Model Name: KAL80

PCB NO: LA-4232P

BOM P/N:

Half Penny Bridge 13.3
Compal Confidential

Schematic Document

Cantiga + ICH9

2009 / 06 / 01 Rev:1.0(A00)

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

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Size: Custom | Document Number: *401593* | Rev: C

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Compal confidential

File Name : LA-4232P

Half Penny Bridge 13.3

ZZZ1 PCB

CRT
+CRT_VCC P.16

LVDS Panel Interface
+LCDVDD
+3VS
B+ P.16

Thermal Sensor
ADT7421ARMZ
+3VS P.4

Fan conn
+5VS P.4

Penryn -4MB (Socket P)
uFCPGA-478 CPU
+CPU_CORE
+VCCP
+1.5VS P.4,5,6

H_A#(3..35)
H_D#(0..63)
FSB
800/1066 MHz 1.05V

CK505 SM IC -72
Clock Generator
CS9LPRS387BKLFT
+1.05VS_CK505
+3VS_CK505 P.15

nVidia
NB9M-GS
+1.8VS
+VGA_CORE
+1.1V_GFX_PCIE
+3VS P.31,32,33,34

VRAM x 2
+1.8VS P.35

Intel Cantiga MCH
1329pin BGA
+3VS_DAC_CRT
+3VS_DAC_BG
+1.05VS_DPLLA
+1.05VS_DPLLB
+VCCP
+1.8V_TXLVDS P.7,8,9,10,11,12

DDR2 667/800MHz 1.8V
Dual Channel

DDR2-SO-DIMM X2
BANK 0, 1, 2, 3
+1.8V +0.9VS P.13,14

DMI X4
C-Link

Intel ICH9-M
676pin BGA
+RTCVCC
+1.5VS
+VCCP
+3VALW P.17,18,19,20

USB2.0
Azalia
SATA 0
SATA 1

PCI-E BUS

USB conn x 4
+5VALW P.29

FingerPrinter
+3VS P.29

Felica Conn
+5VS P.29

BT Conn
+3VS P.29

Camera
+5VS +3VS P.29

Express Card
+3VS +1.5VS P.26

Mini-Card-1
+1.5VS +3VS P.23

10/100/1000 LAN
REALTEK
RTL8111DL
+LAN_IO P.21

RJ45/11 CONN

Mini-Card-1
(WLAN)
+1.5VS
+3VS P.23

CardBus Controller
O2MICRO OZ888
+1.8VS_CB
+3VS_PHY P.30

1394

Media Card
+3VS_CR

Express Card
+1.5VS
+3VS P.26

LPC

TPM
SLB 9635
+3VS P.28

LPC

LPC BUS

Mini-Card-2
(WLAN)
+1.5VS
+3VS P.23

ENE KB926
+3VALW
+EC_AVCC P.27

Touch Pad CONN.
+5VS P.28

Int.KBD
P.28

BIOS(System/EC)
+3VALW P.27

Digital Mic
P.24

Audio CODEC
92HD81
+3VS
+5VS P.24

Audio Jack
P.24

SATA HDD Connector
+5VS P.22

CDROM Conn.
+5VS P.22

Power On/Off CKT.
P.28

DC/DC Interface CKT.
+5VS P.36

Power Circuit DC/DC
P.36~P.45

RTC CKT.
+RTCVCC P.39

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Voltage Rails

O MEANS ON X MEANS OFF

State \ power plane	+B	+5VALW +3VALW	+1.8V	+5VS +3VS +1.5VS +0.9V +VCCP +CPU_CORE +VGA_CORE +1.8VS +1.1VS +0.9VGA
S0	0	0	0	0
S1	0	0	0	0
S3	0	0	0	X
S5 S4/AC	0	0	X	X
S5 S4/ Battery only	0	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :

: means Digital Ground

: means Analog Ground

@ : means just reserve , no build
CONN@: connect
VGA@: discrete component
UMA@: uma component
TPM@: TPM compoent

PCI EXPRESS	DESTINATION
Lane 1	NA
Lane 2	GLAN RTL8111DL
Lane 3	MINI CARD-2 WLAN
Lane 4	EXPRESS CARD
Lane 5	CARD READER OZ888
Lane 6	NA

SATA	DESTINATION
Lane 0	HDD
Lane 1	ODD
Lane 4	NA
Lane 5	NA

	USB PORT#	DESTINATION
ICH9-M	0	JUSBP1
	1	CAMERA
	2	JUSBP3(SINGLE)
	3	Felica
	4	Blue Tooth
	5	Finger Printer
	6	JMINI2-WLAN
	7	Express card
	8	JUSBP3(DUEL TOP)
	9	JUSBP3(DUEL BOTTOM)
	10	NA
	11	NA

SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	THERMAL SENSOR (CPU)	SODIMM	CLK CHIP	MINI CARD	LCD
SMB_EC_CK1 SMB_EC_DA1	KB926	X	V	V	X	X	X	X	X
SMB_EC_CK2 SMB_EC_DA2	KB926	X	X	X	V	X	X	X	X
SMB_CK_CLK1 SMB_CK_DAT1	ICH9	X	X	X	X	V	V	X	X
LCD_CLK LCD_DAT	Cantiga	X	X	X	X	X	X	X	V

I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	10100000
DDR SO-DIMM 1	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010

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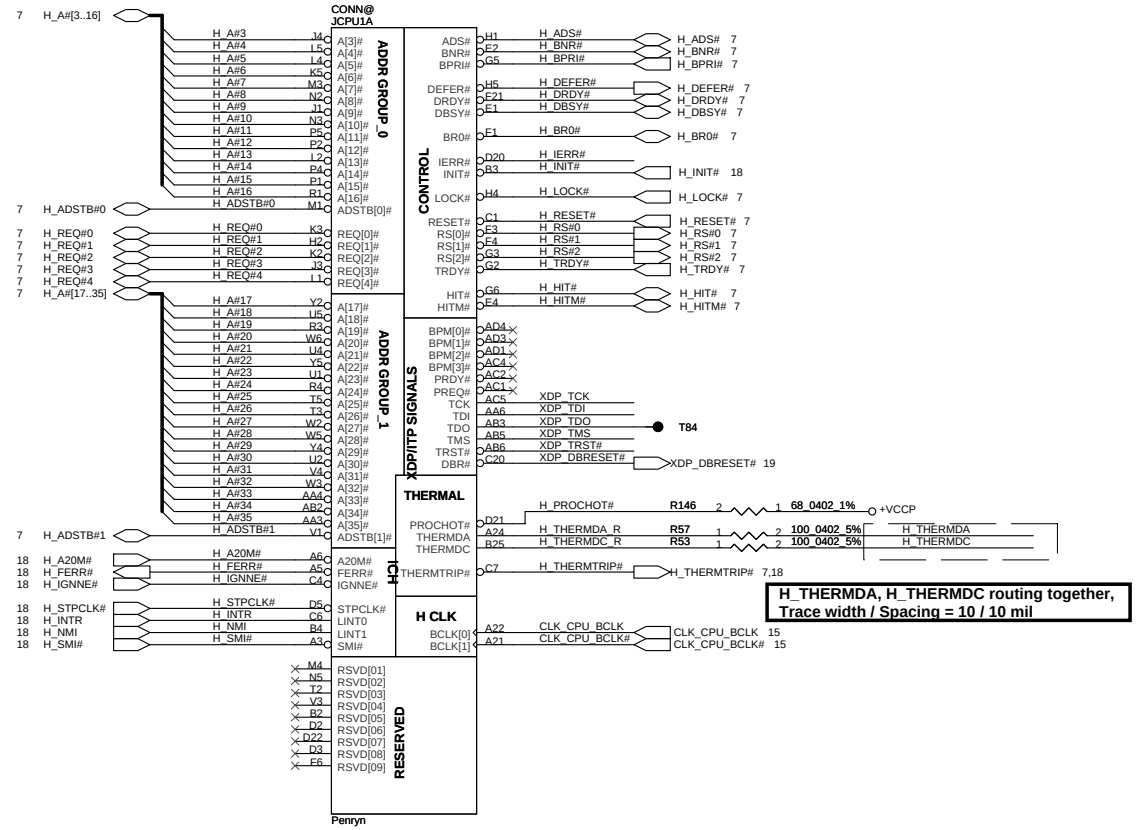
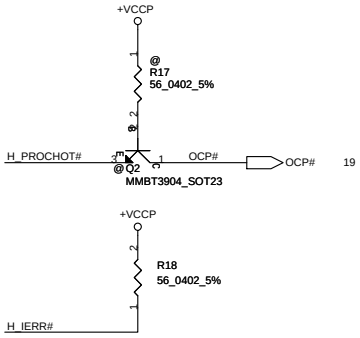
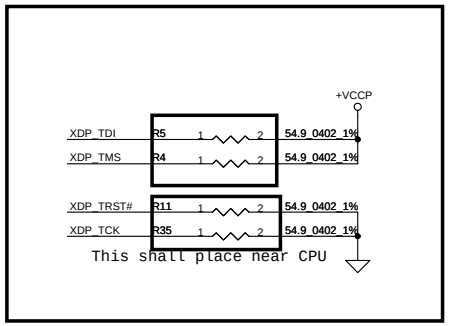
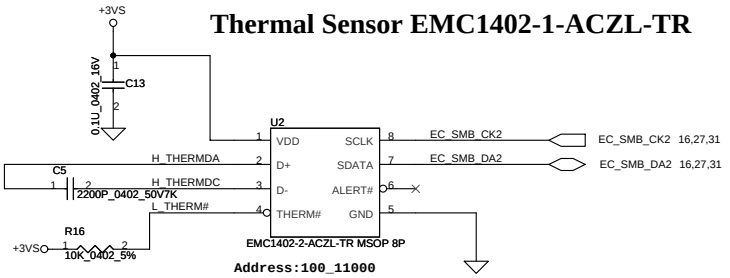


H_THERMDA, H_THERMDC routing together, Trace width / Spacing = 10 / 10 mil

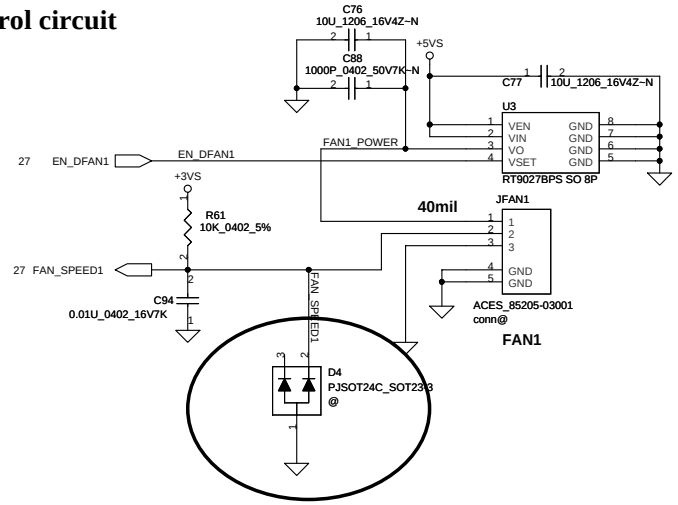




Thermal Sensor EMC1402-1-ACZL-TR



FAN Control circuit



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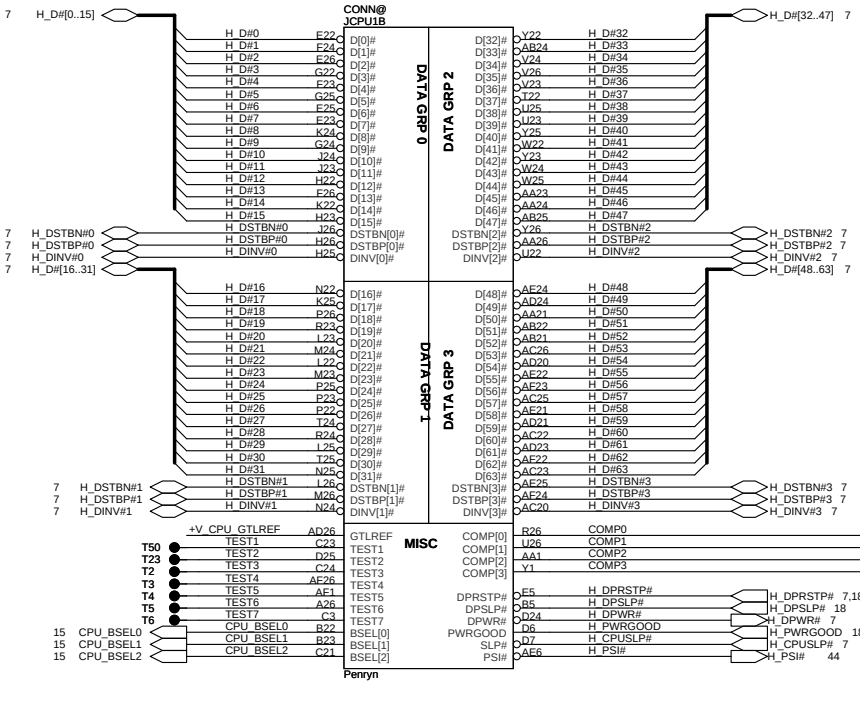
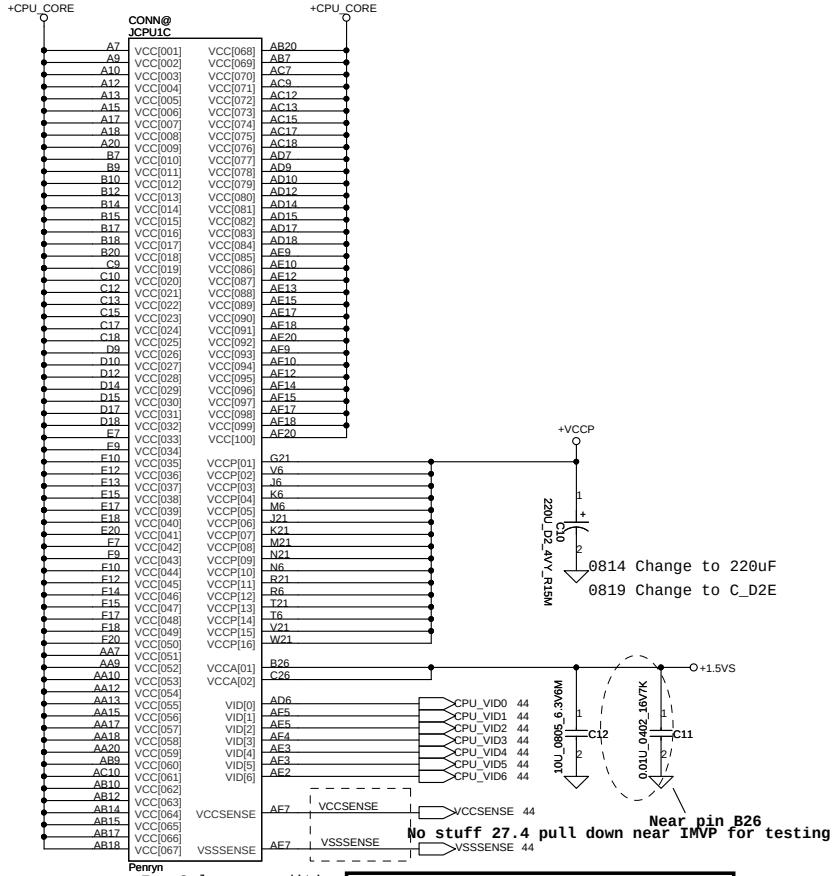


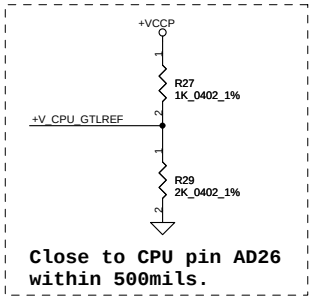


layout note: Rout H_DPRSTP# from ICH9 to IMVP6 then to GMCH & CPU

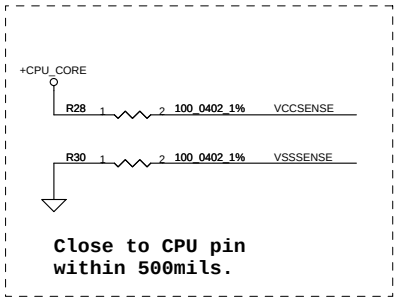
layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

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

Resistor placed within 0.5" of CPU pin.Trace should be at least 25 mils away from any other toggling signal. COMP[0,2] trace width is 21 mils. COMP[1,3] trace width is 5



Length match within 25 mils. The trace width/space/other is 20/7/25.



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High Frequence Decoupling

10uF 0805 X5R -> 85 degree.

Place these caps inside the CPU socket cavity.
(Left side on Top).

+CPU_CORE

C216 10U_0805_6.3V6M, C205 10U_0805_6.3V6M, C529 10U_0805_6.3V6M, C232 10U_0805_6.3V6M, C258 10U_0805_6.3V6M, C505 10U_0805_6.3V6M, C504 10U_0805_6.3V6M

Place these caps inside the CPU socket.
(Left side on Top).

C257 10U_0805_6.3V6M, C261 10U_0805_6.3V6M, C214 10U_0805_6.3V6M

Place these caps inside the CPU socket cavity.
(Right side on Top side).

+CPU_CORE

C190 10U_0805_6.3V6M, C210 10U_0805_6.3V6M, C254 10U_0805_6.3V6M, C208 10U_0805_6.3V6M, C203 10U_0805_6.3V6M, C200 10U_0805_6.3V6M, C206 10U_0805_6.3V6M

Place these caps inside the CPU socket.
(Right side on Top).

C204 10U_0805_6.3V6M, C215 10U_0805_6.3V6M, C226 10U_0805_6.3V6M

Place these caps inside the CPU socket cavity.
(Left side on Bottom).

+CPU_CORE

C501 10U_0805_6.3V6M, C508 10U_0805_6.3V6M, C514 10U_0805_6.3V6M, C519 10U_0805_6.3V6M, C522 10U_0805_6.3V6M, C533 10U_0805_6.3V6M

Place these caps inside the CPU socket cavity.
(Right side on Bottom).

+CPU_CORE

C502 10U_0805_6.3V6M, C510 10U_0805_6.3V6M, C515 10U_0805_6.3V6M, C520 10U_0805_6.3V6M, C526 10U_0805_6.3V6M, C532 10U_0805_6.3V6M

Place these caps inside the CPU socket.
(Left side on Top).

+CPU_CORE

C202 330U_D2E_2.5VM_R9, C207 330U_D2E_2.5VM_R9

C259 330U_D2E_2.5VM_R9, C255 330U_D2E_2.5VM_R9

Place these caps inside the CPU socket.
(Right side on Top side).

ESR <= 1.5m ohm

Capacitor > 880 uF

CONN@
JCPU1D

A4	VSS[001]	VSS[082]	P6
A8	VSS[002]	VSS[083]	P21
A11	VSS[003]	VSS[084]	P24
A14	VSS[004]	VSS[085]	R2
A16	VSS[005]	VSS[086]	R5
A19	VSS[006]	VSS[087]	R22
A23	VSS[007]	VSS[088]	R25
AF2	VSS[008]	VSS[089]	T1
B6	VSS[009]	VSS[090]	T4
B8	VSS[010]	VSS[091]	T23
B11	VSS[011]	VSS[092]	T26
B13	VSS[012]	VSS[093]	U3
B16	VSS[013]	VSS[094]	U6
B19	VSS[014]	VSS[095]	U21
B21	VSS[015]	VSS[096]	U24
B24	VSS[016]	VSS[097]	V2
C5	VSS[017]	VSS[098]	V5
C8	VSS[018]	VSS[099]	V22
C11	VSS[019]	VSS[100]	V25
C14	VSS[020]	VSS[101]	W1
C16	VSS[021]	VSS[102]	W4
C19	VSS[022]	VSS[103]	W23
C2	VSS[023]	VSS[104]	W26
C22	VSS[024]	VSS[105]	Y3
C25	VSS[025]	VSS[106]	Y6
D1	VSS[026]	VSS[107]	Y21
D4	VSS[027]	VSS[108]	Y24
D8	VSS[028]	VSS[109]	AA2
D11	VSS[029]	VSS[110]	AA5
D13	VSS[030]	VSS[111]	AA8
D16	VSS[031]	VSS[112]	AA11
D19	VSS[032]	VSS[113]	AA14
D23	VSS[033]	VSS[114]	AA16
D26	VSS[034]	VSS[115]	AA19
E3	VSS[035]	VSS[116]	AA22
E6	VSS[036]	VSS[117]	AA25
E8	VSS[037]	VSS[118]	AB1
E11	VSS[038]	VSS[119]	AB4
E14	VSS[039]	VSS[120]	AB8
E16	VSS[040]	VSS[121]	AB11
E19	VSS[041]	VSS[122]	AB13
E21	VSS[042]	VSS[123]	AB16
E24	VSS[043]	VSS[124]	AB19
F5	VSS[044]	VSS[125]	AB23
F8	VSS[045]	VSS[126]	AB26
F11	VSS[046]	VSS[127]	AC3
F13	VSS[047]	VSS[128]	AC6
F16	VSS[048]	VSS[129]	AC8
F19	VSS[049]	VSS[130]	AC11
F2	VSS[050]	VSS[131]	AC14
F22	VSS[051]	VSS[132]	AC16
F25	VSS[052]	VSS[133]	AC19
G4	VSS[053]	VSS[134]	AC21
G1	VSS[054]	VSS[135]	AC24
G23	VSS[055]	VSS[136]	AD2
G26	VSS[056]	VSS[137]	AD5
H3	VSS[057]	VSS[138]	AD8
H6	VSS[058]	VSS[139]	AD11
H21	VSS[059]	VSS[140]	AD13
H24	VSS[060]	VSS[141]	AD16
J2	VSS[061]	VSS[142]	AD19
J5	VSS[062]	VSS[143]	AD22
J22	VSS[063]	VSS[144]	AD25
J25	VSS[064]	VSS[145]	AE1
K1	VSS[065]	VSS[146]	AE4
K4	VSS[066]	VSS[147]	AE8
K23	VSS[067]	VSS[148]	AE11
K26	VSS[068]	VSS[149]	AE14
L3	VSS[069]	VSS[150]	AE16
L6	VSS[070]	VSS[151]	AE19
L21	VSS[071]	VSS[152]	AE23
L24	VSS[072]	VSS[153]	AE26
M2	VSS[073]	VSS[154]	A2
M5	VSS[074]	VSS[155]	AE6
M22	VSS[075]	VSS[156]	AE8
M25	VSS[076]	VSS[157]	AE11
N1	VSS[077]	VSS[158]	AE13
N4	VSS[078]	VSS[159]	AE16
N23	VSS[079]	VSS[160]	AE19
N26	VSS[080]	VSS[161]	AE21
P3	VSS[081]	VSS[162]	A25
		VSS[163]	AE25

Penryn

+VCCP

C213 0.1U_0402_16V, C209 0.1U_0402_16V, C212 0.1U_0402_16V, C185 0.1U_0402_16V, C183 0.1U_0402_16V, C184 0.1U_0402_16V

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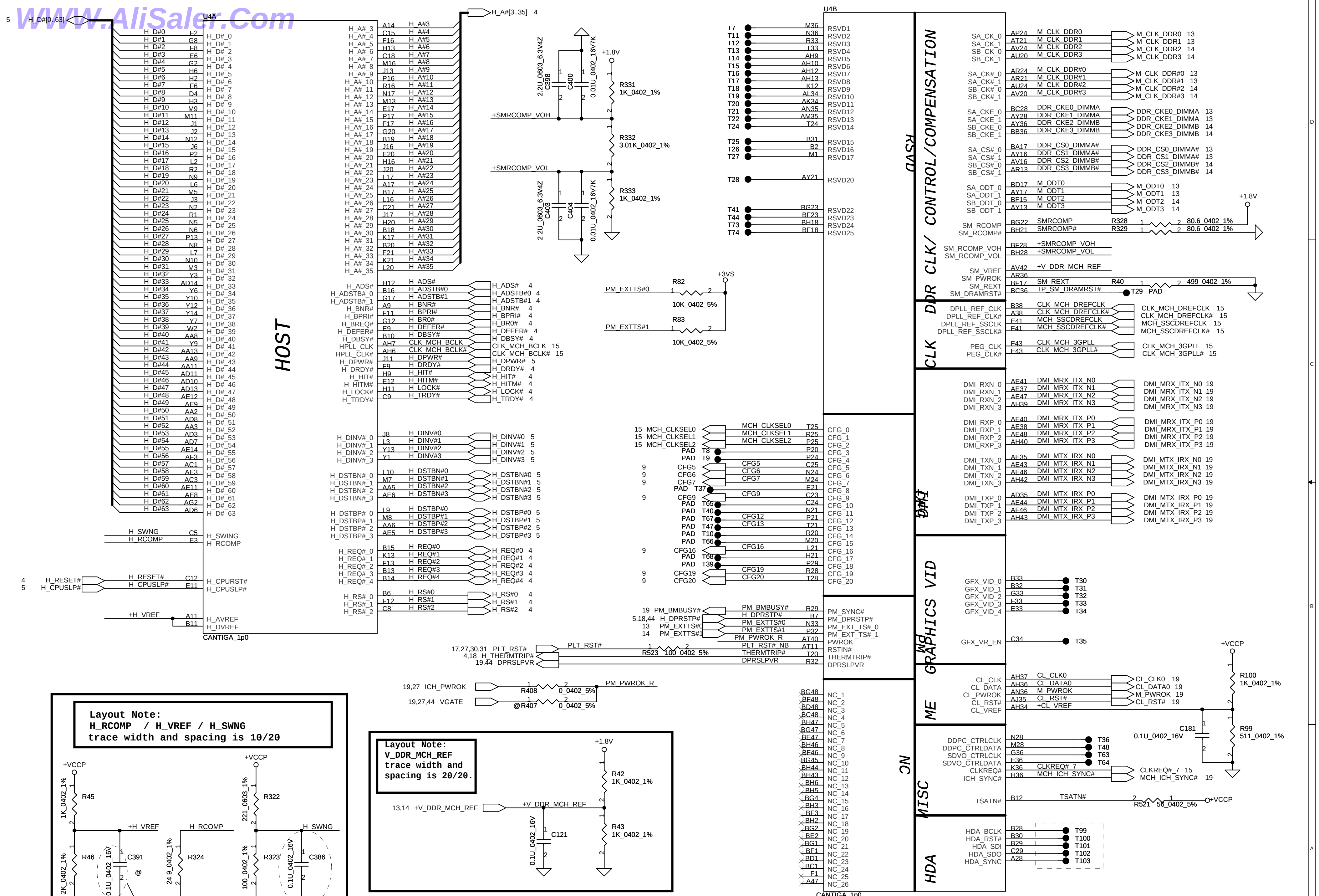

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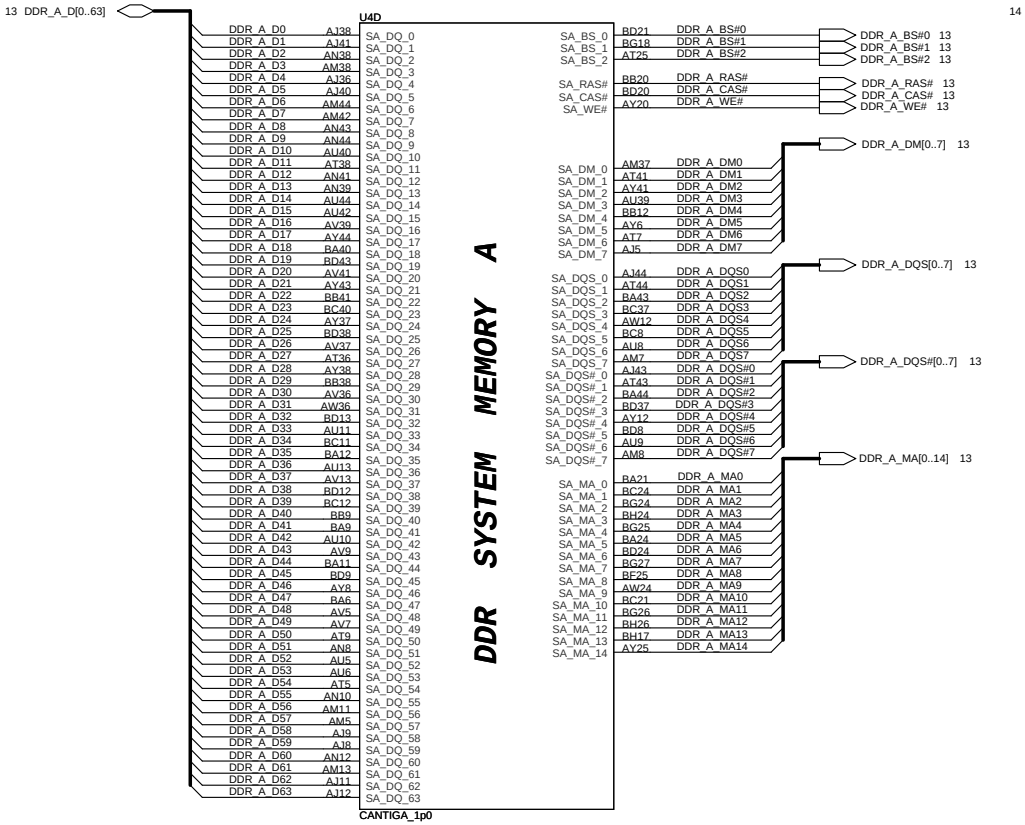

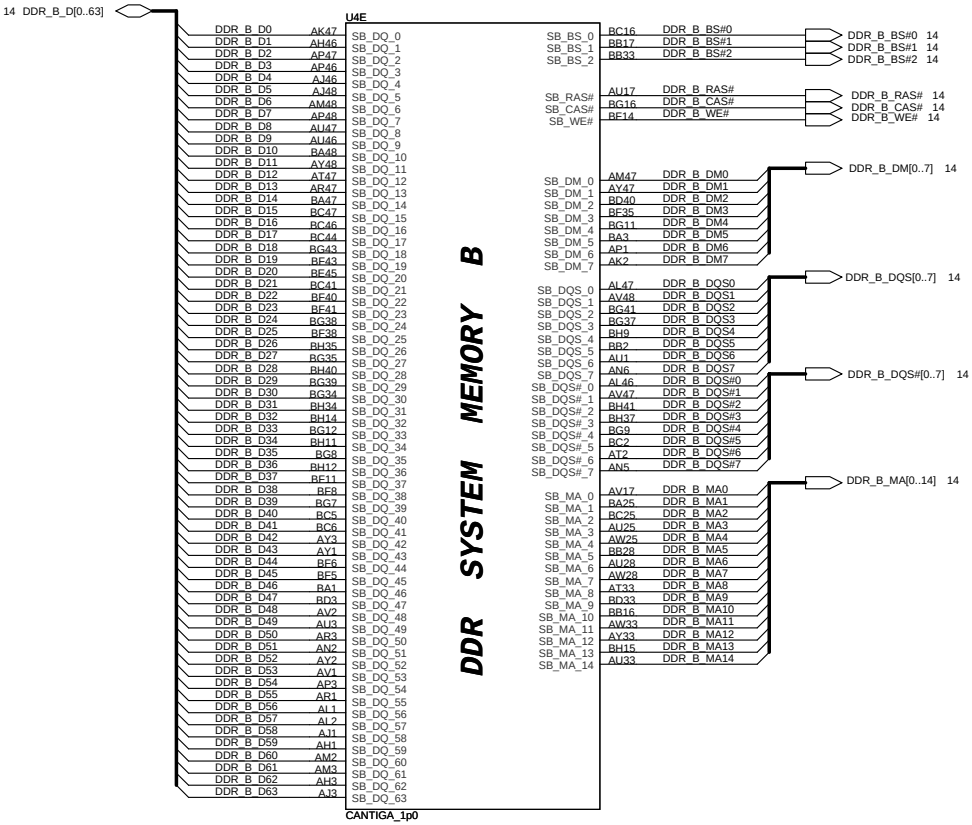

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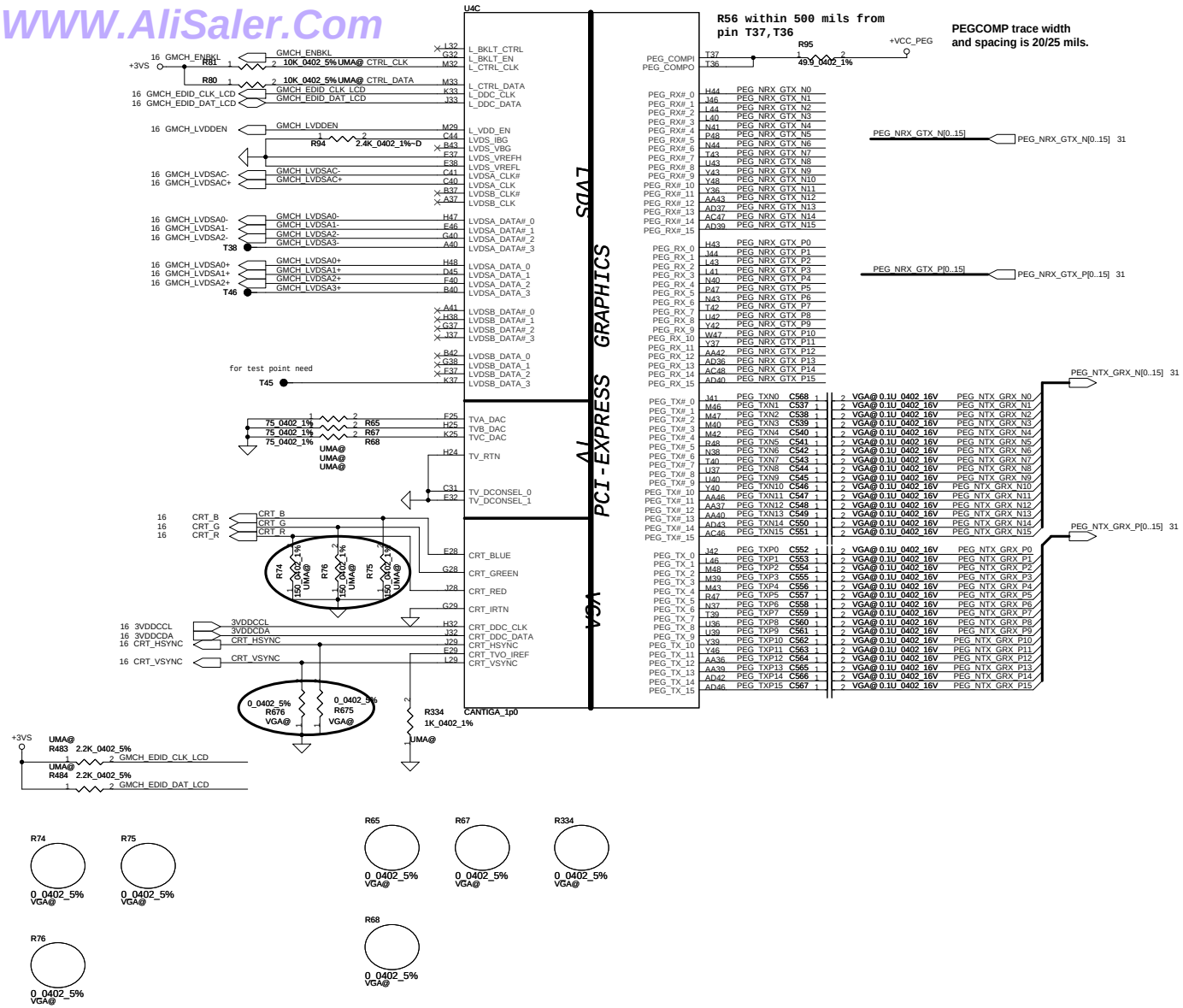
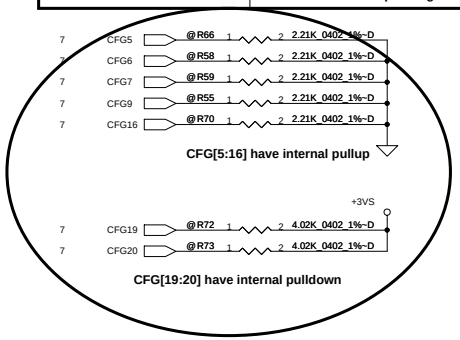


Strap Pin Table

CFG[2:0] FSB Freq select	000 = FSB 1066MHz 010 = FSB 800MHz 011 = FSB 667MHz Others = Reserved
CFG[4:3]	Reserved
CFG5 (DMI select)	0 = DMI x 2 1 = DMI x 4 *
CFG6	0 = The iTPM Host Interface is enable * 1 = The iTPM Host Interface is disable
CFG7 (Intel Management Engine Crypto strap)	0 =(TLS)chiper suite with no confidentiality 1 =(TLS)chiper suite with confidentiality *
CFG8	Reserved
CFG9 (PCIE Graphics Lane Reversal)	0 = Reverse Lane,15->0, 14->1 1 = Normal Operation,Lane Number in order *
CFG10 (PCIE Lookback enable)	0 = Enable 1 = Disable *
CFG11	Reserved
CFG[13:12] (XOR/ALLZ)	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation(Default) *
CFG[15:14]	Reserved
CFG16 (FSB Dynamic ODT)	0 = Disabled 1 = Enabled *
CFG[18:17]	Reserved
CFG19 (DMI Lane Reversal)	0 = Normal Operation * (Lane number in Order) 1 = Reverse Lane
CFG20 (PCIE/SDVO concurrent)	0 = Only PCIE or SDVO is operational. * 1 = PCIE/SDVO are operating simu.



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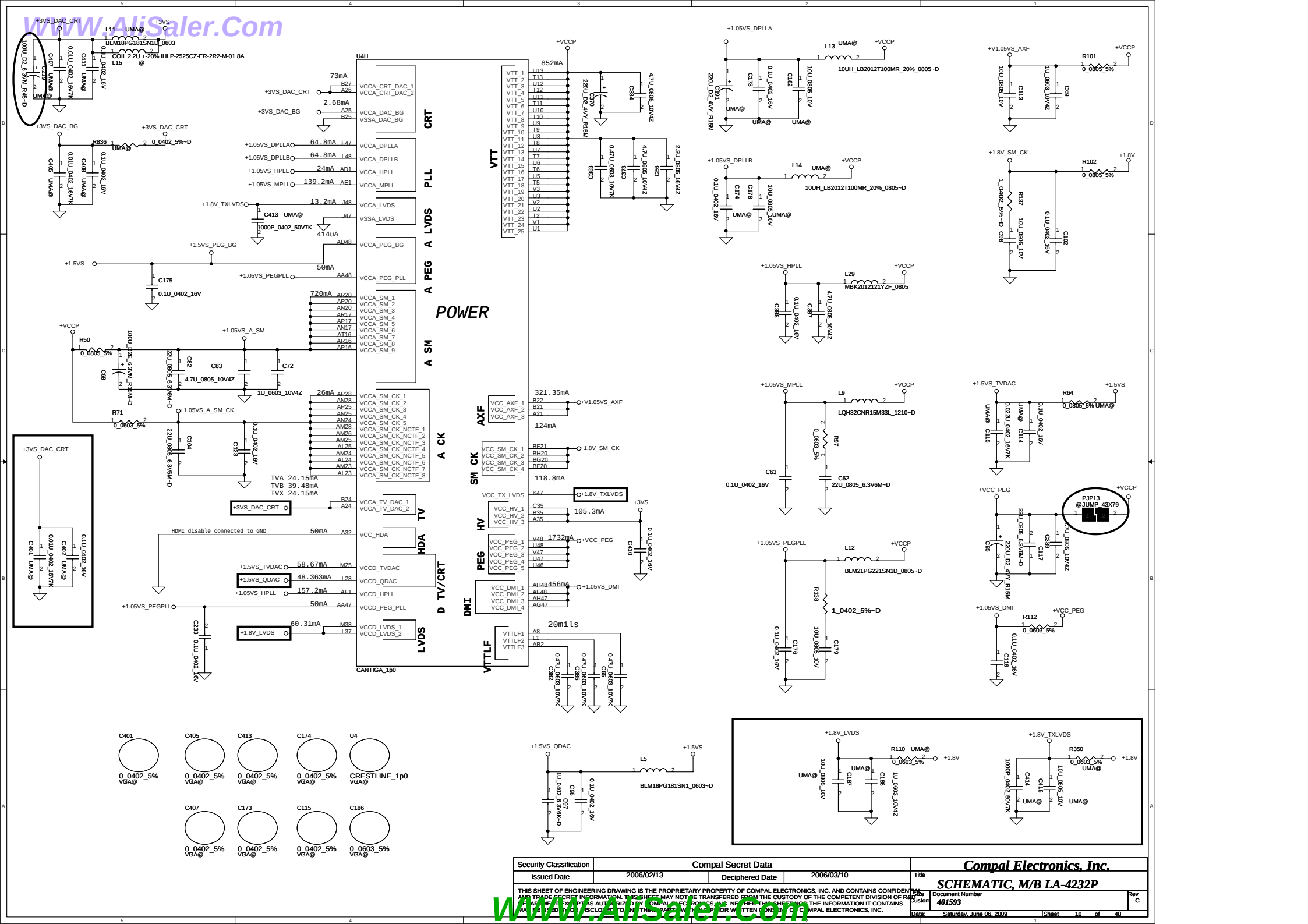

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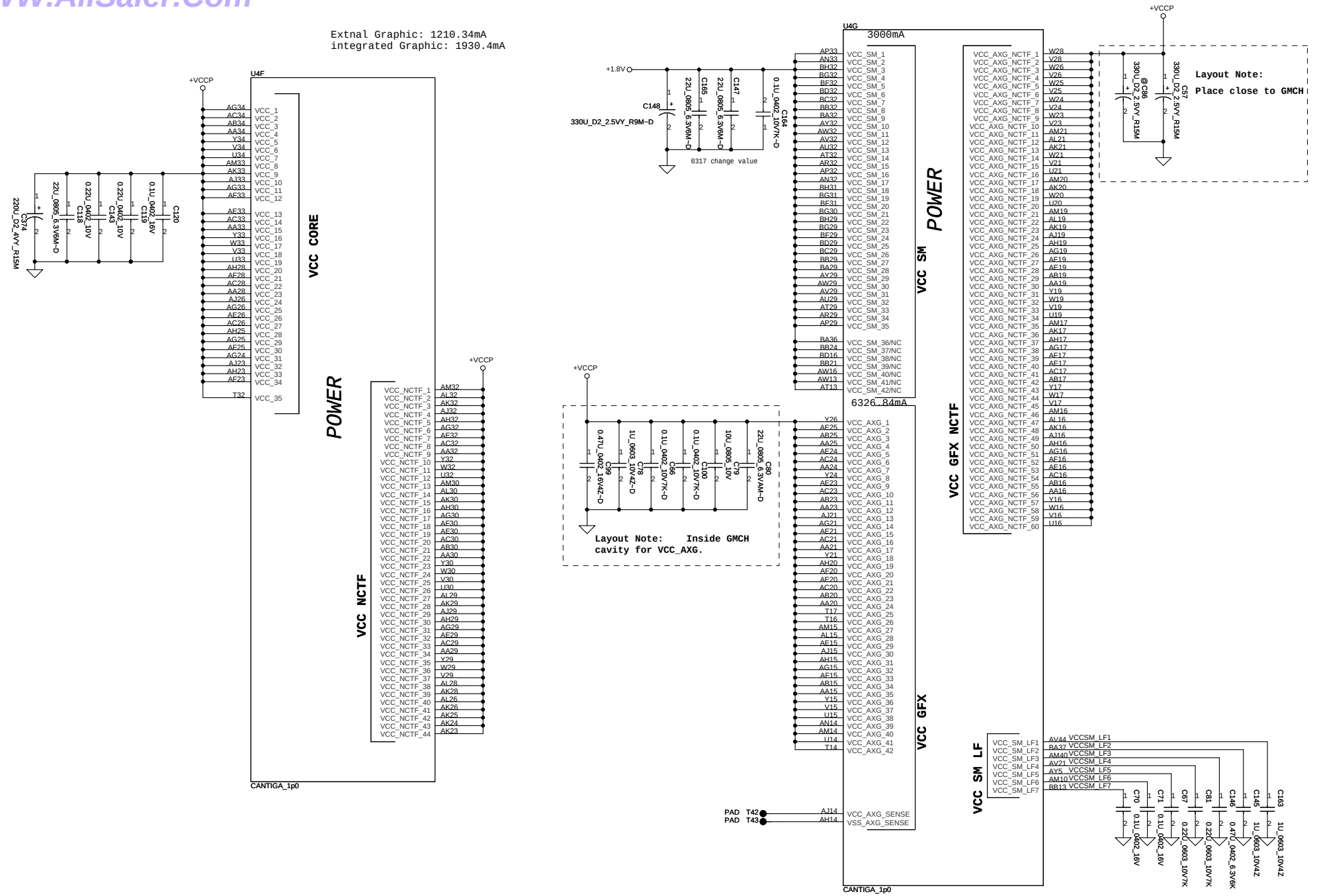
integrated Graphic: 1930.4mA



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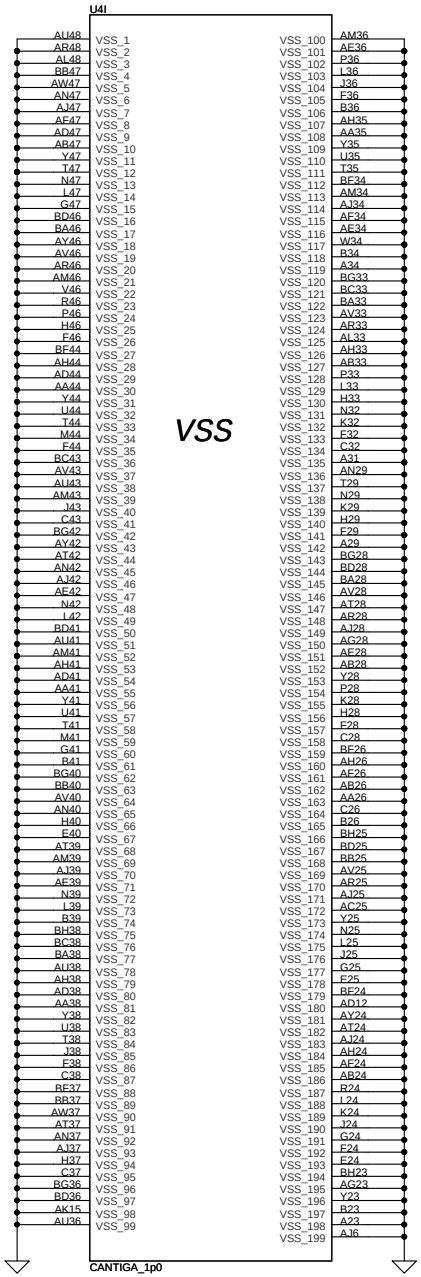

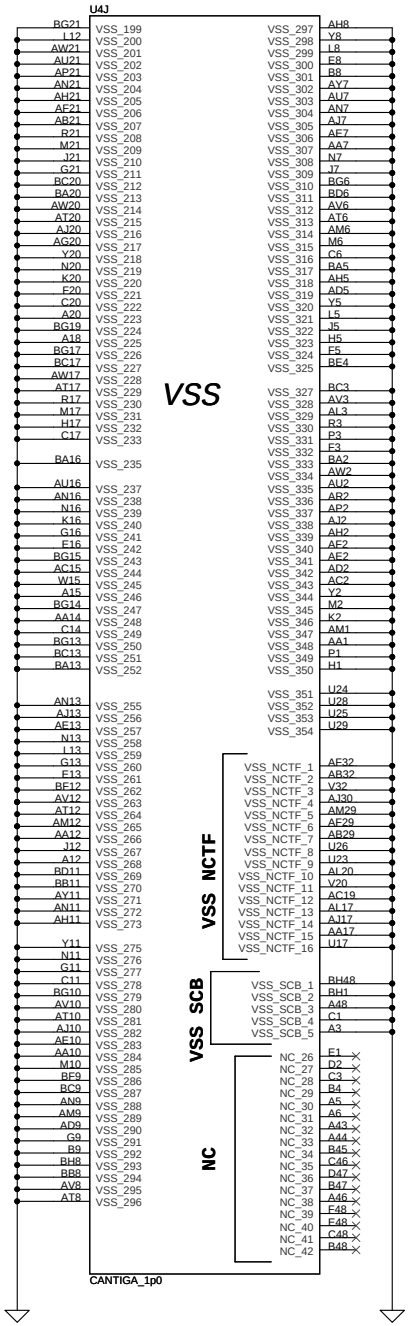

Security Classification	Compal Secret Data		
Issued Date	2006/02/13	Deciphered Date	2006/03/10

Compal Electronics, Inc.			
Title: SCHEMATIC, M/B LA-4232P			
Size: Custom	Document Number: 401593		Rev: C
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8 DDR_A_DQS#[0..7]
8 DDR_A_D[0..63]
8 DDR_A_DM[0..7]
8 DDR_A_DQS[0..7]
8 DDR_A_MA[0..13]

Layout Note:
Place near JDIM1

+1.8V
C105 2.2U_0603_6.3V6K
C124 2.2U_0603_6.3V6K
C149 2.2U_0603_6.3V6K
C166 2.2U_0603_6.3V6K
C169 2.2U_0603_6.3V6K
C154 0.1U_0402_16V
C131 0.1U_0402_16V
C130 0.1U_0402_16V
C108 0.1U_0402_16V
C84 330U 2.5V Y D2 @

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

+0.9VS
C106 0.1U_0402_16V
C125 0.1U_0402_16V
C126 0.1U_0402_16V
C127 0.1U_0402_16V
C150 0.1U_0402_16V
C151 0.1U_0402_16V
C167 0.1U_0402_16V
C107 0.1U_0402_16V
C128 0.1U_0402_16V
C129 0.1U_0402_16V
C152 0.1U_0402_16V
C153 0.1U_0402_16V
C168 0.1U_0402_16V

Layout Note:
Place these resistor closely JP41,all trace length Max=1.5"

+0.9VS
RP14 DDR_A_MA5, DDR_A_MA8 — RP22_56_0404_4P2R_5% DDR_A_MA12, DDR_CKE0_DIMMA
RP13 56_0404_4P2R_5% DDR_A_MA1, DDR_A_MA3 — RP17_56_0404_4P2R_5% DDR_A_MA7, DDR_A_MA6
RP7 56_0404_4P2R_5% DDR_A_RAS#, DDR_CS0_DIMMA# — RP15_56_0404_4P2R_5% DDR_A_MA9, DDR_A_BS#2
RP6 56_0404_4P2R_5% DDR_A_BS#0, DDR_A_MA10 — RP16_56_0404_4P2R_5% DDR_A_MA4, DDR_A_MA2
RP5 56_0404_4P2R_5% DDR_A_CAS#, DDR_A_WE# — RP8_56_0404_4P2R_5% DDR_A_MA0, DDR_A_BS#1
RP1 56_0404_4P2R_5% DDR_CS1_DIMMA#, M_ODT1 — RP2_56_0404_4P2R_5% M_ODT0, DDR_A_MA13
56_0404_4P2R_5% — RP23_56_0404_4P2R_5% DDR_A_MA14, DDR_A_MA11
DDR_CKE1_DIMMA — R96 56_0402_5% — DDR_A_MA11

Close to VREF pins of SO-DIMM

+1.8VO
+V_DDR_MCH_REF 7,14
C201 2.2U_0805_16V4Z
C220 0.1U_0402_16V

JDIM2

	VREF	VSS			
DDR_A_D4	VSS	DQ4	DDR_A_D5		
DDR_A_D1	DQ0	DQ5	DDR_A_D0		
	DQ1	VSS			
DDR_A_DQS#0	VSS	DM0	DDR_A_DM0		
DDR_A_DQS0	DQS0#	VSS			
	DQS0	DQ6	DDR_A_D6		
DDR_A_D2	VSS	DQ7	DDR_A_D7		
DDR_A_D3	DQ2	VSS			
	DQ3	DQ12	DDR_A_D13		
DDR_A_D8	VSS	DQ13	DDR_A_D12		
DDR_A_D9	DQ8	VSS			
	DQ9	DM1	DDR_A_DM1		
DDR_A_DQS#1	VSS	VSS			
DDR_A_DQS1	DQS1#	CK0	M_CLK_DDR0	7	M_CLK_DDR0 7
	DQS1	CK0#	M_CLK_DDR#0	7	M_CLK_DDR#0 7
DDR_A_D14	VSS	VSS			
DDR_A_D15	DQ10	DQ14	DDR_A_D11		
	DQ11	DQ15	DDR_A_D10		
	VSS	VSS			
	VSS	VSS			
DDR_A_D16	DQ16	DQ20	DDR_A_D20		
DDR_A_D17	DQ17	DQ21	DDR_A_D21		
	VSS	VSS			
DDR_A_DQS#2	DQS2#	NC	PM_EXTTS#0	7	PM_EXTTS#0 7
DDR_A_DQS2	DQS2	DM2	DDR_A_DM2		
	VSS	VSS			
DDR_A_D18	DQ18	DQ22	DDR_A_D23		
DDR_A_D19	DQ19	DQ23	DDR_A_D22		
	VSS	VSS			
DDR_A_D29	DQ24	DQ28	DDR_A_D28		
DDR_A_D24	DQ25	DQ29	DDR_A_D25		
	VSS	VSS			
DDR_A_DM3	DM3	DQS3#	DDR_A_DQS#3		
	NC	DQS3	DDR_A_DQS3		
	VSS	VSS			
DDR_A_D26	DQ26	DQ30	DDR_A_D31		
DDR_A_D27	DQ27	DQ31	DDR_A_D30		
	VSS	VSS			
7 DDR_CKE0_DIMMA	CKE0	NC/CKE1	DDR_CKE1_DIMMA		DDR_CKE1_DIMMA 7
	VDD	VDD			
	NC	NC/A15			
8 DDR_A_BS#2	BA2	NC/A14	DDR_A_MA14		DDR_A_MA14 8
	VDD	VDD	DDR_A_MA11		
DDR_A_MA12	A12	A11	DDR_A_MA7		
DDR_A_MA9	A9	A7	DDR_A_MA6		
DDR_A_MA8	A8	A6			
	VDD	VDD	DDR_A_MA4		
DDR_A_MA5	A5	A4	DDR_A_MA2		
DDR_A_MA3	A3	A2	DDR_A_MA0		
DDR_A_MA1	A1	A0			
	VDD	VDD	DDR_A_BS#1		DDR_A_BS#1 8
DDR_A_MA10	A10/AP	BA1	DDR_A_RAS#		DDR_A_RAS# 8
8 DDR_A_BS#0	BA0	RAS#	DDR_CS0_DIMMA#		DDR_CS0_DIMMA# 7
8 DDR_A_WE#	WE#	S0#			
	VDD	VDD	M_ODT0		M_ODT0 7
8 DDR_A_CAS#	CAS#	ODT0	DDR_A_MA13		
7 DDR_CS1_DIMMA#	NC/S1#	NC/A13			
	VDD	VDD			
7 M_ODT1	NC/ODT1	NC			
	VSS	VSS	DDR_A_D32		
DDR_A_D37	DQ32	DQ36	DDR_A_D33		
DDR_A_D36	DQ33	DQ37			
	VSS	VSS	DDR_A_DM4		
DDR_A_DQS#4	DQS4#	DM4			
DDR_A_DQS4	DQS4	VSS	DDR_A_D39		
	VSS	DQ38	DDR_A_D38		
DDR_A_D35	DQ34	DQ39			
DDR_A_D34	DQ35	VSS	DDR_A_D45		
	VSS	DQ44	DDR_A_D47		
DDR_A_D40	DQ40	DQ45			
DDR_A_D44	DQ41	VSS			
	VSS	DQS5#	DDR_A_DQS#5		
DDR_A_DM5	DM5	DQS5	DDR_A_D43		
	VSS	DQ46	DDR_A_D42		
DDR_A_D41	DQ42	DQ47			
DDR_A_D46	DQ43	VSS	DDR_A_D52		
	VSS	DQ52	DDR_A_D53		
DDR_A_D49	DQ48	DQ53			
DDR_A_D48	DQ49	VSS			
	VSS	CK1	M_CLK_DDR1	7	M_CLK_DDR1 7
	NC,TEST	CK1#	M_CLK_DDR#1	7	M_CLK_DDR#1 7
DDR_A_DQS#6	VSS	VSS			
DDR_A_DQS6	DQS6#	DM6	DDR_A_DM6		
	DQS6	VSS			
DDR_A_D54	VSS	DQ54	DDR_A_D51		
DDR_A_D50	DQ50	DQ55	DDR_A_D55		
	DQ51	VSS			
DDR_A_D61	VSS	DQ60	DDR_A_D57		
DDR_A_D60	DQ56	DQ61	DDR_A_D56		
	DQ57	VSS			
DDR_A_DM7	DM7	DQS7#	DDR_A_DQS#7		
	VSS	DQS7	DDR_A_DQS7		
DDR_A_D59	DQ58	VSS			
DDR_A_D58	DQ59	DQ62	DDR_A_D62		
	VSS	DQ63	DDR_A_D63		
14,15,19 ICH_SM_DA	SDA	VSS			
14,15,19 ICH_SM_CLK	SCL	SA0			
+3VSO	VDDSPD	SA1			

FOX_ASOA426-M2RN-7F

C58 0.1U_0402_16V
C59 2.2U_0603_6.3V6K
R31 10K_0402_5%
R32 10K_0402_5%

SO-DIMM A
REVERSE
Bottom side

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.

Title: SCHEMATIC, M/B LA-4232P

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8 DDR_B_DQS#[0..7]
8 DDR_B_D[0..63]
8 DDR_B_DM[0..7]
8 DDR_B_DQS[0..7]
8 DDR_B_MA[0..13]

Layout Note:
Place near JDIM2

+1.8V
C112 2.2U_0603_6.3V6K
C139 2.2U_0603_6.3V6K
C160 2.2U_0603_6.3V6K
C138 2.2U_0603_6.3V6K
C177 2.2U_0603_6.3V6K
C109 0.1U_0402_16V
C132 0.1U_0402_16V
C133 0.1U_0402_16V
C155 0.1U_0402_16V
C189 330U 2.5V Y D2

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

+0.9VS
C110 0.1U_0402_16V
C134 0.1U_0402_16V
C135 0.1U_0402_16V
C156 0.1U_0402_16V
C157 0.1U_0402_16V
C170 0.1U_0402_16V
C171 0.1U_0402_16V
C111 0.1U_0402_16V
C136 0.1U_0402_16V
C158 0.1U_0402_16V
C137 0.1U_0402_16V
C172 0.1U_0402_16V
C159 0.1U_0402_16V
C199 0.1U_0402_16V

Layout Note:
Place these resistor closely JP42,all trace length Max=1.5"

+0.9VS
RP18 56_0404_4P2R_5%: DDR_B_MA3, DDR_B_MA1 / DDR_B_MA12, DDR_B_MA9
RP10 56_0404_4P2R_5%: DDR_B_BS#0, DDR_B_MA10 / DDR_B_MA14, DDR_B_MA11
RP12 56_0404_4P2R_5%: DDR_B_MA0, DDR_B_BS#1 / DDR_B_MA5, DDR_B_MA8
RP11 56_0404_4P2R_5%: DDR_B_RAS#, DDR_CS2_DIMMB# / DDR_B_MA7, DDR_B_MA6
RP9 56_0404_4P2R_5%: DDR_B_CAS#, DDR_B_WE# / DDR_B_MA4, DDR_B_MA2
RP3 56_0404_4P2R_5%: DDR_CS3_DIMMB#, M_ODT3 / DDR_B_MA13, M_ODT2
RP24 56_0404_4P2R_5%
RP26 56_0404_4P2R_5%
RP19 56_0404_4P2R_5%
RP21 56_0404_4P2R_5%
RP20 56_0404_4P2R_5%
RP4 56_0404_4P2R_5%
RP25 56_0404_4P2R_5%: DDR_B_BS#2, DDR_CKE3_DIMMB / DDR_CKE2_DIMMB
R335 56_0402_5%: DDR_CKE3_DIMMB

Close to VREF pins of SO-DIMM

+V_DDR_MCH_REF 7,13
C221 2.2U_0805_16V4Z
C222 0.1U_0402_16V

JDIM1 — FOX_AS0A426-NARN-7F-N

1	VREF	VSS	2
3	VSS	DQ4	4 — DDR_B_D5
5	DQ0	DQ5	6 — DDR_B_D4
7	DQ1	VSS	8
9	VSS	DM0	10 — DDR_B_DM0
11	DQS0#	VSS	12
13	DQS0	DQ6	14 — DDR_B_D6
15	VSS	DQ7	16 — DDR_B_D7
17	DQ2	VSS	18
19	DQ3	DQ12	20 — DDR_B_D12
21	VSS	DQ13	22 — DDR_B_D13
23	DQ8	VSS	24
25	DQ9	DM1	26 — DDR_B_DM1
27	VSS	VSS	28
29	DQS1#	CK0	30 — M_CLK_DDR2 7
31	DQS1	CK0#	32 — M_CLK_DDR#2 7
33	VSS	VSS	34
35	DQ10	DQ14	36 — DDR_B_D14
37	DQ11	DQ15	38 — DDR_B_D15
39	VSS	VSS	40
41	VSS	VSS	42
43	DQ16	DQ20	44 — DDR_B_D21
45	DQ17	DQ21	46 — DDR_B_D16
47	VSS	VSS	48
49	DQS2#	NC	50 — PM_EXTTS#1 7
51	DQS2	DM2	52 — DDR_B_DM2
53	VSS	VSS	54
55	DQ18	DQ22	56 — DDR_B_D22
57	DQ19	DQ23	58 — DDR_B_D23
59	VSS	VSS	60
61	DQ24	DQ28	62 — DDR_B_D29
63	DQ25	DQ29	64 — DDR_B_D24
65	VSS	VSS	66
67	DM3	DQS3#	68 — DDR_B_DQS#3
69	NC	DQS3	70 — DDR_B_DQS3
71	VSS	VSS	72
73	DQ26	DQ30	74 — DDR_B_D26
75	DQ27	DQ31	76 — DDR_B_D27
77	VSS	VSS	78
79	CKE0	NC/CKE1	80 — DDR_CKE3_DIMMB — DDR_CKE3_DIMMB 7
81	VDD	VDD	82
83	NC	NC/A15	84
85	BA2	NC/A14	86 — DDR_B_MA14 — DDR_B_MA14 8
87	VDD	VDD	88
89	A12	A11	90 — DDR_B_MA11
91	A9	A7	92 — DDR_B_MA7
93	A8	A6	94 — DDR_B_MA6
95	VDD	VDD	96
97	A5	A4	98 — DDR_B_MA4
99	A3	A2	100 — DDR_B_MA2
101	A1	A0	102 — DDR_B_MA0
103	VDD	VDD	104
105	A10/AP	BA1	106 — DDR_B_BS#1 — DDR_B_BS#1 8
107	BA0	RAS#	108 — DDR_B_RAS# — DDR_B_RAS# 8
109	WE#	S0#	110 — DDR_CS2_DIMMB# — DDR_CS2_DIMMB# 7
111	VDD	VDD	112
113	CAS#	ODT0	114 — M_ODT2 — M_ODT2 7
115	NC/S1#	NC/A13	116 — DDR_B_MA13
117	VDD	VDD	118
119	NC/ODT1	NC	120
121	VSS	VSS	122
123	DQ32	DQ36	124 — DDR_B_D36
125	DQ33	DQ37	126 — DDR_B_D37
127	VSS	VSS	128
129	DQS4#	DM4	130 — DDR_B_DM4
131	DQS4	VSS	132
133	VSS	DQ38	134 — DDR_B_D39
135	DQ34	DQ39	136 — DDR_B_D38
137	DQ35	VSS	138
139	VSS	DQ44	140 — DDR_B_D44
141	DQ40	DQ45	142 — DDR_B_D45
143	DQ41	VSS	144
145	VSS	DQS5#	146 — DDR_B_DQS#5
147	DM5	DQS5	148 — DDR_B_DQS5
149	VSS	VSS	150
151	DQ42	DQ46	152 — DDR_B_D46
153	DQ43	DQ47	154 — DDR_B_D47
155	VSS	VSS	156
157	DQ48	DQ52	158 — DDR_B_D52
159	DQ49	DQ53	160 — DDR_B_D53
161	VSS	VSS	162
163	NC,TEST	CK1	164 — M_CLK_DDR3 — M_CLK_DDR3 7
165	VSS	CK1#	166 — M_CLK_DDR#3 — M_CLK_DDR#3 7
167	DQS6#	VSS	168
169	DQS6	DM6	170 — DDR_B_DM6
171	VSS	VSS	172
173	DQ50	DQ54	174 — DDR_B_D54
175	DQ51	DQ55	176 — DDR_B_D55
177	VSS	VSS	178
179	DQ56	DQ60	180 — DDR_B_D60
181	DQ57	DQ61	182 — DDR_B_D57
183	VSS	VSS	184
185	DM7	DQS7#	186 — DDR_B_DQS#7
187	VSS	DQS7	188 — DDR_B_DQS7
189	DQ58	VSS	190
191	DQ59	DQ62	192 — DDR_B_D62
193	VSS	DQ63	194 — DDR_B_D63
195	SDA	VSS	196
197	SCL	SAO	198
199	VDDSPD	SA1	200 — +3VS

7 DDR_CKE2_DIMMB — DDR_CKE2_DIMMB
8 DDR_B_BS#2 — DDR_B_BS#2
8 DDR_B_BS#0 — DDR_B_BS#0
8 DDR_B_WE# — DDR_B_WE#
8 DDR_B_CAS# — DDR_B_CAS#
7 DDR_CS3_DIMMB# — DDR_CS3_DIMMB#
7 M_ODT3 — M_ODT3
13,15,19 ICH_SM_DA — ICH_SM_DA
13,15,19 ICH_SM_CLK — ICH_SM_CLK

+3VSO
C61 0.1U_0402_16V
C60 2.2U_0603_6.3V6K
R33 10K_0402_5% → +3VS
R34 10K_0402_5%

SO-DIMM B
REVERSE
Bottom side

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.

Title: ***SCHEMATIC, M/B LA-4232P***

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FSC CLKSEL2	FSB CLKSEL1	FSA CLKSEL0	CPU MHz	SRC MHz	PCI MHz	REF MHz	DOT_96 MHz	USB MHz	
0	0	0	266	100	33.3	14.318	96.0	48.0	*
0	0	1	133	100	33.3	14.318	96.0	48.0	
0	1	0	200	100	33.3	14.318	96.0	48.0	
0	1	1	166	100	33.3	14.318	96.0	48.0	
1	0	0	333	100	33.3	14.318	96.0	48.0	
1	0	1	100	100	33.3	14.318	96.0	48.0	
1	1	0	400	100	33.3	14.318	96.0	48.0	
1	1	1	Reserved						

Routing the trace at least 10mil

CLK_XTAL_OUT
CLK_XTAL_IN
R986 0_0402_5%
14.31818MHZ_16P
Y7
C1196 22P_0402_50V8J
C1197 22P_0402_50V8J

+3VS
R971 0_0805_5%
+3VS_CK505
C1189 10U_0805_10V
C1190 0.1U_0402_16V
C1191 0.1U_0402_16V
C1192 0.1U_0402_16V
C1193 0.1U_0402_16V
C1194 0.1U_0402_16V
C1195 0.1U_0402_16V

0905 Connect to +VCCP
+VCCP
R972 0_0805_5%

Place close to U55
+1.05VS_CK505
C1198 10U_0805_10V
C1199 0.1U_0402_16V
C1200 0.1U_0402_16V
C1201 10U_0805_10V
C1202 0.1U_0402_16V
C1203 0.1U_0402_16V
C1204 0.1U_0402_16V

+1.05VS_CK505
+3VS_CK505

MEDIA_REQ#32
R1020 0_0402_5%
R1025 0_0402_5%
MEDIA_REQ#32 30
CLK_PCIE_MEDIA 30
CLK_PCIE_MEDIA# 30
Card Bus

NB
CPU
7 CLK_MCH_BCLK# R976 0_0402_5% R_MCH_BCLK#
7 CLK_MCH_BCLK R978 0_0402_5% R_MCH_BCLK
4 CLK_CPU_BCLK# R980 0_0402_5% R_CPU_BCLK#
4 CLK_CPU_BCLK R982 0_0402_5% R_CPU_BCLK

R_CLKREQ#_EXPCARD R977 0_0402_5%
R_PCIE_EXPR R979 0_0402_5%
R_PCIE_EXPR# R981 0_0402_5%
EXPCARD_REQ#16 26
CLK_PCIE_EXPR 26
CLK_PCIE_EXPR# 26
Express Card

FSA R983 2.2K_0402_5% R984 1K_0402_5% MCH_CLKSEL0 7
5 CPU_BSEL0

U55
+3VS_CK505
+1.05VS_CK505

19 CK_PWRGD R_CKPWRGD
CPU_BSEL1
CLK_XTAL_OUT
CLK_XTAL_IN
19 CLK_14M_ICH R991 33_0402_1% FSC
PAD T128
13,14,19 ICH_SM_DA ICH_SM_DA
13,14,19 ICH_SM_CLK ICH_SM_CLK

CKPWRGD/PD#
FS_B/TEST_MODE
VSS_REF
XTAL_OUT
XTAL_IN
VDD_REF
REF_0/FS_C/TEST_
REF_1
SDA
SCL
NC
VDD_PCI
PCI_1
PCI_2
PCI_3
PCI_4/SEL_LCDCL
PCIF_5/ITP_EN
VSS_PCI

PCI_STOP# H_STP_PCI# H_STP_PCI# 19
CPU_STOP# H_STP_CPU# H_STP_CPU# 19
CPU_STP

CLKREQ_10# R_PCIE_SATA R992 0_0402_5% CLK_PCIE_SATA 18
SRC_11# R_PCIE_SATA# R994 0_0402_5% CLK_PCIE_SATA# 18
CLKREQ_11# R_CLKSATAREQ# R995 475_0402_1%-D CLKSATAREQ# 19
SRC_9# R_CLK_PCIE_LAN# R996 0_0402_5% CLK_PCIE_LAN# 21
CLKREQ_9# R_CLK_PCIE_LAN R997 0_0402_5% CLK_PCIE_LAN 21
R_CLKREQ#_GLAN GLAN_REQ#9 21
ICH_SATA
GLAN

CPU_BSEL1 R988 1K_0402_5% MCH_CLKSEL1 7
5 CPU_BSEL1

23 CLK_DEBUG_PORT R1001 33_0402_1% PCI2_TME
27 CLK_PCI_EC R1004 33_0402_1% R_CLK_PCI_EC
25 CLK_PCI_TPM R1006 33_0402_1% 27_SEL
17 PCI_CLK R1008 33_0402_1% ITP_EN

CLKREQ_4# R1002 0_0402_5% WLAN_REQ#4 23
SRC_4# R_CLK_PCIE_MCARD# R1005 0_0402_5% CLK_PCIE_MCARD# 23
SRC_4 R_CLK_PCIE_MCARD R1007 0_0402_5% CLK_PCIE_MCARD 23
MiniCard_WLAN

S IC ICS9LPRS387AKLFT MLF 72P CLK GEN

+3VS_CK505
19 CLK_48M_ICH R1013 33_0402_1% FSA
7 CLKREQ#_7 R1014 475_0402_1%-D R_CLKREQ#_7
+1.05VS_CK505

R_PCIE_ICH# R1010 0_0402_5% CLK_PCIE_ICH# 19
R_PCIE_ICH R1012 0_0402_5% CLK_PCIE_ICH 19
ICH

R_MCH_3GPLL# R1015 0_0402_5% CLK_MCH_3GPLL# 7
R_MCH_3GPLL R1018 0_0402_5% CLK_MCH_3GPLL 7
NB_3GPLL

FSC R1016 10K_0402_5% R1017 1K_0402_5% MCH_CLKSEL2 7
5 CPU_BSEL2

NB (UMA)
7 CLK_MCH_DREFCLK R1019 UMA@ 0_0402_5% R_MCH_DREFCLK
7 CLK_MCH_DREFCLK# R1021 UMA@ 0_0402_5% R_MCH_DREFCLK#
+1.05VS_CK505

SSCDREFCLK# UMA@ R1022 0_0402_5% MCH_SSCDREFCLK# 7
SSCDREFCLK UMA@ R1023 0_0402_5% MCH_SSCDREFCLK 7
NB_SSC (UMA)

VGA (Discrete)
31 CLK_PCIE_VGA R1024 VGA@ 0_0402_5%
31 CLK_PCIE_VGA# R1026 VGA@ 0_0402_5%

VGA@ R1067 33_0402_1% CLK_NVSS_27M 31
VGA@ R1195 33_0402_1% CLK_NV_27M 31
VGA_27M (DIS)

ITP_EN	* 0 = SRC8/SRC8# 1 = ITP/ITP#
27_SEL	0 = Enable DOT96 & SRC1(UMA) 1 = Enable SRC0 & 27MHz(DIS)
PCI2_TME	0 = Overclocking of CPU and SRC Allowed *1 = Overclocking of CPU and SRC NOT allowed

+3VS_CK505
VGA@ R1030 10K_0402_5%
+3VS_CK505
R1031 10K_0402_5%
ITP_EN
R1032 10K_0402_5%
27_SEL
UMA@ R1033 10K_0402_5%
PCI2_TME

+3VS
EXPCARD_REQ#16 R90 10K_0402_5%
MEDIA_REQ#32 R91 10K_0402_5%
CLKSATAREQ# R88 10K_0402_5%
GLAN_REQ#9 R87 10K_0402_5%
WLAN_REQ#4 R85 10K_0402_5%
CLKREQ# 7 R60 10K_0402_5%

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Issued Date	2006/02/13	Deciphered Date	2006/03/10

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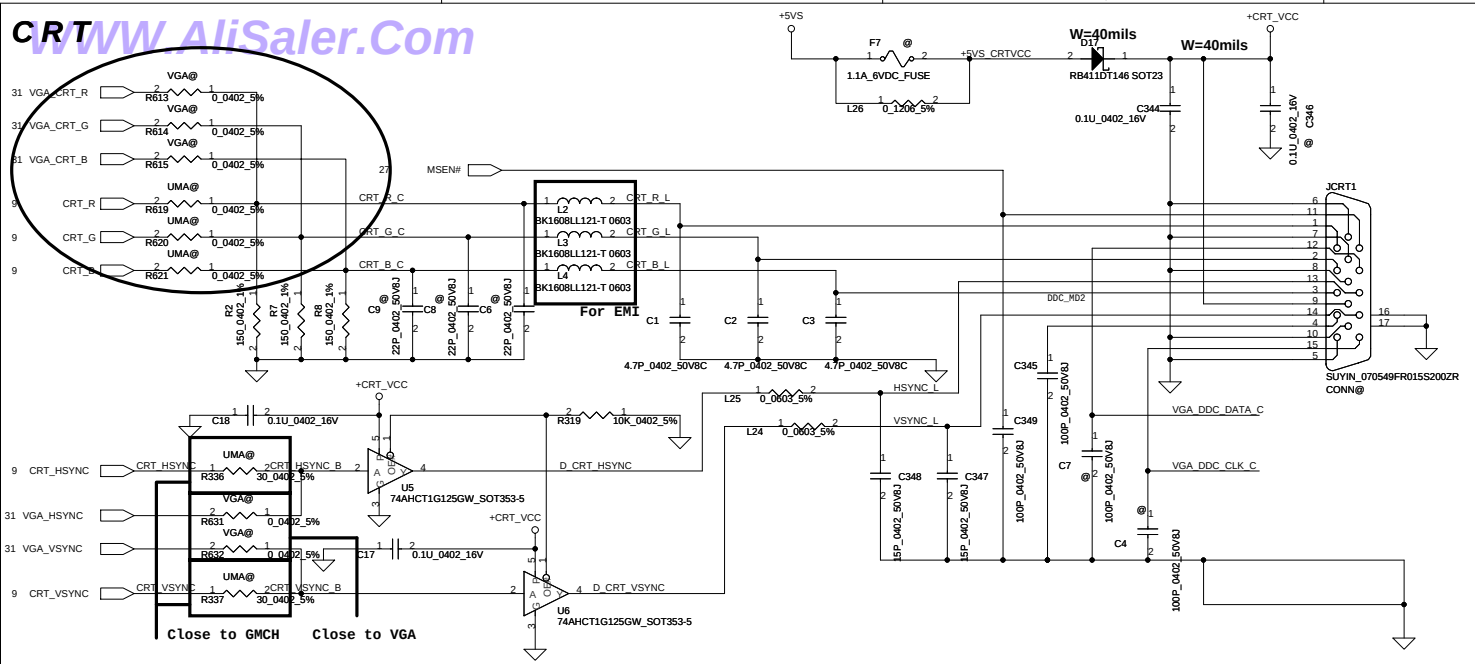
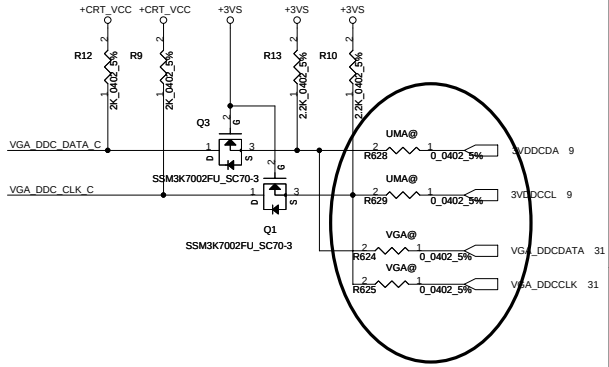
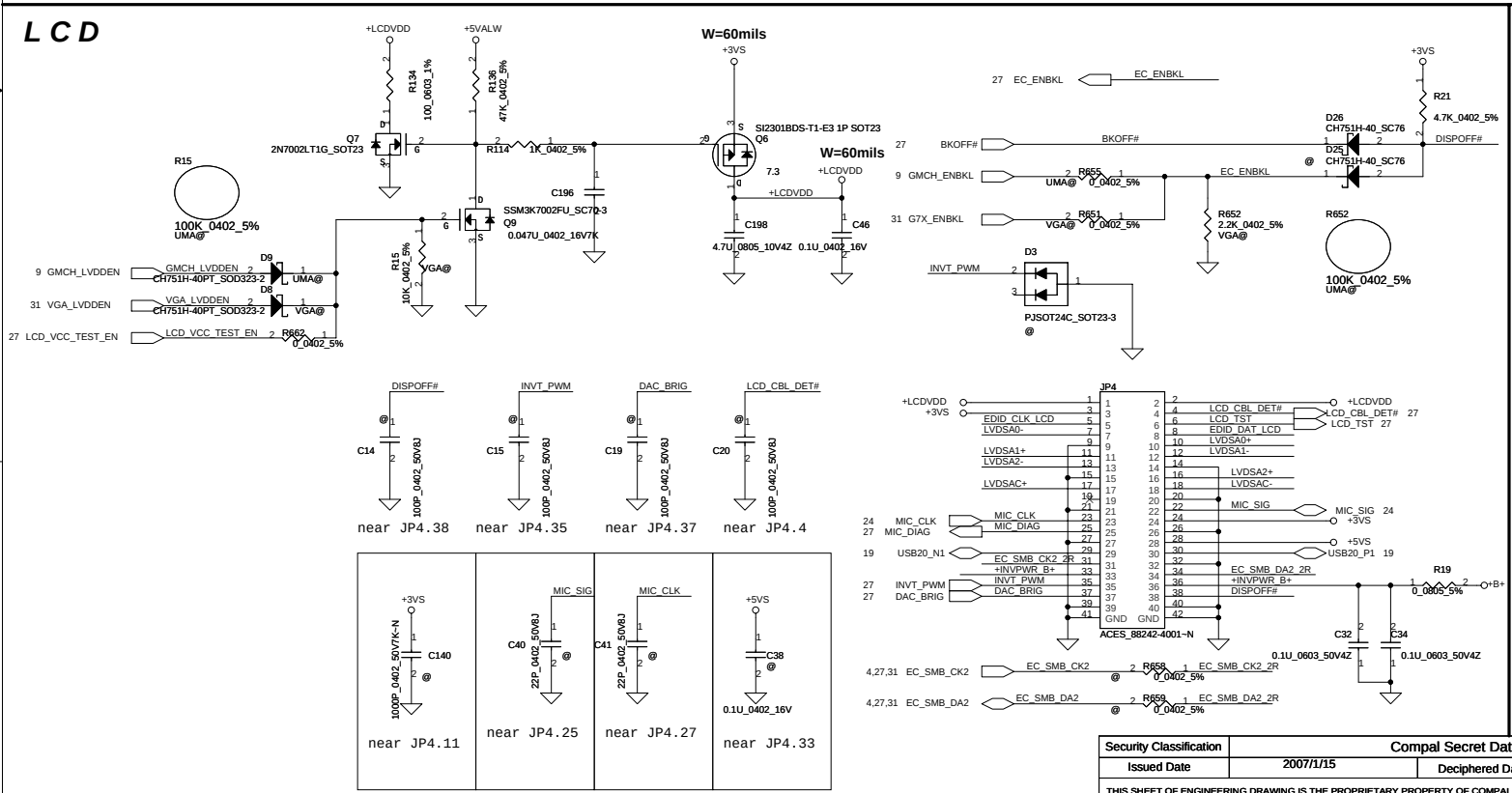
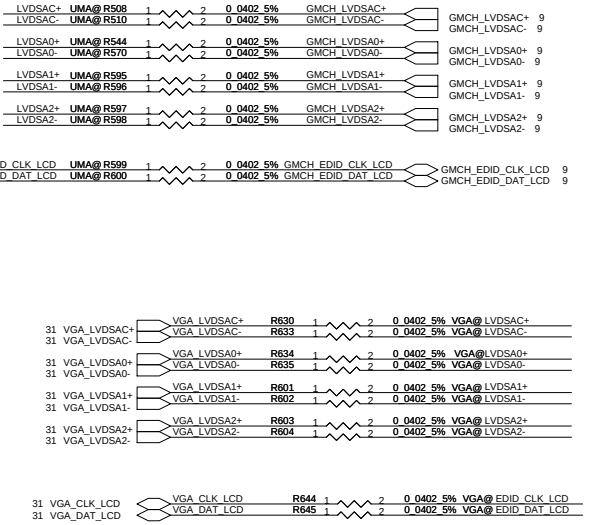
CRT





LCD





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+3VS

R1035 8.2K_0402_5% PCI_DEVSEL#
R1036 8.2K_0402_5% PCI_STOP#
R1037 8.2K_0402_5% PCI_TRDY#
R1038 8.2K_0402_5% PCI_FRAME#
R1039 8.2K_0402_5% PCI_PLOCK#
R1040 8.2K_0402_5% PCI_IRDY#
R1041 8.2K_0402_5% PCI_SERR#
R1042 8.2K_0402_5% PCI_PERR#

+3VS

R1043 8.2K_0402_5% PCI_PIRQA#
R1044 8.2K_0402_5% PCI_PIRQB#
R1045 8.2K_0402_5% PCI_PIRQC#
R1046 8.2K_0402_5% PCI_PIRQD#
R1047 8.2K_0402_5% PCI_PIRQE#
R1048 8.2K_0402_5% PCI_PIRQF#
R1049 8.2K_0402_5% PCI_PIRQG#
R1050 8.2K_0402_5% PCI_PIRQH#

R1051 8.2K_0402_5% PCI_REQ0#
R1052 8.2K_0402_5% PCI_REQ1#
R1053 8.2K_0402_5% PCI_REQ2#
R1054 8.2K_0402_5% PCI_REQ3#

U56B

PCI

D11	AD0	REQ0#	F1 PCI_REQ0#
C8	AD1	GNT0#	G4 PCI_GNT0#
D9	AD2	REQ1#/GPIO50	B6 PCI_REQ1#
E12	AD3	GNT1#/GPIO51	A7
E9	AD4	REQ2#/GPIO52	E13 PCI_REQ2#
C9	AD5	GNT2#/GPIO53	E12
E10	AD6	REQ3#/GPIO54	E6 PCI_REQ3#
B7	AD7	GNT3#/GPIO55	F6 PCI_GNT3#
C7	AD8		
C5	AD9	C/BE0#	D8
G11	AD10	C/BE1#	B4
F8	AD11	C/BE2#	D6
E11	AD12	C/BE3#	A5
E7	AD13		
A3	AD14	IRDY#	D3 PCI_IRDY#
D2	AD15	PAR	E3
F10	AD16	PCIRST#	B1 PCI_PCIRST#
D5	AD17	DEVSEL#	C6 PCI_DEVSEL#
D10	AD18	PERR#	E4 PCI_PERR#
B3	AD19	PLOCK#	C2 PCI_PLOCK#
F7	AD20	SERR#	J4 PCI_SERR#
C3	AD21	STOP#	A4 PCI_STOP#
F3	AD22	TRDY#	F5 PCI_TRDY#
F4	AD23	FRAME#	D7 PCI_FRAME#
C1	AD24		
G7	AD25	PLTRST#	C14 PCI_PLTRST#
H7	AD26	PCICLK	D4 PCI_CLK
D1	AD27	PME#	R2
G5	AD28		
H6	AD29		
G1	AD30		
H3	AD31		

PCI_CLK 15
EC_PME# 21,23,26,27

Interrupt I/F

PCI_PIRQA# J5	PIRQA#	PIRQE#/GPIO2	H4 PCI_PIRQE#
PCI_PIRQB# E1	PIRQB#	PIRQF#/GPIO3	K6 PCI_PIRQF#
PCI_PIRQC# J6	PIRQC#	PIRQG#/GPIO4	F2 PCI_PIRQG#
PCI_PIRQD# C4	PIRQD#	PIRQH#/GPIO5	G2 PCI_PIRQH#

ICH9M REV 1.0

+3VALW

@ C101 0.1U_0402_16V4Z

@U9

PCI_PCIRST# → PCI_RST# → PCI_RST# 21,23,25,26

MC74VHC1G08DFT2G SC70 5P

R1094 0_0402_5%

+3VALW

@ C87 0.1U_0402_16V4Z

@U58

PCI_PLTRST# → PLT_RST# → PLT_RST# 7,27,30,31

MC74VHC1G08DFT2G SC70 5P

R1061 0_0402_5%

A16 swap override Strap	
PCI_GNT3#	Low= A16 swap override Enble High= Default*

PCI_GNT3# @R1055 1K_0402_5%

Boot BIOS Strap		
PCI_GNT0#	SPI_CS1#	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *

19 SPI_CS1#_R → SPI_CS1#_R @R1058 1K_0402_5%

PCI_GNT0# @R1060 1K_0402_5%

+3VALW

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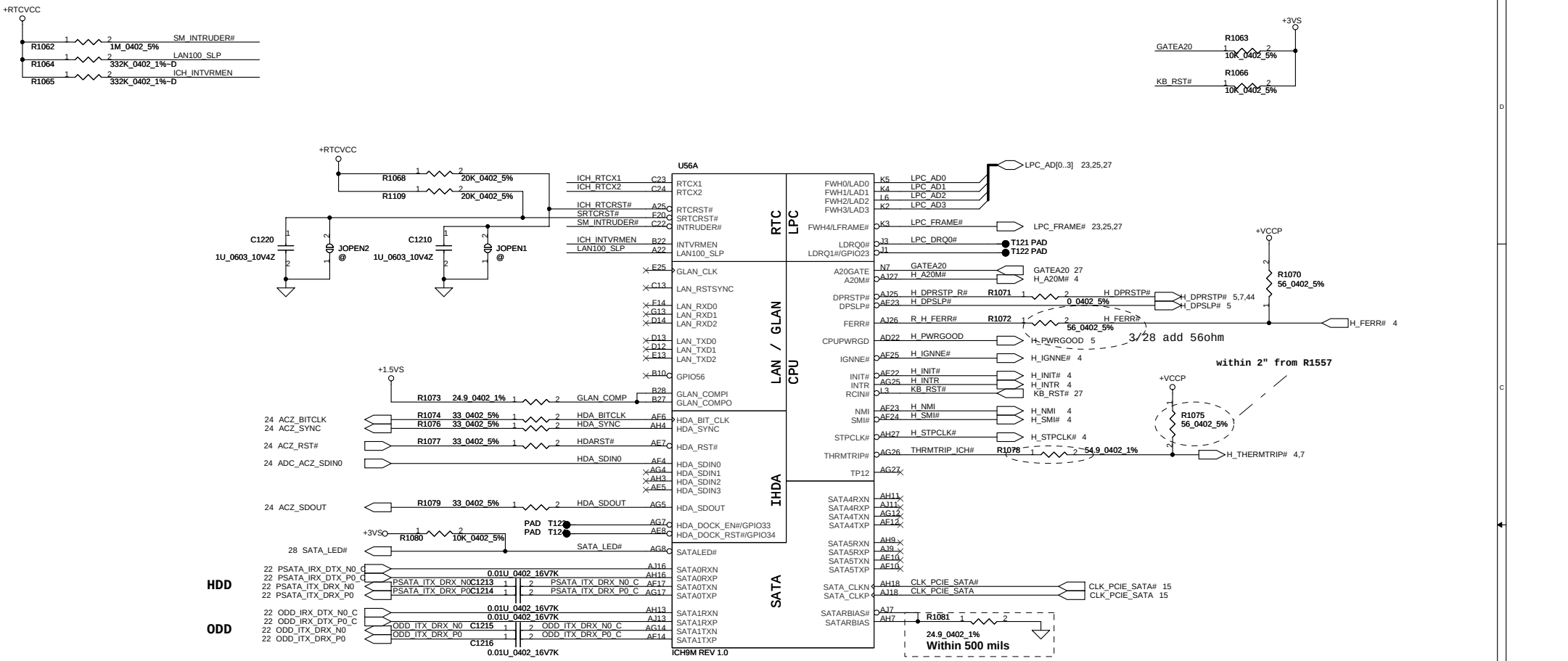

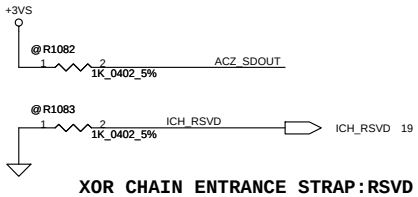

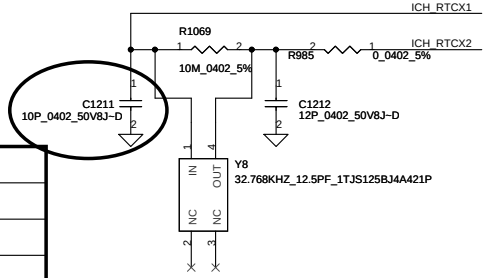

XOR CHAIN ENTRANCE STRAP:RSVD

XOR Chain Entrance Strap		
ICH_RSVD_TP3	HDA SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal Operation (Default)
1	1	Set PCIE port config bit 1

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ICH8 don't have

Low-->default
High -->No boot

checklist pull hi

Place closely pin AF3

Place closely pin H1

RSMRST circuit

Within 500 mils

Within 500 mils

USB0	
Camera	
USB1	
Felica	
BlueTooth	
FingerPrinter	
Mini Card	
Express Card	
USB2	
USB3	

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Issued Date	2006/02/13	Deciphered Date	2006/03/10

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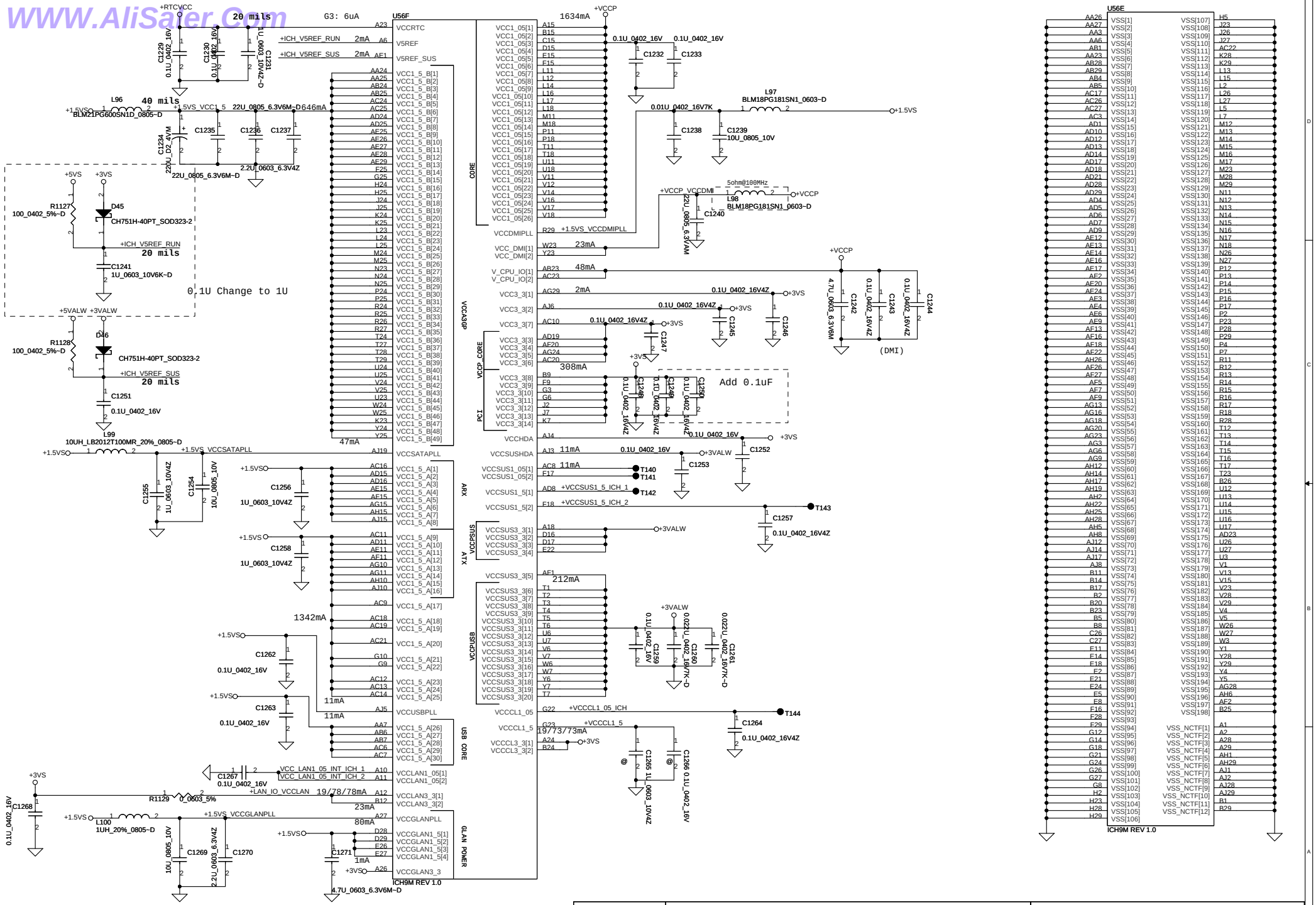

W=60mils SI3456BDV-T1-E3 1N TSOP6

+3VALW

Q59

C790 1U_0603_10V6K

+LAN_IO_R

R111 0_1206_5%~D

W=60mils +LAN_IO 1.5A

C812 @ 22U_1206_6.3V6M

C777 22U_1206_6.3V6M

C787 0.1U_0402_16V

C781 0.1U_0402_16V

C802 0.1U_0402_16V

C804 0.1U_0402_16V

C45 0.1U_0402_16V

These caps close to U64: Pin 29, 37, 44, 45

+B+_BIAS

R1239 470K_0402_5%

EN_WOL

27 EN_WOL#

Q58 SSM3K7002FU_SC70-3

R906 1.5M_0402_5%

+LAN_VDD

R105 0_0603_5%

+LAN_DVDD12

C572 C698 C782 C780 C779 C700 0.1U_0402_16V

These caps close to U64: Pin 13, 30, 36

+LAN_IO

C783 22U_1206_6.3V6M

C792 0.1U_0402_16V

These caps close to U64: Pin 44,45

(Should be place within 200 mils)

U64

RTL8111DL

RTL8111DL-GR_LQFP48

19 GLAN_RXP C1473 0.1U_0402_16V GLAN_RXP_C HSOP

19 GLAN_RXN C1476 0.1U_0402_16V GLAN_RXN_C HSON

19 GLAN_TXP GLAN_TXP HSIP

19 GLAN_TXN GLAN_TXN HSIN

15 CLK_PCIE_LAN REFCLK_P

15 CLK_PCIE_LAN# REFCLK_M

15 GLAN_REQ#9 CLKREQB

17,23,25,26 PCI_RST# PERSTB

R1244 2.49K_0402_1% RSET

17,23,26,27 EC_PME# LANWAKEB

R1245 1K_0402_5% +3VS ISOLATEB

ISOLATEB

R1246 15K_0402_5% CKTAL1

R1253 0_0402_5% CKTAL2

19 LAN_CABDT LAN_CABDT NC

NC

GND GND GND GND EGND

Y9 25MHZ_20P_1BX25000CK1A

C1488 27P_0402_50V8J

C1489 27P_0402_50V8J

LED3/EEDO LED2/EEDI/AUX LED1/EESK EECS LED0

LAN_LED3 LAN_LED2 LAN_LED1 LAN_LED0

MDIP0 MDIN0 MDIP1 MDIN1 MDI P2 MDI N2 MDI P3 MDI N3

LAN_MDIP0 LAN_MDIN0 LAN_MDIP1 LAN_MDIN1 LAN_MDIP2 LAN_MDIN2 LAN_MDIP3 LAN_MDIN3

FB12 +LAN_DVDD12

SROUT12 +LAN_VDD_L

R1241 3.6K_0402_5%

+LAN_IO

W=60mils +LAN_VDD

L107 4.7UH_1008HC-472EJFS-A_5%_1008

C1478 0.1U_0402_16V

C1479 22U_1206_6.3V6M

W=60mils

W=30mils +LAN_VDD_EVDD

L110 0_0603_5% W=30mils +LAN_VDD

These components close to U64: Pin 48

(Should be place within 200 mils)

EVDD12 DVDD12 DVDD12 DVDD12 AVDD12 AVDD12

+LAN_DVDD12

C1484 1U_0402_6.3V6K~D

C1485 1U_0402_6.3V6K~D

These caps close to U64: Pin 19

VDDSR VDDSR +LAN_IO

VDD33 VDD33 +LAN_AVDD33

AVDD33 AVDD33 ENSR +LAN_IO

0_0603_5% L108 +LAN_IO

C1486 C1487 C1495 C1496 0.1U_0402_16V

These caps close to U64: Pin 1, 40,29,37

CM1293-04SO_SOT23-6 @ D28

RJ45_TX0- RJ45_RX1- +3VS RJ45_TX0+ RJ45_RX1+

CM1293-04SO_SOT23-6 @ D29

RJ45_TX2- RJ45_TX3- +3VS RJ45_TX2+ RJ45_TX3+

19 LAN_LOPWEN LAN_LOPWEN 0_0402_5% @ R1374 ISOLATEB

T51 BOTH_GST5009-LF

C1490 0.01U_0402_16V7K +V_DAC LAN_MDIN3 LAN_MDIP3 TCT1 TD1+ TD1- MCT1 MX1+ MX1- RJ45_TX3- RJ45_TX3+

C1491 0.01U_0402_16V7K +V_DAC LAN_MDIN2 LAN_MDIP2 TCT2 TD2+ TD2- MCT2 MX2+ MX2- RJ45_TX2- RJ45_TX2+

C1492 0.01U_0402_16V7K +V_DAC LAN_MDIN1 LAN_MDIP1 TCT3 TD3+ TD3- MCT3 MX3+ MX3- RJ45_RX1- RJ45_RX1+

C1494 0.01U_0402_16V7K +V_DAC LAN_MDIN0 LAN_MDIP0 TCT4 TD4+ TD4- MCT4 MX4+ MX4- RJ45_TX0- RJ45_TX0+

RP42 75_1206_8P4R_5%

C1493 1000P_1206_2KV7K

D54 CH751H-40PT_SOD323-2 LAN_LED2 LED2_LED3

D55 CH751H-40PT_SOD323-2 LAN_LED3 LED2_LED3

D56 CH751H-40PT_SOD323-2 LAN_LED1 LED1_LED3

D57 CH751H-40PT_SOD323-2 LAN_LED3 LED1_LED3

LAN_LED0 R968 220_0402_5% 2LAN_ACTIVITY#

+LAN_IO

C103 @ 220P_0603_10V7K C122 @ 220P_0603_10V7K

JRJ45 C-1775553 CONN@

Yellow LED- Yellow LED+ PR4- PR4+ PR2- PR3- PR3+ PR2+ PR1- PR1+ Green LED- Orange LED- Green-Orange LED+ GND GND

RJ45_TX3- RJ45_TX3+ RJ45_RX1- RJ45_TX2- RJ45_TX2+ RJ45_RX1+ RJ45_TX0- RJ45_TX0+

LED2_LED3 R969 220_0402_5% LINK_10_1000#

LED1_LED3 R970 220_0402_5% LINK_100_1000#

+LAN_IO

C141 C142 C144 @ 220P_0603_10V7K

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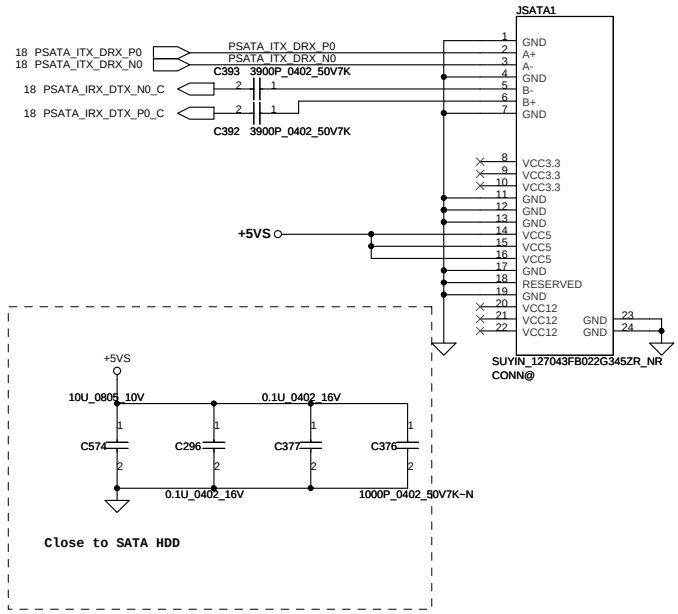
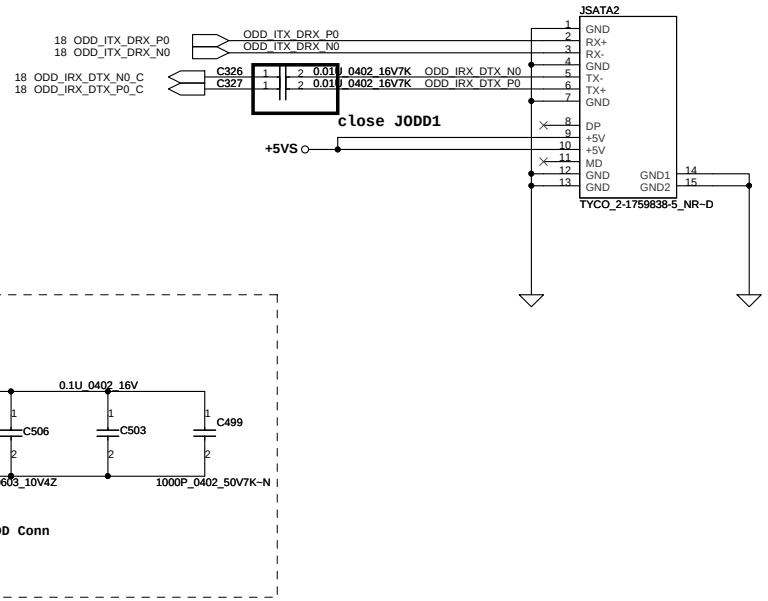
SATA HDD CONN



SATA ODD CONN



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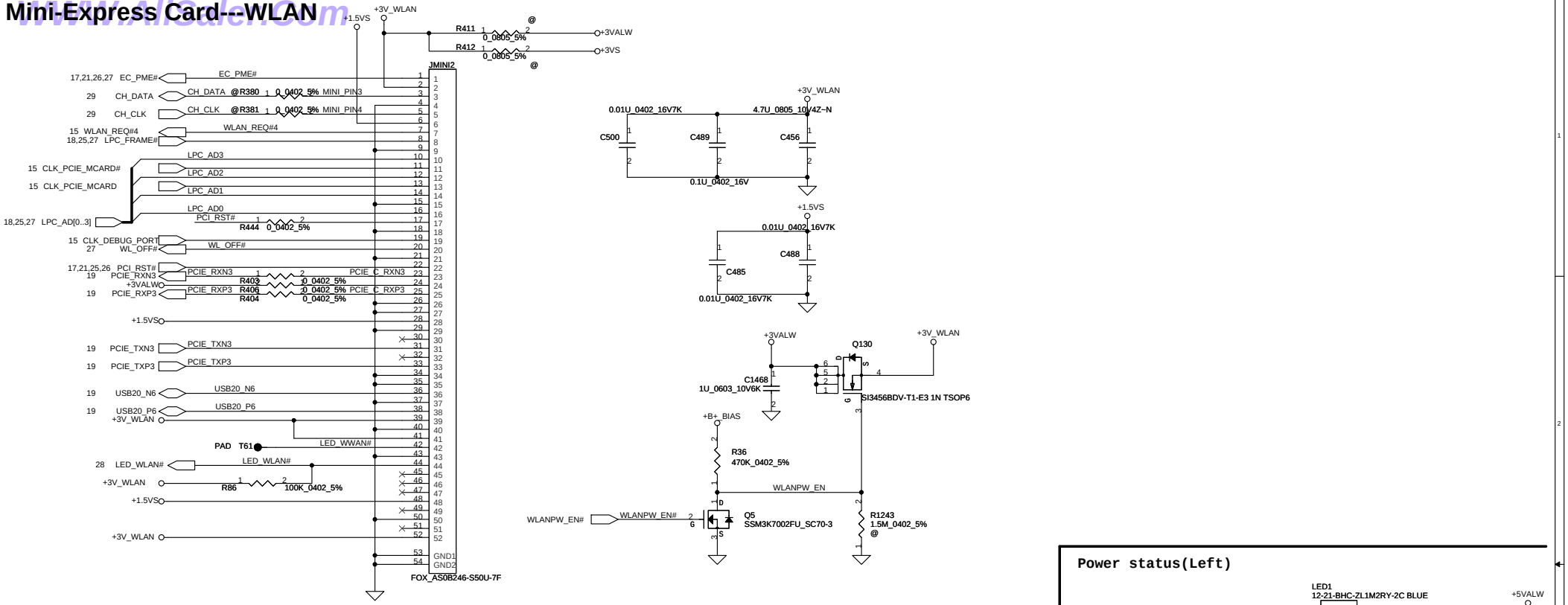
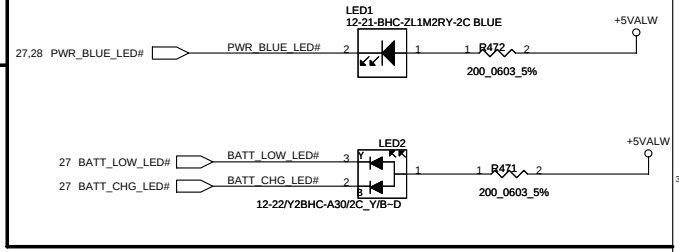
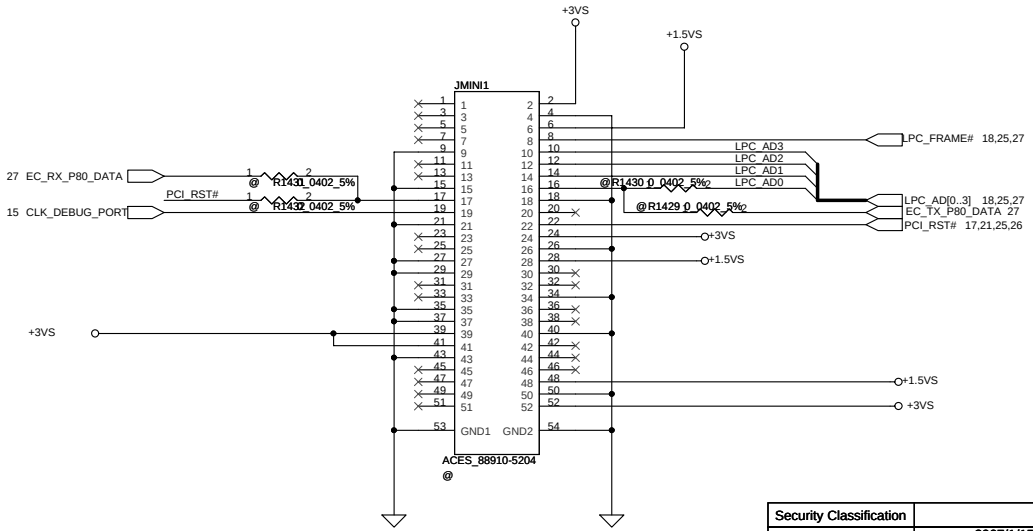
Mini-Express Card--WLAN



Power status(Left)





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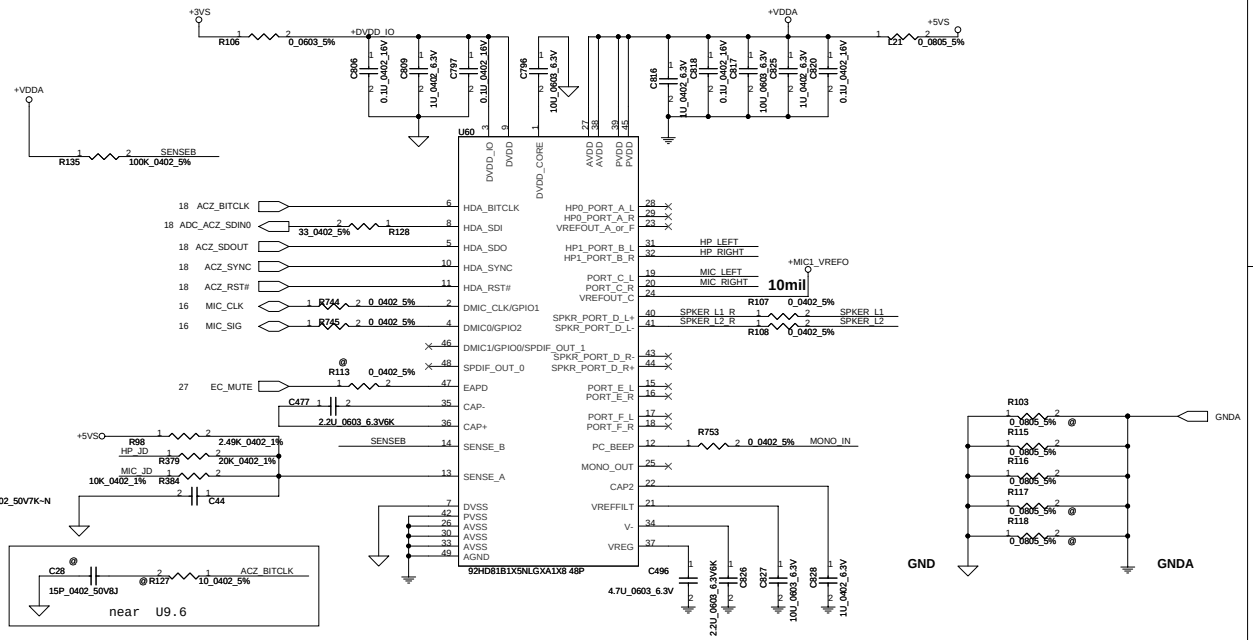
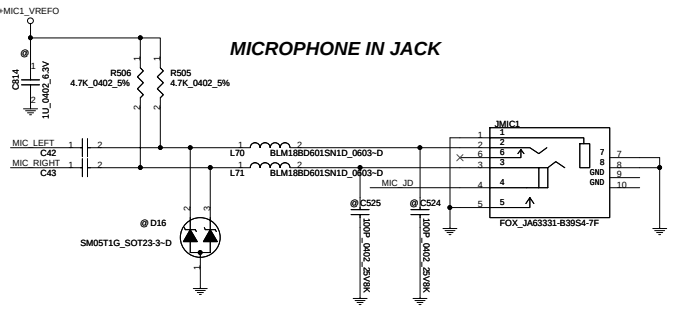
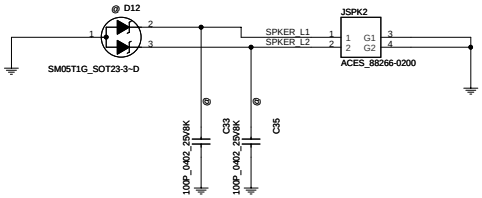


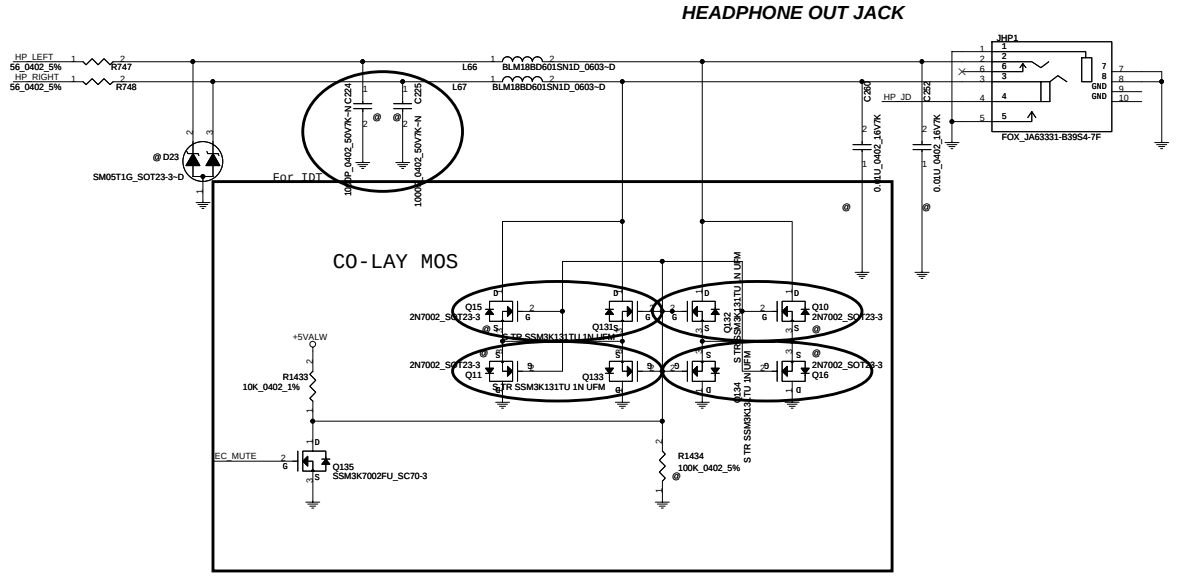
MICROPHONE IN JACK



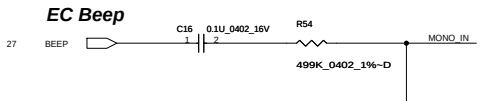
Speaker Connector



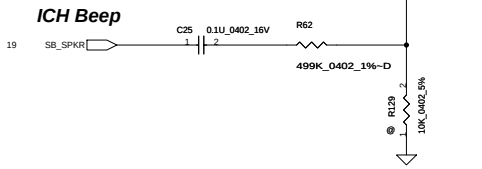
HEADPHONE OUT JACK



EC Beep



ICH Beep



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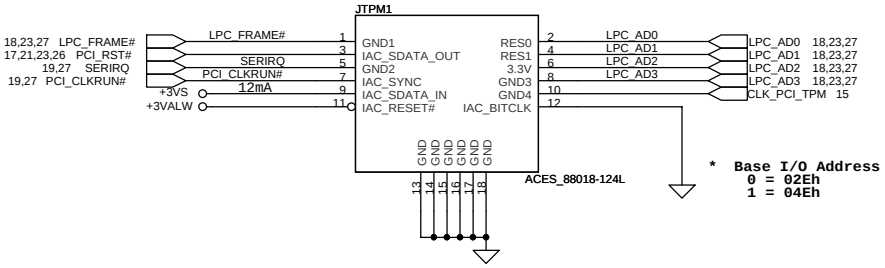
TPM 1.2



Security Classification	Compal Secret Data		
Issued Date	2006/08/05	Deciphered Date	2007/08/05

Compal Electronics, Inc.		
Title: SCHEMATIC, M/B LA-4232P		
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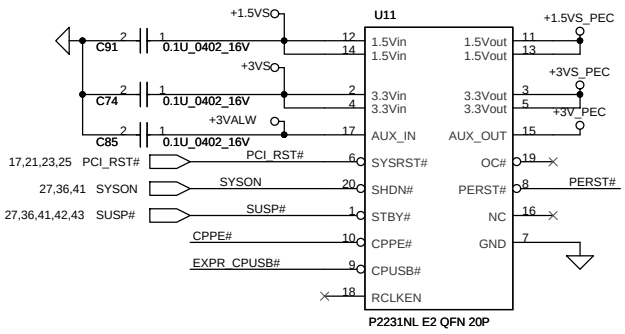
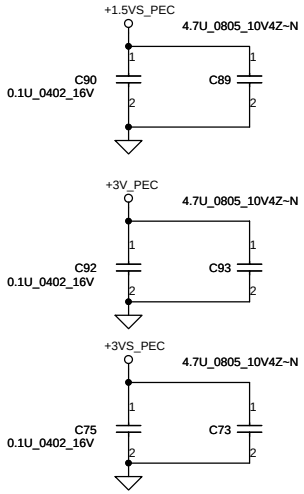
Express card

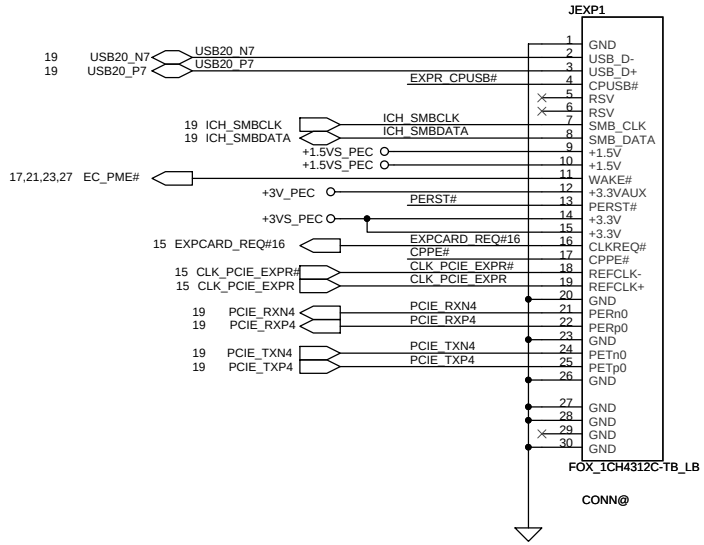
Express Card Power Switch



+1.5V_CARD Max. 650mA, Average 500mA

+3V_CARD Max. 1300mA, Average 1000mA





Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.			
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Board ID

Rev	0.1	0.2	0.3	0.4	1.0
Voltage	0	0.105	0.210	0.3	0.430
Rb	-----	3.3K	6.8K	10K	15K

M/B rev:0.1; 0.2 ; 0.3 ; 0.4
Voltage:0.0; 0.105; 0.210; 0.3
Rb: ---;3.3K ;6.8K ;10K

SPI Flash connect

JBIOS1
E&T_2941-G08N-00E-D
ME@

SPI Flash (8Mb*1)

U37
MX25L1605AM2C-12G_SO8

REED Switch

U8 APX9132ATI-TRL_SOT23-3
U1 APX9132ATI-TRL_SOT23-3

KB926QFA1_LQFP128

32.768KHZ_12.5P_1TJS125BJ2A251

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Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.
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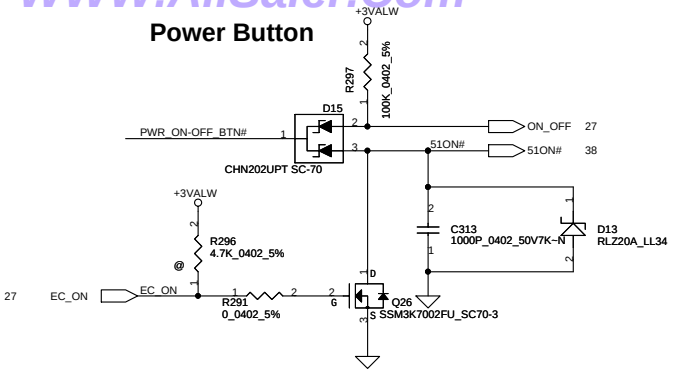
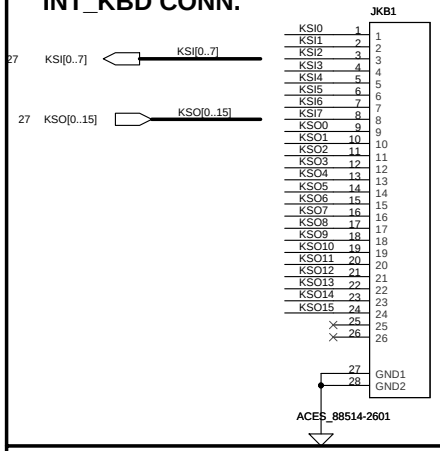
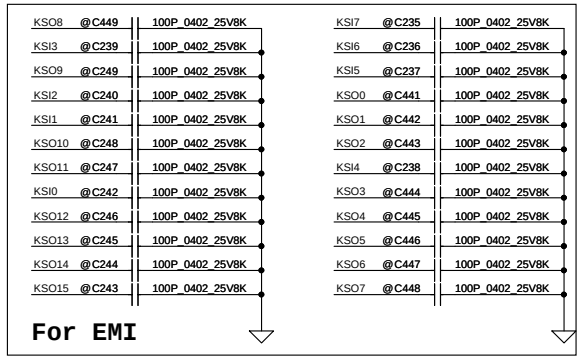
Power Button

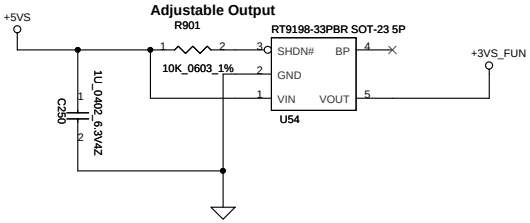


INT_KBD CONN.

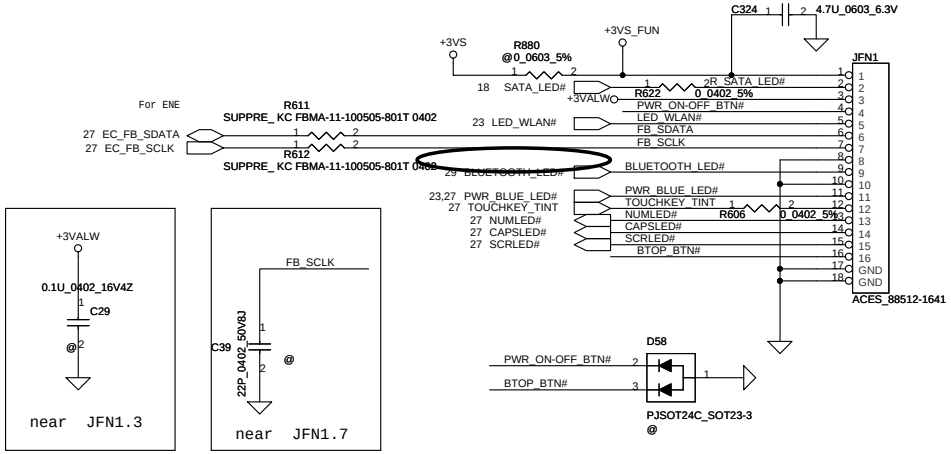




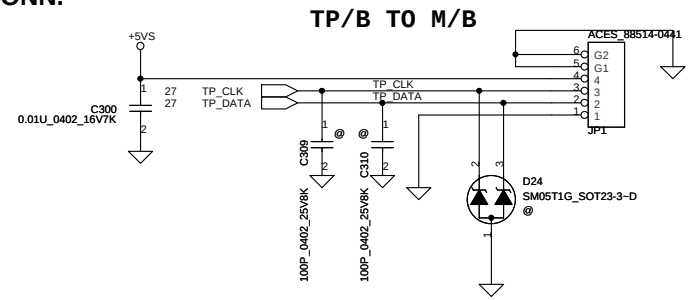
Regulator for ENE sensor



Function/B CONN.



Touch PAD/B CONN.



Security Classification	Compal Secret Data		
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Compal Electronics, Inc.			
Title	SCHEMATIC, M/B LA-4232P		
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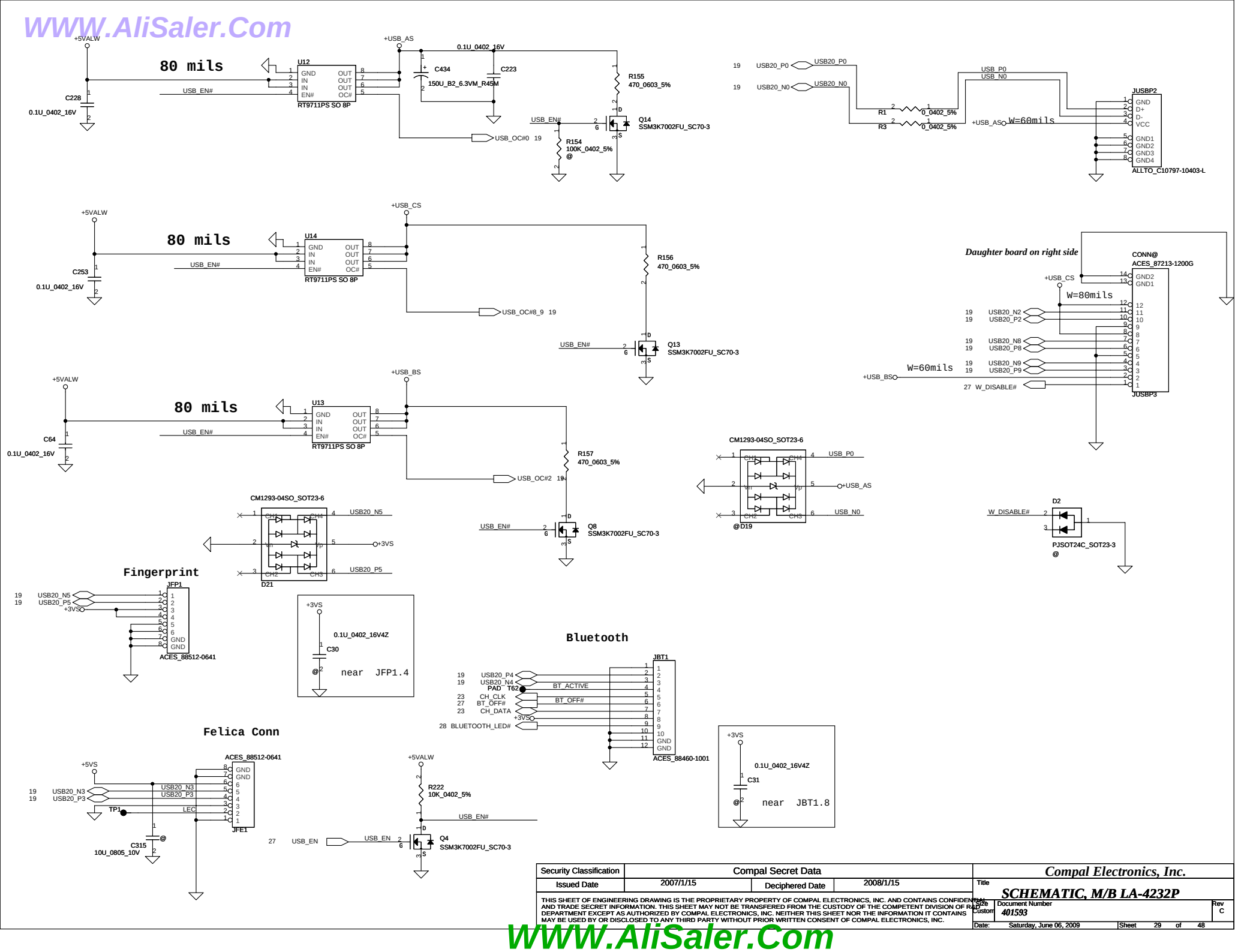

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.

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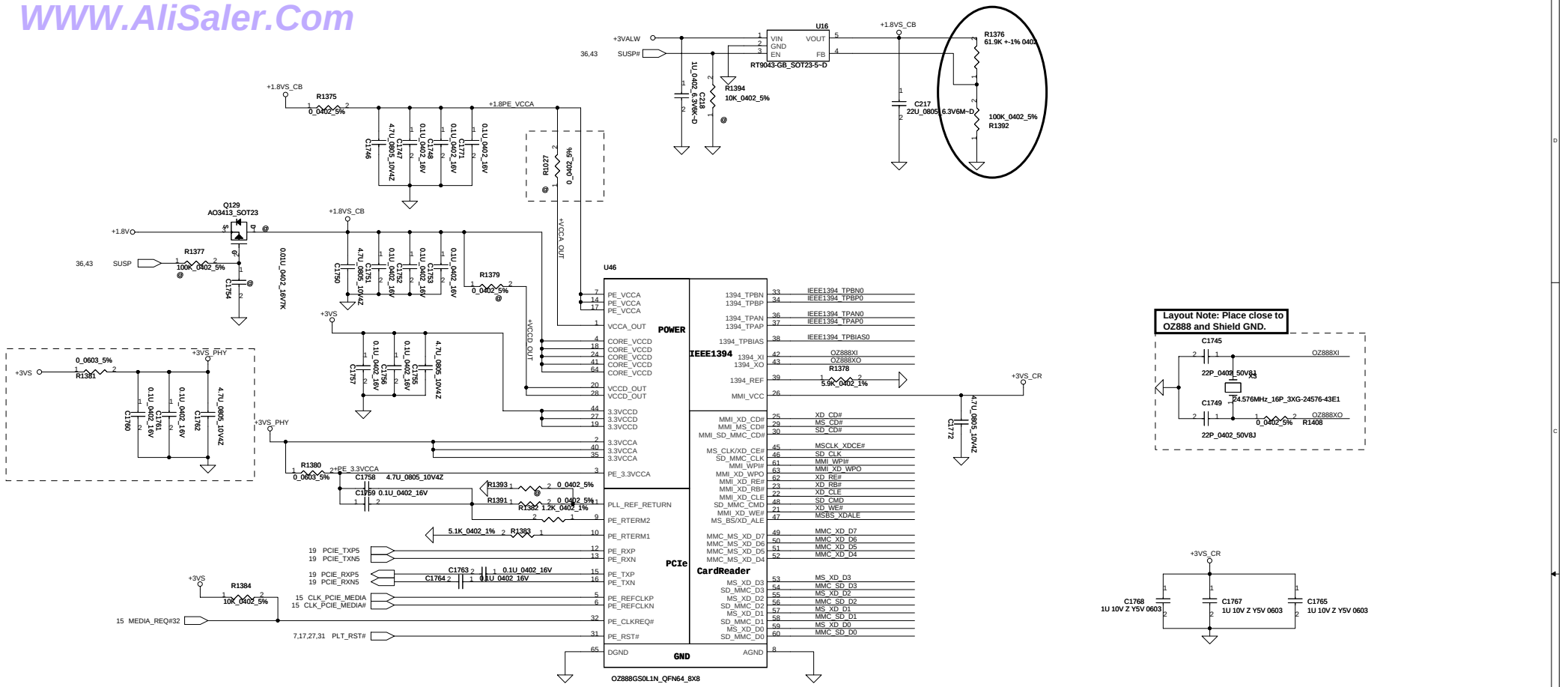

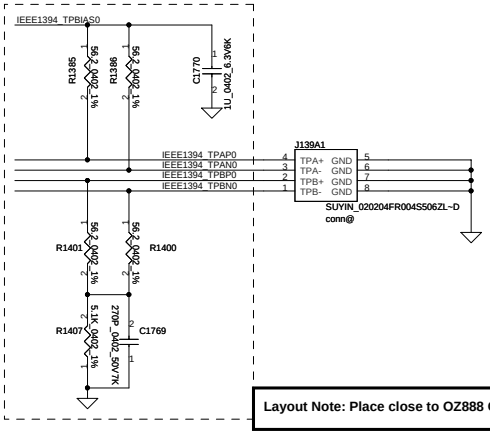

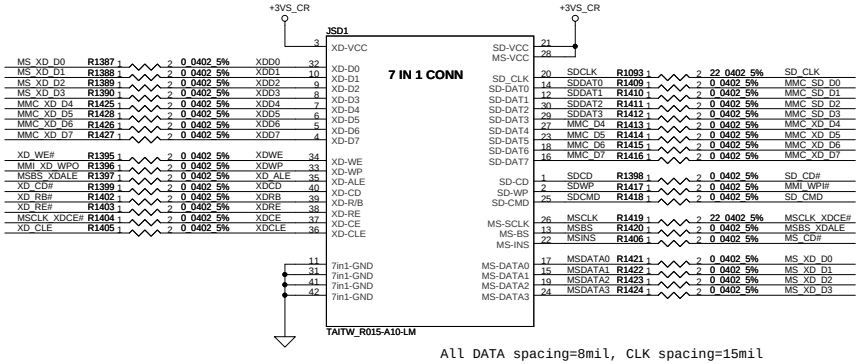

Security Classification	Compal Secret Data		Compal Electronics, Inc.
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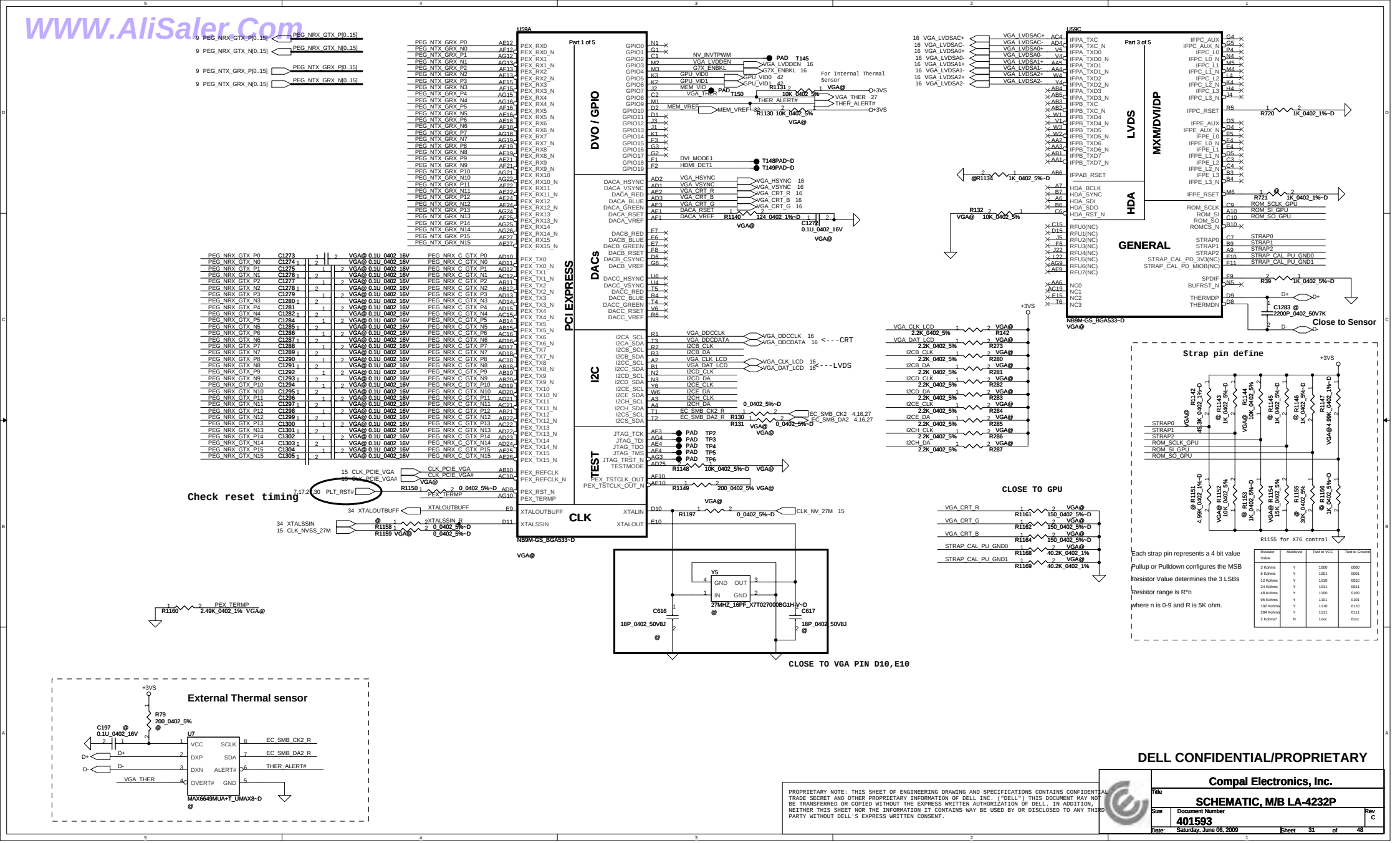

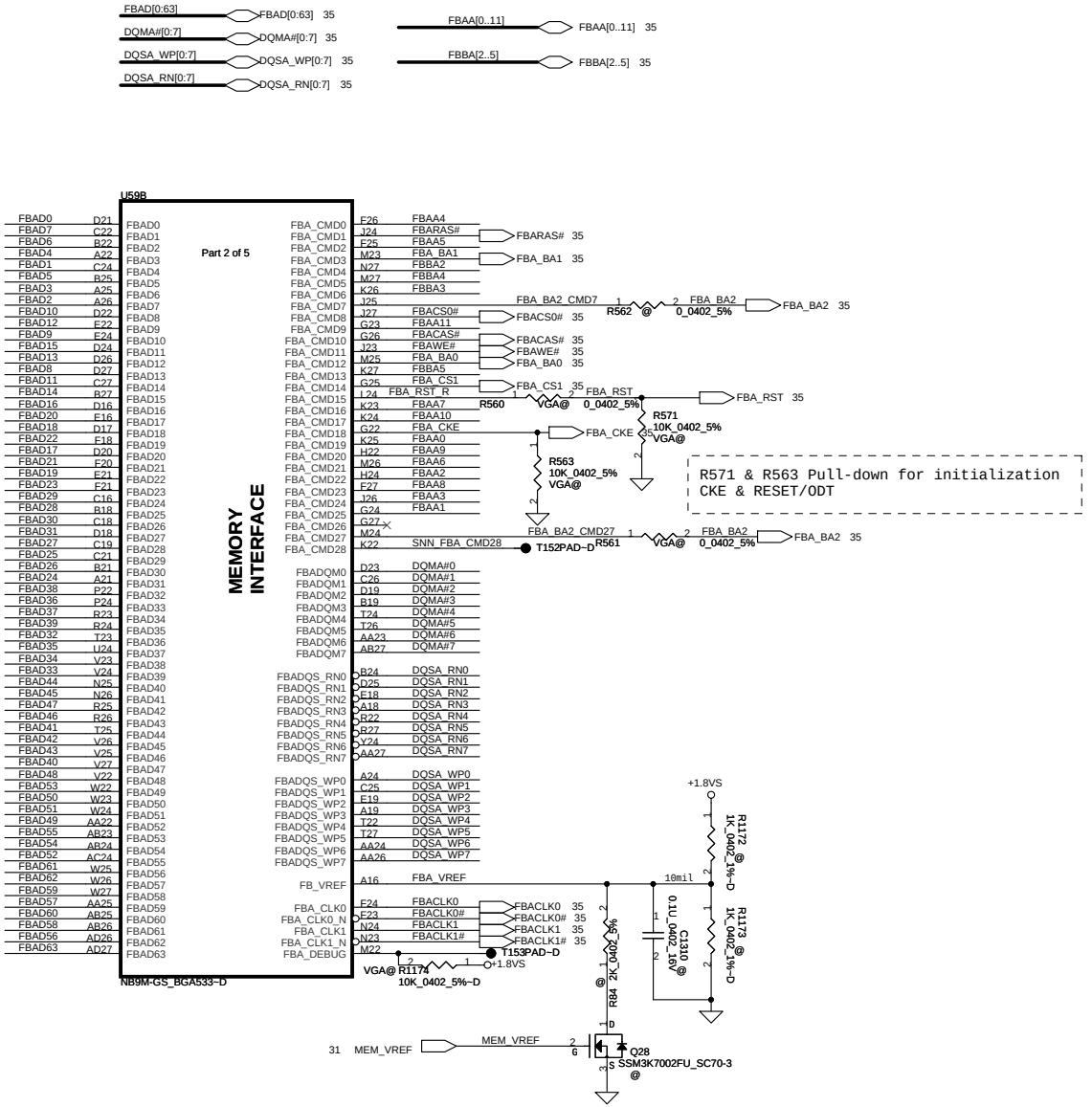

Compal Electronics, Inc.

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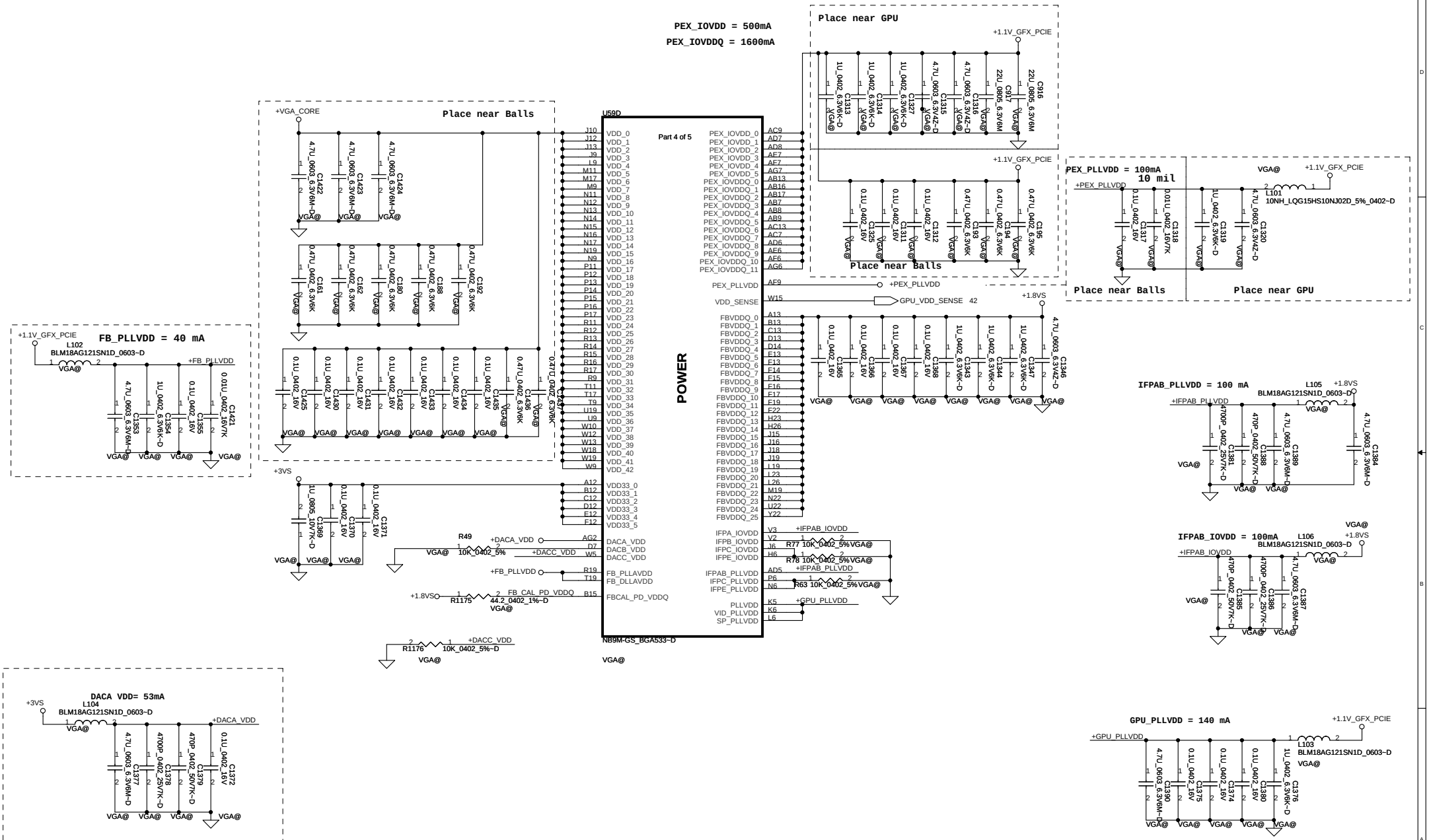

Compal Electronics, Inc.

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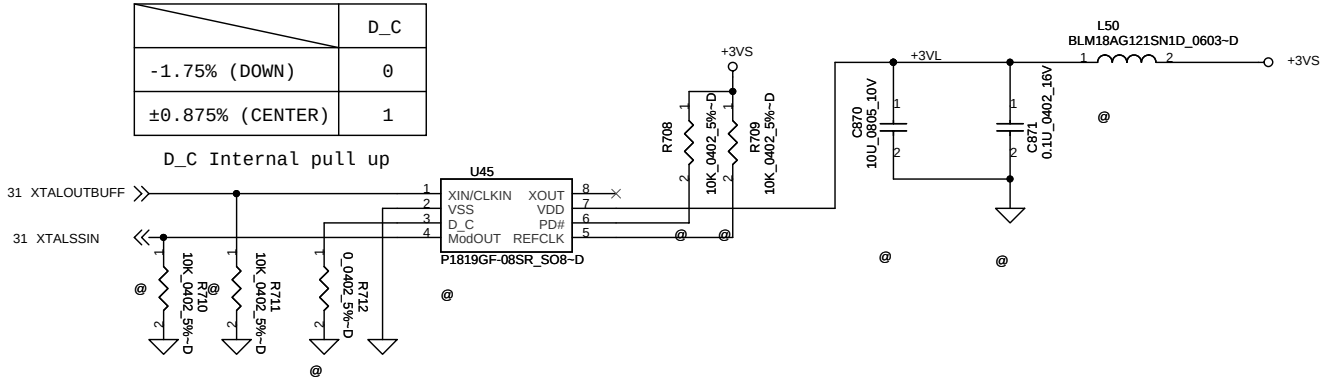
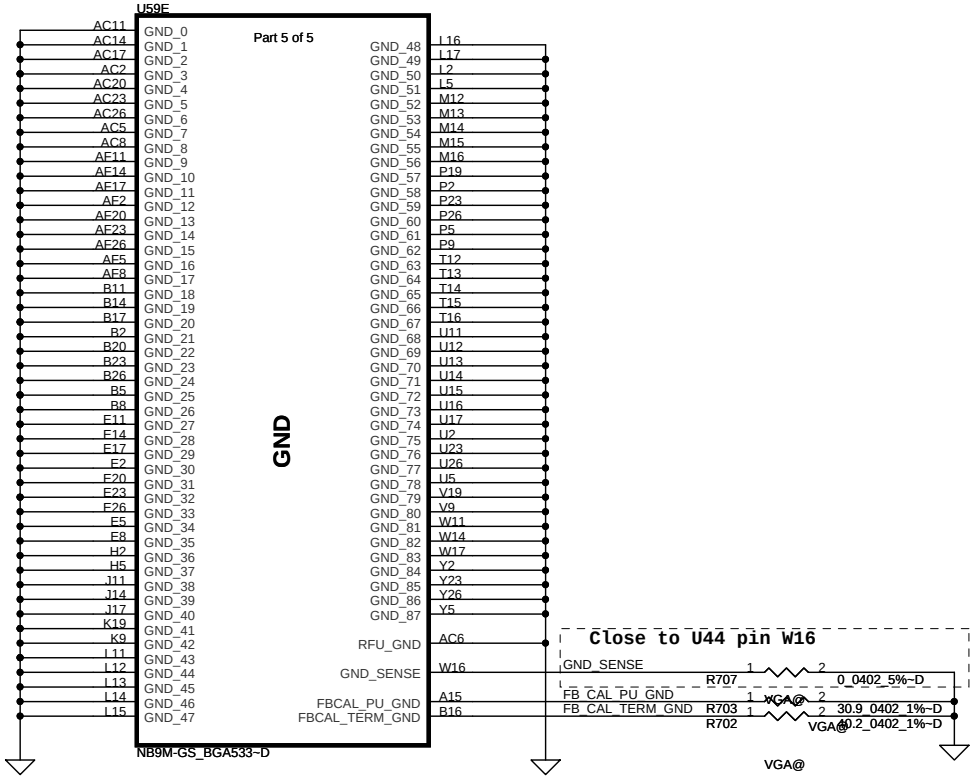
	D_C
-1.75% (DOWN)	0
±0.875% (CENTER)	1

D_C Internal pull up





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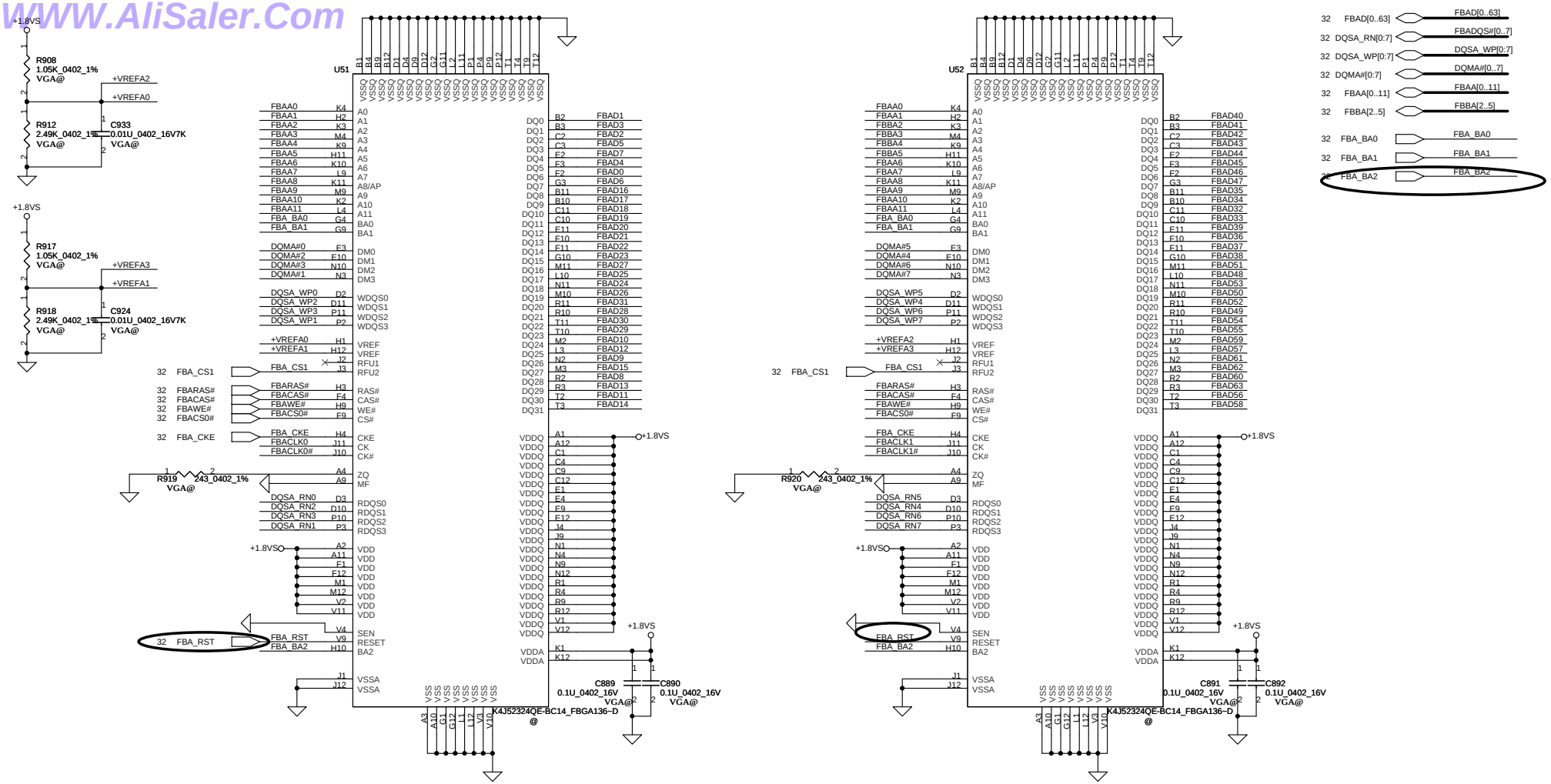
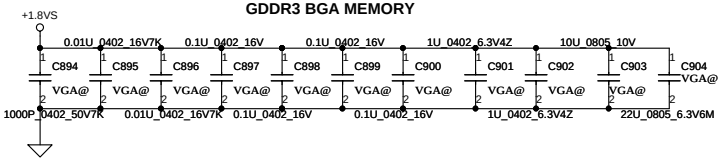
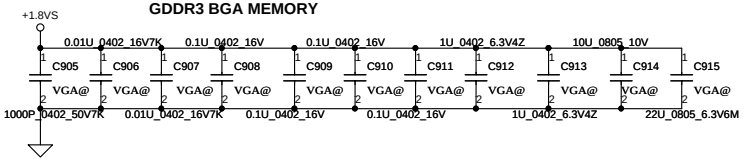


GDDR3 BGA MEMORY



GDDR3 BGA MEMORY



Security Classification	Compal Secret Data		
Issued Date	2007/02/12	Deciphered Date	2008/02/12

Compal Electronics, Inc.

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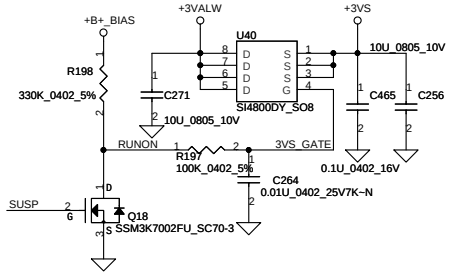
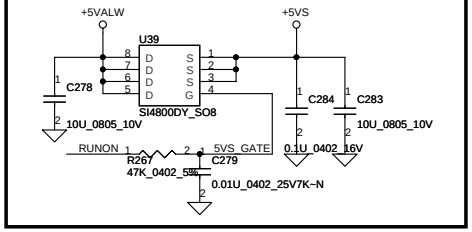
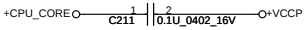
+3VALW to +3VS Transfer

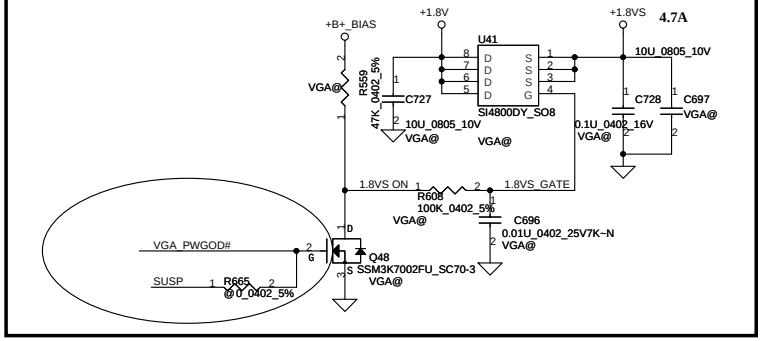


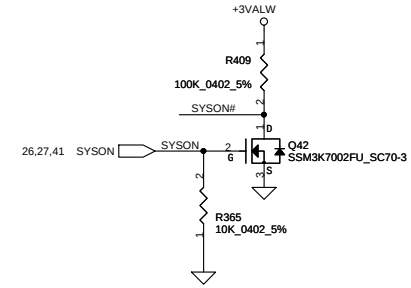
+5VALW to +5VS Transfer

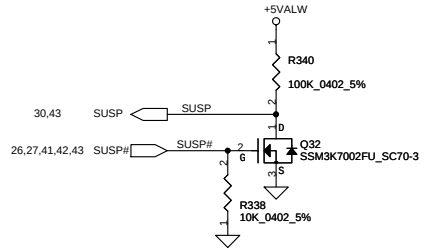


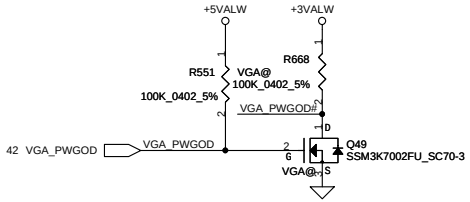


+1.8V to +1.8VS Transfer



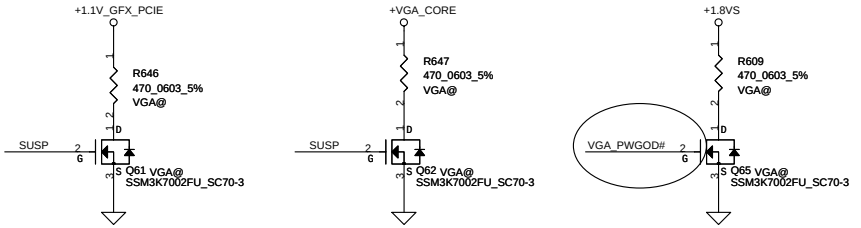




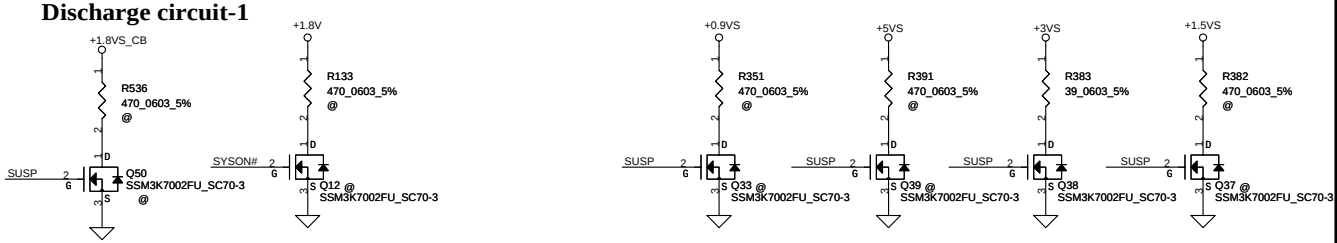


SYSON -> SUSP# -> VGA_ON->VGA_PWGOD

VGA Discharge circuit



Discharge circuit-1



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Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.	
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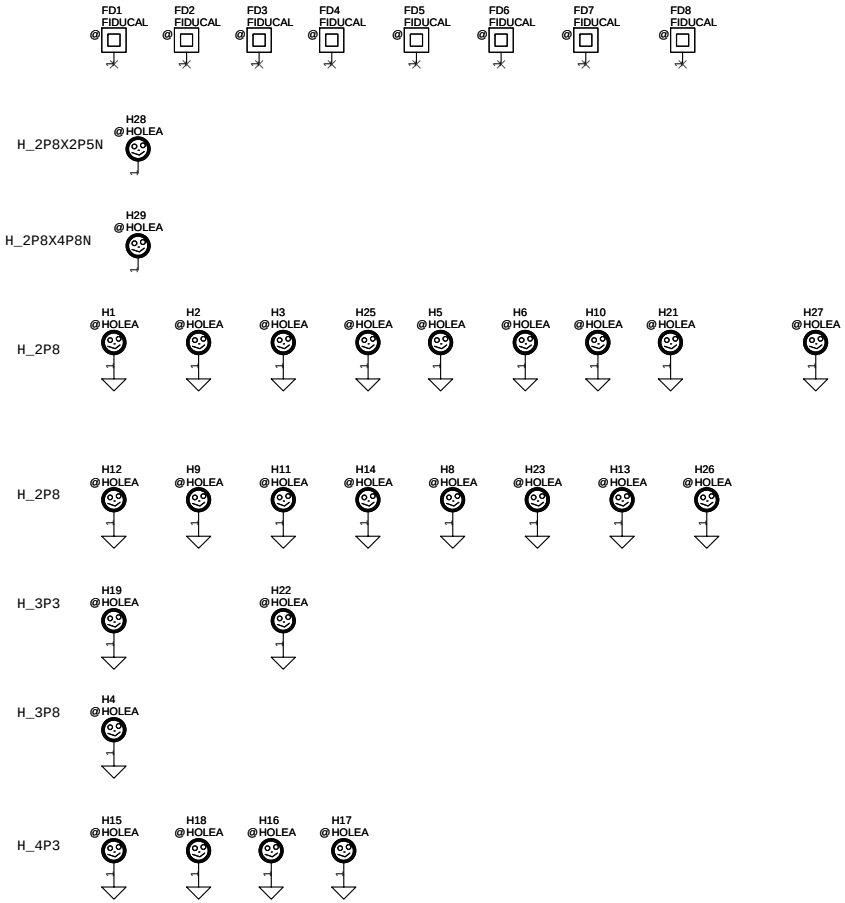

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.

Title: ***SCHEMATIC, M/B LA-4232P***

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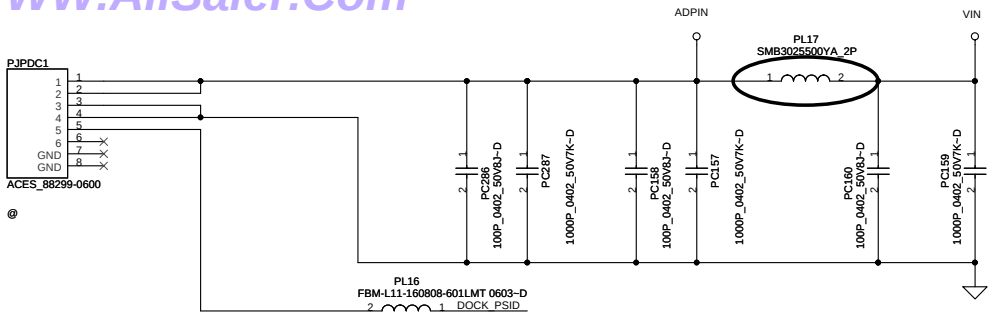
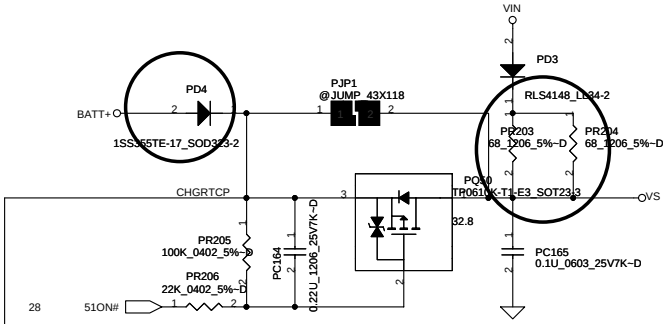
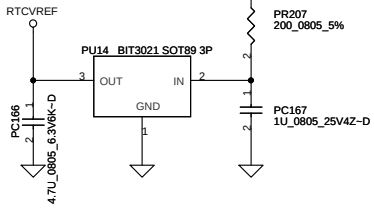
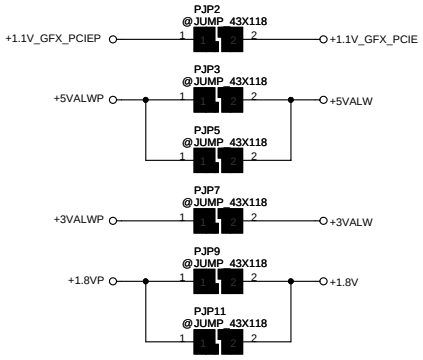
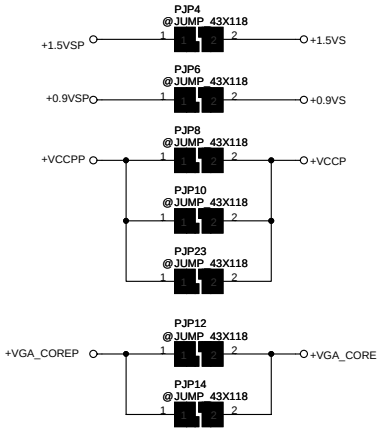
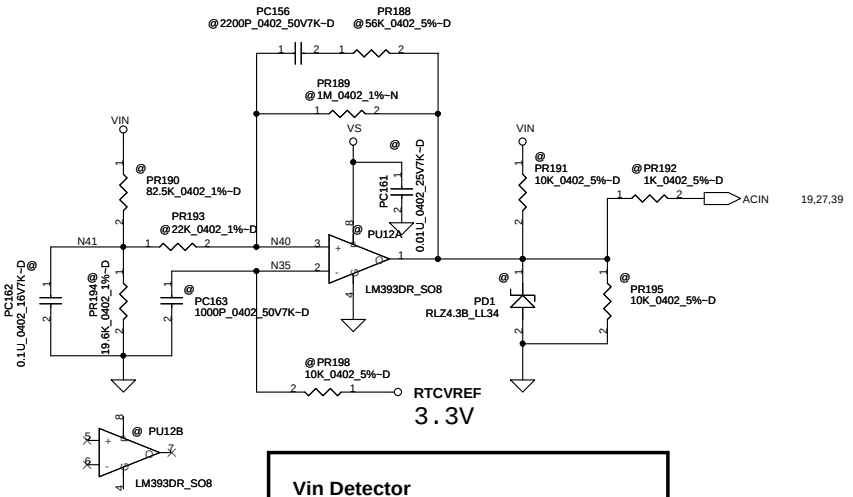






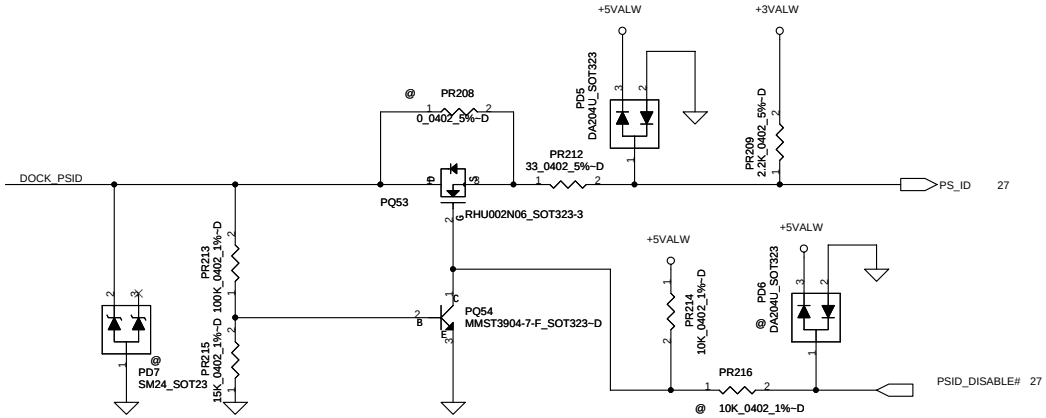






Vin Detector

	Max.	typ.	Min.
L-->H	18.234	17.841	17.449
H-->L	17.597	17.210	16.813



Security Classification	Compal Secret Data		
Issued Date	2006/10/1	Deciphered Date	2007/5/01

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90W adapter
Icharge=(Vsrset/Vvdac)*(0.1/PR222)=3.3A
Iadapter=(Vacset/Vvdac)*(0.1/PR217)=3.1A
Input OVP : 22.3V
Input UVP : 16.98V
Fsw : 300KHz

CP setting

Cells selector

CELLS	GND	3 Cell
	VREF	4 Cell

ICHG setting

IREF	Current
2.968V	3A

COIN RTC Battery

Security Classification	Compal Secret Data		
Issued Date	2006/10/1	Deciphered Date	2007/5/01

Compal Electronics, Inc.

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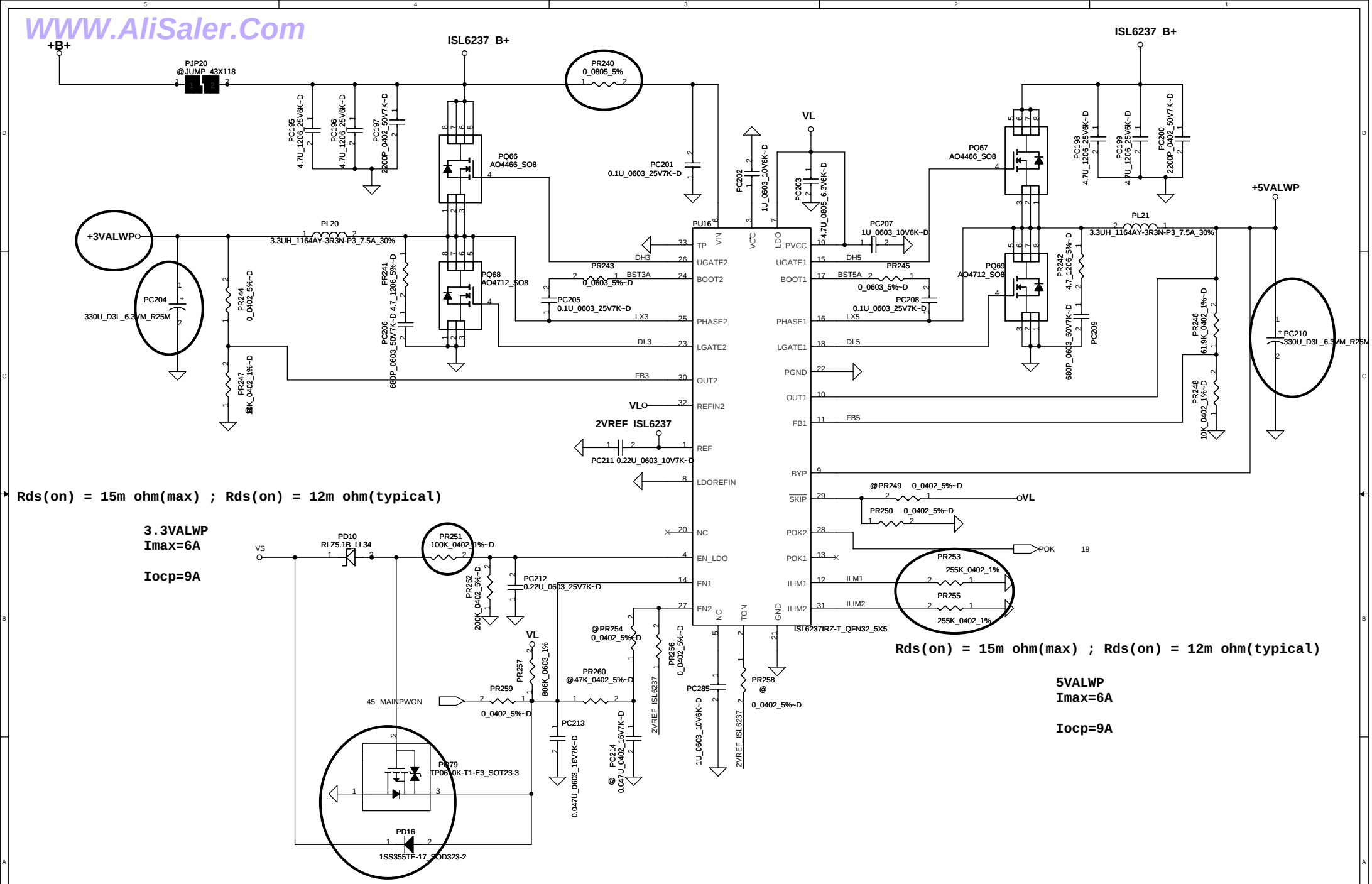

Security Classification	Compal Secret Data		
Issued Date	2006/10/1	Deciphered Date	2007/05/30

Compal Electronics, Inc.			
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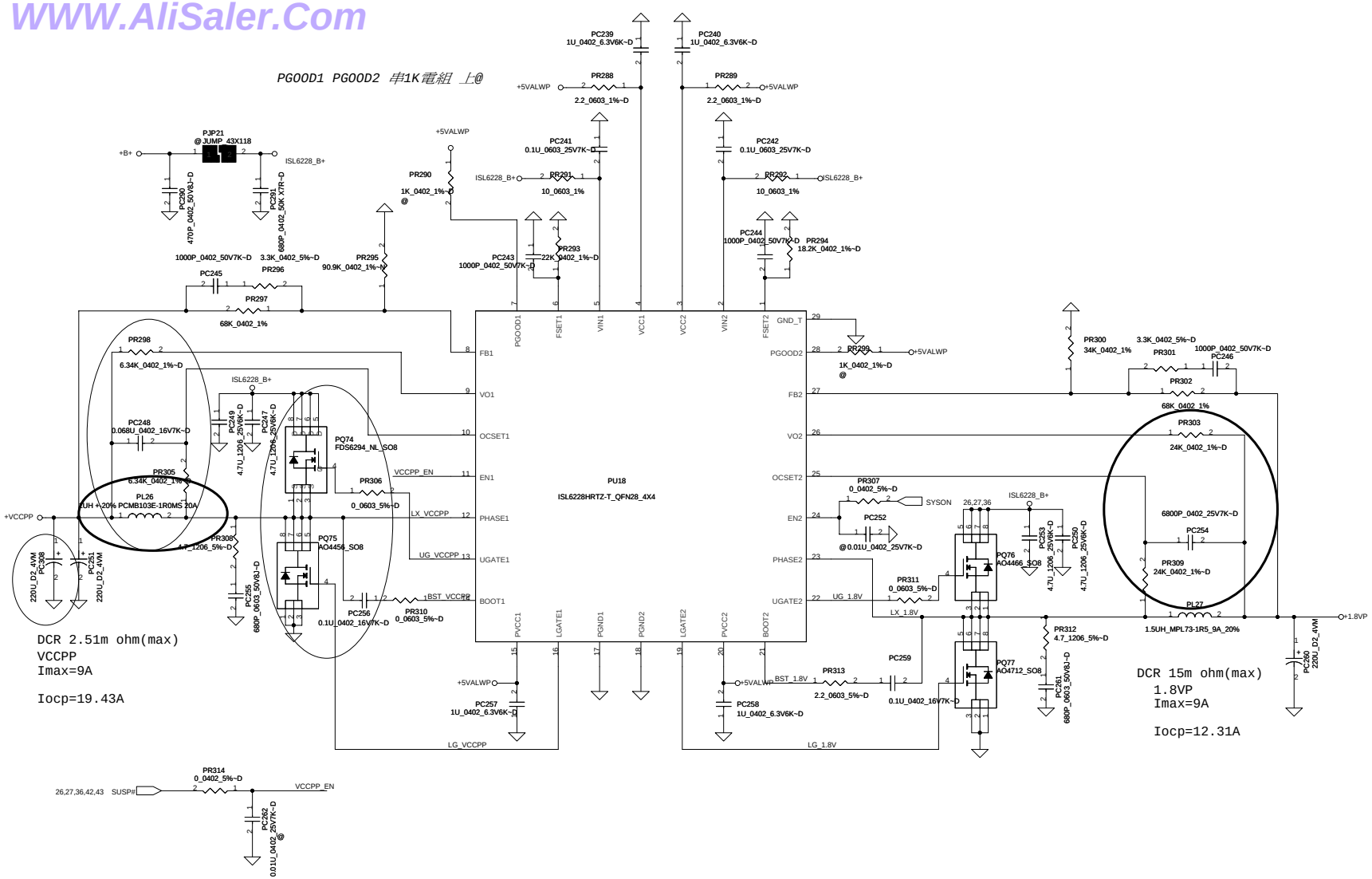

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PGOOD1 PGOOD2 串1K電組 上@

PU17
ISL6228HRTZ-T_QFN28_4X4

DCR 15m ohm(max)
1.5VP
Imax=5A

Iocp=9.13A

DCR 10m ohm(max)
+VGA (1.15V)
Imax=11A

Iocp=15.08A

	0.90V	1.09V	1.17V
GPU_VID_0	0	0	1
GPU_VID_1	0	1	1

output voltage adjustable network

Security Classification	Compal Secret Data		
Issued Date	2006/10/1	Deciphered Date	2007/5/01

Compal Electronics, Inc.

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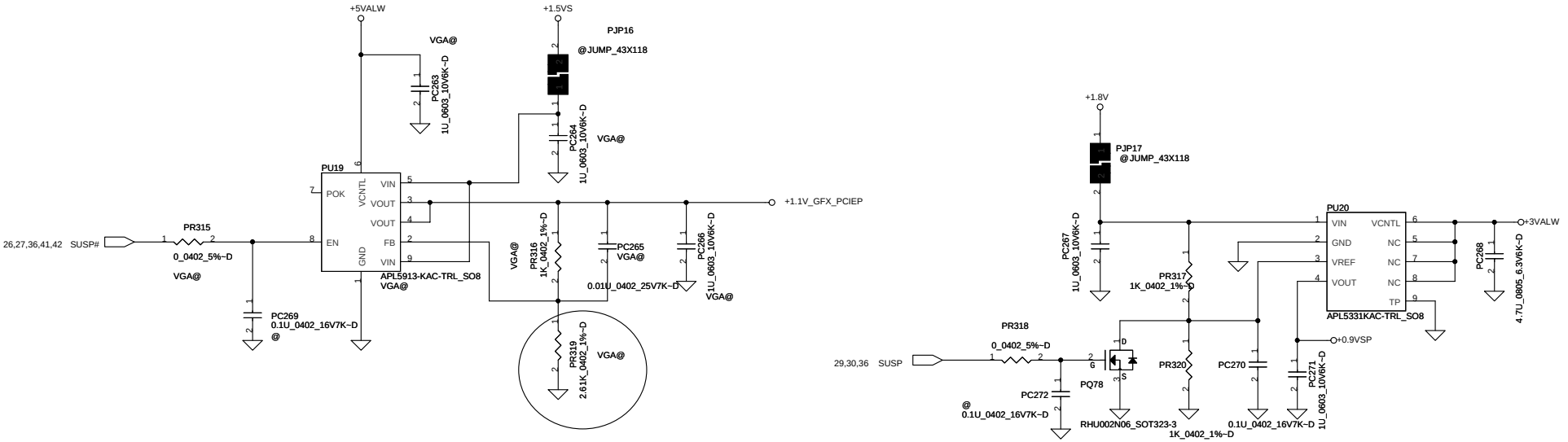

Security Classification	Compal Secret Data		
Issued Date	2005/10/1	Deciphered Date	2007/05/30

Compal Electronics, Inc.

Title	SCHEMATIC, M/B LA-4232P		
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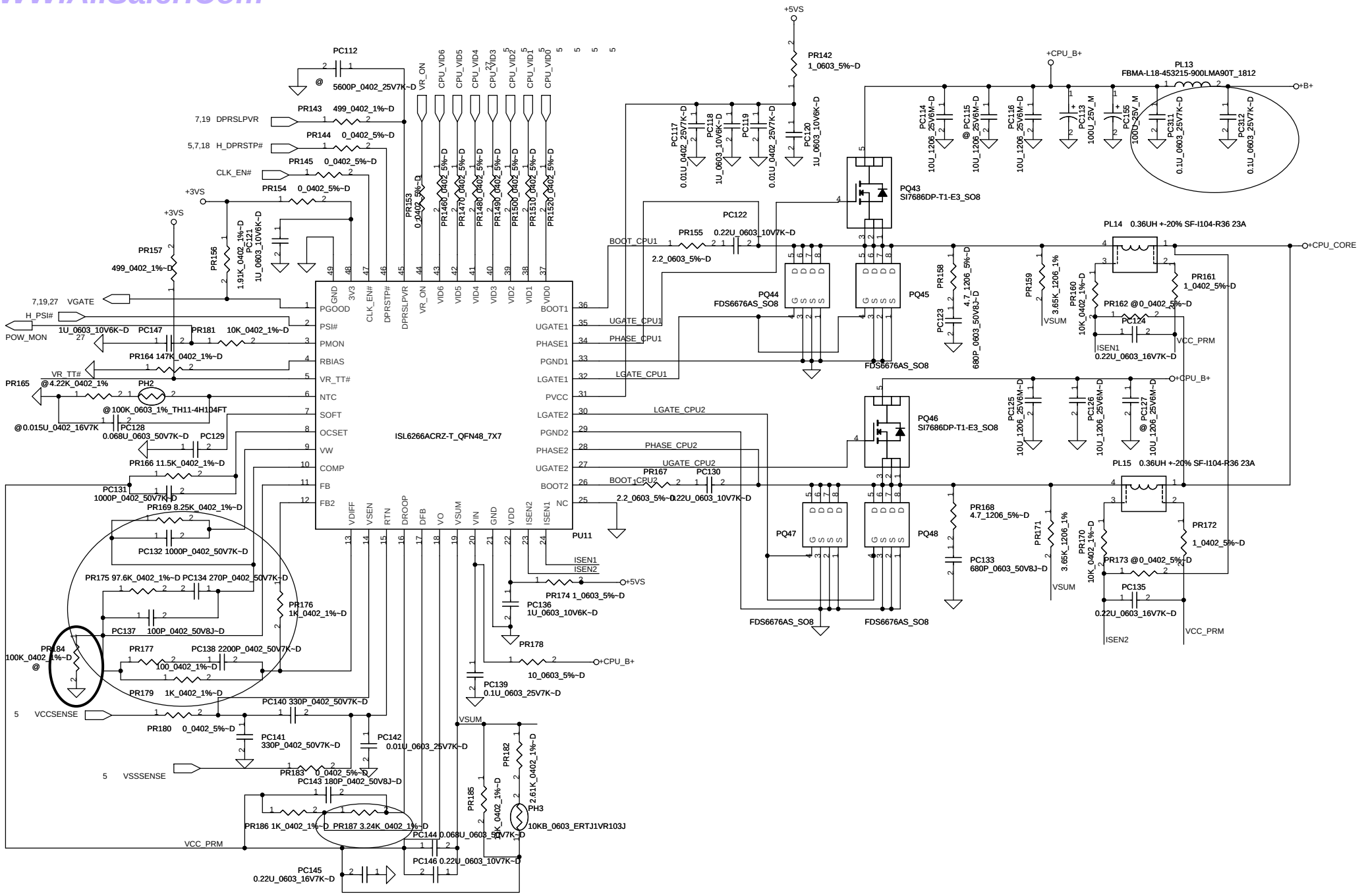

Security Classification	Compal Secret Data		
Issued Date	2007/1/15	Deciphered Date	2008/1/15

Compal Electronics, Inc.

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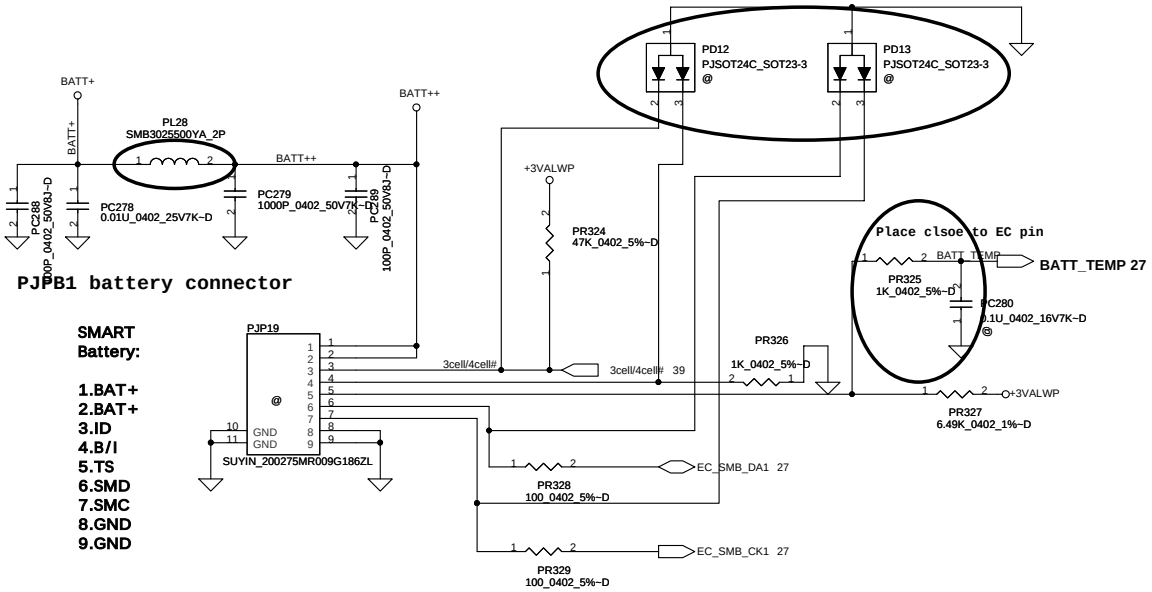
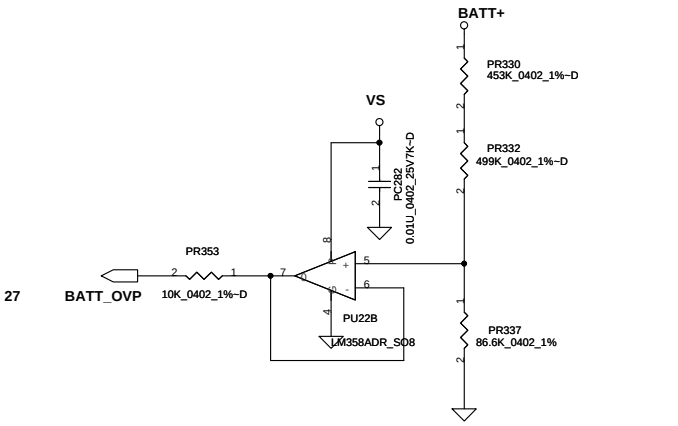
Battery Connect/OTP



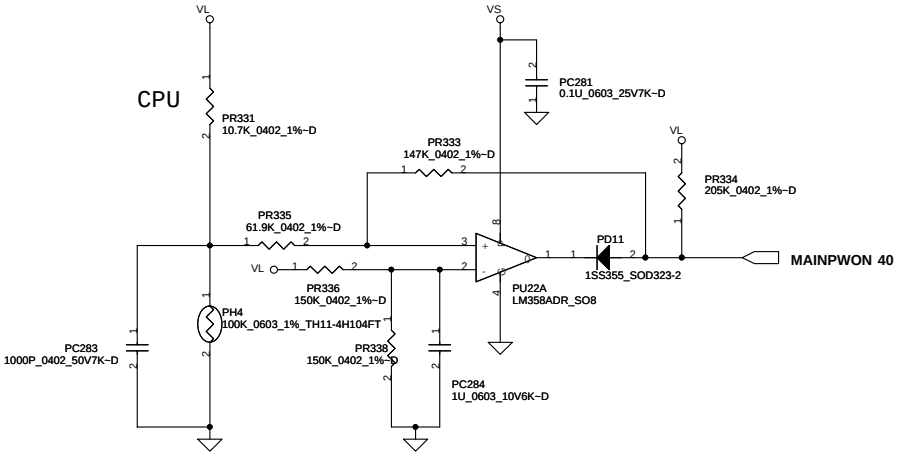
PJPB1 battery connector

CPU

PH1 under CPU botten side :
CPU thermal protection at 90 +-3 degree C
Recovery at 50 +-3 degree C



LI-3S :13.5V----BATT-OVP=1.5V
BATT-OVP=0.111*BATT+



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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	29	P29-EC KB926/REED SW/TPM1.2	07/10/30	compal	board rev update to 0.2	R231 change to 15K & R232 pop	0.2
2	40	P40-OZ129_Card Reader/1394	07/10/30	compal	CardBus vendor change	CardBus R5C833 change to OZ129	0.2
3	29	P29-EC KB926/REED SW/TPM1.2	07/10/30	compal	Change pull up resistance	Change EC pin17,18 pull up to 4.7Kohm	0.2
4	29	P29-EC KB926/REED SW/TPM1.2	07/10/30	compal	Need pull up	NET MIC_DIAG pull up R to 10Kohm 3VS	0.2
5	13,14	DDR2 SODIMM-I,II Socket	07/10/30	compal	Change Capacitance	Change C84,C189 to SGA00002680 330U	0.2
6	29	P29-EC KB926/REED SW/TPM1.2	07/10/30	compal	EC update rev	EC change to 926C	0.2
7	28	P28-Express card	07/10/30	compal	Express card can't detect	POWER IC(U11) ADD PIN10 CPUSB# PIN9 EXPR_CPUSB#S	0.2
8	32	P32-USB/ BlueTooth/ FP/ Felica	07/10/30	compal	Bluetooth can't detect	BLUETOOTH CONN USB+- change	0.2
9	42	P42-Screws	07/10/30	compal	FIDUCAL no enough	ADD FIDUCAL*4	0.2
10	41	P41-DC/DC Interface	07/10/30	compal	Need pull down	SYSON pull down 10K ohm	0.2
11	41	P41-DC/DC Interface	07/11/12	compal	USB can't detect	SUSP change to 5VALW(Q32)	0.2
12	06	P06-Merom(3/3)-GND/Bypass	07/11/12	compal	Change CPU High Frequence Decoupling Capacitance	C195 change to C1150~C1181	0.2
13	41	P41-DC/DC Interface	07/11/13	compal	+1.8VS Discharge error	+1.8VS Discharge circuit Q65 net change to VGA_PWGOD#	0.2
14	41	P41-DC/DC Interface	07/11/16	compal	Delete	Remove SIM card connector	0.2
15	42	P42-Screws	07/11/16	compal	Change Holea size	Change Holea size 2.5 to 2.8, change 3.5 to 3.8	0.2
16	31	P31-PWR_OK/ BTN/ KB / TouchPad	07/11/21	compal	Change Touch PAD/B connector	Touch PAD/B connector change net	0.2
17	15	P15-CRT Conn.& LCD Conn.	07/11/21	compal	Add LCD control pin	Add LCD control pin LCD_CBL_DET# & LCD_TST & LCD_VCC_TEST_EN	0.2
18	20	P20-ICH9(4/4)_POWER&GND	08/04/22	compal	+5VS & +3VS have leakage	Change VCCCL3[1] [2] & VCCLAN3_3[1] [2] power source to +LAN_IO	
19	20	P09-Cantiga(3/6)-VGA/LVDS/TV	08/04/22	compal	Can't boot to OS	Add BOM Structure @	
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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	41	1.8VP/+VCCPP	08/10/22	COMPAL	adjust +VCCP OCP set	Change PC248 from 0.033u to 0.068u	0.2
2	42	1.5VSP/+VGA_CORE	08/10/22	COMPAL	ripple voltage fail	Change PC227 from SF22001M300 to SGA20221150	0.2
3	42	1.5VSP/+VGA_CORE	08/10/22	COMPAL	convenient test	Add PR304	0.2
4	44	CPU_CORE	08/10/22	COMPAL	load line fail	Change PR187 from 2.21K to 3.24K	0.2
5	38	DCIN / Precharge	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
6	39	Charger	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
7	40	+3VALWP/+5VALWP	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
8	41	1.8VP/+VCCPP	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
9	42	1.5VSP/+VGA_CORE	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
10	43	+0.9VSP/+1.1V_GFX_PCIEP	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
11	44	CPU_CORE	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
12	45	BATTERY CONN	08/10/22	COMPAL	modify MLCC part number	change part number N0 to 8L	0.2
13	40	+3VALWP/+5VALWP	08/10/24	COMPAL	boost choke current rating	change PL20 PL21 from SH000006380 to SH00000AY00	0.2
14	45	BATTERY CONN	08/10/30	COMPAL	delete diode for EMD request	del PD14 PD15	0.2
15	45	BATTERY CONN	08/10/30	COMPAL	change diode for EMD request	change PD12 PD13 from SC1A204U00L to SCA00000E00	0.2
16	39	Charger	08/10/31	COMPAL	design modify	add PR372 PR373	0.2
17	41	1.8VP/+VCCPP	08/11/03	COMPAL	dynamic fail	change PC233 from SGA20221150 to SGA00001U80	0.2
18	44	CPU_CORE	08/12/08	COMPAL	cost down	change PU11 from SA00001HU80 to SA000031W00 and interrelated components	0.3
19	38	DCIN / Precharge	08/12/08	COMPAL	common circuit design modify	change PR203 from 33 to 68 and add PR204 to 68	0.3
20	39	Charger	08/12/08	COMPAL	vendor FAE suggest	change PR272 PR339 from 1 to 3.3	0.3
21	38	DCIN / Precharge	08/12/08	COMPAL	design modify	change PL17 from SM010018880 to SM010008E10	0.3
22	45	BATTERY CONN	08/12/08	COMPAL	design modify	change PL28 from SM010018210 to SM010008E10	0.3
23	39	Charger	08/12/15	COMPAL	change component for EMD request	change PJP15 to PL19 SM010016410	0.3
24	39	Charger	08/12/15	COMPAL	add capacitor for EMD request	add PC274 0.1u	0.3
25	42	1.5VSP/+VGA_CORE	09/01/19	COMPAL	adjust VGA_CORE OCP set	change PQ72 from SB00000CG00 to SB562940080	0.4
26						change PQ73 from SB00000AJ00 to SB000003W00	0.4
27						change PL24 from SH000008700 to SH000005400	0.4
28						change PR276 PR282 from 24K to 19.6K	0.4
29						change PC230 from 0.022u to 6800p	0.4
30					consumption adjust	change PR269 from 3.3K to 2.2K	0.4
31	44	CPU_CORE	09/01/19	COMPAL	vendor FAE suggest	add PC141 330p	0.4
32	45	BATTERY CONN	09/02/18	COMPAL	delete diode for ESD request	del PD12 PD13	0.4

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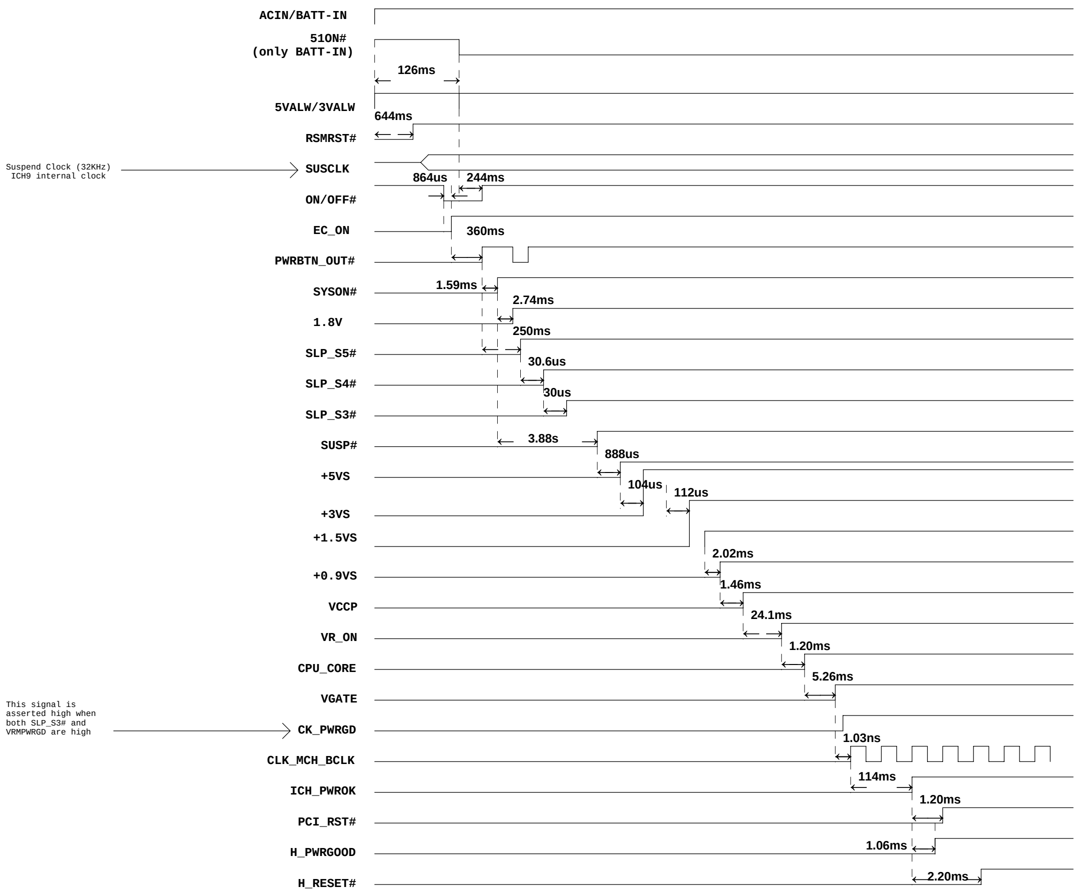
KAL80 POWER UP SEQUENCE



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