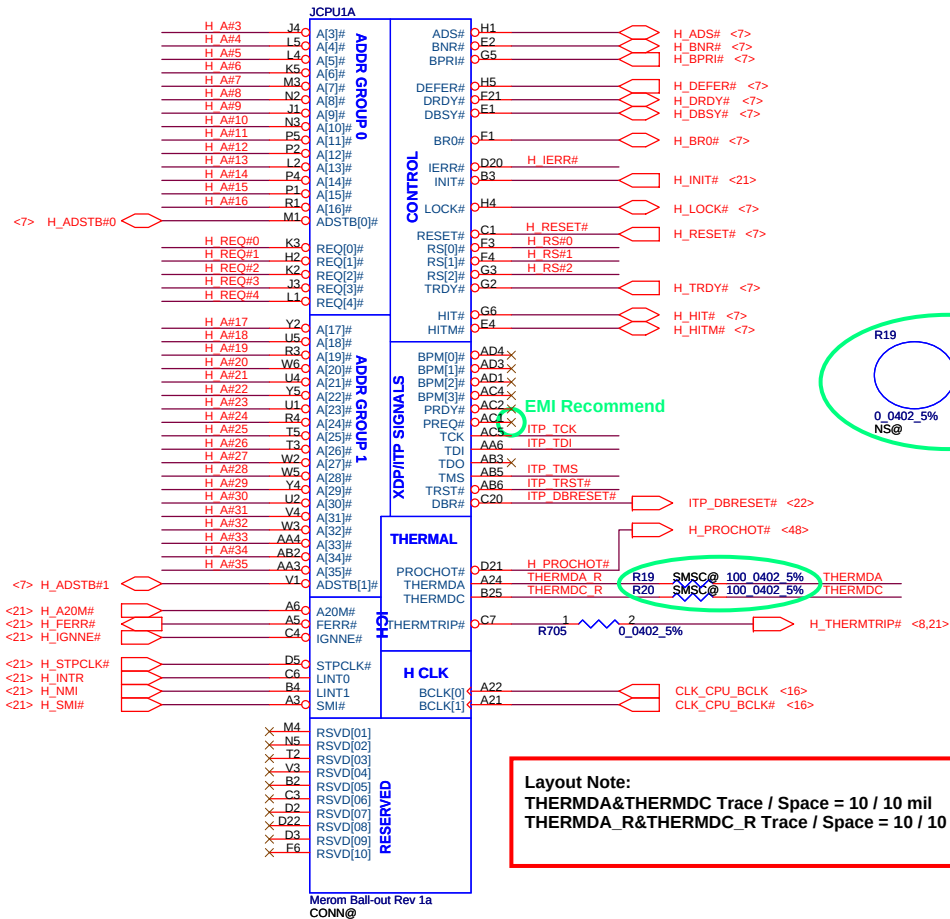
Rb~ R470

Ra~ R472



Board ID	Rb	Ra	VAD_BID min	VAD_BID typ	VAD_BID max	Ra BOM Structure
1	NA	4.7K +/- 5%	0 V	0 V	0 V	H_14_B@
2	47K(RB@)	4.7K +/- 5%	0.274 V	0.300 V	0.328 V	H_14_C@ ✓
3	47K(RB@)	10K +/- 5%	0.553V	0.578 V	0.628 V	H_14_MP@
4	47K(RB@)	18K +/- 5%	0.849V	0.913V	0.981 V	H_15_B@
5	47K(RB@)	27K +/- 5%	1.129 V	1.204 V	1.282 V	H_15_C@ ✓
6	47K(RB@)	39K +/- 5%	1.415 V	1.496 V	1.579 V	H_15_MP@
7	47K(RB@)	56K +/- 5%	1.712 V	1.794 V	1.876 V	L_14_B@
8	47K(RB@)	82K +/- 5%	2.020V	2.097 V	2.173 V	L_14_C@ ✓
9	47K(RB@)	120K +/- 5%	2.303 V	2.371 V	2.437 V	L_14_MP@
10	47K(RB@)	220K +/- 5%	2.670 V	2.719 V	2.765 V	L_15_B@
11	47K(RB@)	470K +/- 5%	2.972 V	3.000 V	3.026 V	L_15_C@ ✓
12	47K(RB@)	NA	3.135 V	3.300 V	3.465 V	NA for L_15_MP

<7> H_A# [3..35]
<7> H_REQ# [0..4]
<7> H_RS# [0..2]

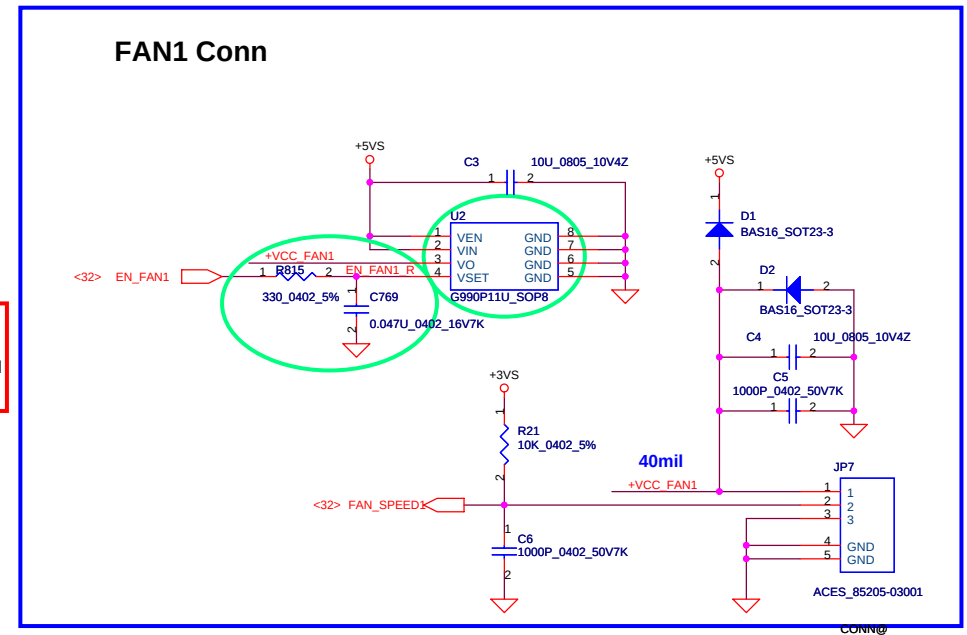
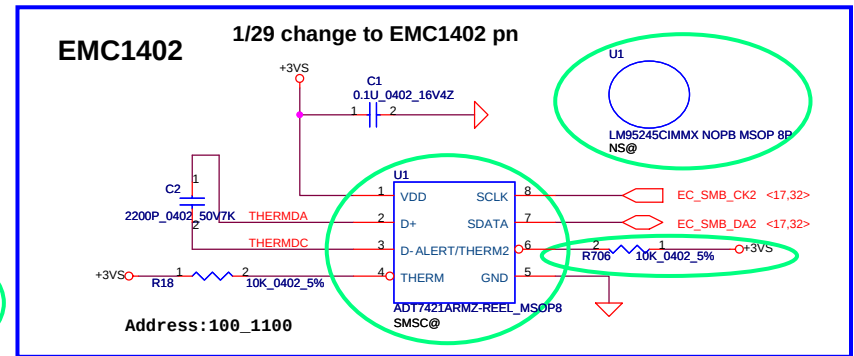


Which to follow?

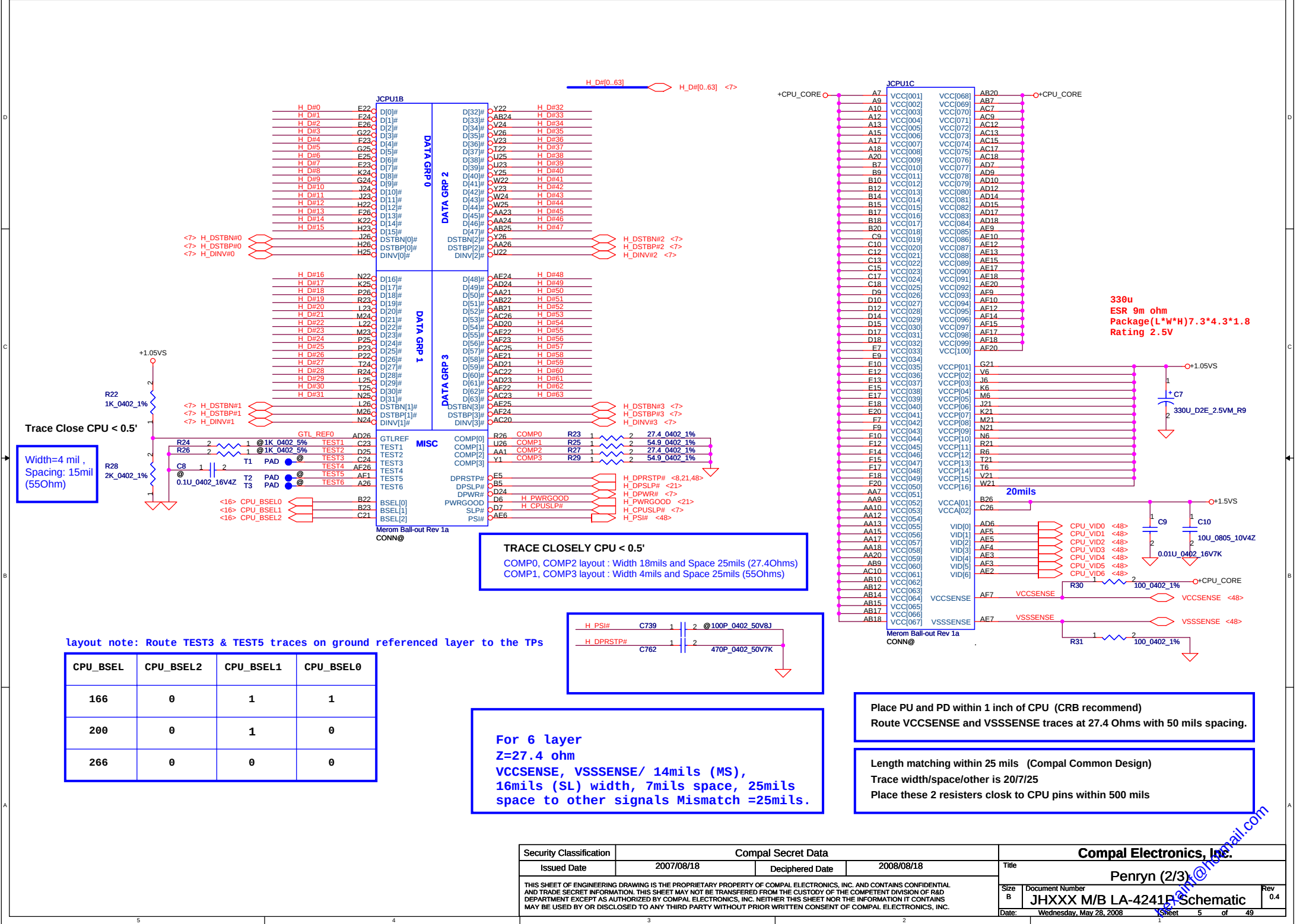
	Checklist	CRB
TCK	55.5%	54.9 1%
TDI	55.5%	54.9 1%
TMS	55.1%	54.9 1%
TRST#	55.5%	54.9 1%
PREQ#	X	54.9 1%

EMI Recommend

H_IERR#	R12	1	2	56.0402.5%
ITP_TMS	R13	1	2	54.9.0402.1%
ITP_TDI	R14	1	2	54.9.0402.1%
H_PROCHOT#	R15	1	2	56.0402.5%
ITP_TCK	R16	1	2	54.9.0402.1%
ITP_TRST#	R17	1	2	54.9.0402.1%



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/08/18	Penryn (1/3)		
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 B	Document Number JHXXXX M/B LA-4241P Schematic	Rev 0.4
				Date: Tuesday, June 03, 2008	Sheet 4	of 49



Width=4 mil ,
Spacing: 15mil
(55Ohm)

TRACE CLOSELY CPU < 0.5'
COMP0, COMP2 layout : Width 18mils and Space 25mils (27.4Ohms)
COMP1, COMP3 layout : Width 4mils and Space 25mils (55Ohms)

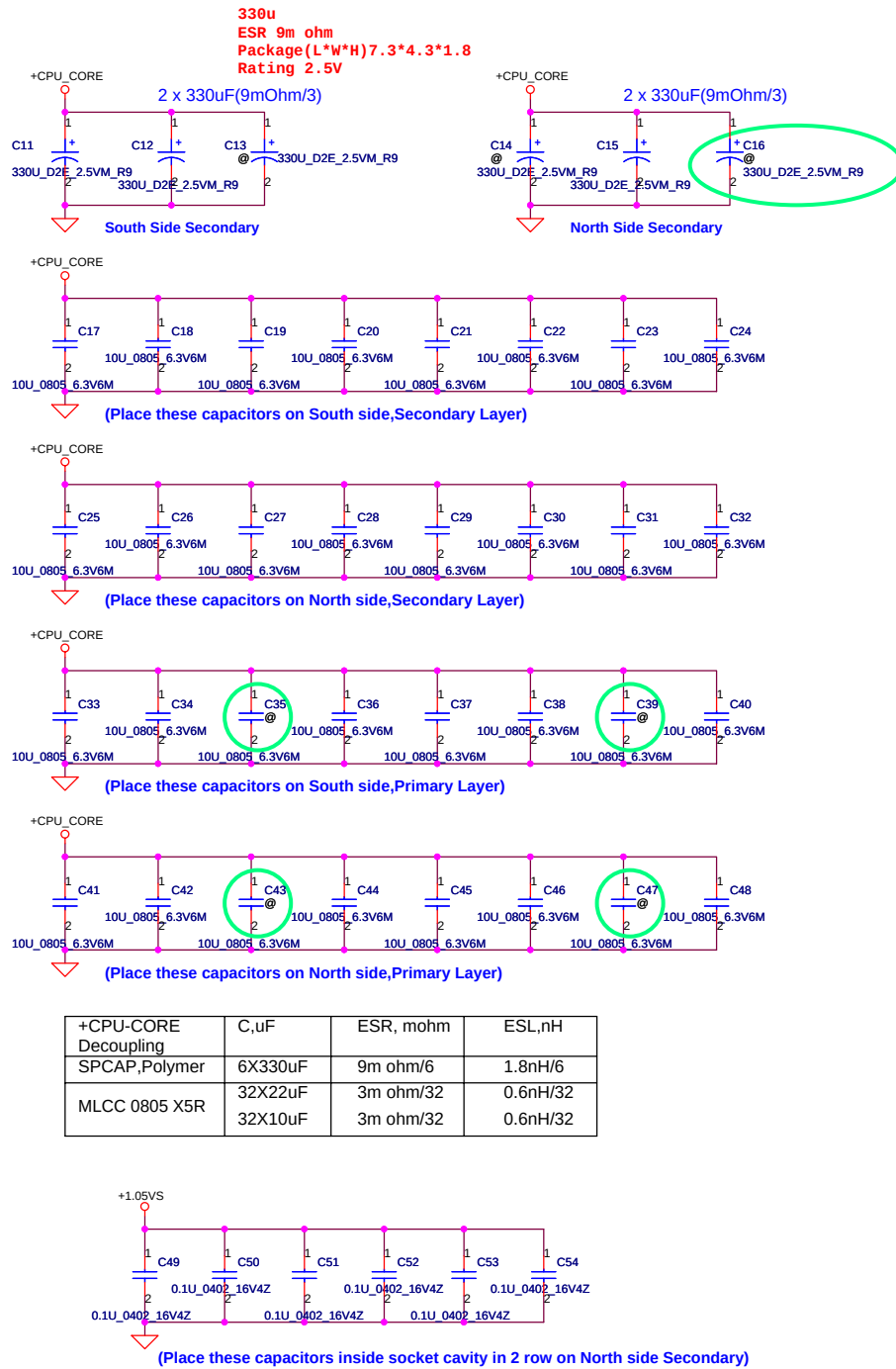
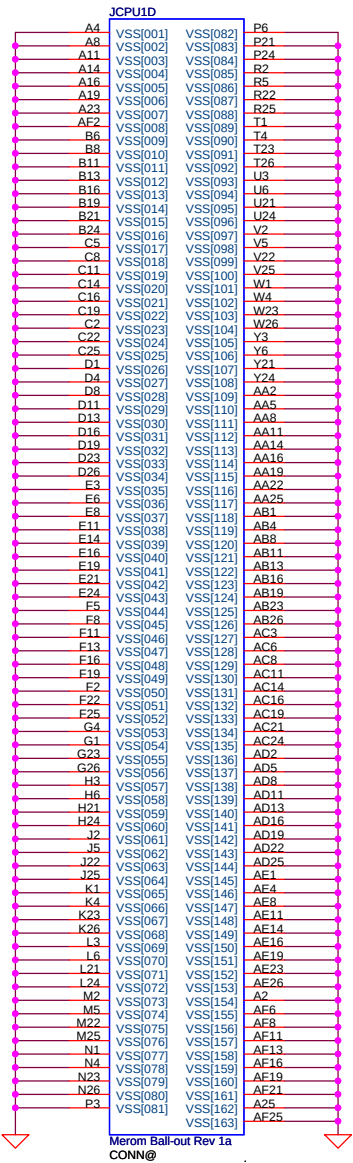
layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0
266	0	0	0

For 6 layer
Z=27.4 ohm
VCCSENSE, VSSSENSE/ 14mils (MS),
16mils (SL) width, 7mils space, 25mils
space to other signals Mismatch =25mils.

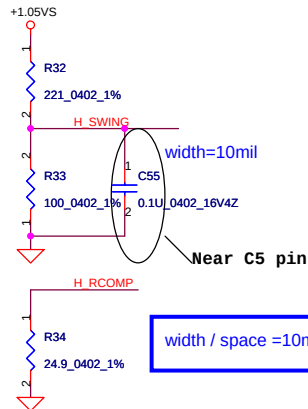
Place PU and PD within 1 inch of CPU (CRB recommend)
Route VCCSENSE and VSSSENSE traces at 27.4 Ohms with 50 mils spacing.

Length matching within 25 mils (Compal Common Design)
Trace width/space/other is 20/7/25
Place these 2 resistors clook to CPU pins within 500 mils

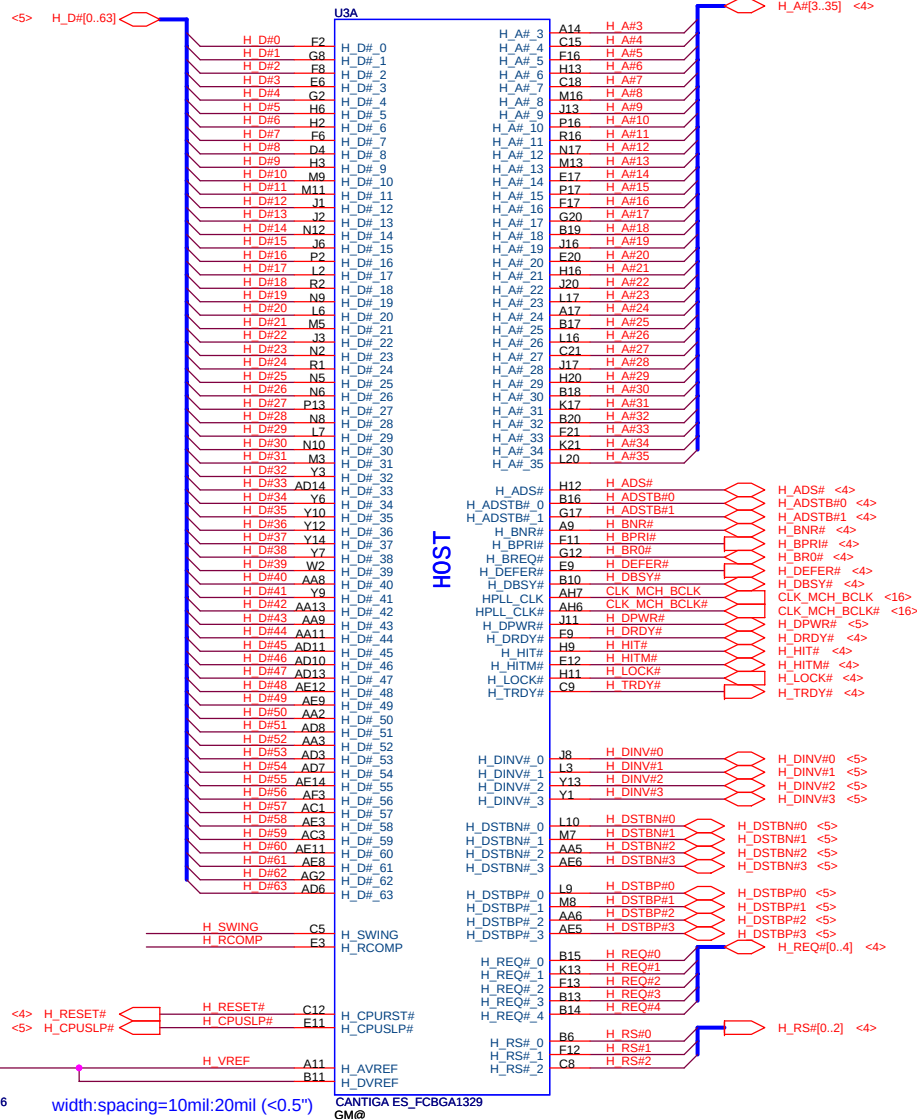
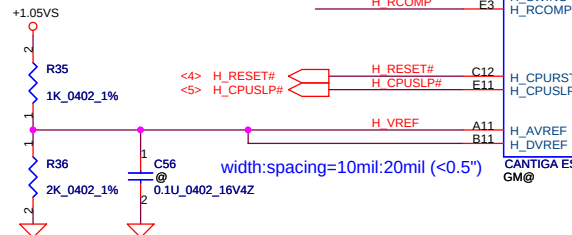


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Penryn (3/3)	
Size B	Document Number	JHXXXX M/B LA-4241P Schematic		Rev	0.4
Date:	Friday, April 11, 2008	Sheet	6	of	49

Change U3 from SA00001P900 to SA00001P930
3/4 Change U3 from SA00001P930 to SA00002JT10 (B0 to B2)

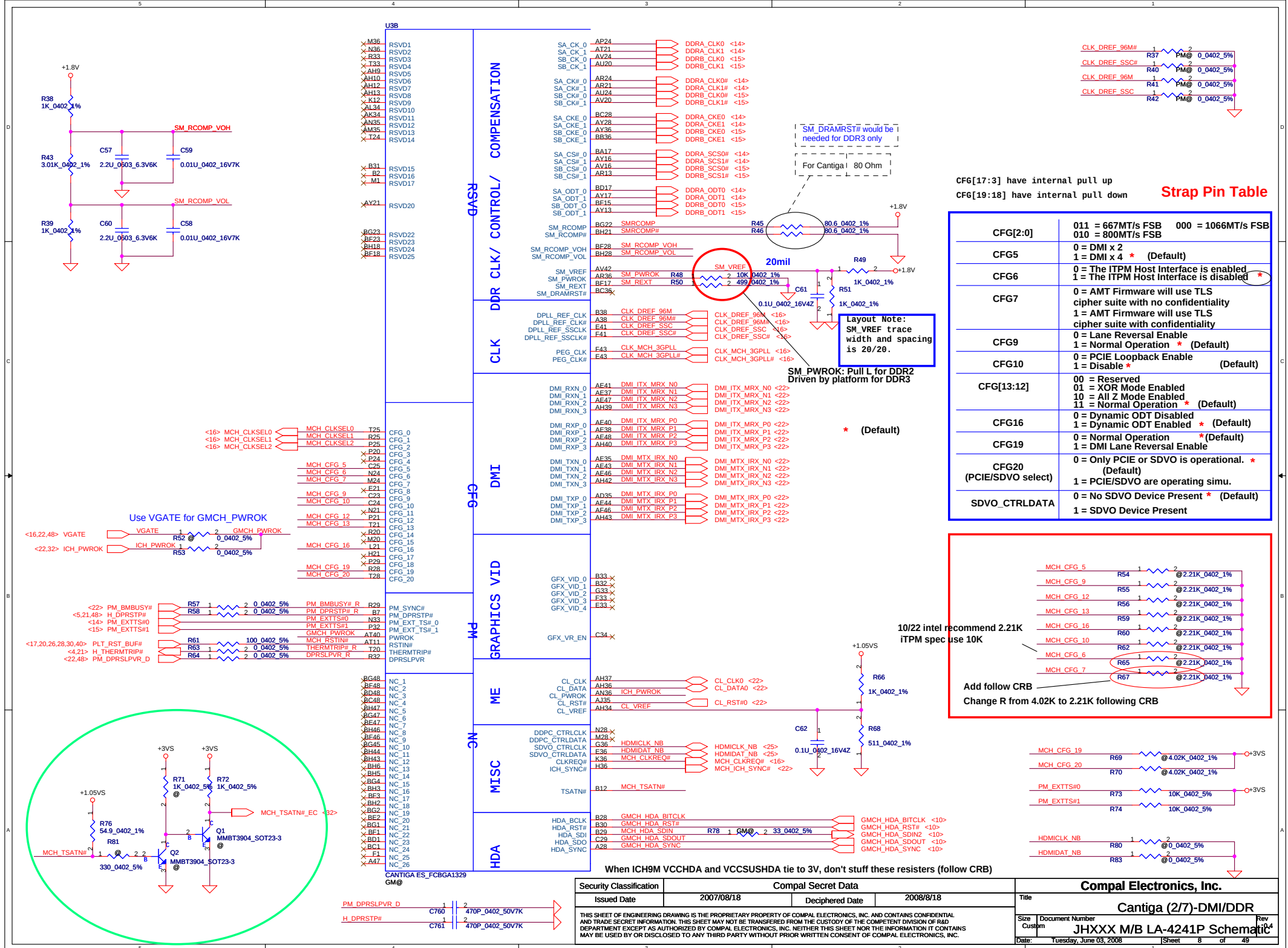


Layout Note:
H_RCOMP / H_VREF / H_SWING
trace width and spacing is 10/20



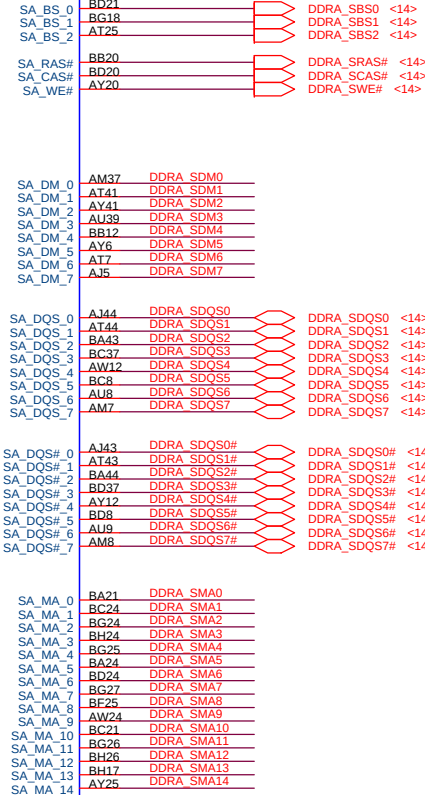
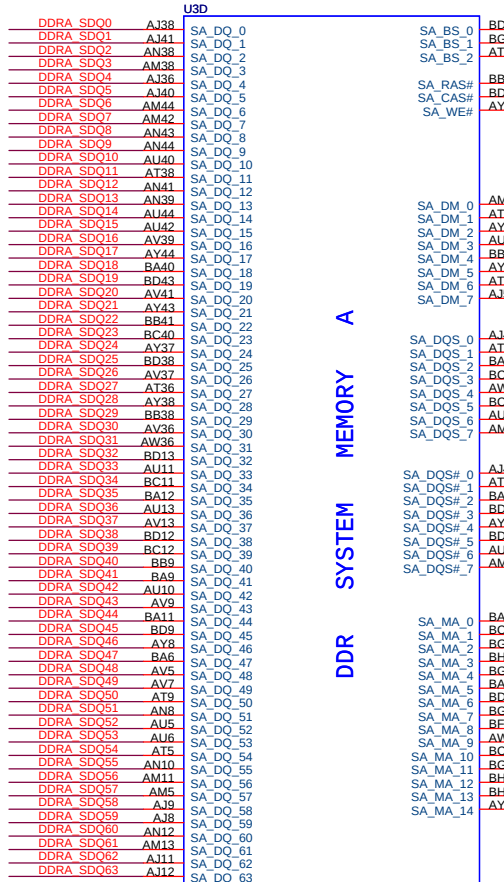
3/4 Change U3 PM@ from SA00001Z030
to SA00002JJ00 (B0 to B2)

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	
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.				Cantiga (1/7) CTL	
Size B	Document Number	JHXXXX M/B LA-4244P Schematic		Rev	0.4
Date:	Tuesday, June 03, 2008	Y Sheet	7	of	49



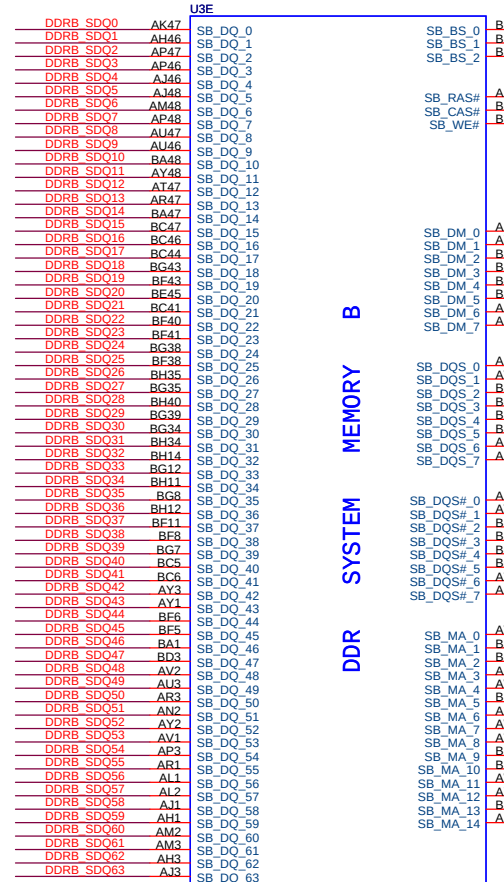
<14> DDRA_SDQ[0..63] <14> DDRA_SDM[0..7] <14> DDRA_SMA[0..14]

<15> DDRB_SDQ[0..63] <15> DDRB_SDM[0..7] <15> DDRB_SMA[0..14]



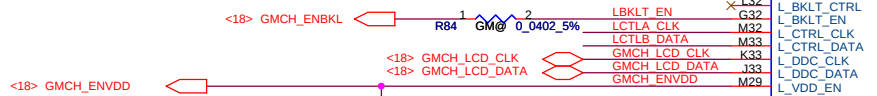
DDR SYSTEM MEMORY A

GM@ CANTIGA ES_FCBGA1329

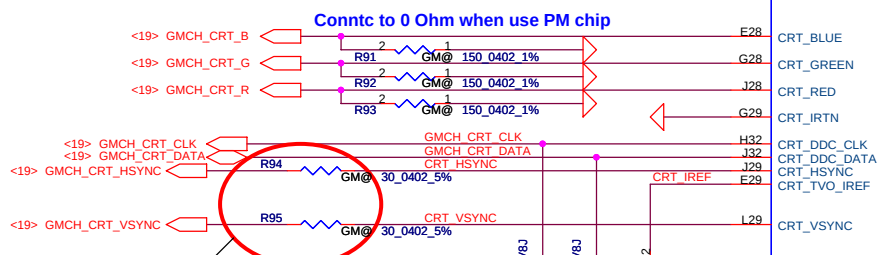
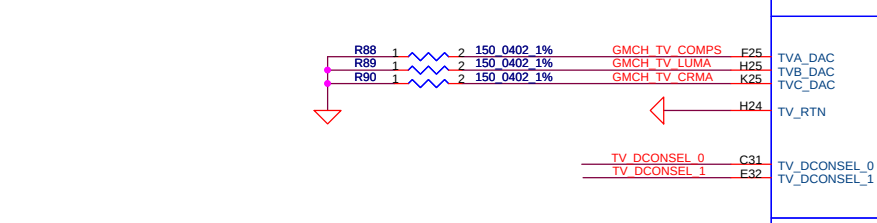


DDR SYSTEM MEMORY B

GM@ CANTIGA ES_FCBGA1329

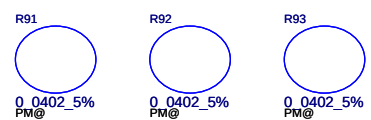
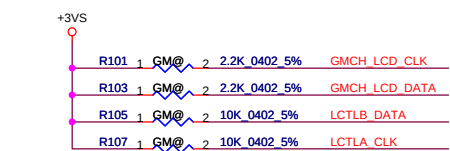


Change to @ state

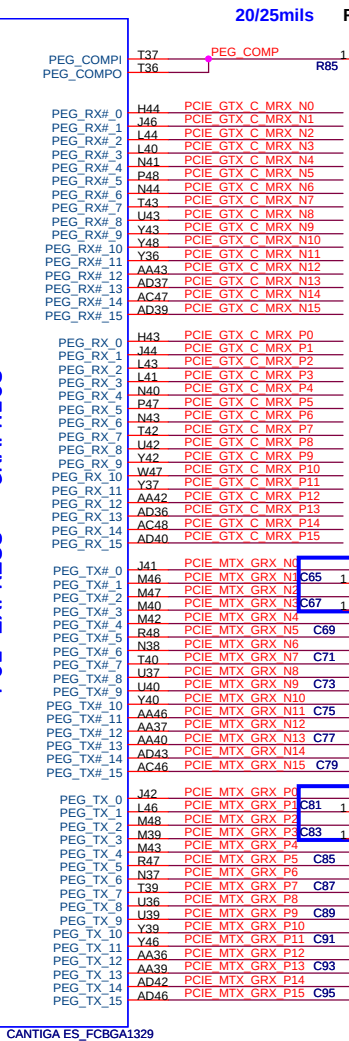


10/22 follow CRB and Checklist
recommend use 30 Ohm (SD028300A80)

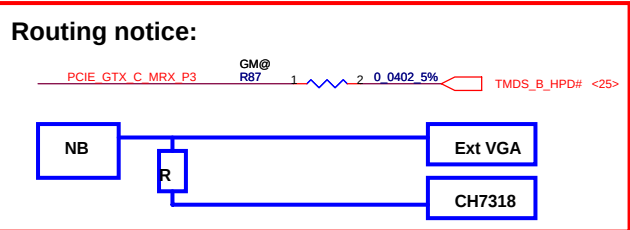
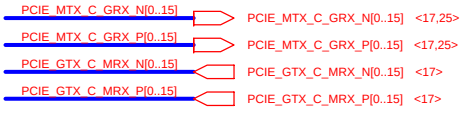
Common design recommend H/VSNC width=8 mil



LVDS
GRAPHICS
PCI-EXPRESS
TV
VGA

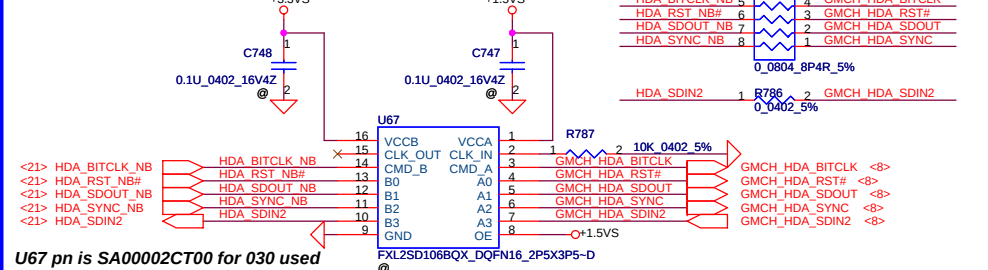


20/25mils R492 Close to GMCH < 0.5'



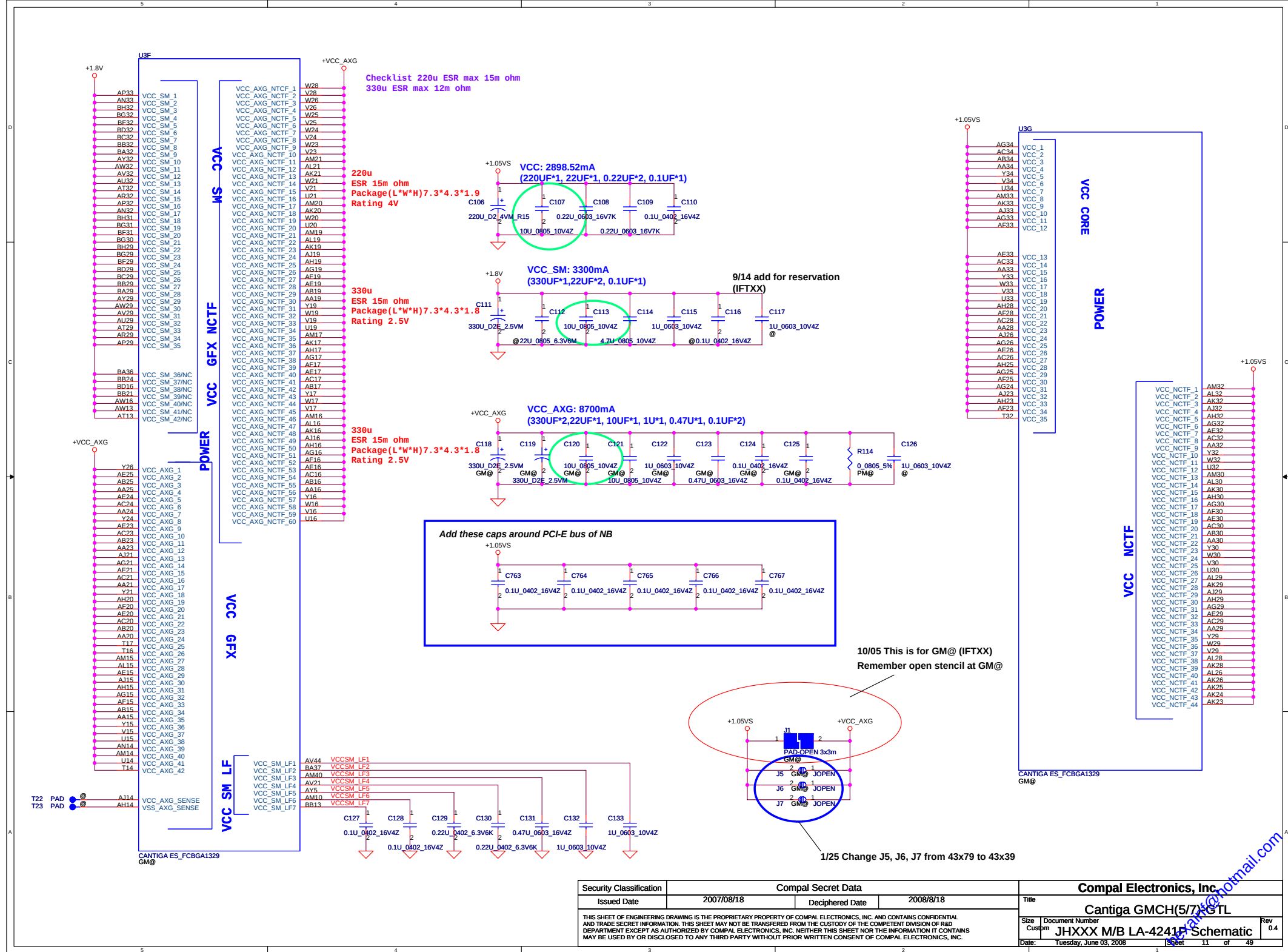
J41	PCIE_MTX_GRX_N0	C64	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_N0	PCIE_MTX_C_GRX_N0 <17,25>
M46	PCIE_MTX_GRX_N1	C65	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_N1	PCIE_MTX_C_GRX_N1 <17,25>
M47	PCIE_MTX_GRX_N2	C66	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_N2	PCIE_MTX_C_GRX_N2 <17,25>
M40	PCIE_MTX_GRX_N3	C67	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_N3	PCIE_MTX_C_GRX_N3 <17,25>
M42	PCIE_MTX_GRX_N4	C68	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N4	PCIE_MTX_C_GRX_N4 <17,25>
R48	PCIE_MTX_GRX_N5	C69	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N5	PCIE_MTX_C_GRX_N5 <17,25>
N38	PCIE_MTX_GRX_N6	C70	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N6	PCIE_MTX_C_GRX_N6 <17,25>
T40	PCIE_MTX_GRX_N7	C71	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N7	PCIE_MTX_C_GRX_N7 <17,25>
U37	PCIE_MTX_GRX_N8	C72	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N8	PCIE_MTX_C_GRX_N8 <17,25>
U40	PCIE_MTX_GRX_N9	C73	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N9	PCIE_MTX_C_GRX_N9 <17,25>
Y40	PCIE_MTX_GRX_N10	C74	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N10	PCIE_MTX_C_GRX_N10 <17,25>
AA46	PCIE_MTX_GRX_N11	C75	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N11	PCIE_MTX_C_GRX_N11 <17,25>
AA37	PCIE_MTX_GRX_N12	C76	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N12	PCIE_MTX_C_GRX_N12 <17,25>
AA40	PCIE_MTX_GRX_N13	C77	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N13	PCIE_MTX_C_GRX_N13 <17,25>
AD43	PCIE_MTX_GRX_N14	C78	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N14	PCIE_MTX_C_GRX_N14 <17,25>
AD46	PCIE_MTX_GRX_N15	C79	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_N15	PCIE_MTX_C_GRX_N15 <17,25>
J42	PCIE_MTX_GRX_P0	C80	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_P0	PCIE_MTX_C_GRX_P0 <17,25>
L46	PCIE_MTX_GRX_P1	C81	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_P1	PCIE_MTX_C_GRX_P1 <17,25>
M48	PCIE_MTX_GRX_P2	C82	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_P2	PCIE_MTX_C_GRX_P2 <17,25>
M39	PCIE_MTX_GRX_P3	C83	1	2	0.1U_0402_10V7K	PCIE_MTX_C_GRX_P3	PCIE_MTX_C_GRX_P3 <17,25>
M43	PCIE_MTX_GRX_P4	C84	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P4	PCIE_MTX_C_GRX_P4 <17,25>
R47	PCIE_MTX_GRX_P5	C85	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P5	PCIE_MTX_C_GRX_P5 <17,25>
N37	PCIE_MTX_GRX_P6	C86	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P6	PCIE_MTX_C_GRX_P6 <17,25>
T39	PCIE_MTX_GRX_P7	C87	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P7	PCIE_MTX_C_GRX_P7 <17,25>
U36	PCIE_MTX_GRX_P8	C88	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P8	PCIE_MTX_C_GRX_P8 <17,25>
U39	PCIE_MTX_GRX_P9	C89	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P9	PCIE_MTX_C_GRX_P9 <17,25>
Y39	PCIE_MTX_GRX_P10	C90	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P10	PCIE_MTX_C_GRX_P10 <17,25>
Y46	PCIE_MTX_GRX_P11	C91	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P11	PCIE_MTX_C_GRX_P11 <17,25>
AA36	PCIE_MTX_GRX_P12	C92	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P12	PCIE_MTX_C_GRX_P12 <17,25>
AA39	PCIE_MTX_GRX_P13	C93	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P13	PCIE_MTX_C_GRX_P13 <17,25>
AD42	PCIE_MTX_GRX_P14	C94	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P14	PCIE_MTX_C_GRX_P14 <17,25>
AD46	PCIE_MTX_GRX_P15	C95	1	2	PM@ 0.1U_0402_10V7K	PCIE_MTX_C_GRX_P15	PCIE_MTX_C_GRX_P15 <17,25>

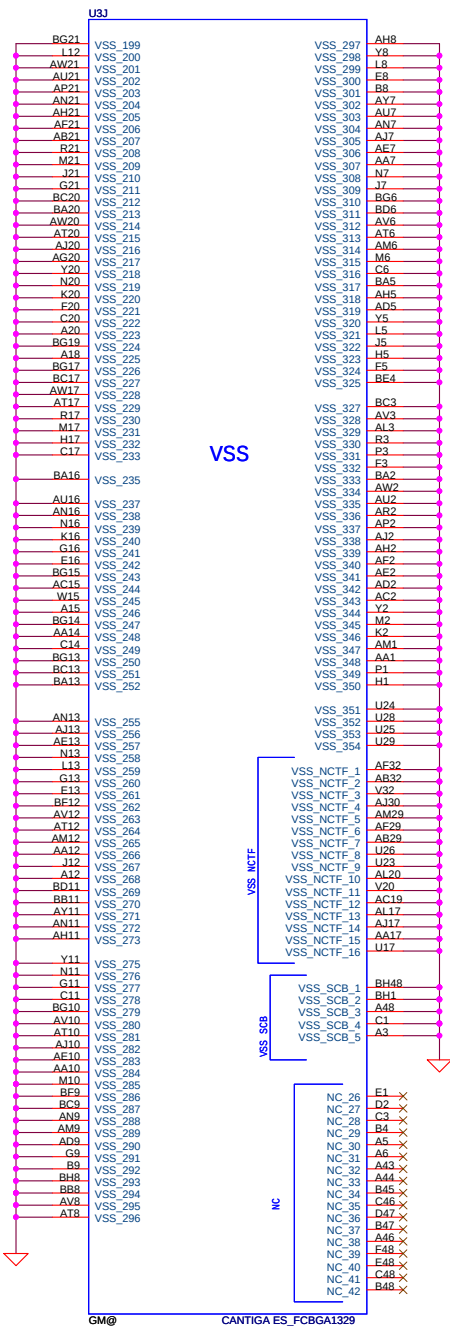
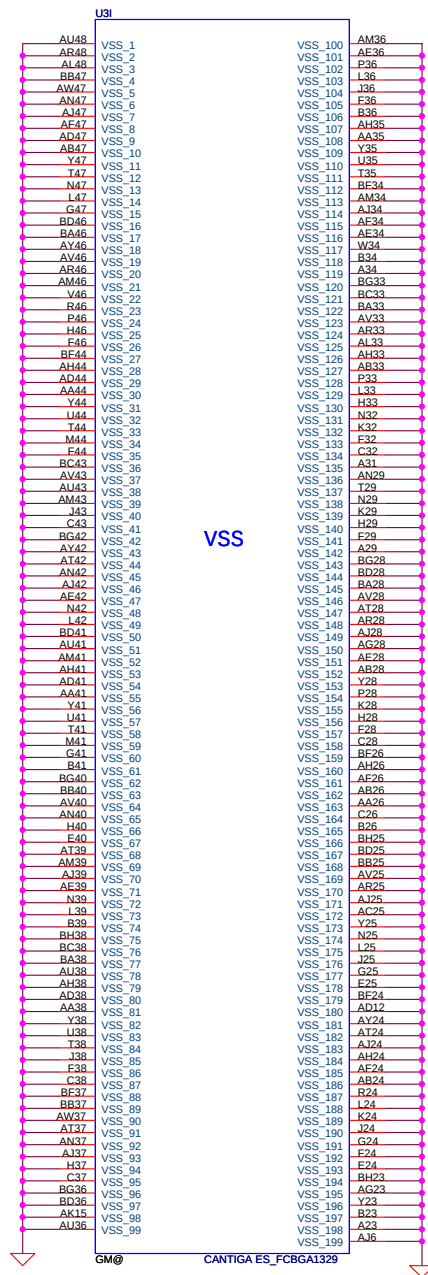
Reserved for 1.5V level shift circuit



U67 pn is SA00002CT00 for 030 used

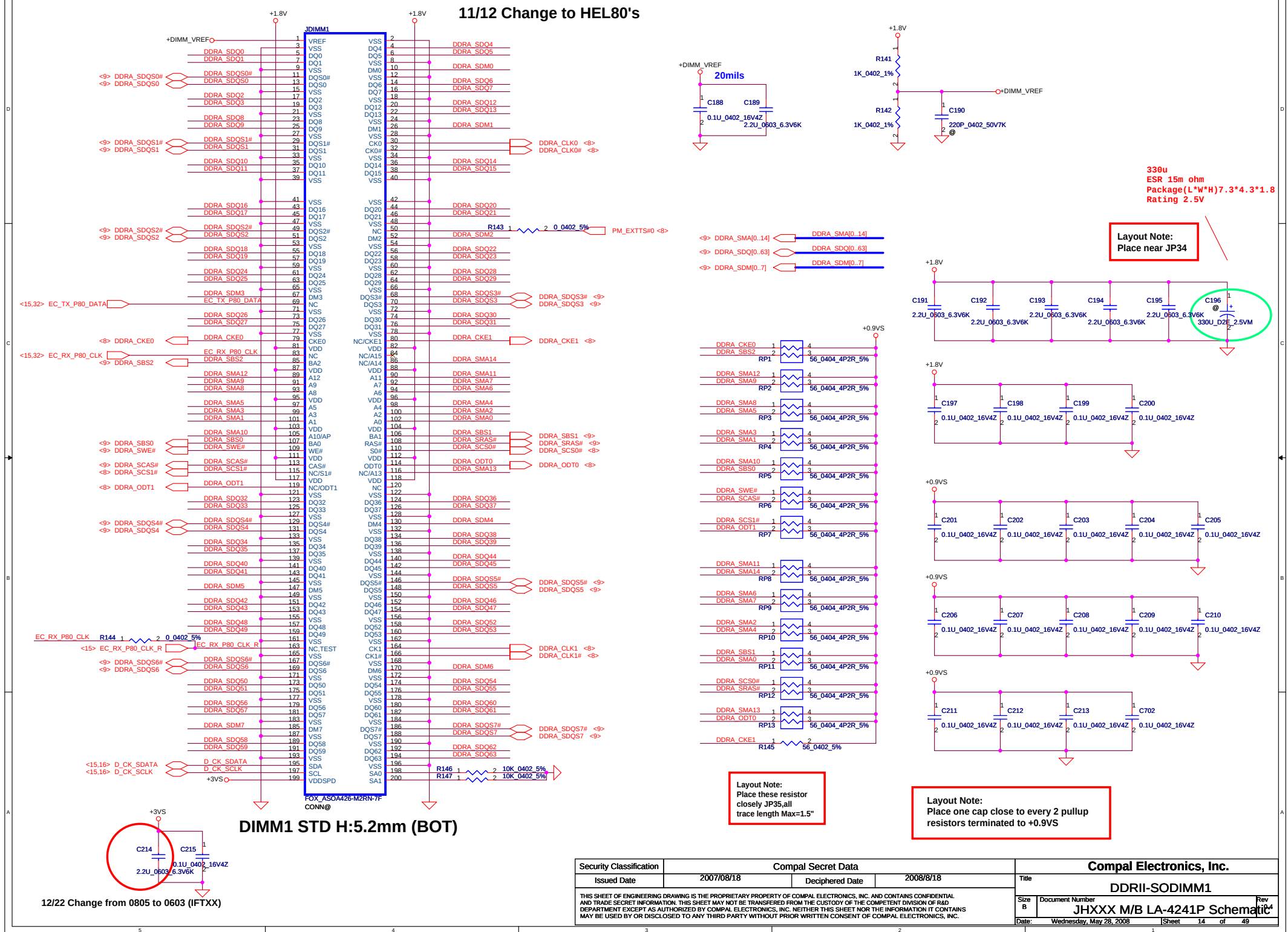
Security Classification	Compal Secret Data	Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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 Cantiga (4/7)-VGA/LVDS/TV	
Size Custpm		Document Number JHXXXX M/B LA-4241P Schematic	Rev 0.4
Date Tuesday, June 03, 2008		Sheet 10	of 49





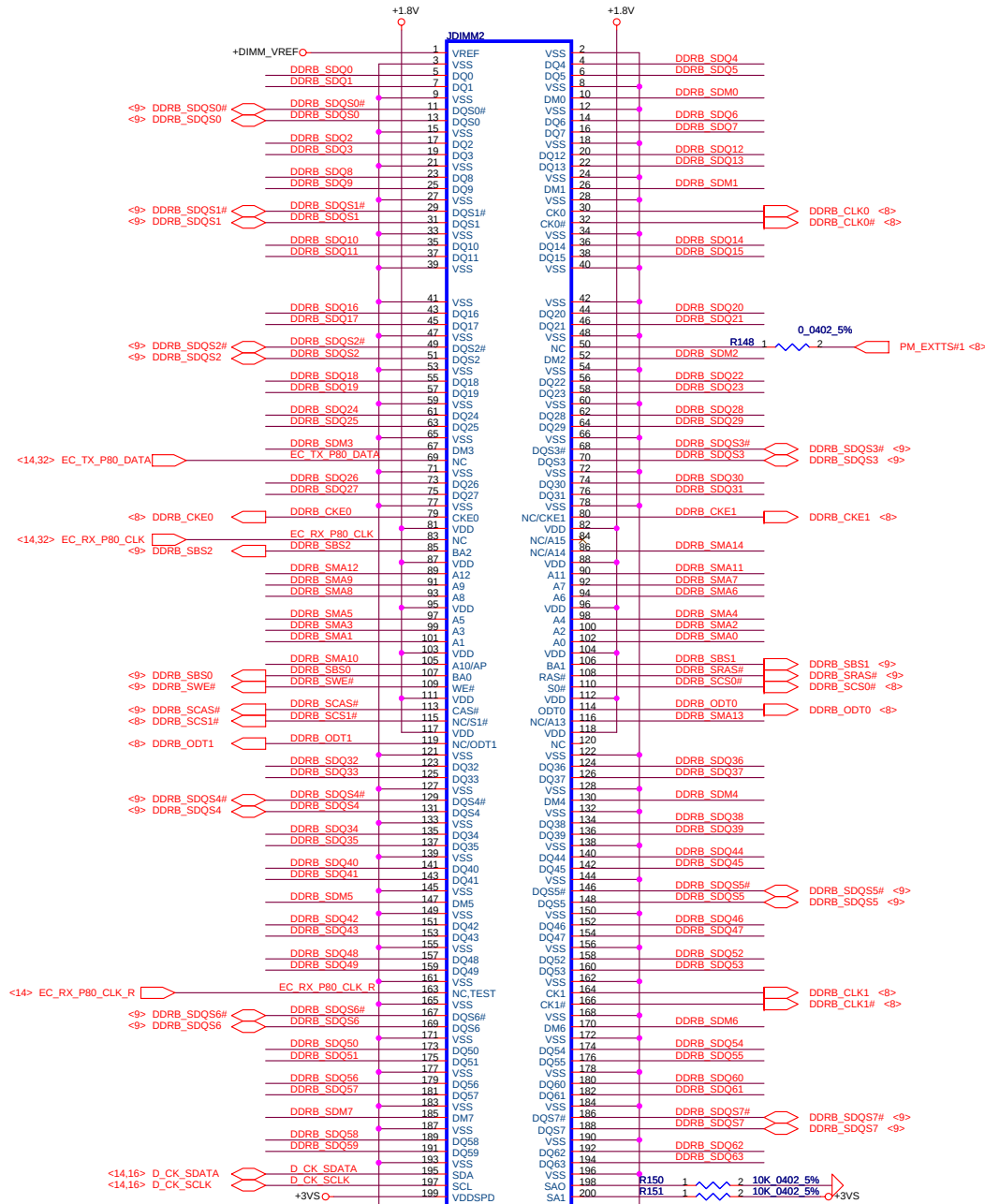
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Cantiga GMCH(7/7)-GTL
Size	Document Number	Rev		
Custom	JHXXX M/B LA-4241P Schematic	0.4		
Date:	Tuesday, June 03, 2008	Sheet	1	of 49

11/12 Change to HEL80's



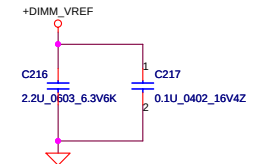
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/08/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DDR2-SODIMM1	
Size B	Document Number	JHXXX M/B LA-4241P Schematic		Rev	
Date:	Wednesday, May 28, 2008	Sheet	14	of	49

11/12 Change DIMM1 as HEL80's



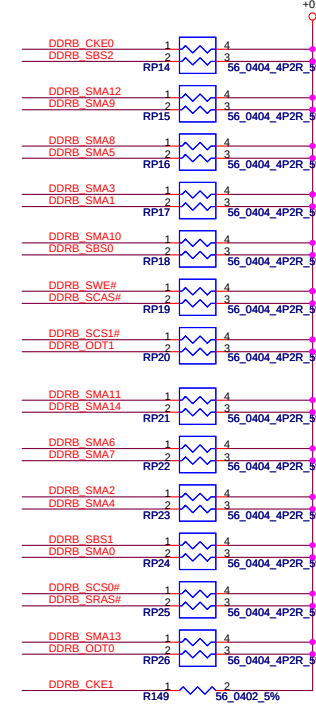
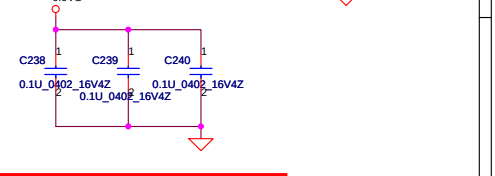
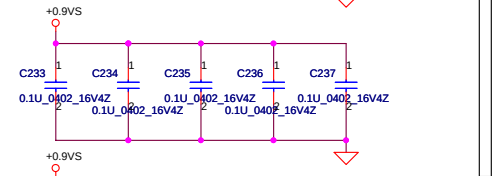
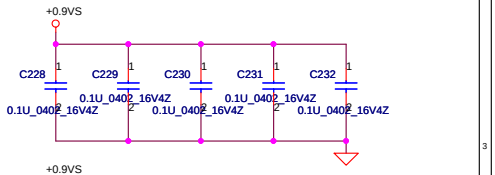
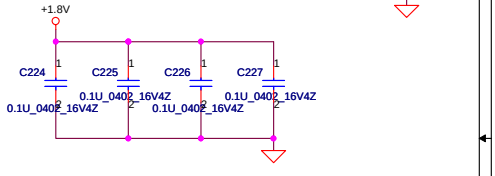
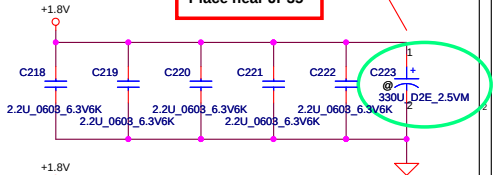
DIMM2 STD H:9.2mm (BOT)

<9> DDRB_SMA[0..14] <=> DDRB_SMA[0..14]
 <9> DDRB_SDQ[0..63] <=> DDRB_SDQ[0..63]
 <9> DDRB_SDM[0..7] <=> DDRB_SDM[0..7]



330u
 ESR 15m ohm
 Package (L*W*H) 7.3*4.3*1.8
 Rating 2.5V

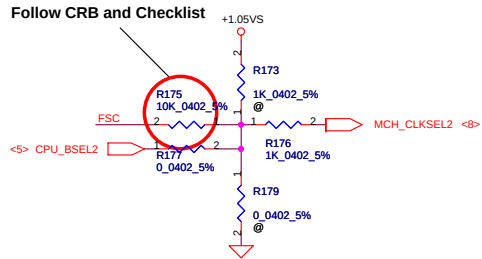
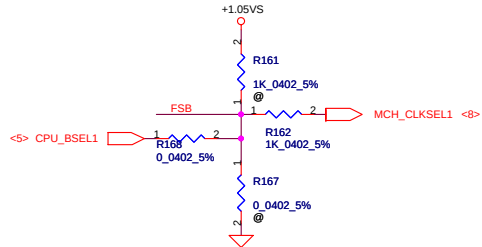
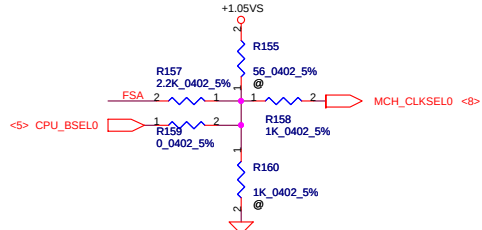
Layout Note:
 Place near JP35



Layout Note:
 Place these resistor
 closely JP35, all
 trace length Max=1.5"

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

Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	DDR2-SODIMM2	
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 B	Document Number JHXXX M/B LA-4241P Schematic
				Date: Wednesday, May 28, 2008	Sheet 15 of 49

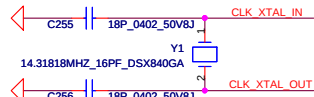


FSLC	FSLB	FSLA	CPU	SRC	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHZ	MHZ	MHZ
0	1	1	166.6	100	33.3
0	1	0	200	100	33.3
0	0	0	266.6	100	33.3

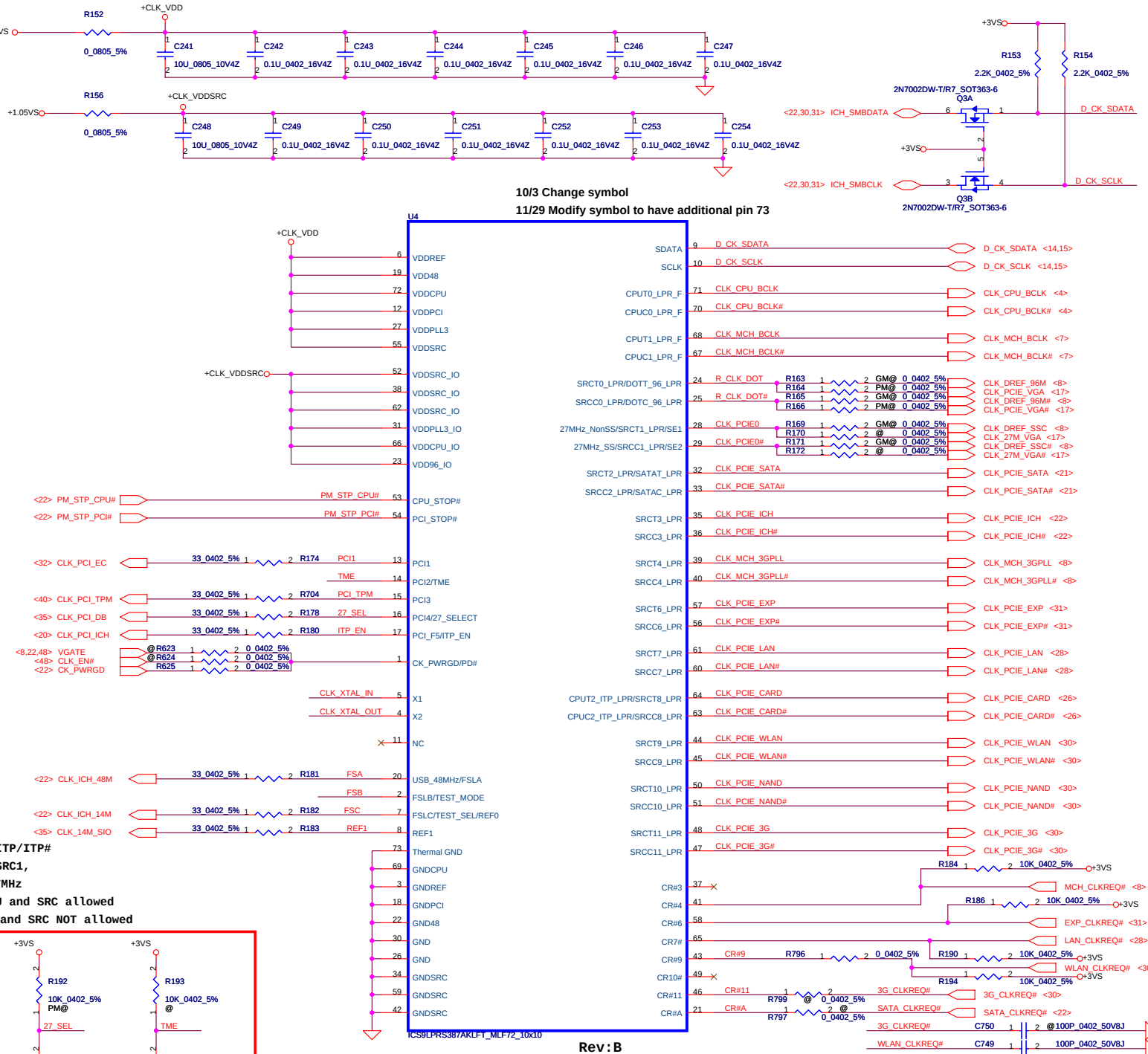
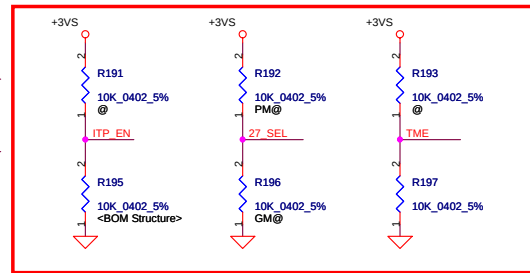
For ITP_EN, 0 = SRC8/SRC8#; 1 = ITP/ITP#

For 27_SEL, 0 = Enable DOT96 & SRC1,
1 = Enable SRC0 & 27MHZ

For TME, 0 = Overclocking of CPU and SRC allowed
1 = Overclocking of CPU and SRC NOT allowed

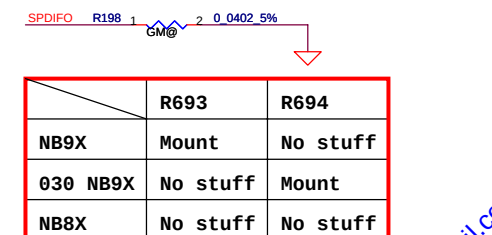
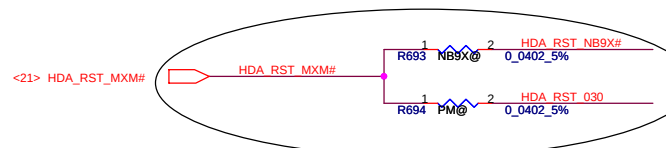
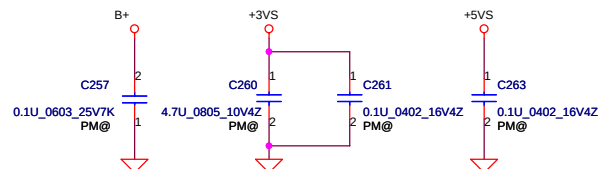
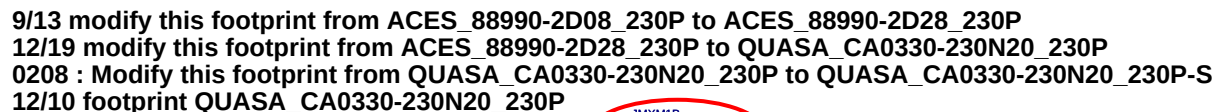


Routing the trace at least 10mil



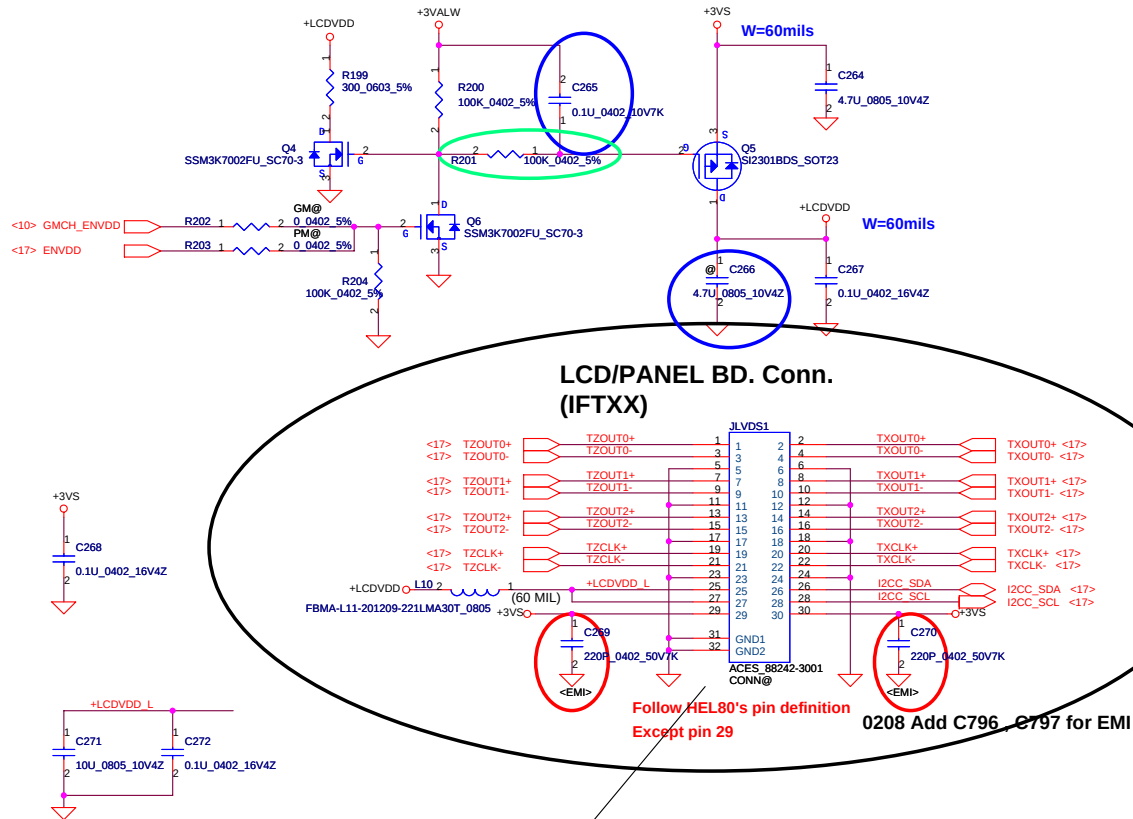
10/3 Change symbol
11/29 Modify symbol to have additional pin 73

Security Classification			Compal Secret Data			Title	
Issued Date	2007/08/18	Deciphered Date	2008/8/18			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 COMPLETE 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.						Clock generator-ICS9LPRS387	
Size	Document Number	JHXXX M/B LA-4241P Schematic				Rev	0.4
Date	Wednesday, May 28, 2008	Sheet	16	of		49	



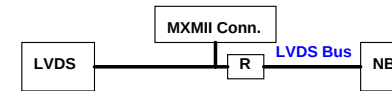
Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title MXM Connector			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Size	Document Number	Rev	
				Custom	JHXXX M/B LA-4241P Schematic		
				Date:	Wednesday, May 28, 2008	Sheet	17 of 49

LCD POWER CIRCUIT

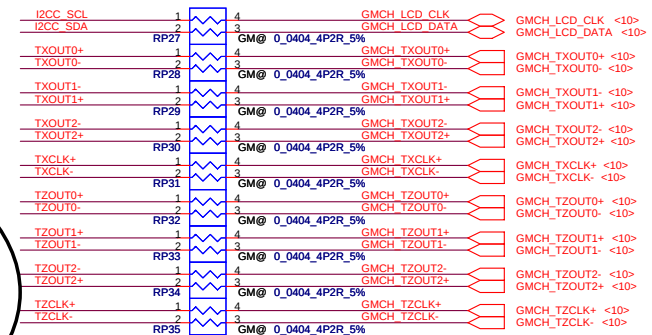


LTCX000G500 footprint is still use ACES_88242-3001

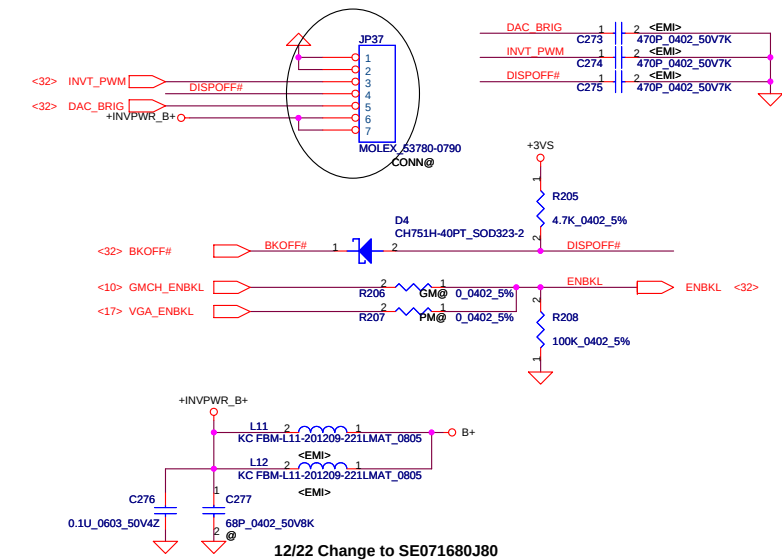
Routing Diagram



Use Daisy chain to route

***INVERTER Conn.***

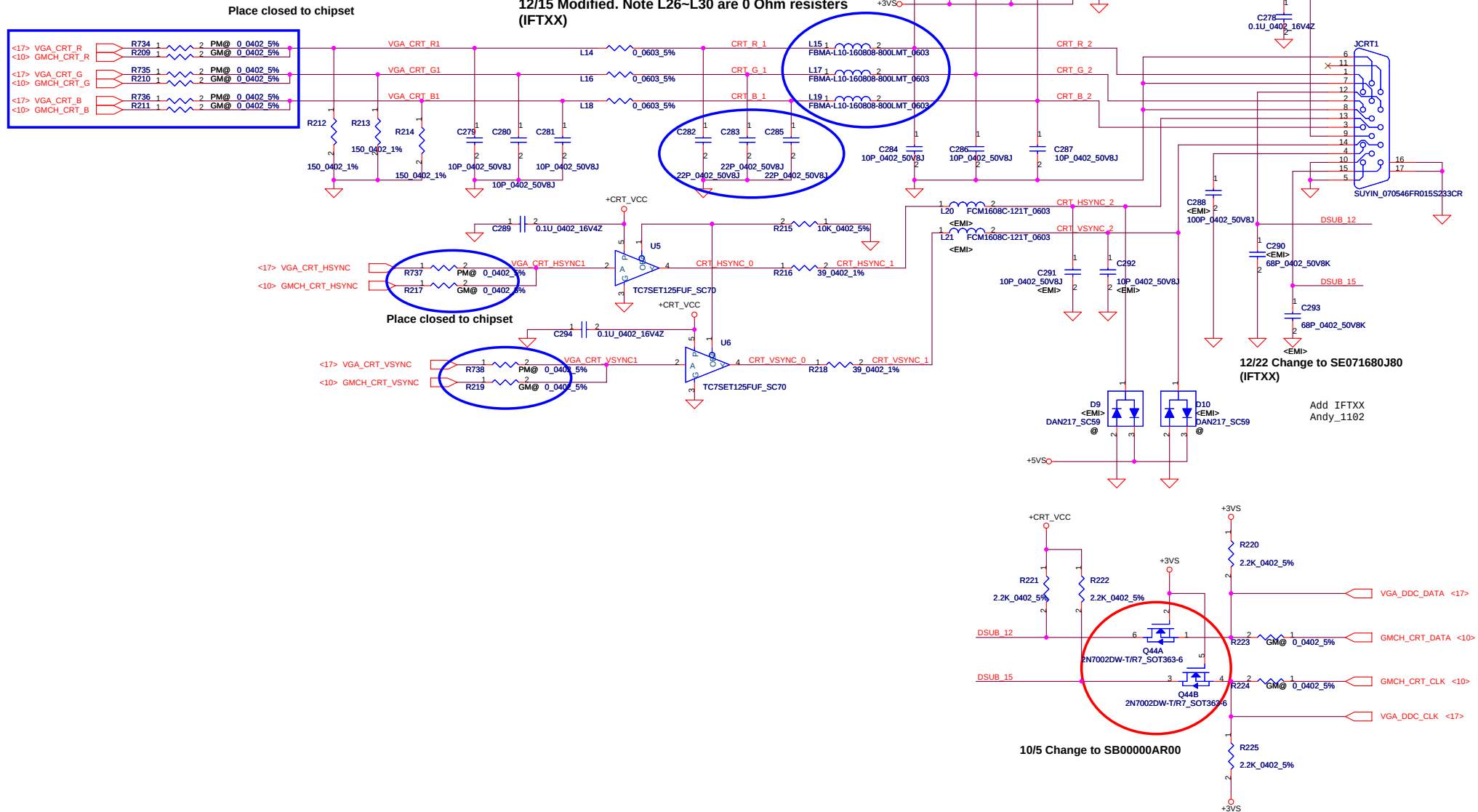
12/18 modified from
220p @ to 470p mount
by EMI request



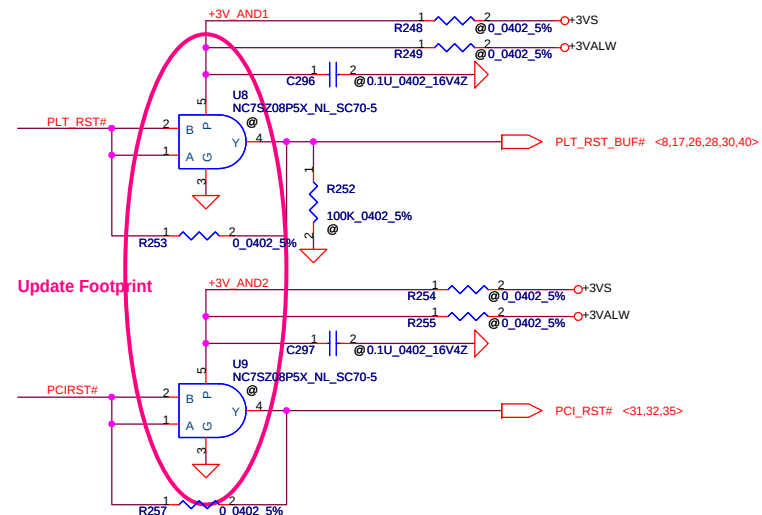
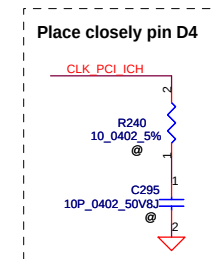
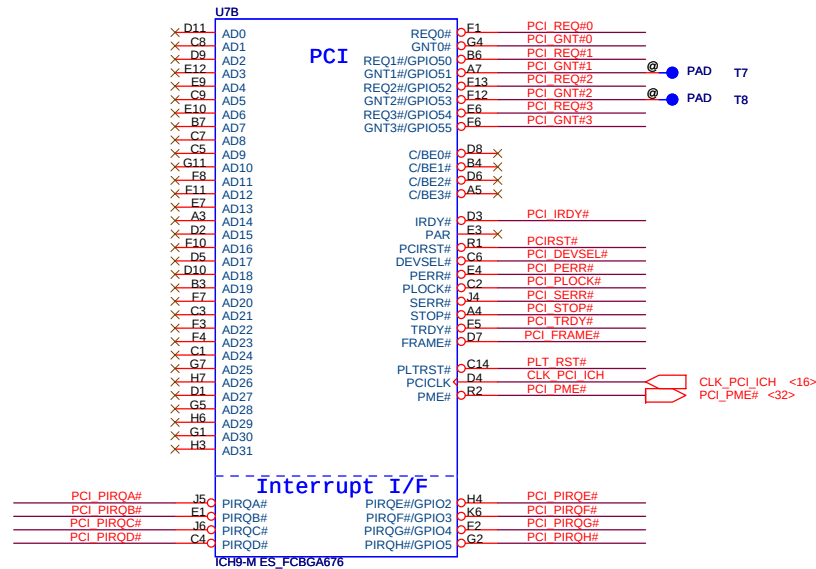
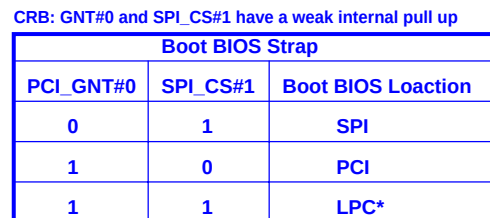
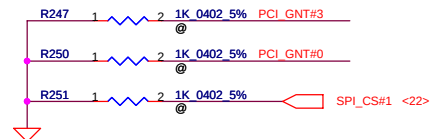
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/09/18	Deciphered Date	2008/8/18	Title	LVDS & DVI Connector
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Size B	Document Number
				JHXXX M/B LA-4241P Schematic	
				Date: Wednesday, May 28, 2008	Sheet 18 of 49

CRT Connector

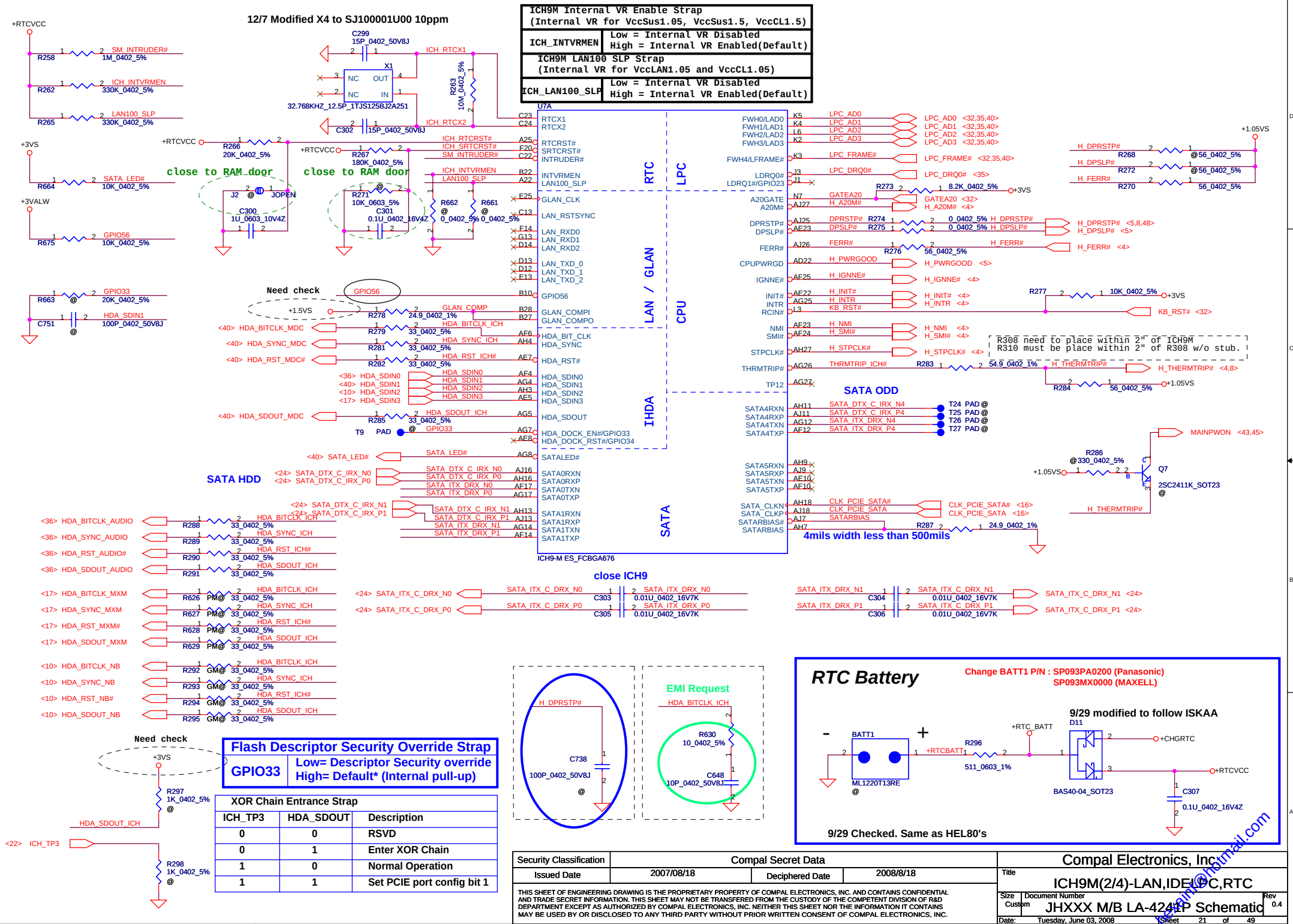
Checklist recommend: 2-pole filter on R/G/B signals
C - L - C - L - C
10p - 47 Ohm/100MHz - 22p - 47 Ohm/100MHz - 10p



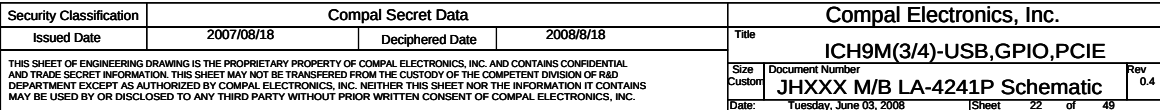
Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	CRT Connector	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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 OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size B	Document Number
				Date: Wednesday, May 28, 2008	Rev 19 of 49

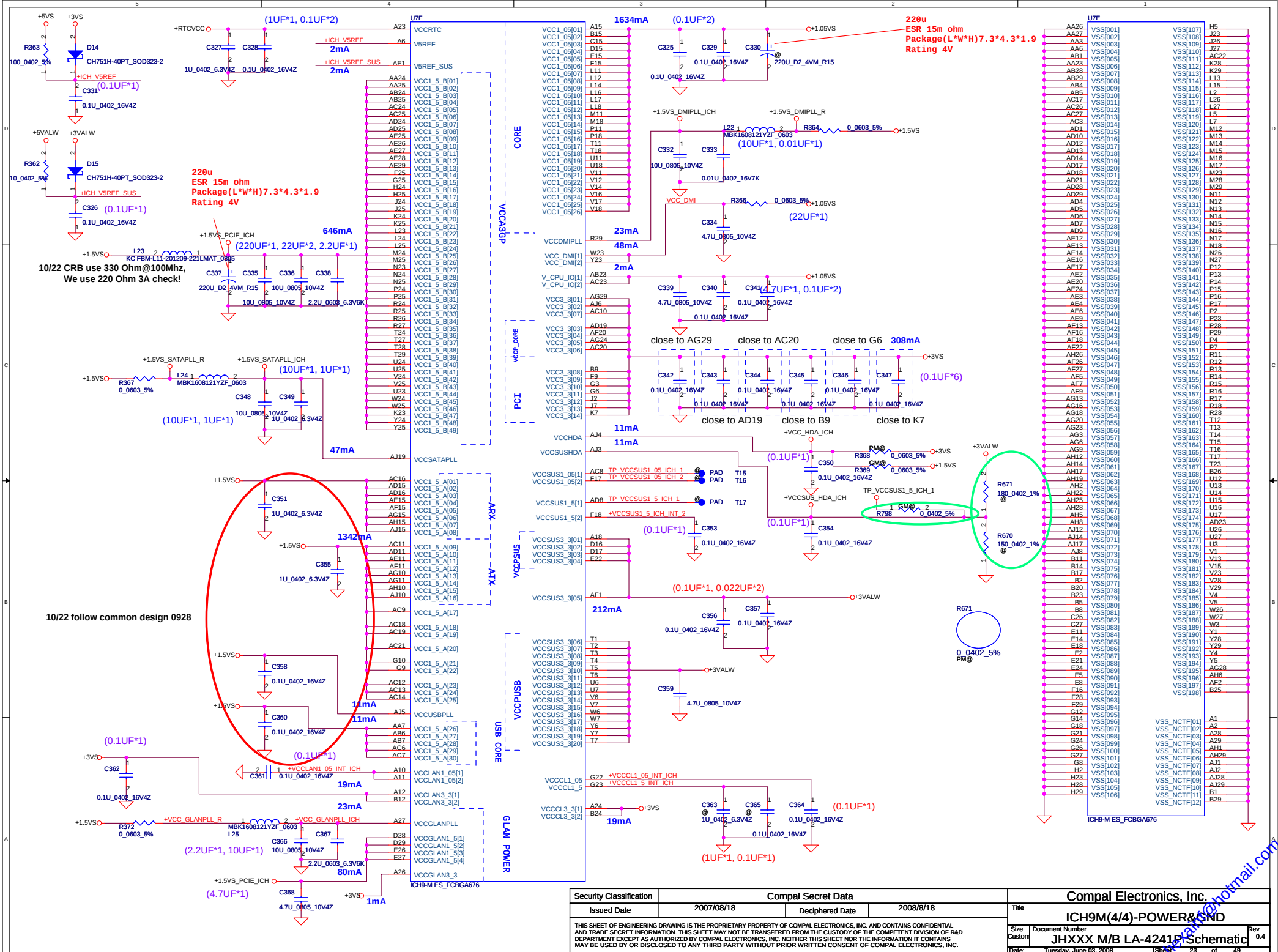


Security Classification	Compal Secret Data			Compal Electronics, Inc.			
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title ICH9M(1/4)-PCI			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	
				JHXXXX M/B LA-4241P Schematic			0.4
				Date:	Tuesday, June 03, 2008	Sheet 20 of 49	



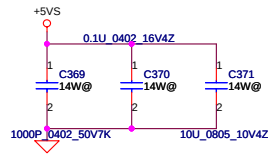
Security Classification	Compal Secret Data		
Issued Date	2007/08/18	Deciphered Date	2008/8/18
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.			





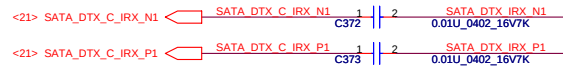
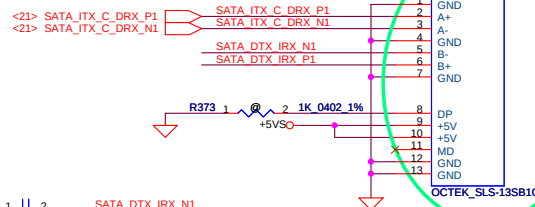
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				ICH9M(4/4)-POWER&GND		
				Size	Document Number	Rev
				Customer	JHXXX M/B LA-4241P Schematic	0.4
Date	Tuesday, June 03, 2008	Sheet	23	of	49	

14W SATA ODD Conn.



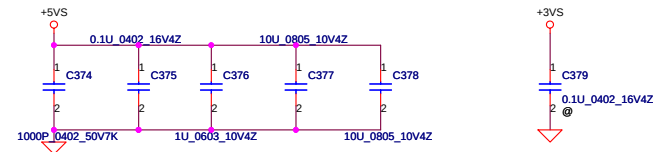
SATA ODD Conn.

Copy JIWA2 Symbol

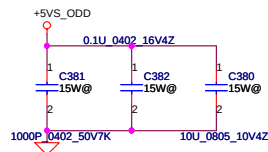


Update FootPrint from
OCTEK_SLS-13SB1G_13P-T to
OCTEK_SLS-13SB1G_13P_RV-T

SATA HDD Conn.

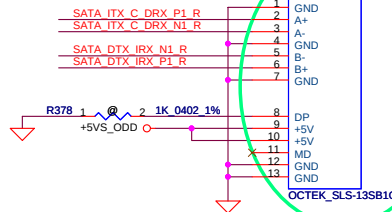
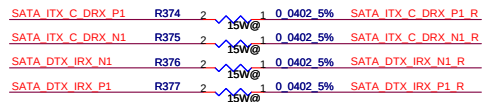


15W SATA ODD Conn.

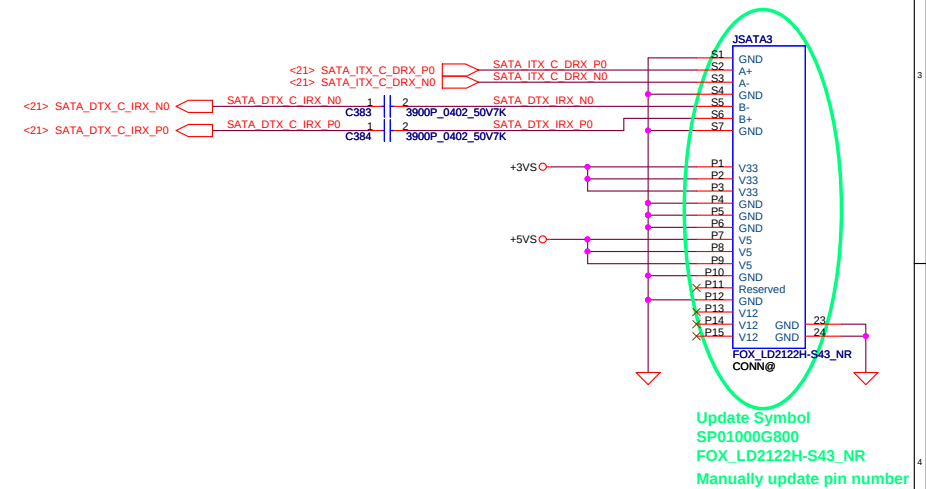
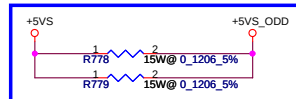


SATA ODD Conn.

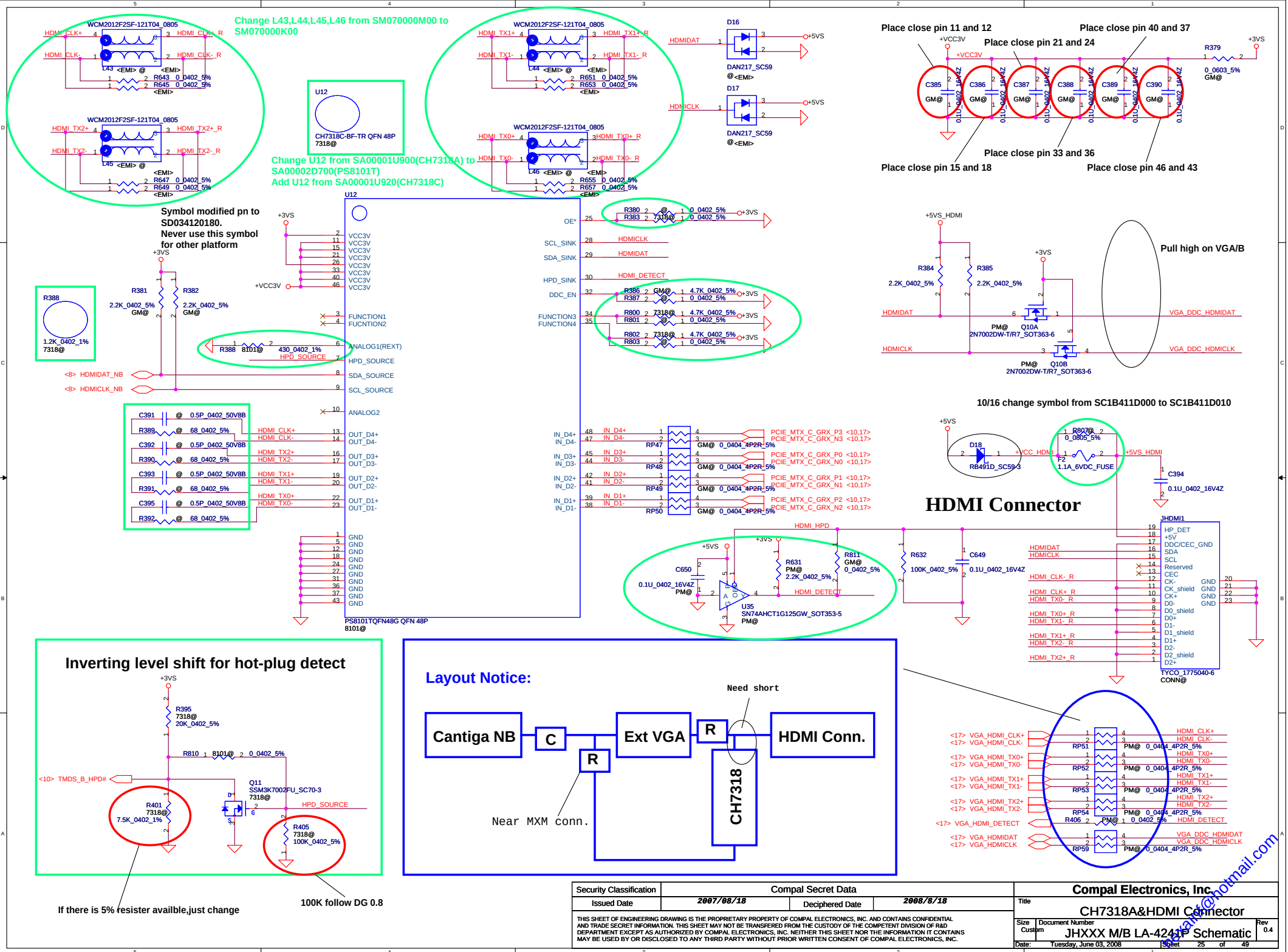
Copy JIWA2 Symbol

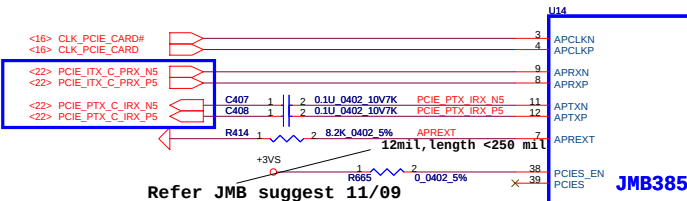
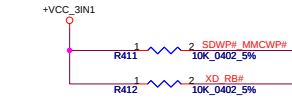


Update FootPrint from
OCTEK_SLS-13SB1G_13P-T to
OCTEK_SLS-13SB1G_13P_RV-T

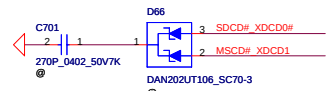
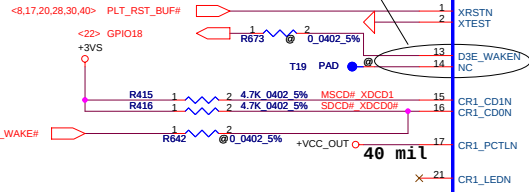


Security Classification		Compal Secret Data	
Issued Date	2007/08/18	Deciphered Date	2008/8/18
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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		Compal Electronics, Inc.	
HDD & ODD Connector		Rev 04	
Size B	Document Number	JHXXX M/B LA-4241P Schematic	
Date:	Wednesday, May 28, 2008	Sheet	24 of 49





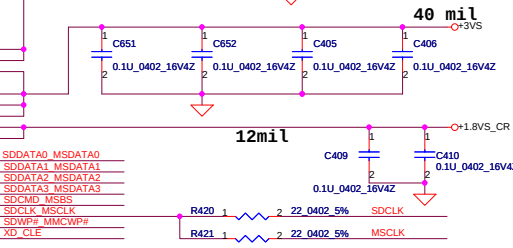
Change Pin definition for Rev:B



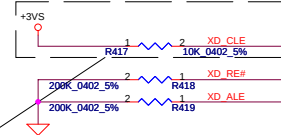
The diagram shows the power supply connections for the R79701-PB_SOT23-5 chip. The chip has pins labeled VIN, VINCIN, VOUT, VINICE, and VOUT. The connections are as follows:

- VIN**: Connected to +3VS through a capacitor C397 (0.1μ_0402_16V4Z).
- VINCIN**: Connected to +VCC_OUT.
- VOUT**: Connected to +VCC_IN1 through a capacitor C398 (1μ_0603_10V4Z) and a resistor R410 (150K_0402_5W).
- VINICE**: Connected to GND.
- VOUT**: Connected to GND.

The text "reserved power circuit" is written at the bottom of the diagram.



Strap pin for JMicro



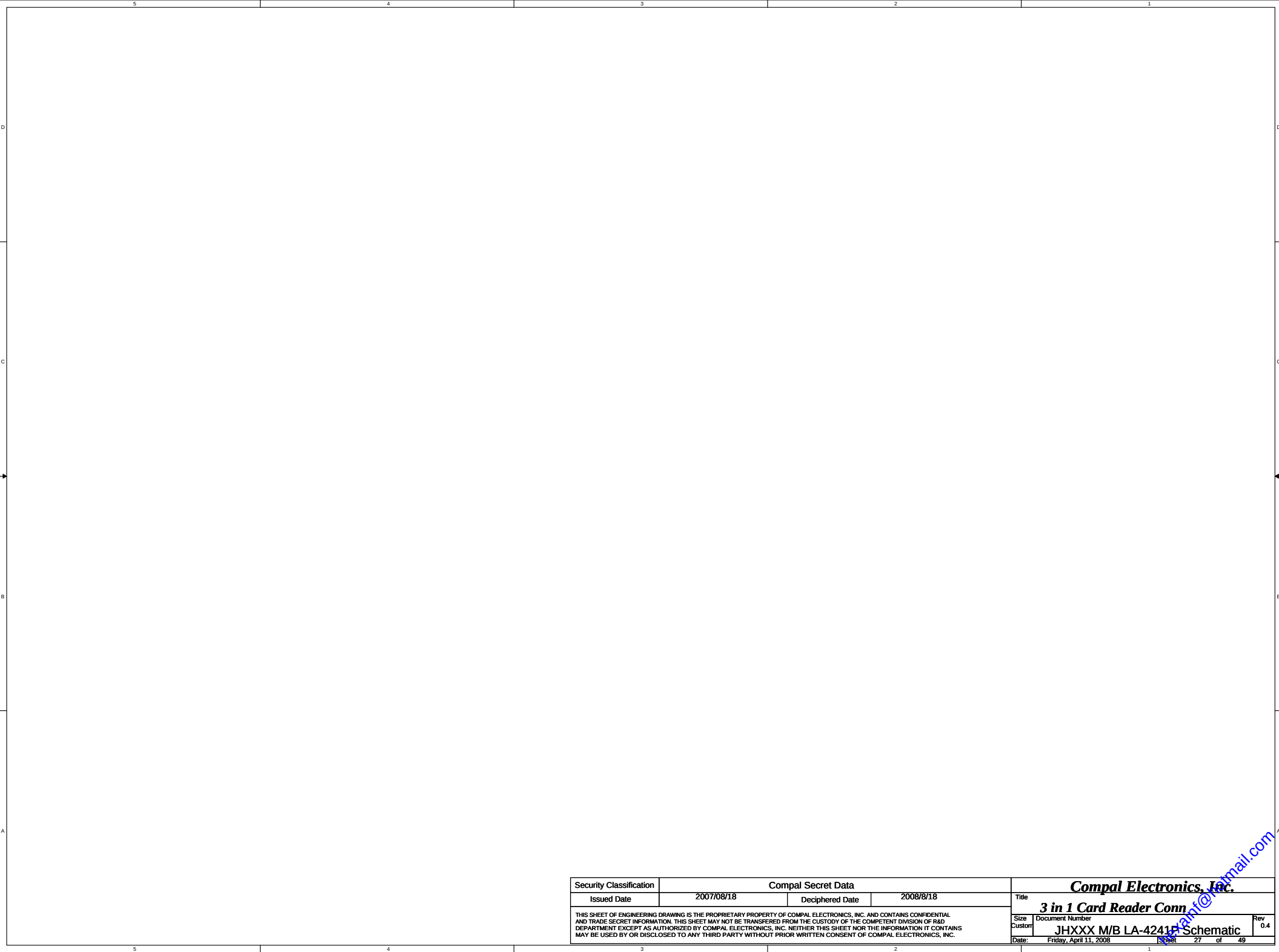
Pin 19 connection diagram for MDR019-C0-1202. The diagram shows a 24-pin connector with pins 1-12 on the left and 13-24 on the right. Pin 1 is labeled '+VCC_3IN1' with a red circle. Pin 19 is labeled 'VCC_MS' with a red circle. Pin 23 is labeled 'GND' with a red circle. The connector is labeled 'PROCO_MDR019-C0-1202' and 'CONN@'.

Pin	Signal
1	+VCC_3IN1
2	SDDATA0_MSDATA0
3	SDDATA1_MSDATA1
4	SDDATA2_MSDATA2
5	SDDATA3_MSDATA3
6	MSCLK
7	SOWP#_MMCWP#
8	SOCMD_MSES
9	SOCID#_XBCID0#
10	
11	
12	
13	SDDATA1_MSDATA1
14	MSCLK
15	MSCID#_XBCID1
16	SDDATA0_MSDATA0
17	SOCMD_MSES
18	SDDATA3_MSDATA3
19	SDDATA2_MSDATA2
20	
21	
22	
23	GND
24	

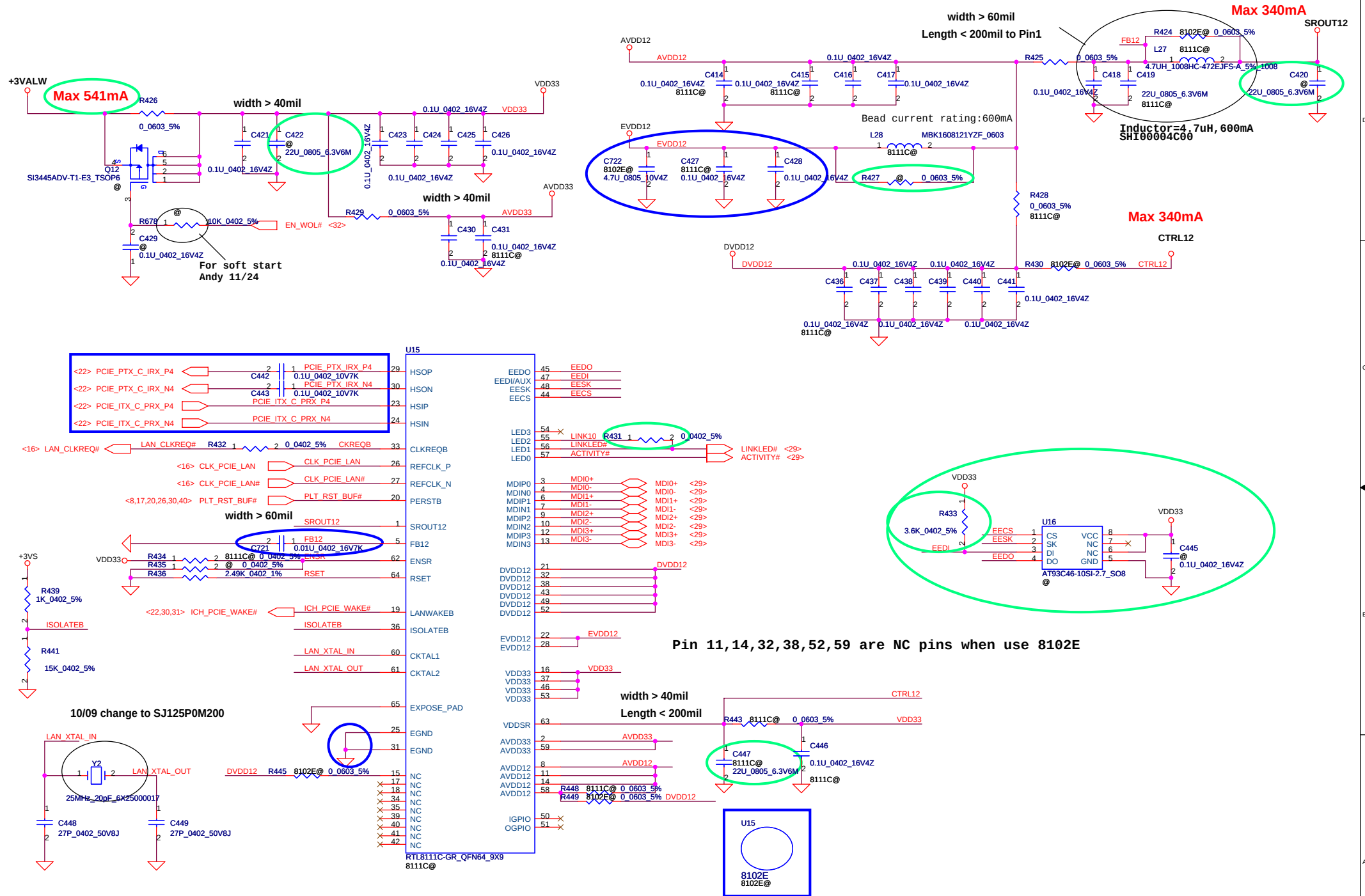
[illegible]

SD_MMC,MS multi-function pin define		
MDIO PIN Name	SD/MMC Card PIN Name	MS Card PIN Name
MDIO00	SD1_DAT0	MS1_DAT0
MDIO01	SD1_DAT1	MS1_DAT1
MDIO02	SD1_DAT2	MS1_DAT2
MDIO03	SD1_DAT3	MS1_DAT3
MDIO04	SD1_CMD	MS1_BS
MDIO05	SD1_CLK	MS1_CLK
MDIO06	SD1_WP	
MDIO07		
MDIO08	MMC_DAT4	MS1_DAT4
MDIO09	MMC_DAT5	MS1_DAT5
MDIO10	MMC_DAT6	MS1_DAT6
MDIO11	MMC_DAT7	MS1_DAT7
MDIO12		
MDIO13		
MDIO14		
CR1_LEDN	SD1_LED#	MS1_LED#
CR1_PCTLN	SD1_PCTL#	MS1_PCTL#
CR1_CD0	SD1_CD#	
CR1_CD1		MS1_CD#

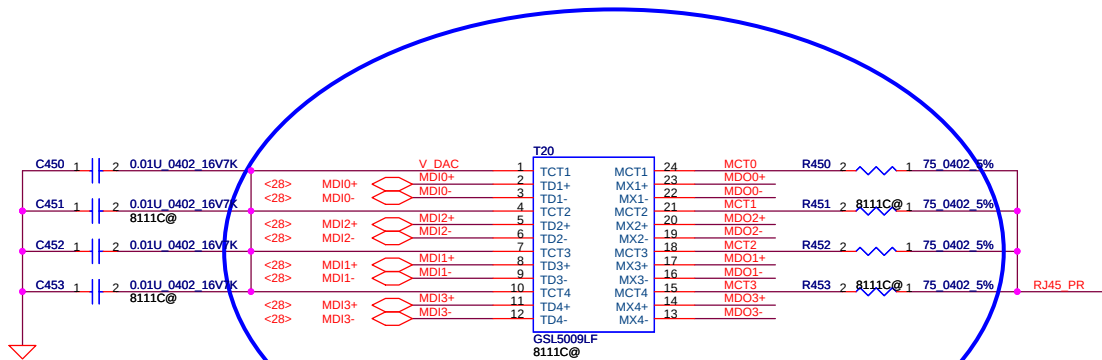
3 in 1 Card Reader



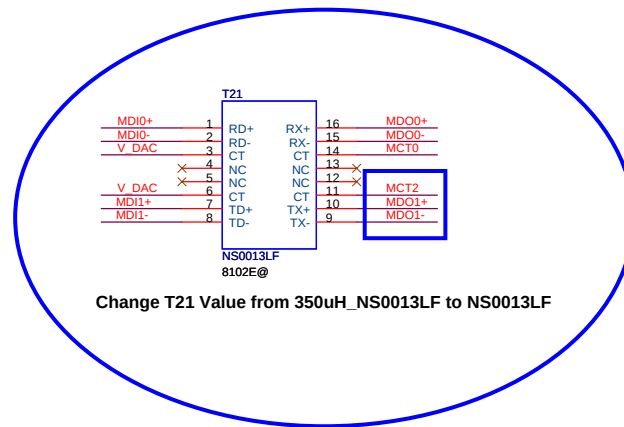
Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	3 in 1 Card Reader Conn	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Size	Document Number
				Custom	JHXXX M/B LA-4241H Schematic
				Date:	Friday, April 11, 2008
				Sheet	27 of 49



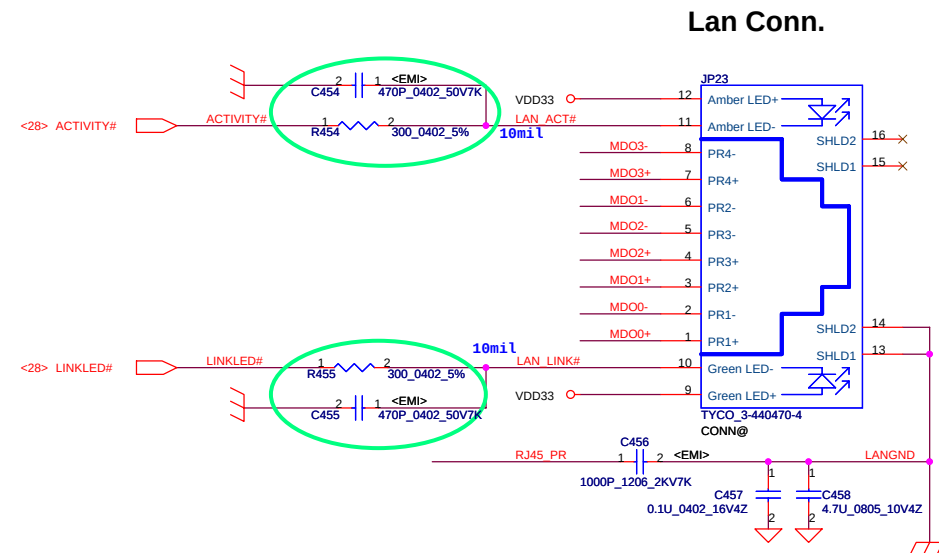
Security Classification		Compal Secret Data							
Issued Date		2007/08/18		Deciphered Date		2008/8/18		Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY 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-RTL8111C/RTL8102E			
						Size Custom	Document Number		
Date:		Tuesday, June 03, 2008		Sheet		28		of	49



3/4 Change T20 Value from 350uH_GSL5009LF to GSL5009LF
Change T20 P/N from SP050003T00 to SP050003T10

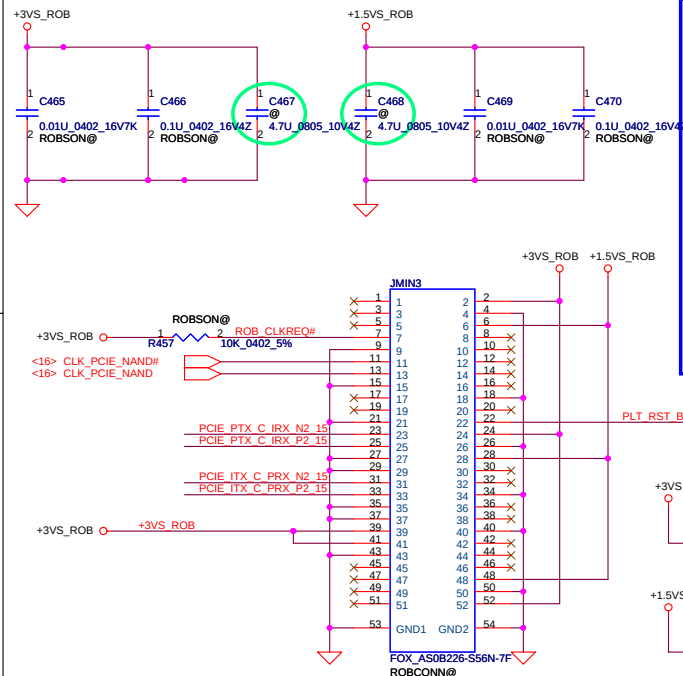


Change T21 Value from 350uH_NS0013LF to NS0013LF



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	LAN 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.				Size	Document Number
				Custom	JHXXX M/B LA-4241P Schematic
				Date:	Wednesday, May 28, 2008
				Sheet	29 of 49
				Rev	0.4

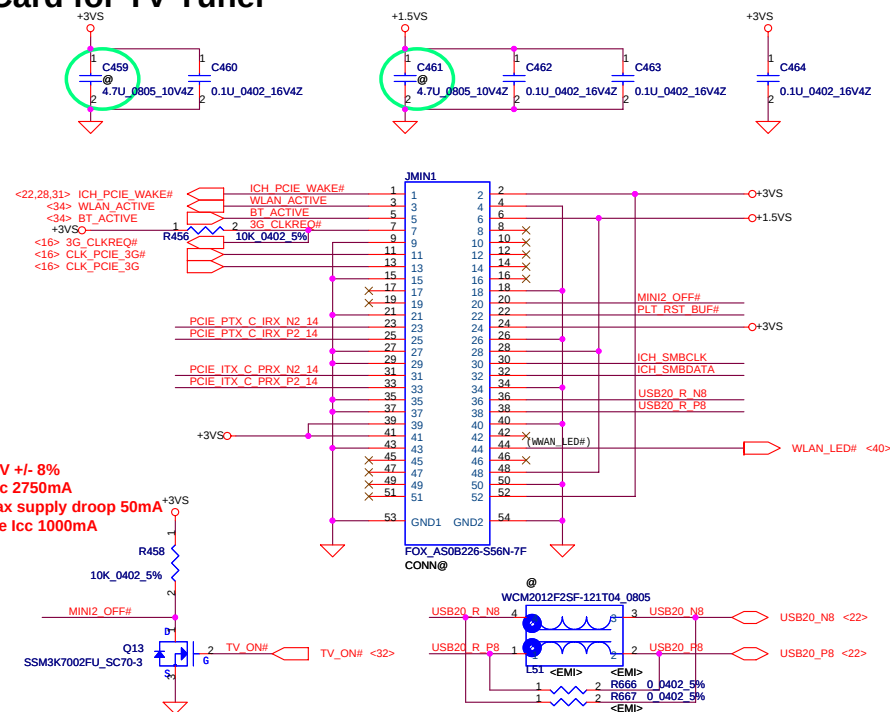
NAND mini Card(Robson support)



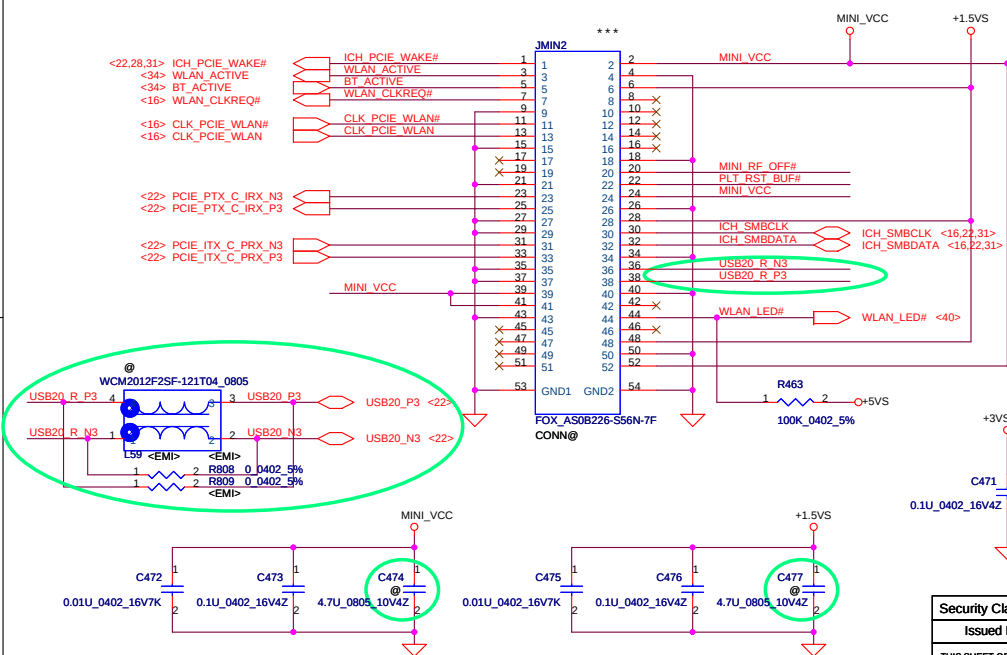
Use Y topology to place these resistors between JMIN2 and JMIN1



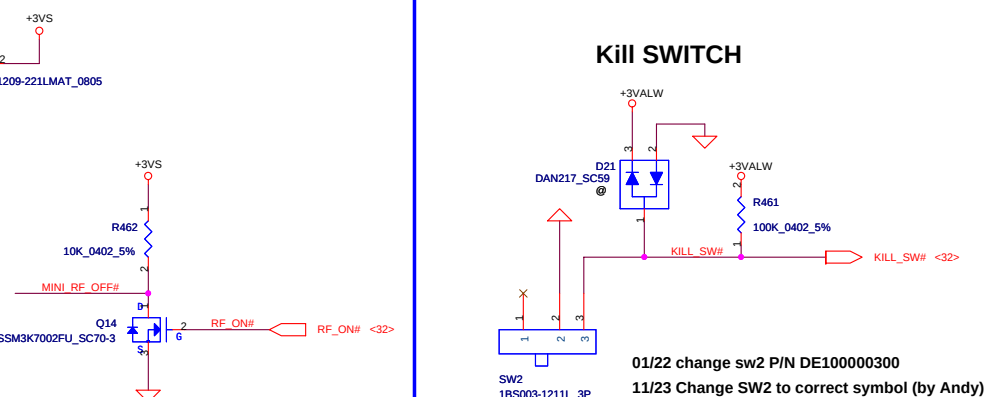
Vcc 3.3V +/- 8%
Peak Icc 2750mA
with max supply dro
Average Icc 1000mA



Mini-Express Card for WLAN

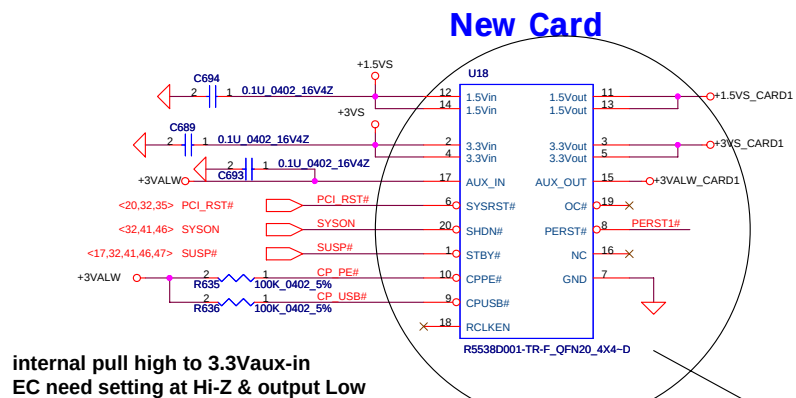


Please place these caps between JMIN1 and JMIN2

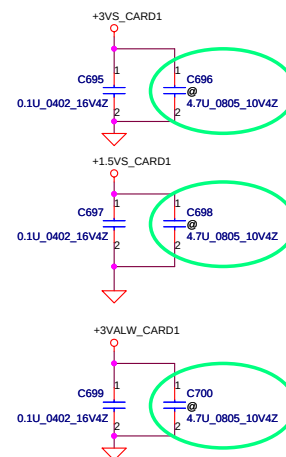


Security Classification		Compal Secret Data		Compal Electronics, Inc. Mini-Card/Kill SWITCH	
Issued Date	2007/08/18	Deciphered Date	2008/6/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
				JHXXX M/B LA-4241P Schematic	
				Date:	Wednesday, May 28, 2008
				Sheet	30 of 49

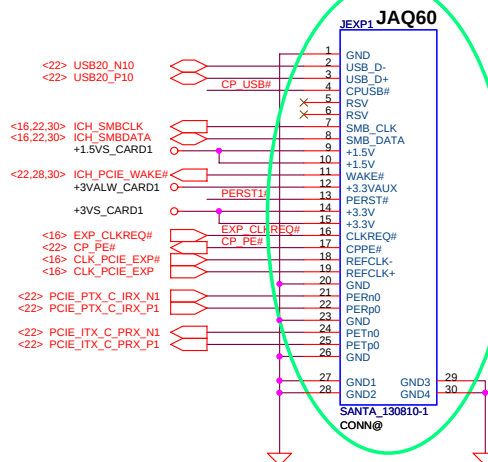
New Card Power Switch



Change to GMT PartNumber



New Card Socket (Left/TOP)



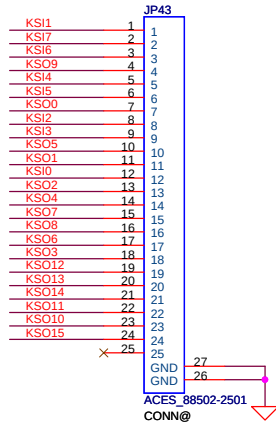
Update FootPrint from
SANTA_13181060-5_26P-T to
SANTA_130810-1_26P

Update FootPrint from
SANTA_130810-1_26P to
SANTA_130810-1_26P-S

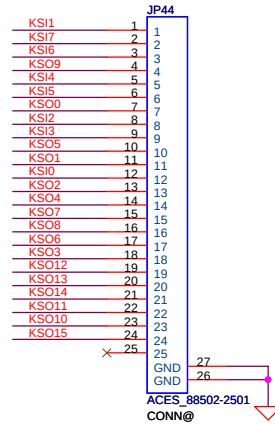
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	NEW CARD	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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 B	Document Number	Rev 0.
				JHXXX M/B LA-4241A Schematic		
Date:				Wednesday, May 28, 2008	Sheet 31	of 49

INT_KBD Conn.

For JHL90

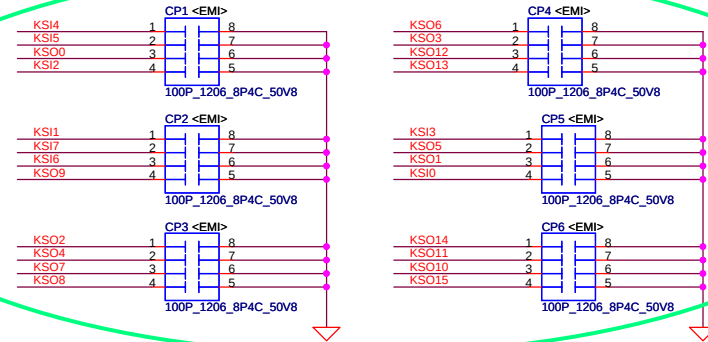


For JHT00

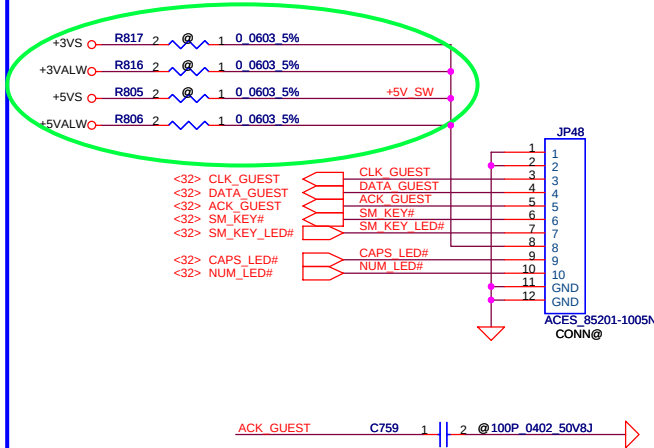


KSI[0..7] <32>
KSO[0..15] <32>

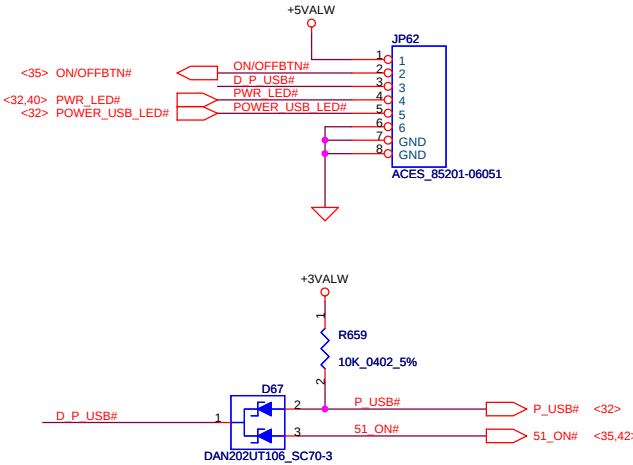
Delete C525~C548 SE071101J80 (100pF)
Add SI102101K80 (CP : 100pF)
(EMI Recommend)



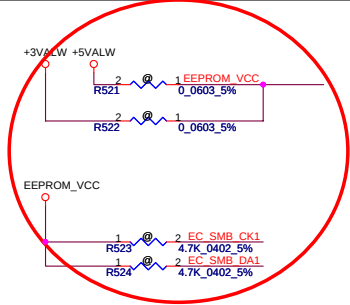
Function Board Conn.



Power USB Board Conn.



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	
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.				KB/SW/PW Conn	
Size	Document Number	JHXXX M/B LA-4241P Schematic		Rev	
Date	Wednesday, May 28, 2008	Sheet	33	of	49

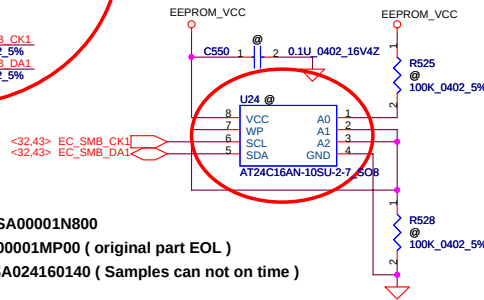


12/28 Add

0206 => change PN to SA00001N800

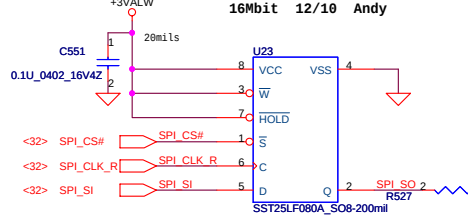
12/19 change pn to SA00001MP00 (original part EOL)

12/25 change back to SA024160140 (Samples not on time)



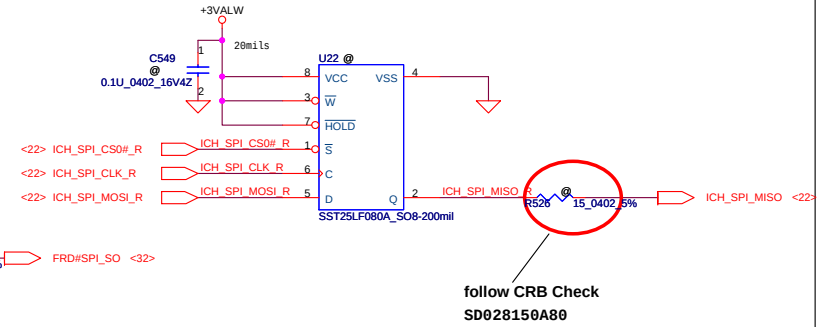
16M SPI ROM For EC+BIOS+VBIOS

SA00001IT00
16Mbit 12/10 Andy



12/15 change from 15 to 0 ohm'

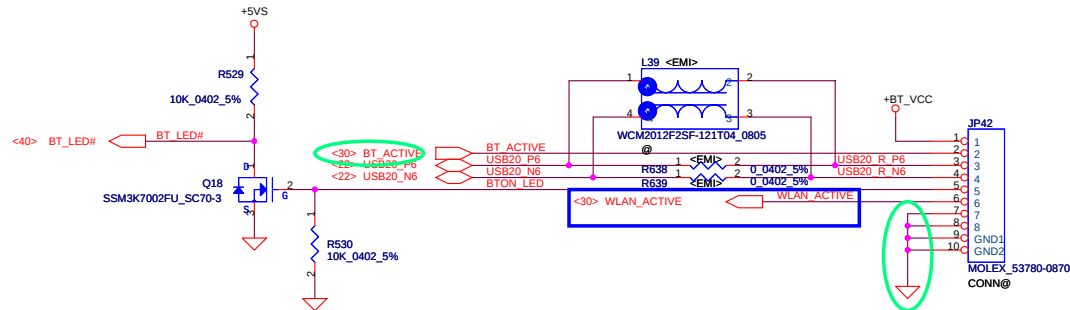
8M SPI ROM For iTPM+HDCP



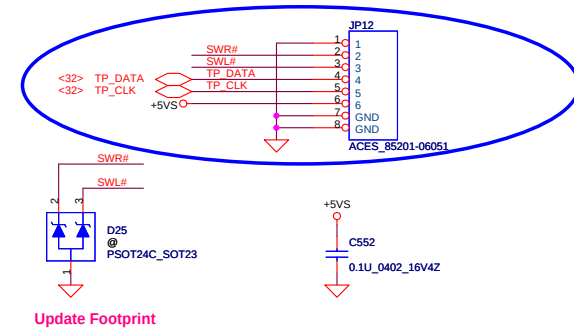
Bluetooth Conn.

Need to check BT pin definition again!

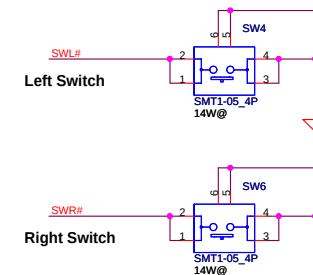
9/20 modified this block



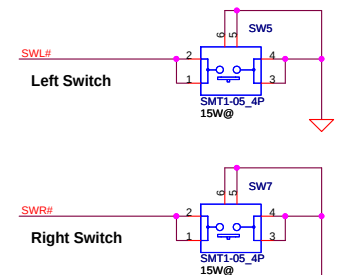
To TP/B Conn.



14W Use

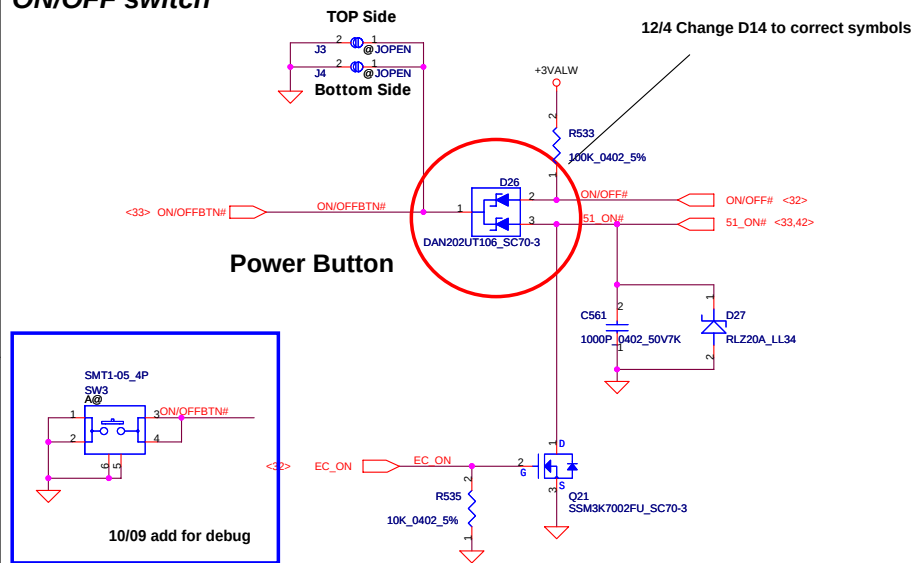


15W Use

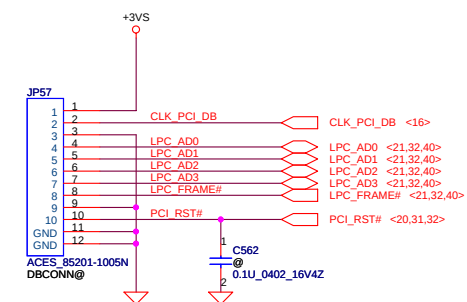


Security Classification		Compal Secret Data				Compal Electronics, Inc.										
Issued Date		2007/08/18		Deciphered Date		2008/8/18		Title								
								BIOS, TP & BT Connector								
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL 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.								Size B	Document Number	Rev 0.4						
								JHXXX M/B LA-4241P Schematic								
								Date	Wednesday May 28 2008		Sheet 34 of 49					

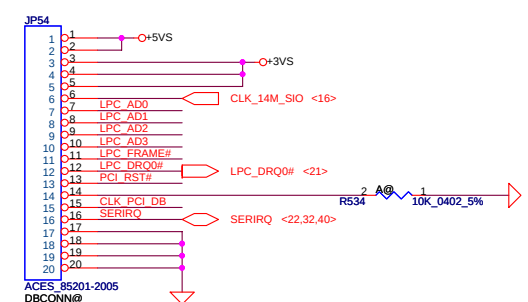
ON/OFF switch



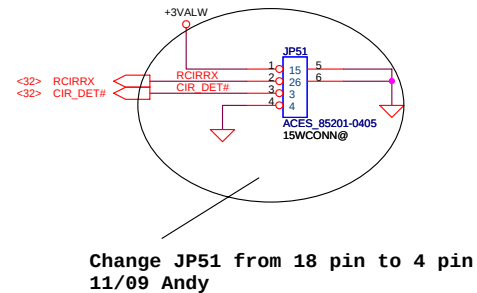
FOR LPC DEBUG PORT



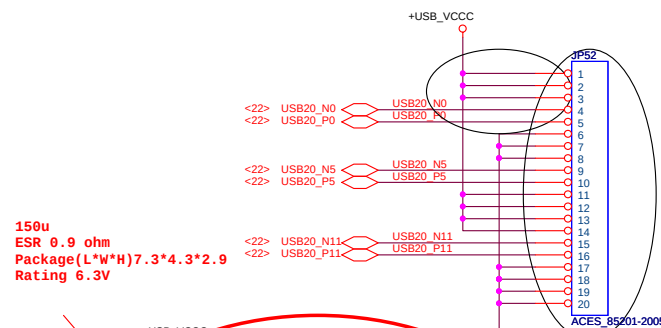
FOR LPC SIO DEBUG PORT



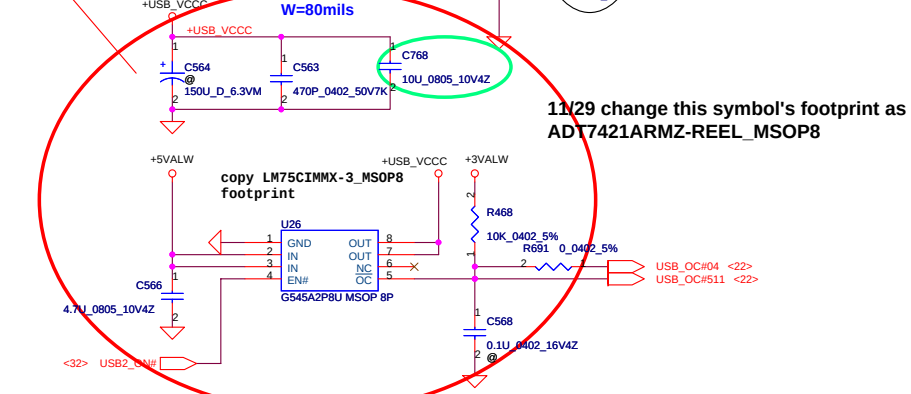
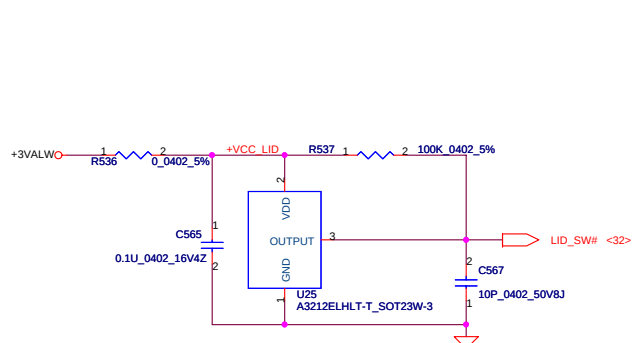
CIR



USB IO Conn.

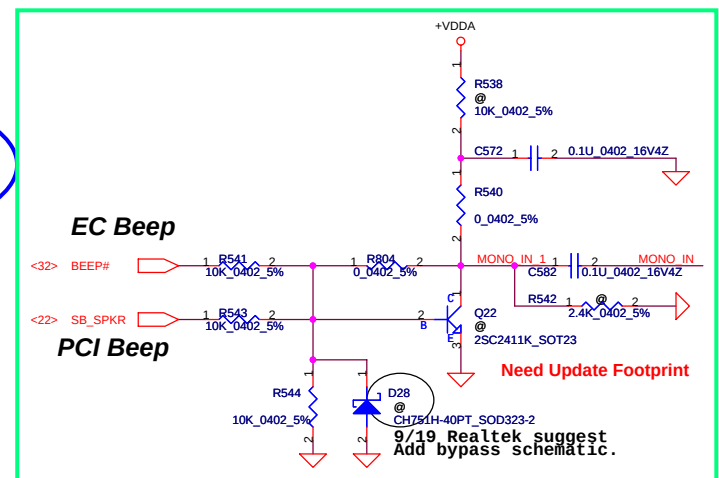
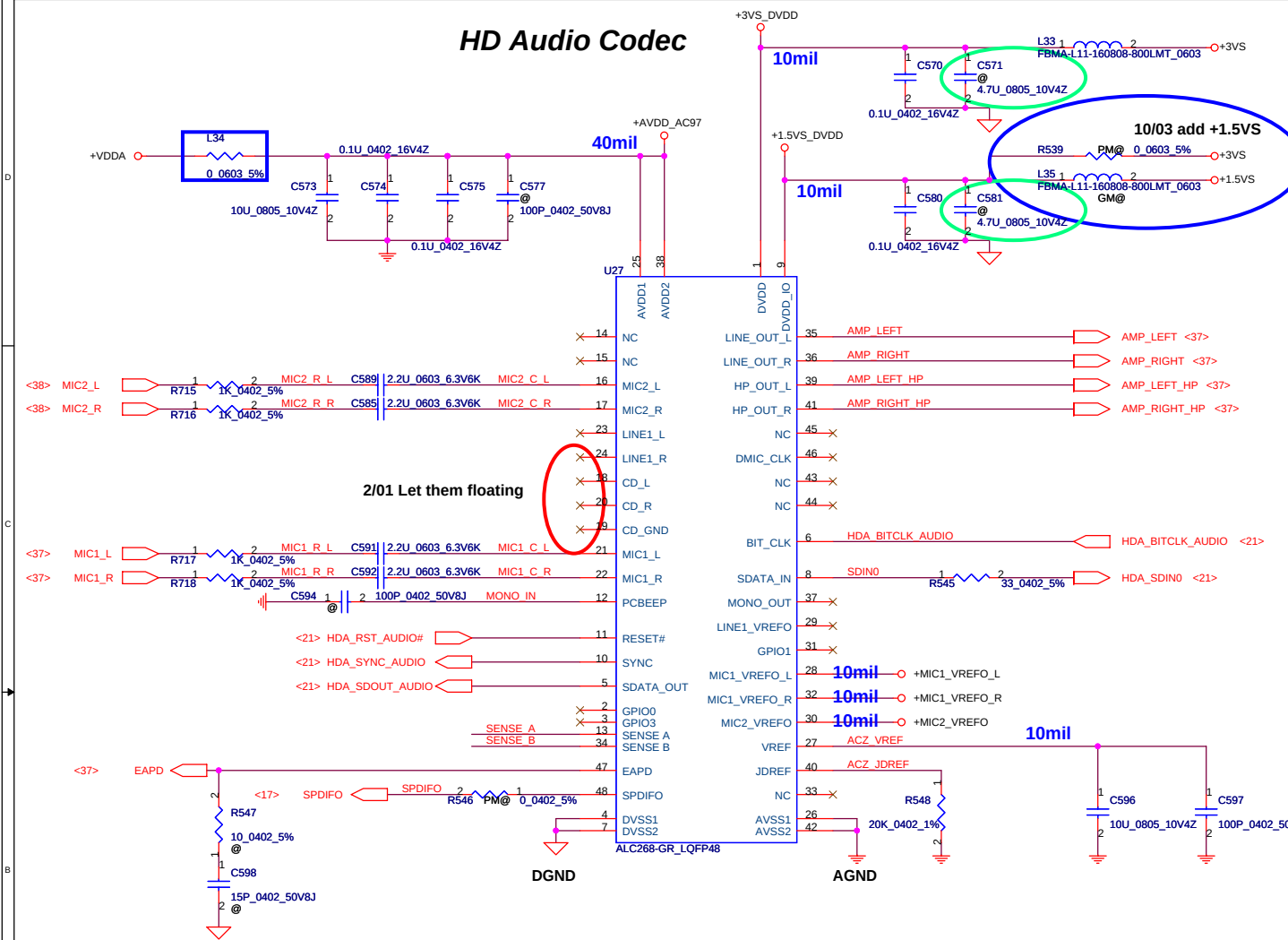


Lid Switch



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	
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.				Power OK/Lid/Front,IO,DB Conn	
Size	B	Document Number	JHXXX M/B LA-4241P Schematic	Rev	0.4
Date:	Wednesday, May 28, 2008	Sheet	35	of	49

HD Audio Codec



Sense Pin	Impedance	Codec Signals	Function
SENSE A / B	39.2K	PORT-A (PIN 39, 41)	HP
	20K	PORT-B (PIN 21, 22)	MIC
	10K	PORT-C (PIN 23, 24)	LINE IN
	5.1K	PORT-D (PIN 35, 36)	LINE OUT
SENSE B	39.2K	PORT-E (PIN 14, 15)	HP
	20K	PORT-F (PIN 16, 17)	MIC
	10K	PORT-G (PIN 43, 44)	LINE IN
	5.1K	PORT-H (PIN 45, 46)	LINE OUT

SENSE FOR Ext. Mic.



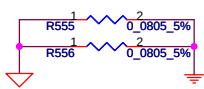
SENSE FOR Solo Int. Mic.



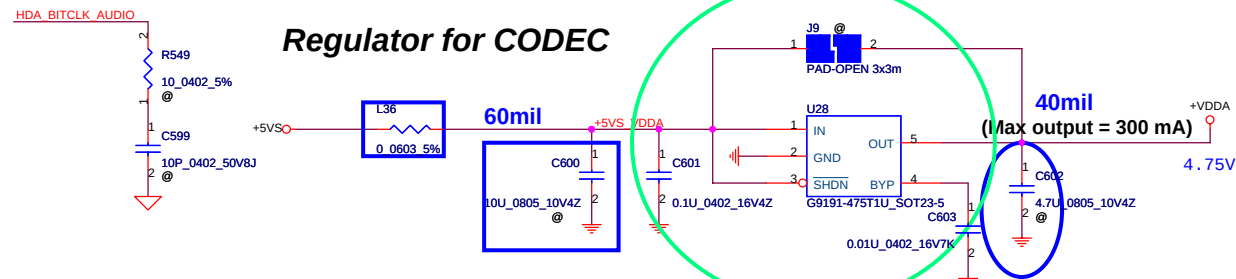
SENSE FOR HP



Moat Bridge



Regulator for CODEC



10/2 change circuit

U8 change footprint

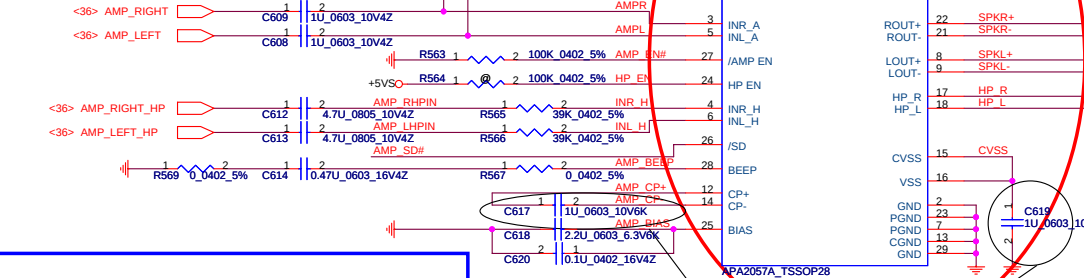
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	HD Audio Codec ALC268	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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	JHXXX M/B LA-4241P Schematic	0.4
				Date:	Wednesday, May 28, 2008	Sheet 36 of 49

APA2057 SPK/HP Amplifier

10/2 U6 APA2057A P/N:SA00001QD00

$$f_0 = 1 / (2 * \pi * R * C) = 106\text{Hz}$$

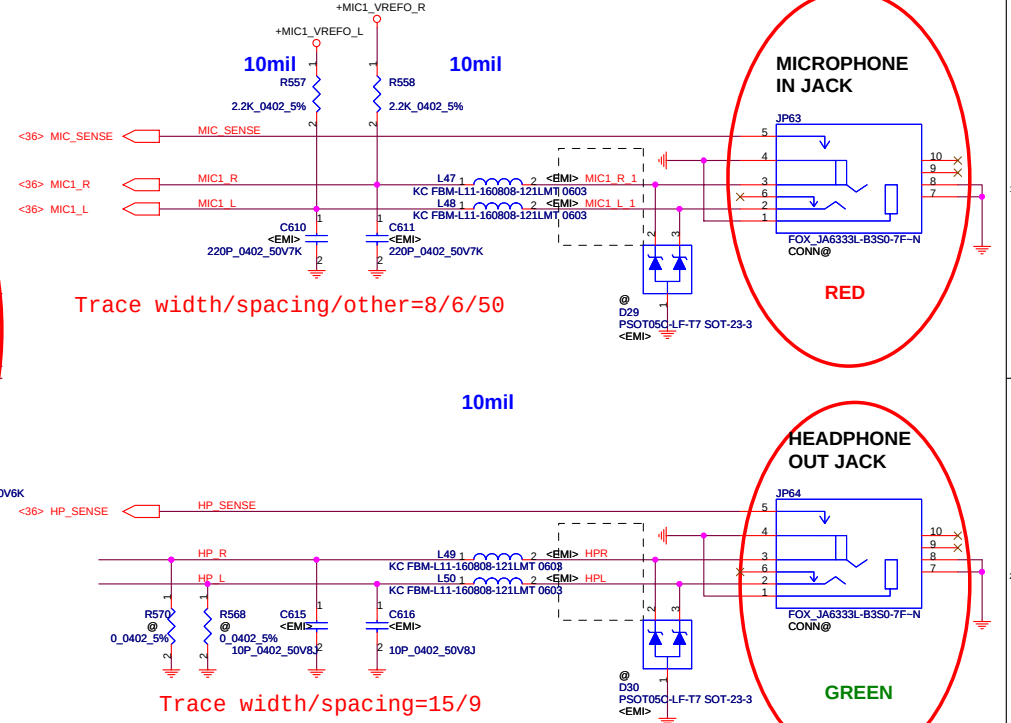
$$R = 1.5\text{K} / C = 1\mu\text{F}$$



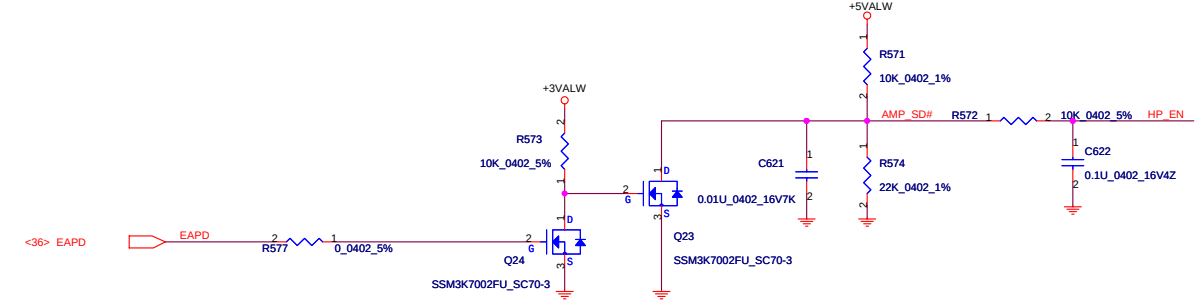
9/5 If implement AMP BEEP, Swap C641 and R524.
R524 change from 0 Ohm to 47K

IN_A Gain = 10dB (Internal Speaker)
IN_H Gain = 0dB (Headphone)

11/28 Modified to X5R
11/28 Change to SE080105K80



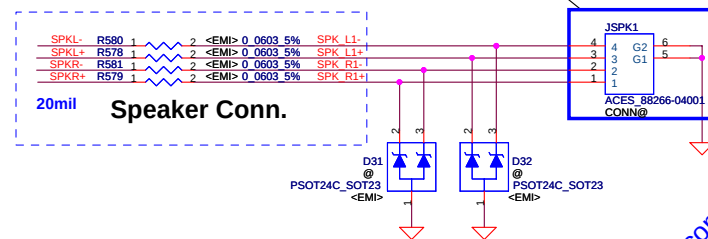
Add below circuit for APA2057 gain tuning use



Gain= 10dB

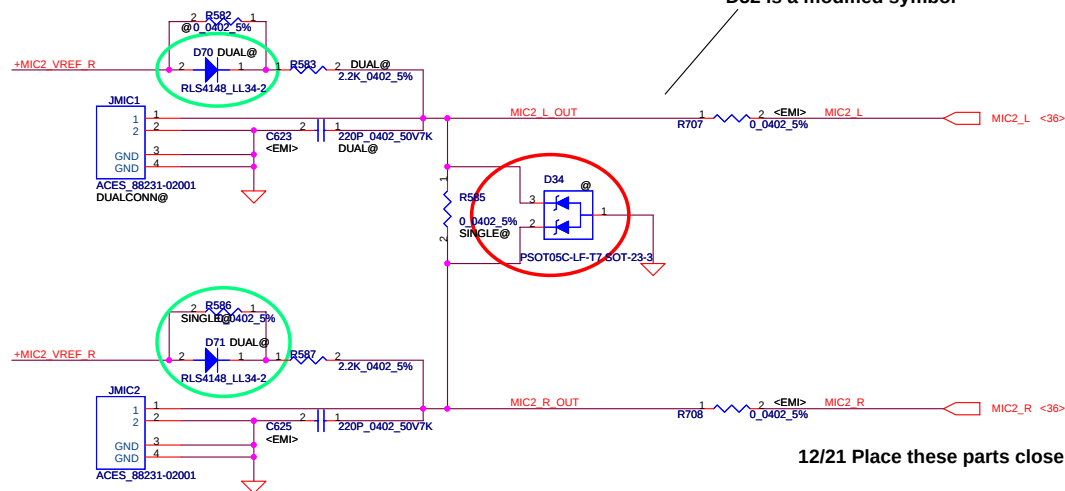
Gain (dB)	Low (V)	High (V)	Recommended (V)
10	3.45	3.51	3.48
11	3.56	3.62	3.59
12	3.68	3.73	3.70
13	3.80	3.85	3.82

+5VALW assume equal 5.1V
10 dB ----> 5.1 x 220 / 320 = 3.5



Security Classification		Compal Secret Data		Compal Electronics Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	AMP/VR/Audio Jack	
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 Customer	Document Number JHXXX M/B LA-4241P Schematic
Date:	Wednesday, May 28, 2008	Sheet	37 of 49	Rev	0.4

D52 is a modified symbol



12/21 Place these parts close to CODEC (U7)

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title		
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.				MIC		
				Size B	Document Number	Rev 0.4
				JHXXXX M/B LA-4241P Schematic		
Date	Wednesday, May 28, 2008	Sheet	38 of 49			

11/27 Add screw for layout request

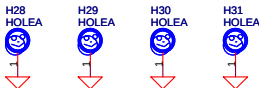
H_3P0



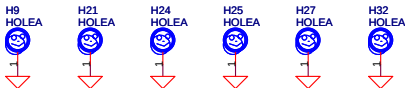
H_3P7



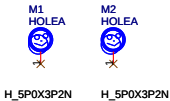
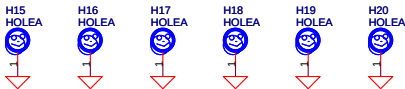
H_4P2



2/22 change these from H_3P7 to H_3P8

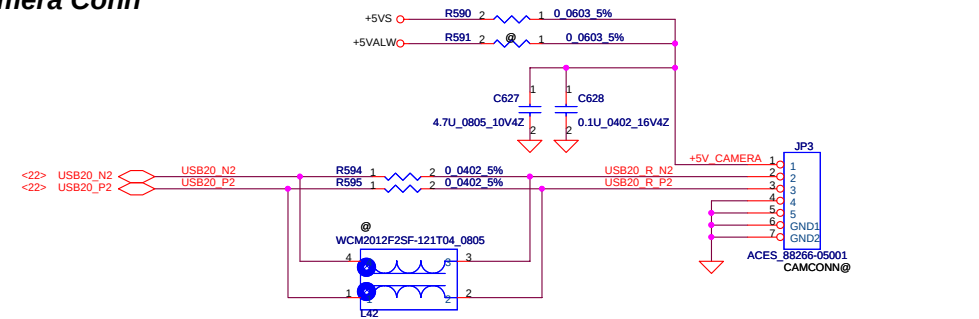


2/22 change these from H_3P2 to H_3P3



11/27 Add screw for layout request

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2007/08/18	Deciphered Date	2008/8/18	Title	
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
				JHXXX M/B LA-4241P Schematic	
				Date:	Friday, April 11, 2008
				Sheet	39 of 49
				Rev	0.4

Camera Conn

05/26 Change D36 from SC300000X00 to SC300000K00

For

EMI 2/1 change JP4 pin 6 to +5VS for LTT FP use

0208 Remove D3 , Add D55 (SC300000G00)

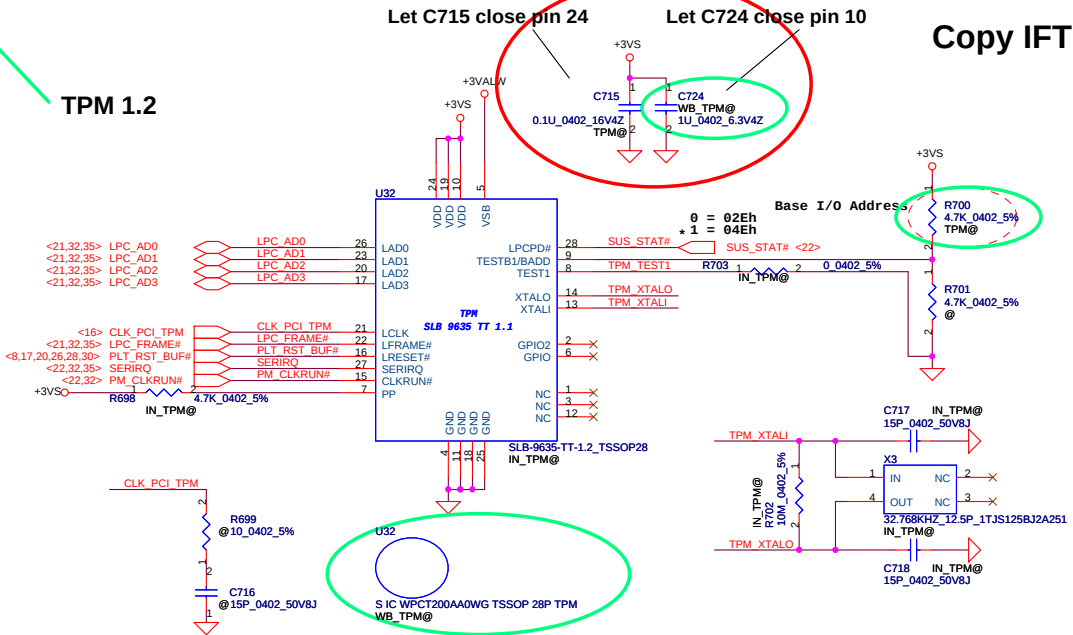
EMI Reg



X76 P/N	Vendor	Location	Bom Structure
X7611630L07	Infineon	C717,C718,R698,R702,R703,U32,X3	IN_TPM@
X7611630L08	Winbond	C724,U32	WB_TPM@

TPM 1.2

05/28 Change R660,R596,R597,R598,R599,R600 to 820ohm for 15W@
05/28 Add R660,R596,R597,R598,R599,R600 to 2kohm for 14W@



12/15 Modified to correct LED symbol!

Security Classification

Compal Secret Data

Issued Date

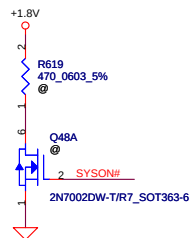
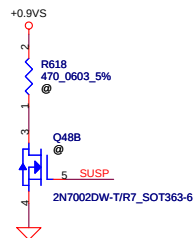
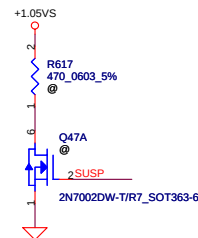
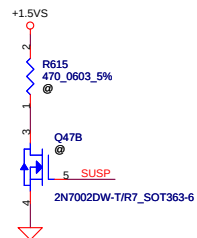
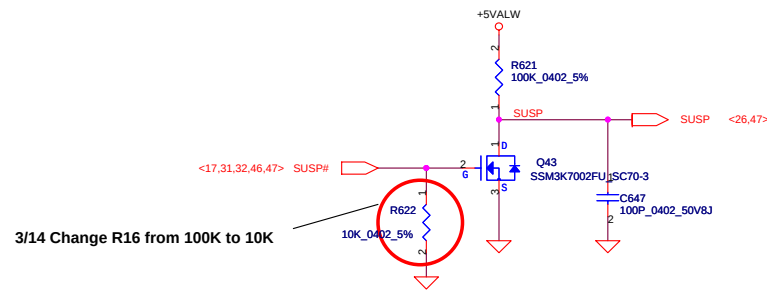
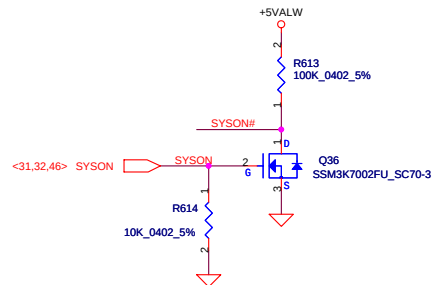
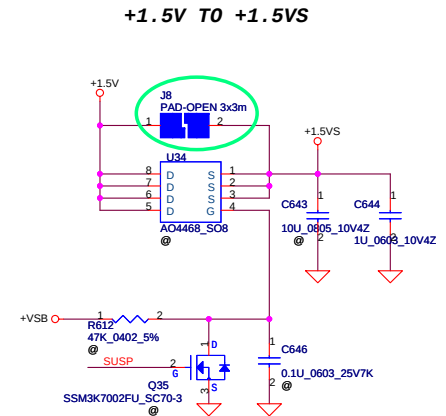
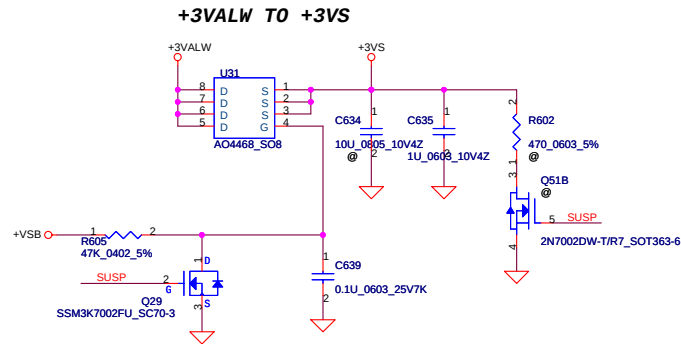
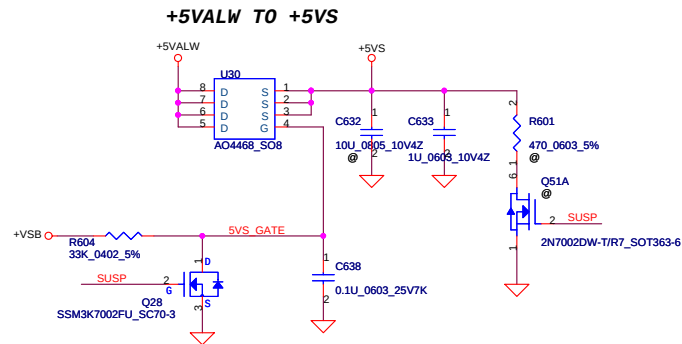
Deciphered Date	2008/8/18
-----------------	-----------

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

Compal Electronics, Inc.

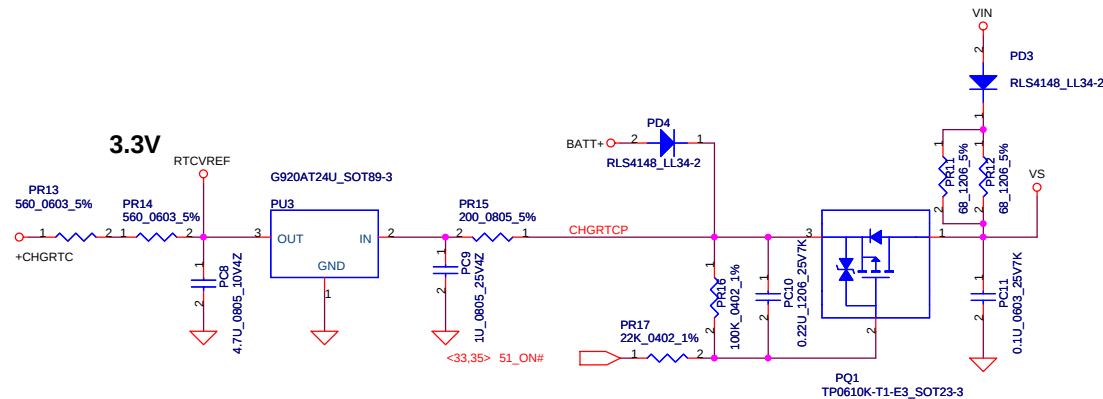
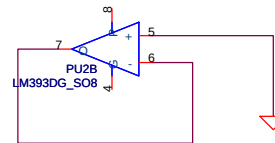
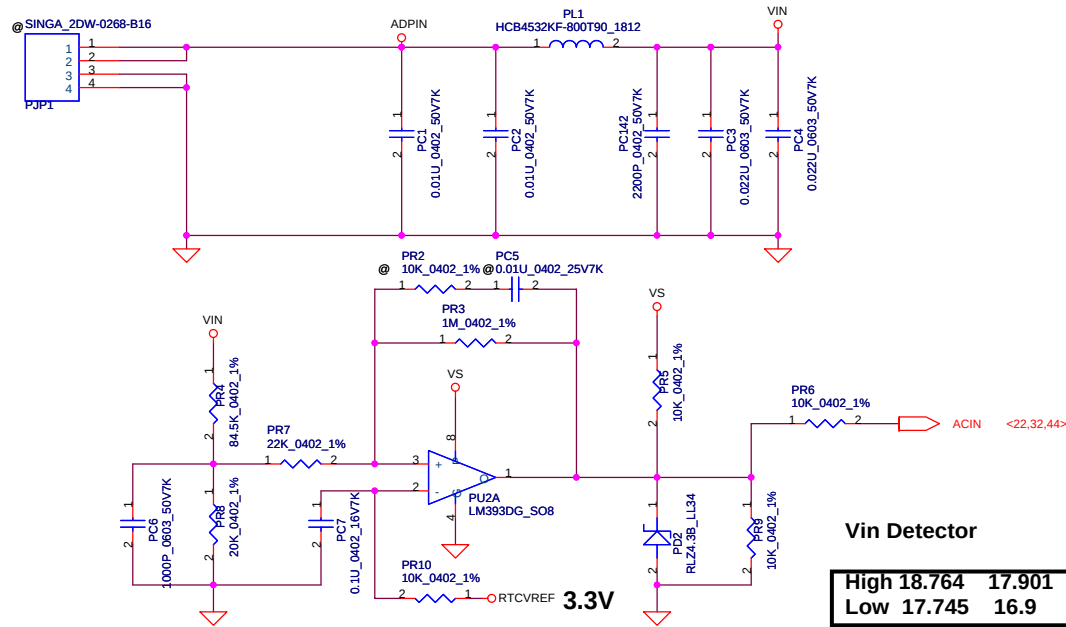
Title	MDC/LED/Camera/FP
-------	-------------------

Size B	Document Number JHXXX M/B LA-4241P Schematic	Rev 0.4
-----------	---	------------



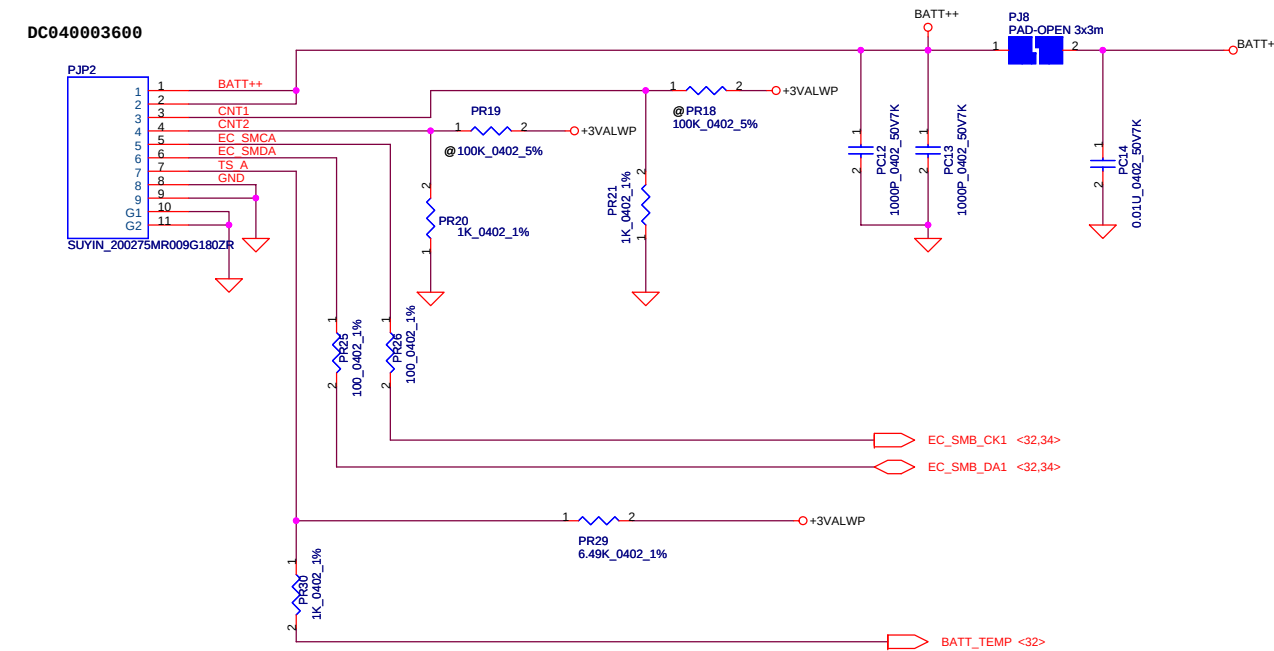
Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2007/08/18				Deciphered Date			
								2008/8/18			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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 Interface			
								Size B			
								Document Number			
								JHXXX M/B LA-4241P Schematic			
								Date: Wednesday, May 28, 2008			
								Sheet 41 of 49			

DC301001Y00

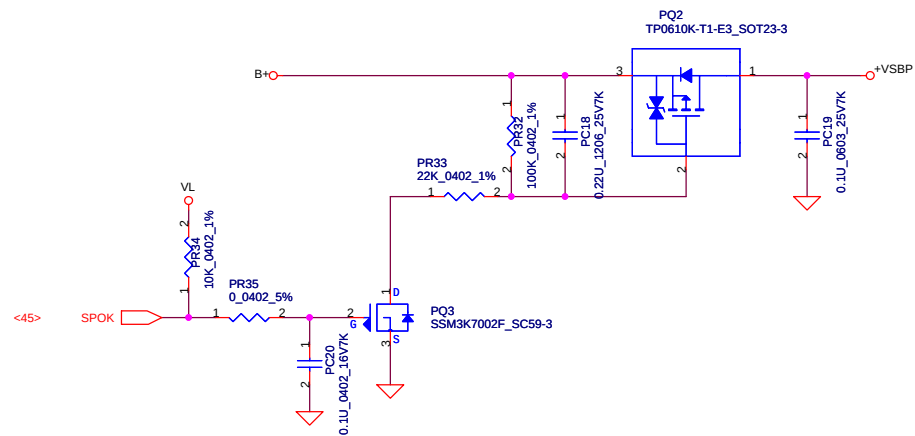
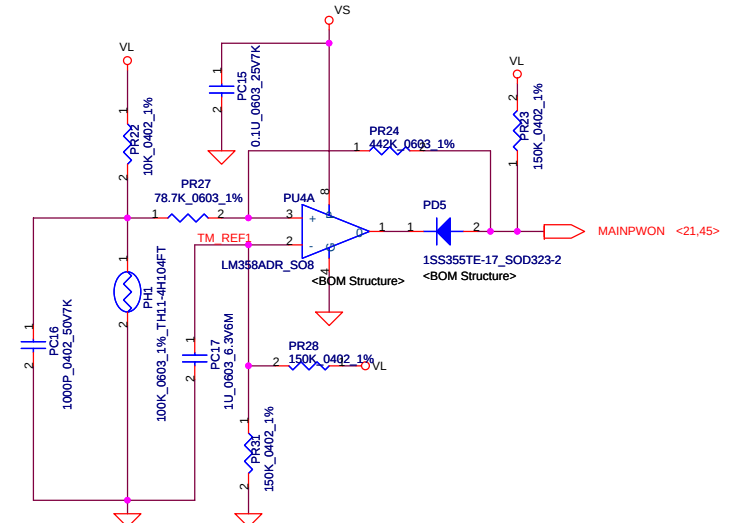


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2005/10/17				Deciphered Date			
2005/10/17				2006/10/17				Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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.				DCIN/DECTOR				Rev 0.2			
Date:				Tuesday, June 03, 2008				Sheet 42 of 49			

DC040003600

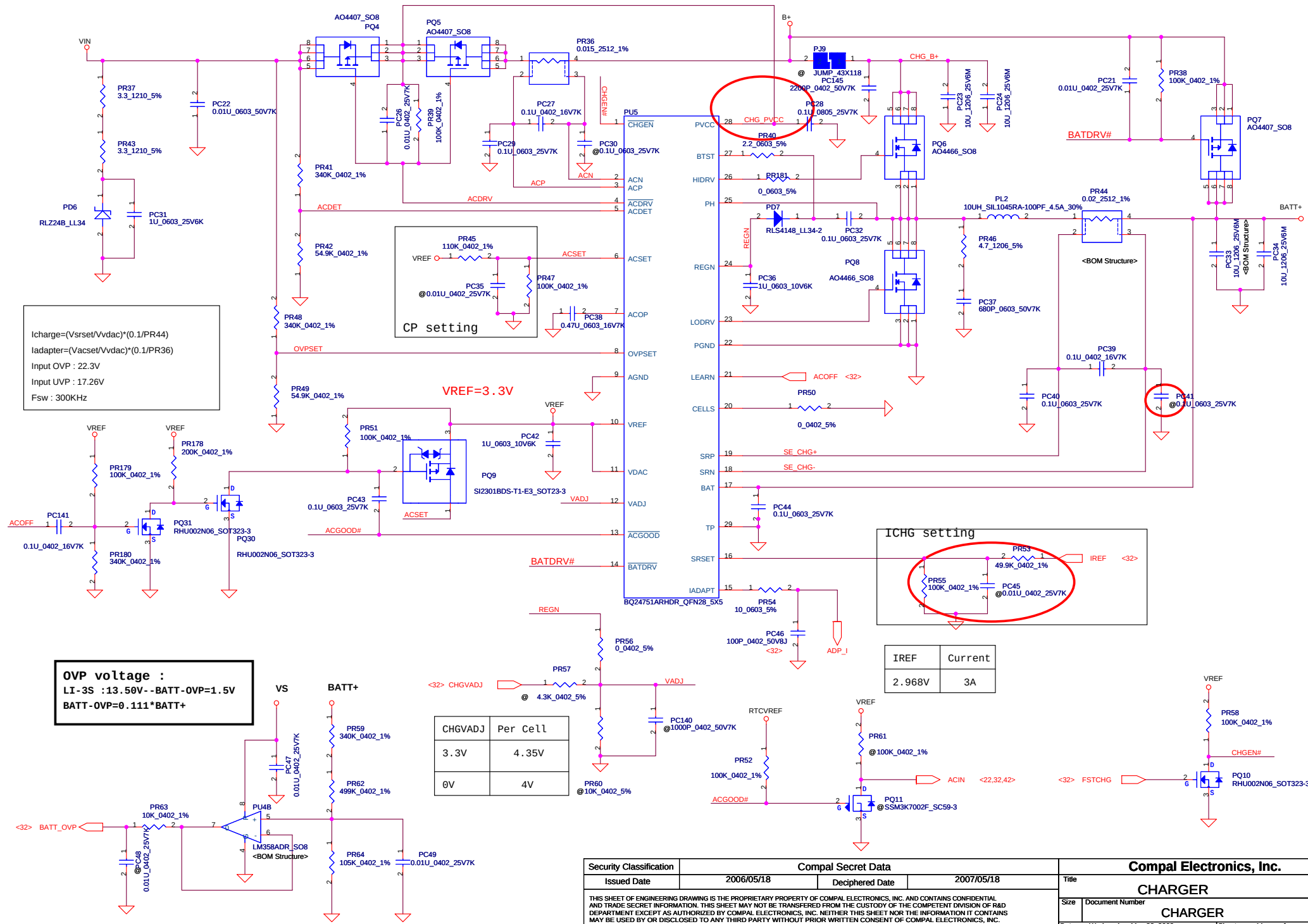


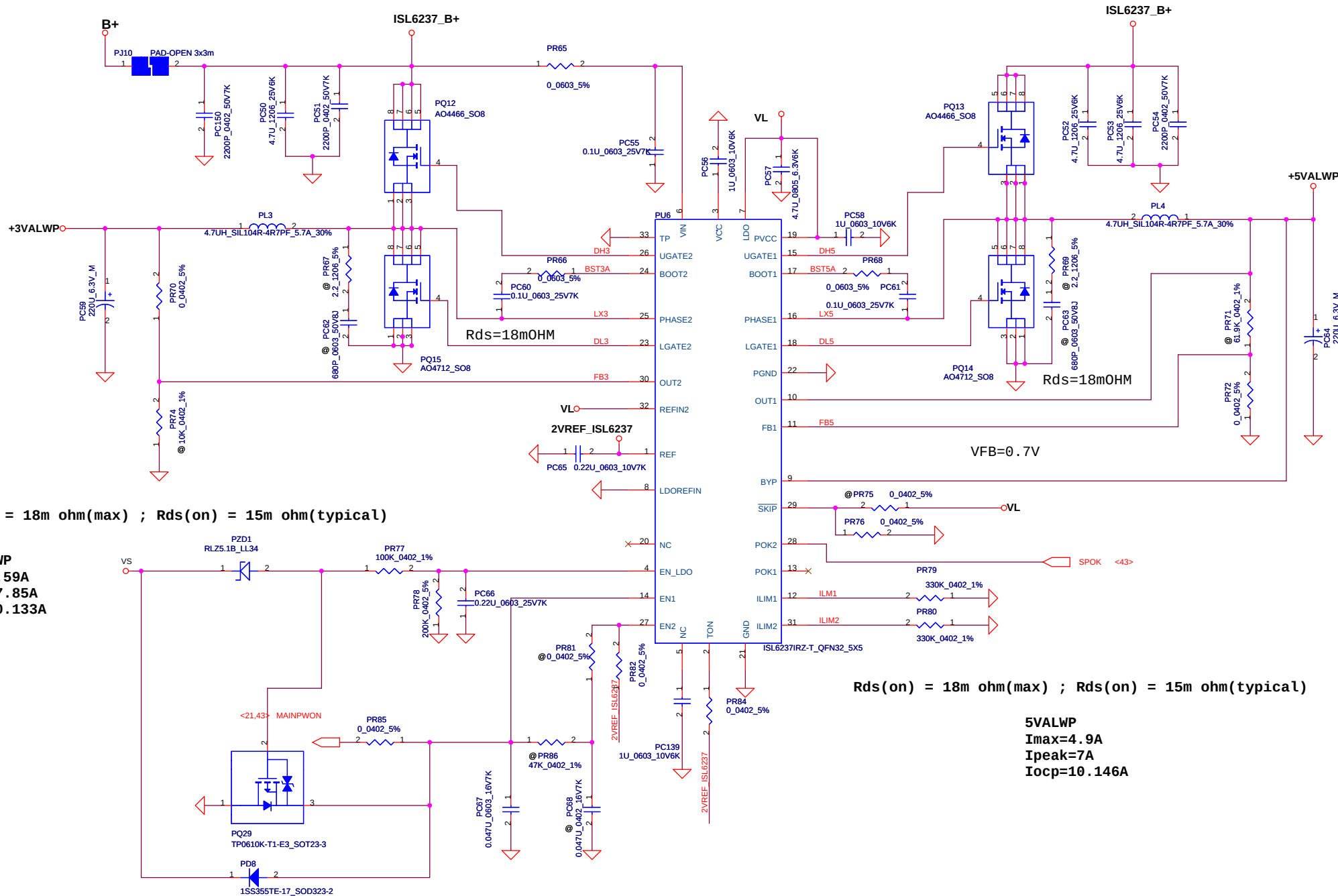
PH1 under CPU botten side :
CPU thermal protection at 89 degree C
Recovery at 70 degree C



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2005/10/17	Deciphered Date	2006/10/17	Title		
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.				BATTERY CONN. 16TP		
				Size B	Document Number	Rev 0.1
				Date: Tuesday, June 03, 2008	Sheet 43 of 49	

65W, Iadapter=0~3.42A, Current sense=0.015ohm, PR45=110K, CP=3.175A
90W, Iadapter=0~4.74A, Current Sense=0.015ohm, PR45=54.9K, CP=4.303A



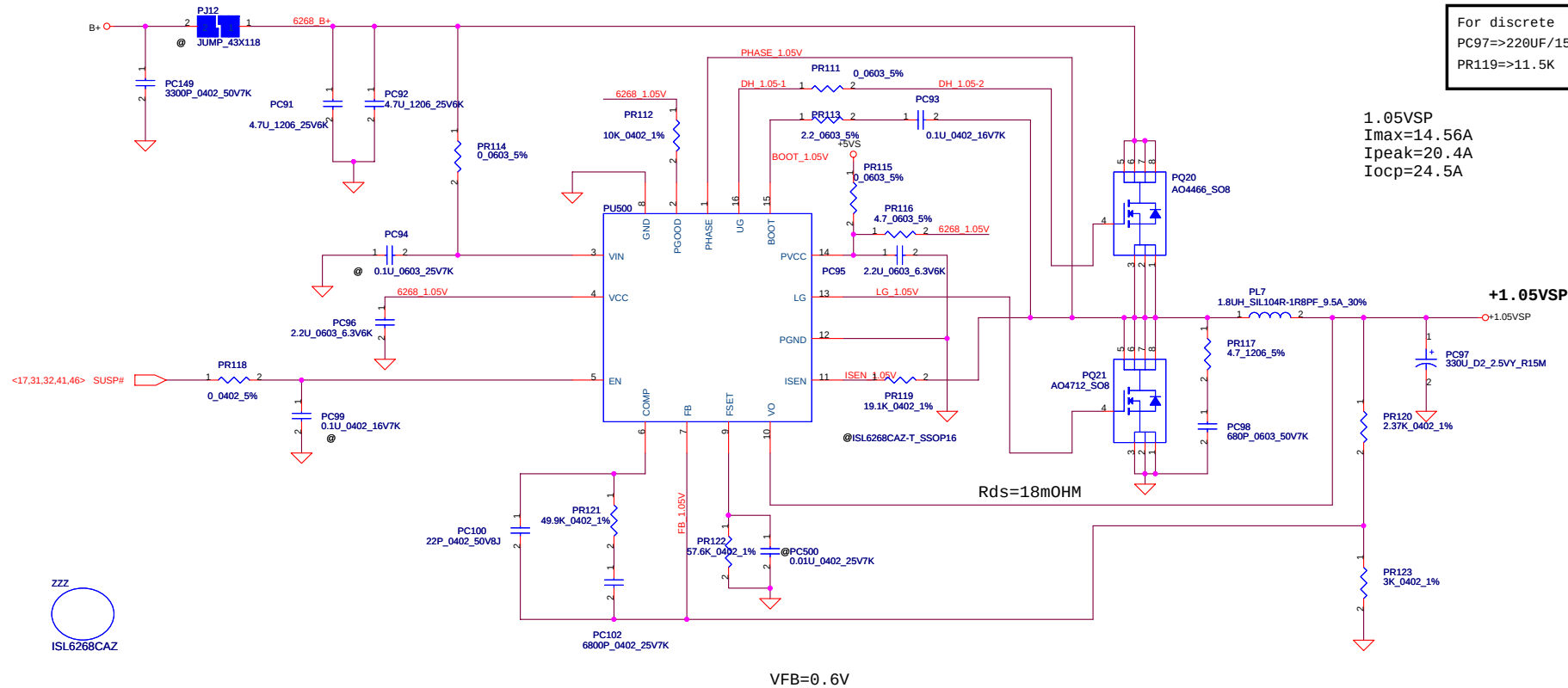


$R_{ds(on)} = 18m\ ohm(max) ; R_{ds(on)} = 15m\ ohm(typical)$

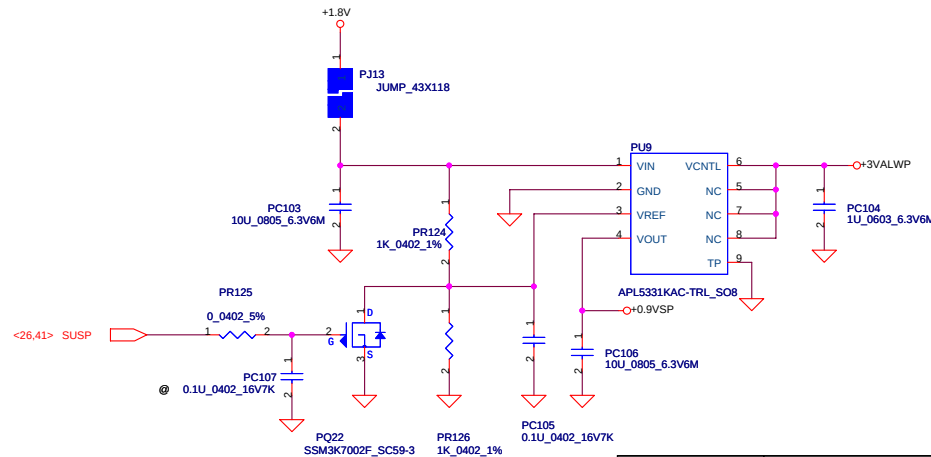
$R_{ds(on)} = 18m\ ohm(max) ; R_{ds(on)} = 15m\ ohm(typical)$

5VALWP
 $I_{max}=4.9A$
 $I_{peak}=7A$
 $I_{ocp}=10.146A$

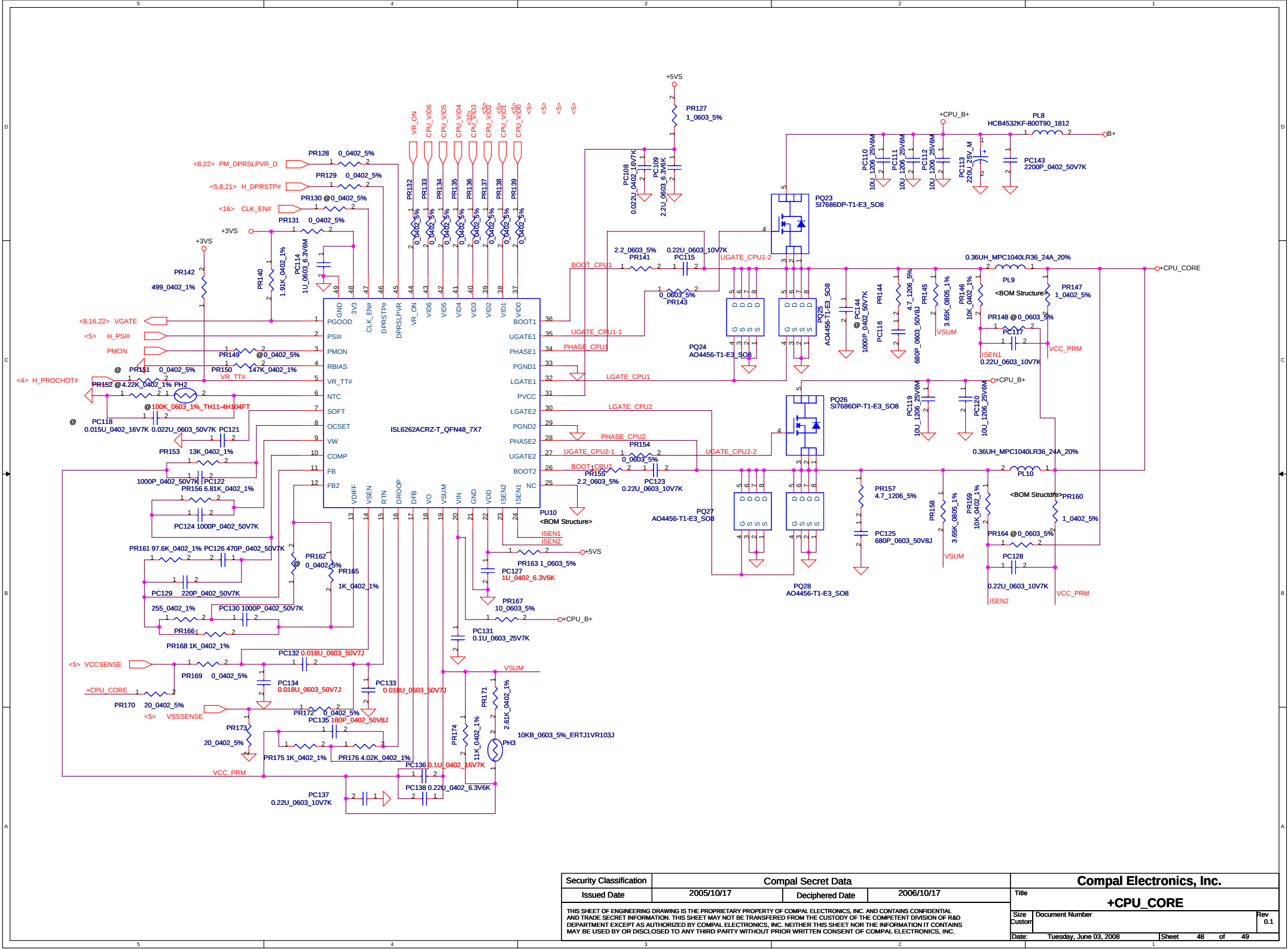
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/10/17	Deciphered Date	2006/10/17	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				+5VALWP/+3VALWP	
Size	Custom	Document Number	45	Rev	0.1
Date	Wednesday, May 28, 2008	Sheet	45	of	49



ZZZ
ISL6268CAZ



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/10/17	Deciphered Date	2006/10/17	Title	
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.				1.05VSP/0.9VSP	
Size	Custom	Document Number	0.1	Rev	
Date:	Wednesday, May 28, 2008	Sheet	47	of	49



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/10/17	Deciphered Date	2006/10/17	Title	
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.				+CPU_CORE	
Size	Custom	Document Number		Rev	0.1
Date:		Tuesday, June 03, 2008	Sheet	48	of 49

page	Reason for change	Modify list
	Add original ACIN detector fun,and del TI fun.	ADD PR6, Del PQ11, PR61
	Change PC28 to 0.1U for common design	PC28
	Change PR16,PR32 & PR77 to 1% for common part	PR16 & PR32 & PR77
	Change PC55 to 0.1U_0603 for common design	PC55
	Add PC139 for 3/5V 2nd source	PC139
	Change PQ21 to A04712 and PL7 to 1.8UH for cost	PQ21 & PL7
	Change PC12 and PC13 to 0402 for source suggest	PC12 & PC13
	Change PR176 to 4.02K for load line	PR176
	Change 1.05V VIN from 5valwp to 5VS. reduce S3 power loss	
	Del PR83 for extra pull-high R	
	Add cpu_core boost and sunnber for EMI request	Add PR141,PR144,PC116,PR155,PR157 &PC125
	Add 1.05VSP boost and sunnber for EMI request	Add PR113,PR117 &PC98
	Fixed CV mode	Add PR56,Del PR57&PR60
	Adjust 1.05V to 1.074 for HW request	Modify PR120 to 2.37K
	Adjust 1.5V to 1.527 for HW request	Modify PR93 to 22K
DVT	Del PR73 for fix 3V in 2nd source	
	Add PQ30,PQ31, PR178,PR179,PR180,PC141	Prevent ACOP protection by charger
	Modify PQ10 to S0T322	Layout limit
	Modify 1.5V to susp#	Add PR177, Del PR170
	Modify PR36 to 0.015 for rating & change PR45 to 100K	
	Modify PL9 & PL10 form NEC to TOKO	
	Modify PR108 to 2.2 for EMI request	
PVT	Fix 5valwp, so del PR71, change PR72 to 0	
	Change PC8 to Y5V type for costdown	
	Change PU6 & PC101 to PU500 &PC500 for BOM	
	Add PC142,PC143,PC144,PC145,PC146,PC147,PC149,PC150 for EMI request	
	Add PR40,PR181,PR107,PR109,PR46,PC37 & Del PR108 for EMI request	
	Change PQ24,PQ25,PQ27,PQ28 to A04456 for EOL	
PVT-1	Move PC500 & PU500 to X76 group.	
Pre-MP	Del PC144 & PC146 for EMI request	

Title		<Title>	
Size	Document Number	Rev	
Custom	<Doc>	<Rev Code>	
Date:	Wednesday, May 28, 2008	Sheet	49 of 49

hexainf@hotmail.com