

Compal Confidential

MB Schematic Document

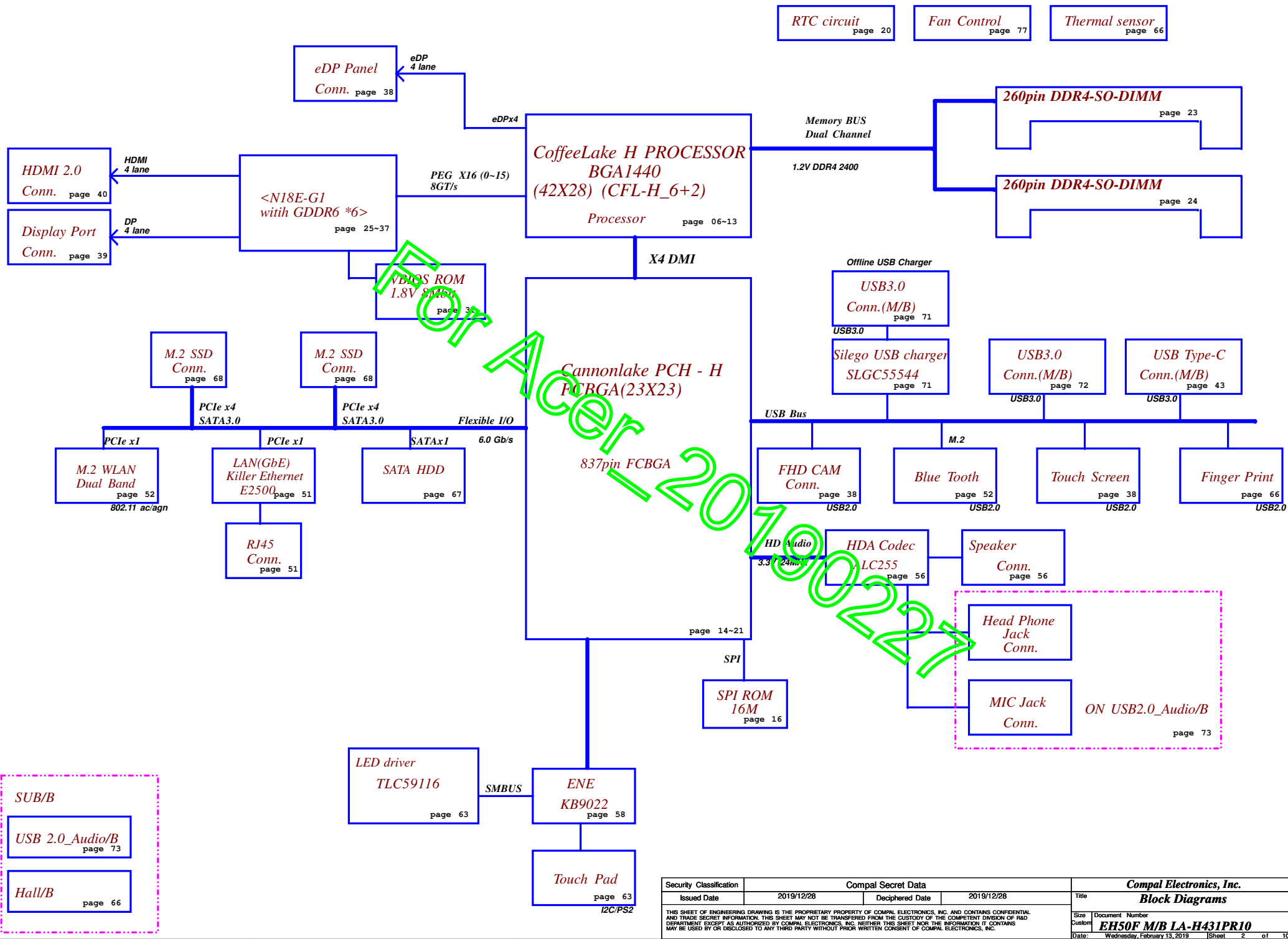
EH50F/EH70F/EH51F/EH5VF/EH53F/EH73F

LA-H431P

Rev:1.0

2018.01.22

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/12/28	Deciphered Date		2019/12/28
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	
				Cover Sheet	
Size	Custom	Document Number			Rev
		EH50F M/B LA-H431PR10			1.0
Date:		Wednesday, February 13, 2019		Sheet	1 of 100



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Block Diagrams	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Customer	Rev
				Date	Wednesday, February 13, 2019
				Sheet	2 of 100

Vcc	3.3V				
Ra	100K +/- 1%				
Board ID	Rb	V _{BI} D min	V _{BI} D typ	V _{BI} D max	EC AD
0	0		0.000 V	0.300 V	0x00 - 0x13
1	12K +/- 1%	0.347 V	0.345 V	0.360 V	0x14 - 0x1E
2	15K +/- 1%	0.423 V	0.430 V	0.438 V	0x1F - 0x25
3	20K +/- 1%	0.541 V	0.550 V	0.559 V	0x26 - 0x30
4	27K +/- 1%	0.691 V	0.702 V	0.713 V	0x31 - 0x3A
5	33K +/- 1%	0.807 V	0.819 V	0.831 V	0x3B - 0x45
6	43K +/- 1%	0.978 V	0.992 V	1.006 V	0x46 - 0x54
7	56K +/- 1%	1.169 V	1.185 V	1.200 V	0x55 - 0x64
8	75K +/- 1%	1.398 V	1.414 V	1.430 V	0x65 - 0x76
9	100K +/- 1%	1.634 V	1.650 V	1.667 V	0x77 - 0x87
10	130K +/- 1%	1.849 V	1.865 V	1.881 V	0x88 - 0x96
11	160K +/- 1%	2.015 V	2.031 V	2.046 V	0x97 - 0xA4
12	200K +/- 1%	2.185 V	2.200 V	2.215 V	0xA5 - 0xAF
13	240K +/- 1%	2.316 V	2.329 V	2.343 V	0xB0 - 0xB7
14	270K +/- 1%	2.395 V	2.408 V	2.421 V	0xB8 - 0xBF
15	330K +/- 1%	2.521 V	2.533 V	2.547 V	0xC0 - 0xC9
16	430K +/- 1%	2.667 V	2.677 V	2.687 V	0xCA - 0xD4
17	560K +/- 1%	2.791 V	2.800 V	2.808 V	0xD5 - 0xDD
18	750K +/- 1%	2.905 V	2.912 V	2.919 V	0xDE - 0xF0
19	NC	3.000 V	3.000 V		0xFF - 0xFF

BUS	Device	Address(7 bit)	Address(8bit)	
			Write	Read
I2C_0 (+3VS)				
I2C_1 (+3VS)	TM-P3393-003 (Touch Pad)			
	SA577C-12A0 (Touch Pad)			
PCH_SMBCLK (+3VS)	DIMM1			
	DIMM2			
PCH_SML1CLK EC_SMB_CK2 (+3VALW)	N18E-G0/G1 (VGA)	0x9E		
	Thermal Sensor (NCT7718W)	1001_100xb	1001_1001b	1001_1000b
	PCH	0x90		
EC_SMB_CK1 (+3VLP)	ISL88739 (Charger IC)	0x12		
	BATTERY PACK	0x16		
EC_SMB_CK3 (+3VALW)	LED driver	0xC0		

[illegible]

BOM Option Table	
Item	BOM Structure
Unpop	@
Connector	CONN@
i5 CPU	I5@
I7 CPU	I7@
PCH	PCH@
CMC	CMC@
dGPU circuit	VGA@
VGA GC6 3.0	NFGC6@
VGA GC63.0+FGPC6	FGC6@
Intel CNVI	CNVI@
USB charger	CHG@
EMI/ESD requirement	EMC@
EMI/ESD require reserve	XEMC@
With TPM	TPM@
Without TPM	NTPM@
OVRM with uPI	uPI@
OVRM with ON	ON@
With SATA redriver	SATARD@
Without SATA redriver	NORD@
Thermal sensor	TMS@
With FingerPrint	FP@
FingerPrint ESD	FPESD@
With GSYNC panel	GSYNC@
With RTX GSYNC panel	NGSYNC@
RF require reserve	@RF@
for Smart card board	UART@
UMA sku	UMA@
HDMI cost	45@
VRAM BOM	X76@

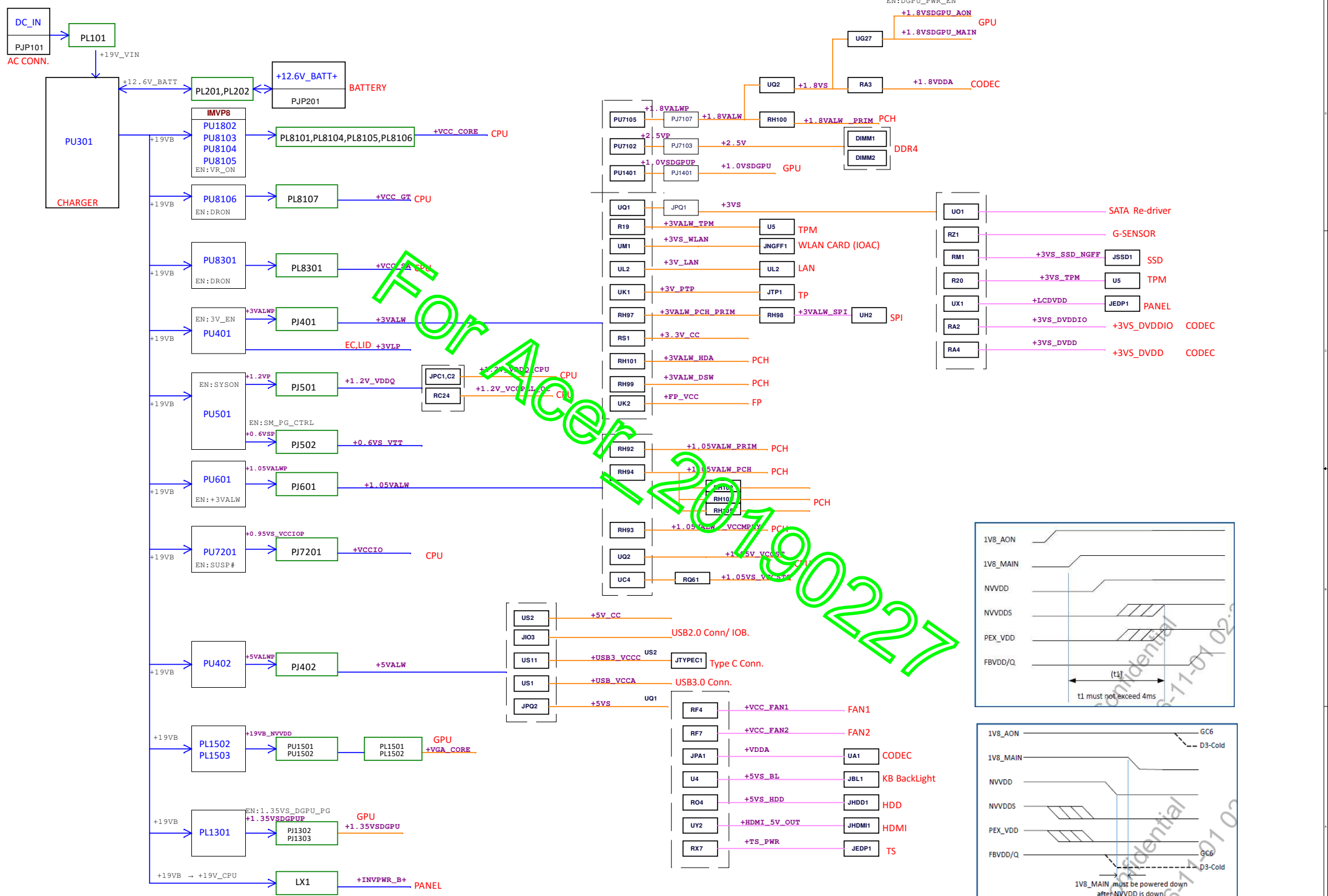
<i>SIGNAL</i>	<i>SLP_S3#</i>	<i>SLP_S4#</i>	<i>SLP_S5#</i>	<i>+VALW</i>	<i>+V</i>	<i>+VS</i>	<i>Clock</i>
<i>S0 (Full ON)</i>	<i>HIGH</i>	<i>HIGH</i>	<i>HIGH</i>	<i>ON</i>	<i>ON</i>	<i>ON</i>	<i>ON</i>
<i>S3 (Suspend to RAM)</i>	<i>LOW</i>	<i>HIGH</i>	<i>HIGH</i>	<i>ON</i>	<i>ON</i>	<i>OFF</i>	<i>OFF</i>
<i>S4 (Suspend to Disk)</i>	<i>LOW</i>	<i>LOW</i>	<i>HIGH</i>	<i>ON</i>	<i>OFF</i>	<i>OFF</i>	<i>OFF</i>
<i>S5 (Soft OFF)</i>	<i>LOW</i>	<i>LOW</i>	<i>LOW</i>	<i>ON</i>	<i>OFF</i>	<i>OFF</i>	<i>OFF</i>

Power Plane	Description	S0	S3	S4	S5
+RTCVCC	RTC Battery Power	ON	ON	ON	ON
+19V_VIN	Adapter power supply	N/A	N/A	N/A	N/A
+12.6V_BATT	Battery power supply	N/A	N/A	N/A	N/A
+19VB	AC or battery power rail for power circuit.	N/A	N/A	N/A	N/A
+3VLP	+19VB to +3VLP power rail for suspend power	ON	ON	ON	ON
+5VALW	+5V Always power rail	ON	ON	ON	ON
+3VALW	System +3VALW always on power rail	ON	ON	ON	ON*
+3VALW_DSW	+3VALW power for PCH DSW rails	ON	ON	ON	ON
+3VALW_PCH_PRIM	+3VALW power for PCH power rails	ON	ON	ON	ON*
+3VALW_SPI	+3VALW_PRIM supply for the SPI IO	ON	ON	ON	ON
+1.05VALW	+1.05V Always power rail	ON	ON	ON	ON
+1.2V_VDDQ	DDR4 +1.2V power rail	ON	ON	OFF	OFF
+1.05V_VCCST	Sustain voltage for processor in Standby modes	ON	ON	OFF	OFF
+5VS	System +5V power rail	ON	OFF	OFF	OFF
+3VS	System +3V power rail	ON	OFF	OFF	OFF
+1.05VS_VCCSTG	+1.05VALW_PRIM Gated version of VCCST	ON	OFF	OFF	OFF
+0.6VS_YTT	DDR +0.6VS power rail for DDR terminator .	ON	OFF	OFF	OFF
+VCC_CORE	Core voltage for CPU	ON	OFF	OFF	OFF
+VCC_GT	Sliced graphics power rail	ON	OFF	OFF	OFF
+VCCIO	CPU IO +0.95VS power rail	ON	OFF	OFF	OFF
+VCC_SA	System Agent power rail	ON	OFF	OFF	OFF
+1.8VSDGPU_AON	+1.8VS power rail for GPU(AON rails)	ON	OFF	OFF	OFF
+1.8VSDGPU_MAIN	+1.8VS power rail for GPU GC6	ON	OFF	OFF	OFF
+VGA_CORE	Core voltage for VGA (merge core & core_s)	ON	OFF	OFF	OFF
+1.35VSDGPU	+1.35VS power rail for GPU	ON	OFF	OFF	OFF
+1.0VSDGPU	+1.0VS power rail for GPU	ON	OFF	OFF	OFF
+1.8VALW	System +1.8VALW always on power rail	ON	ON	ON	ON*

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

Board ID	PCB Revision	Board ID	PCB Revision
0	2050 Rev0.1	10	
1	2050 Rev0.2	11	
2	2050 Rev0.3	12	
3	2050 Rev1.0	13	
4	2060 Rev0.1	14	
5	2060 Rev0.2	15	
6	2060 Rev0.3	16	
7	2060 Rev1.0	17	
8		18	
9		19	

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				Notes List	
				Size	Document Number
				EH50F M/B LA-H431PR10	
				Date:	Wednesday, February 13, 2019
				Sheet	3 of 100



EH50F_EVT Power Sequence
BIOS : 0.02T3
AC mode

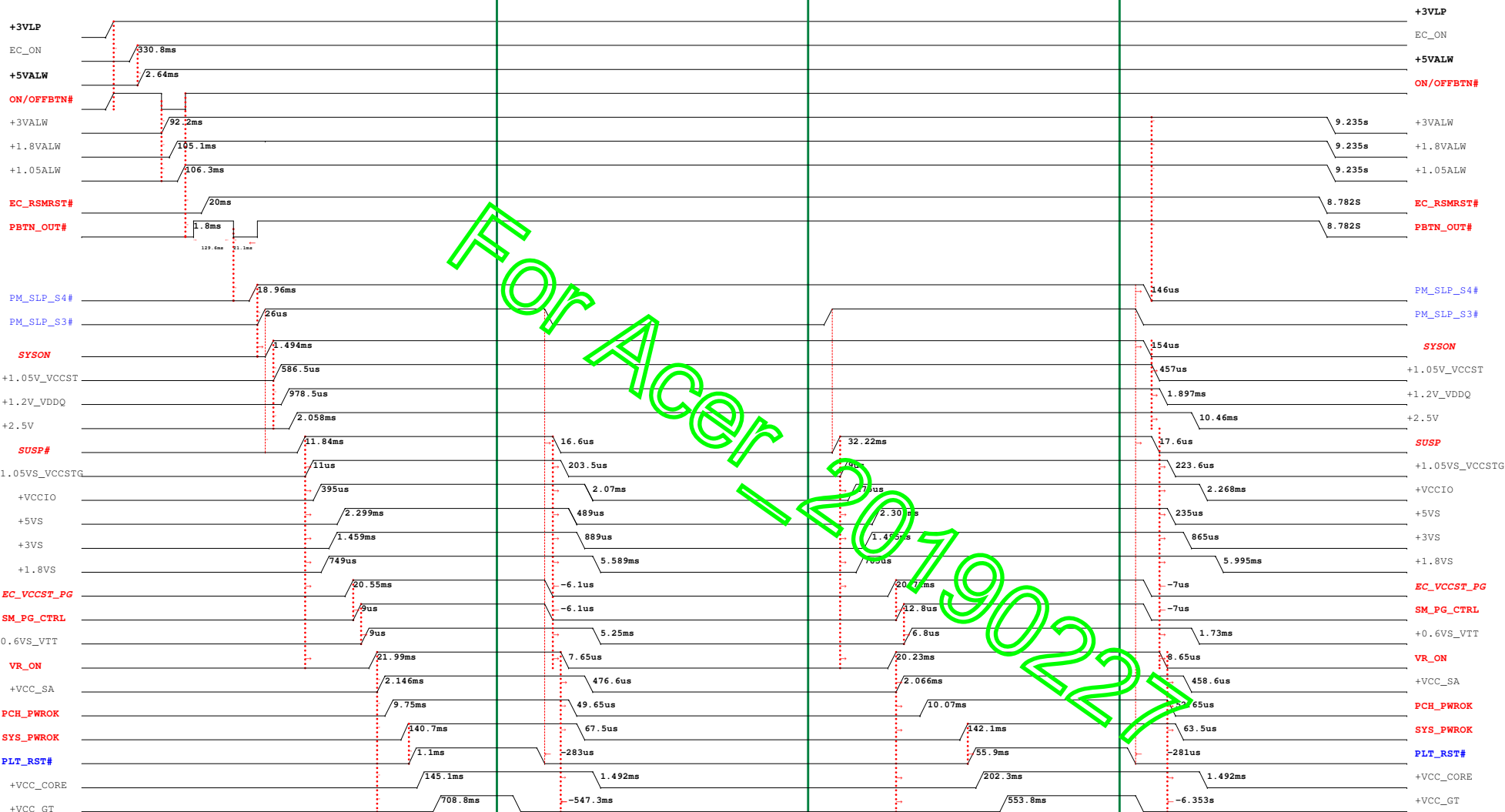
Power On

S3

S3 Resume

Power Off

Plug in



Coffee Lake-H CPU SKU



CFL-H_BGA1440
S IC CL8068403373522 SR3Z0 U0 2.3G ABO!
SA0000BPJ40
IS@



CFL-H_BGA1440
S IC CL8068403359524 SR3YY U0 2.2G ABO!
SA0000BPZ40
I7@

Cannon Lake PCH SKU

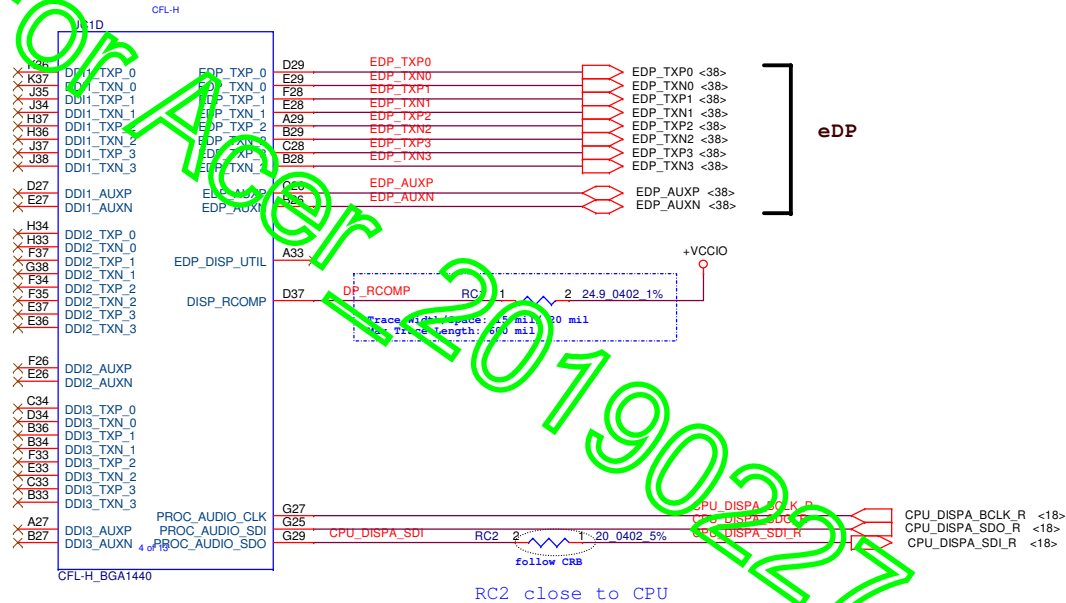


CFL-H_BGA1440
S IC FH82HM370 SR40B B0 BGA 874P PCH-H ABO!
SA0000BVP10
PCH@

NV N18E-G1



S IC N18E-G1-KD-A1 QS FCBGA 2228 GPU
SA0000CFC00



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	CFL-H(1/8)DDI/eDP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Rev 1.0
				Date: Wednesday, February 13, 2019	Sheet 6 of 100

Interleaved Memory

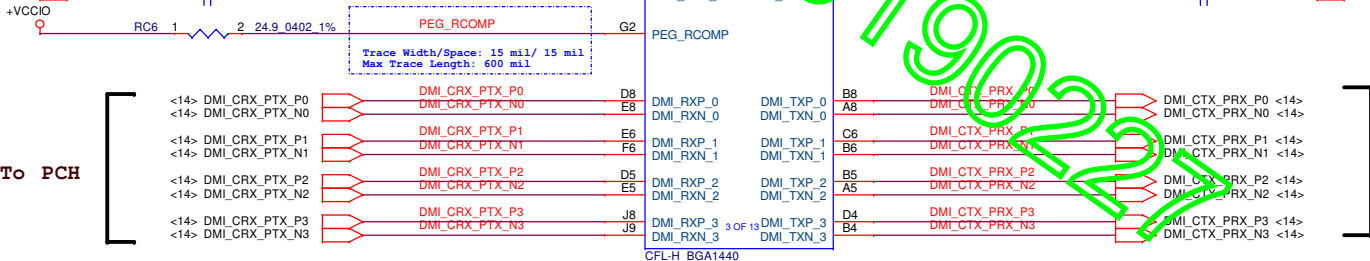
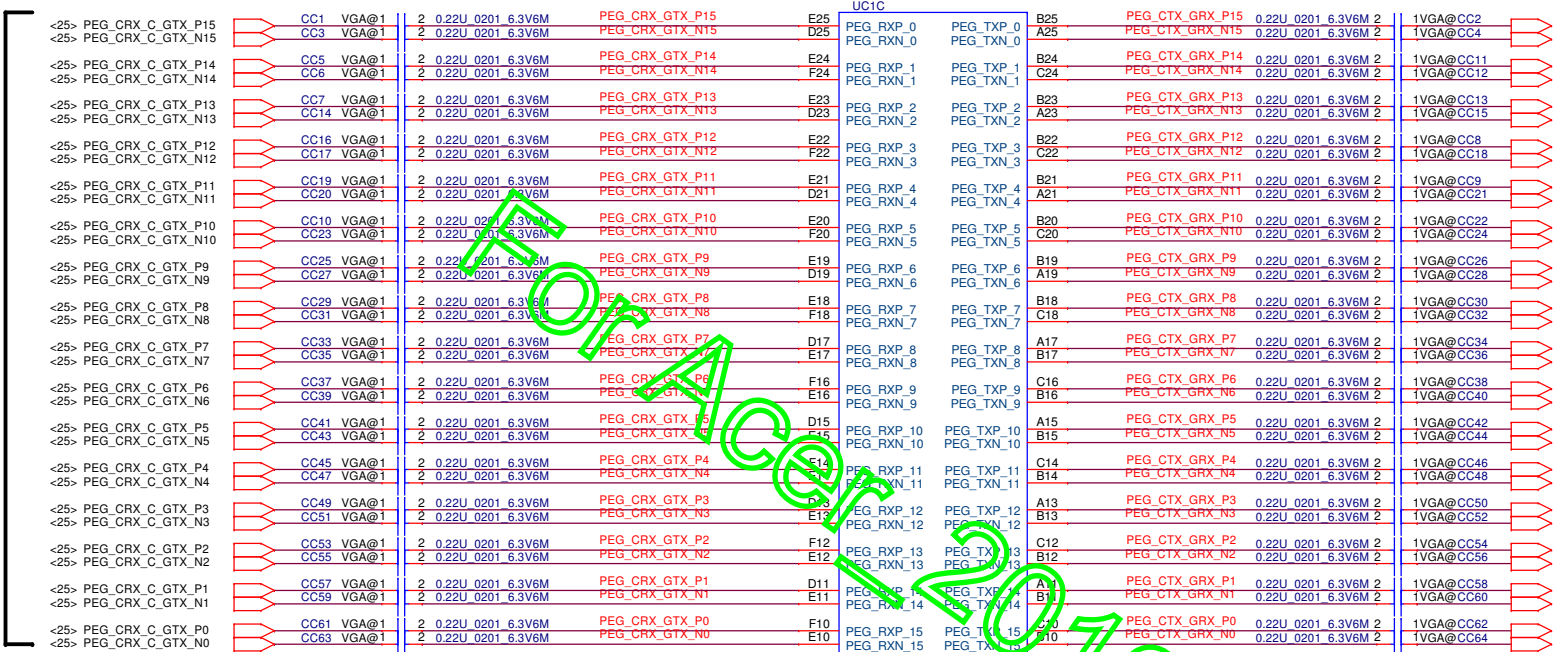


Security Classification		Compal Secret Data		Compal Electronics, Inc. CFL-H(2/8)DIMMA	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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	Rev
				Custom	1.0
				Date: Wednesday, February 13, 2019 Sheet 7 of 100 EH50F M/B LA-H431PR10	

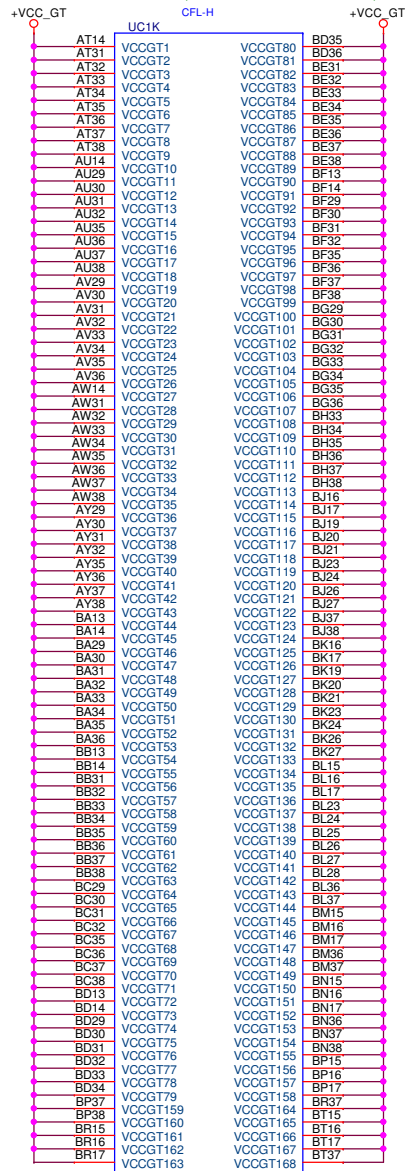
PEG&DMI

To DGPU
PEG Lane Reversed

To DGPU
PEG Lane Reversed



GT
32000mA (Hexa Core GT2)

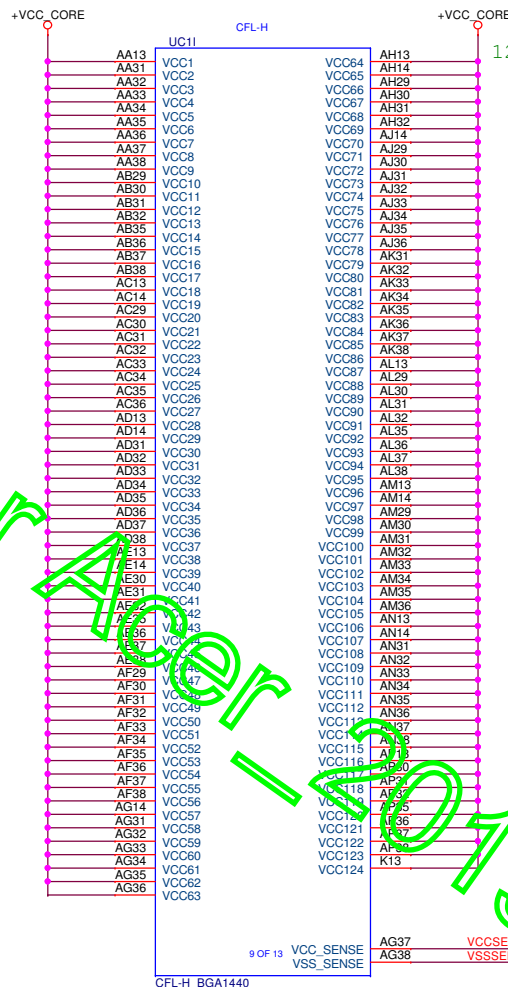


11 of 13 VSSGT_SENSE
VCCGT_SENSE

AH37 VSSGT_SENSE
AH38 VCCGT_SENSE

VSSGT_SENSE <89>
VCCGT_SENSE <89>

1. VccGT_SENSE / VssGT_SENSE Trace Length Match < 25 mils
2. Maintain 25-mil separation distance away from any other dynamic signals.



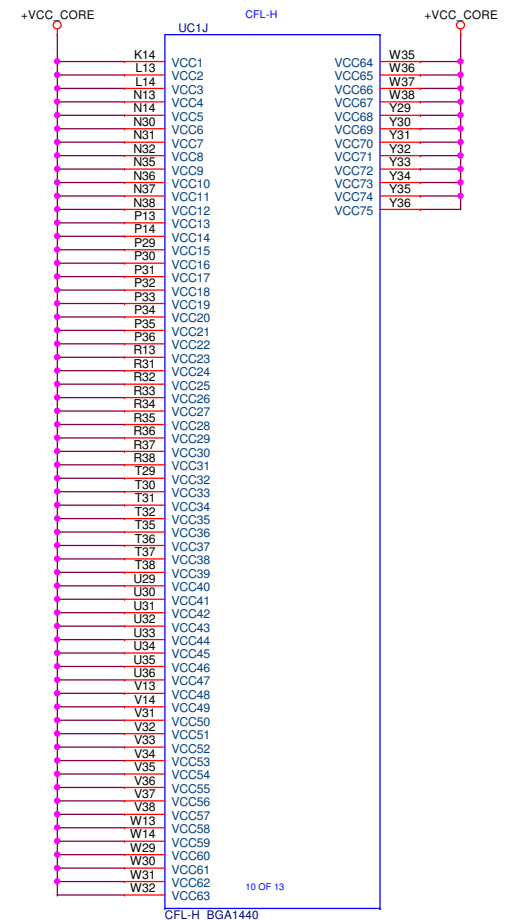
9 of 13 VCC_SENSE
VSS_SENSE

AG37 VCC_SENSE
AG38 VSS_SENSE

VCC_SENSE <89>
VSS_SENSE <89>

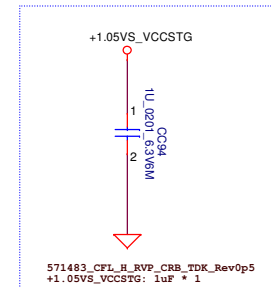
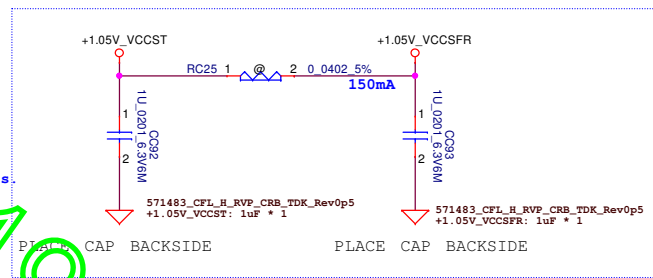
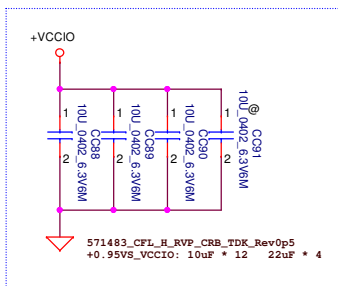
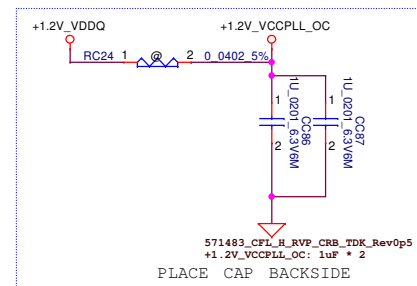
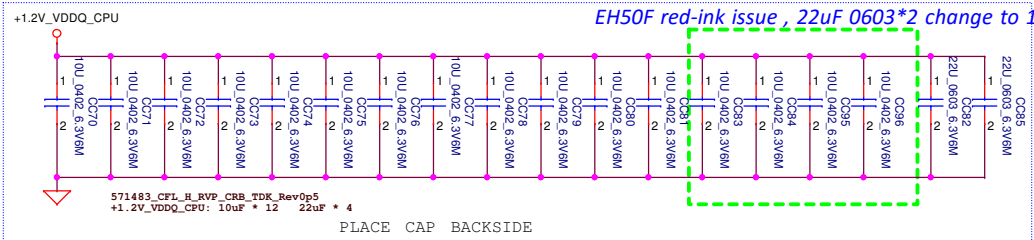
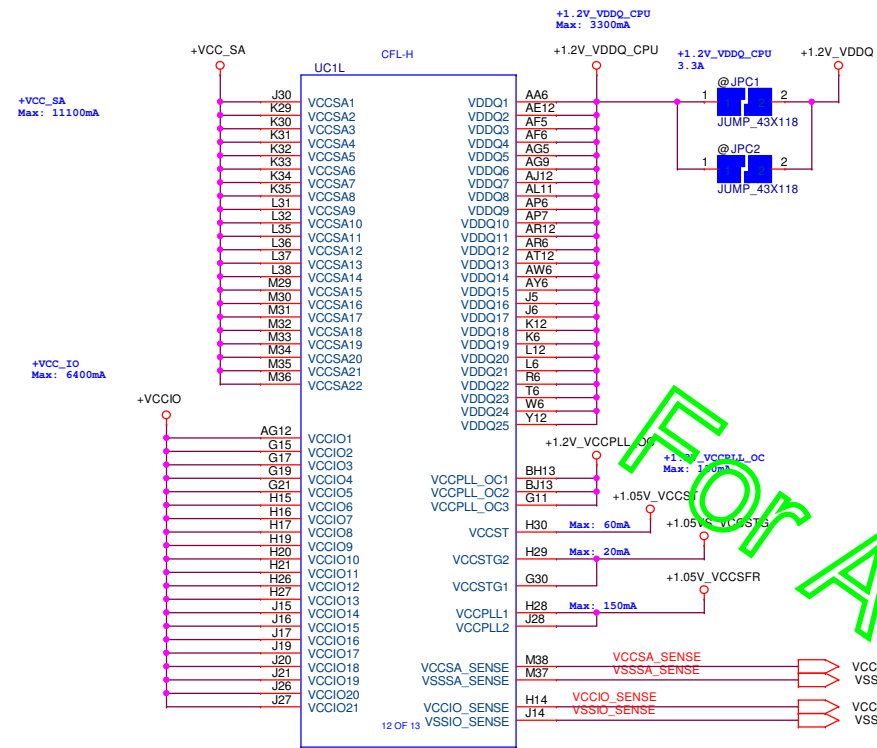
1. Vcc_SENSE/ Vss_SENSE Trace Length Match < 25 mils
2. Maintain 25-mil separation distance away from any other dynamic signals.

128000mA (Hexa Core GT2)



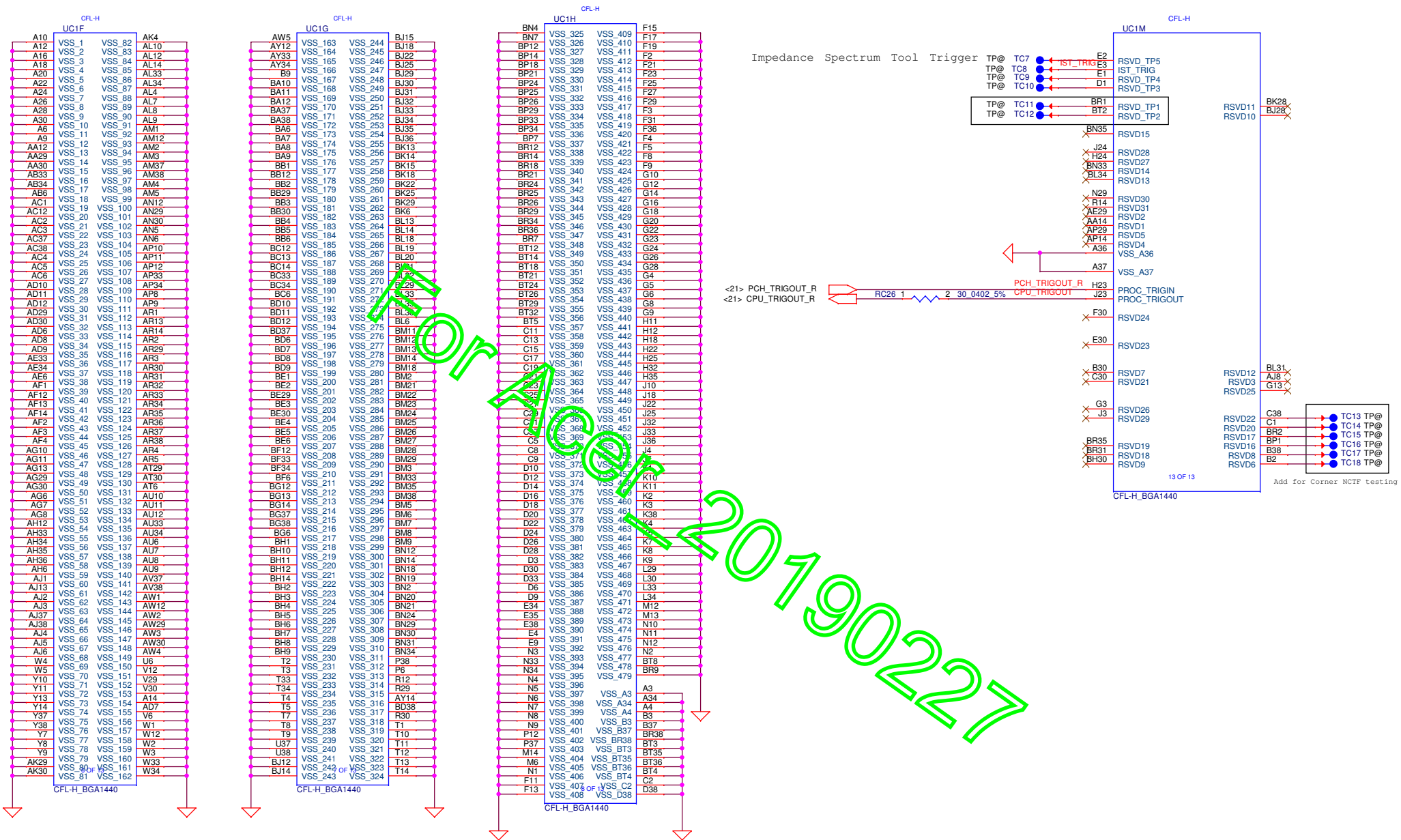
CFL-H_BGA1440

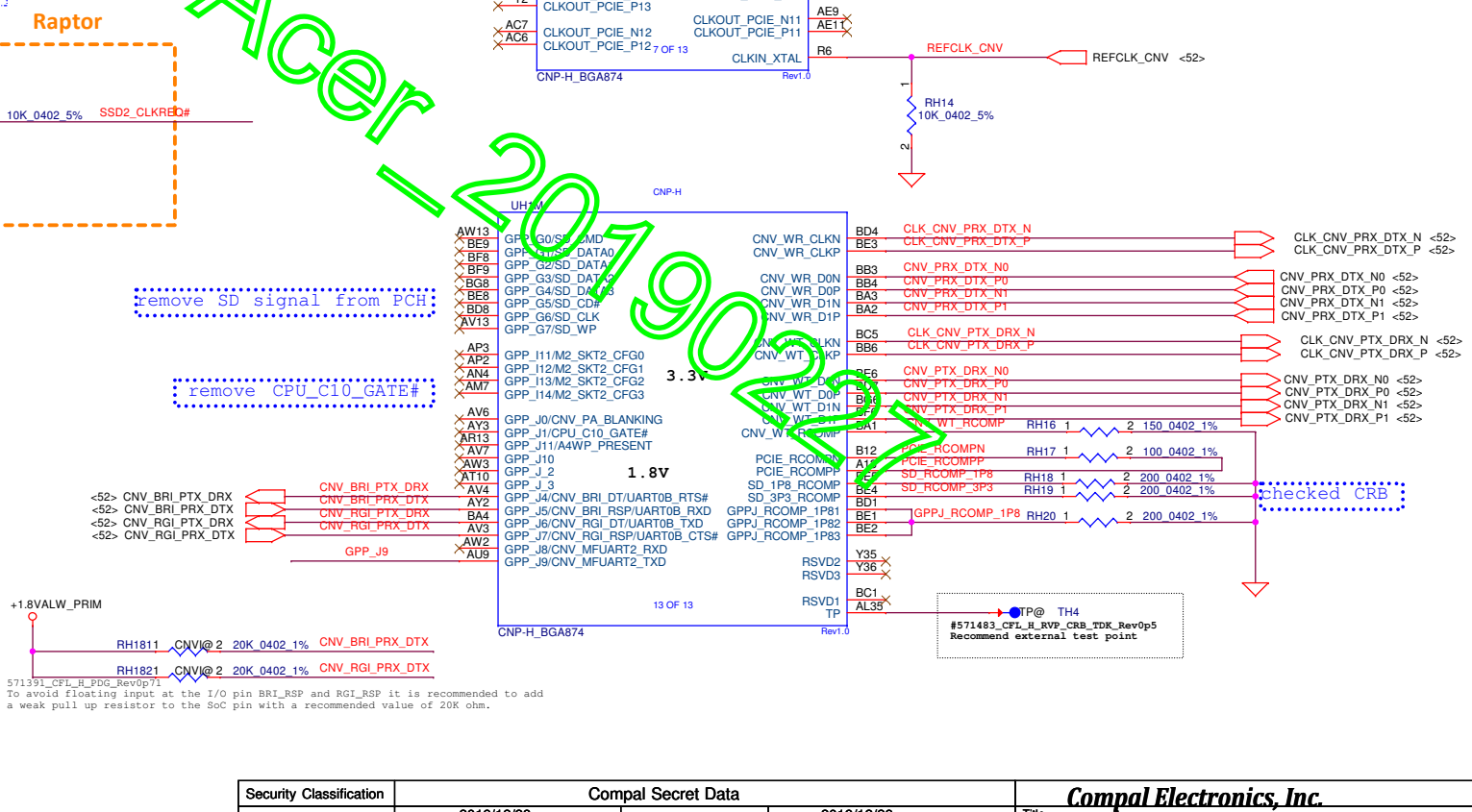
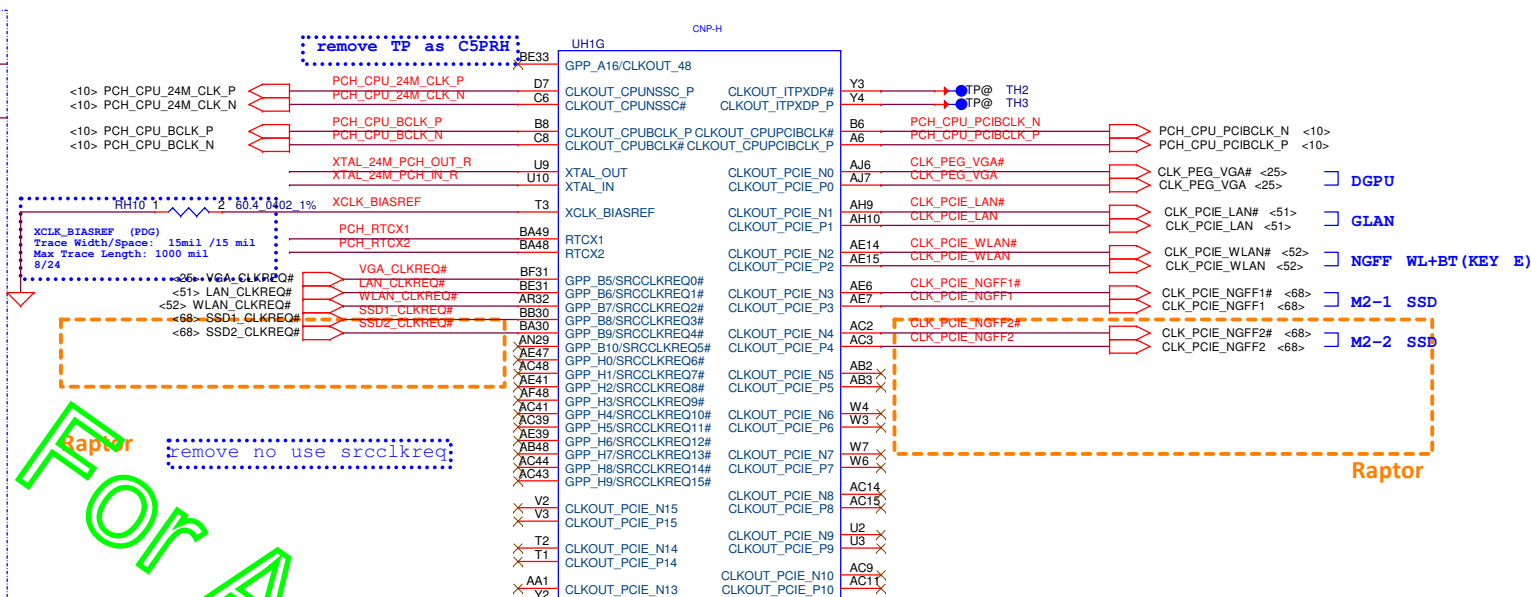
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	CFL-H(6/8)VCC CORE/GT
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EHS0F M/B LA-H431PR10
				Date	Wednesday, February 13, 2019
				Sheet	11 of 100
				Rev	1.0



1. VccGT_SENSE / VssGT_SENSE Trace Length Match 25 mil
2. Maintain 25-mil separation distance away from any other dynamic signals.

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				CFL-H(7/8)VCCSA/VCCIO/VDDQ	
Size	Document Number	Rev		1.0	
Custom	EH50F M/B LA-H431PR10	Date		Wednesday, February 13, 2019	
Sheet		12		of 100	





Security Classification		Compal Secret Data		Compal Electronics, Inc. PCH(2/8)CLK/CNVI/SD	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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	Rev
				Custom	1.0
				Document Number EH50F M/B LA-H431PR10	
Date:				Wednesday, February 13, 2019	Sheet 15 of 100

Raptor

<25,39> DP0_HPD_PCH
<25,40> HDMI_HPD_PCH

DP0_HPD_PCH
HDMI_HPD_PCH

RT881 1

2 0 0402 5%

AT6

AN10

AP9

AL15

can remove if no use DP
08/18

remove PCH DP SCLK/SDATA

DDP[B..F]CTRLDATA
This signal has a weak internal Pull-down.
0 = Port B-D is not detected.
1 = Port B,C,D is detected. (Default)
Notes:
1. The internal Pull-down is disabled after PCH_PWR0K de-asserts
2. This signal is in the primary well.

<51,58> EC_PME#

RH24

1

2 0 0402 5%

EC_PME#_R

BE36

RH25

1

2 0 0402 5%

PCH_SPI_SI

AU41

RH258

1

2 0 0402 5%

PCH_SPI_SO

BA45

RH259

1

2 0 0402 5%

PCH_SPI_CS#0

AV47

RH260

1

2 0 0402 5%

PCH_SPI_CLK

AV47

RH260

1

2 0 0402 5%

PCH_SPI_CS#2

AV47

RH260

1

2 0 0402 5%

PCH_SPI_I02

AV47

RH260

1

2 0 0402 5%

PCH_SPI_I03

AV47

RH260

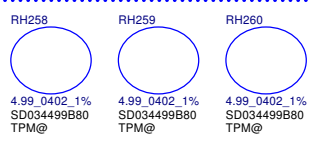
1

2 0 0402 5%

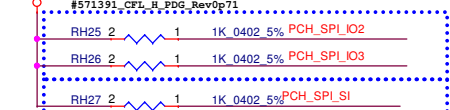
intel critical net recommend

PCH_SPI_CLK RH1951 2 100K 0201 5%

R2 = 5ohm for SPI dual-load



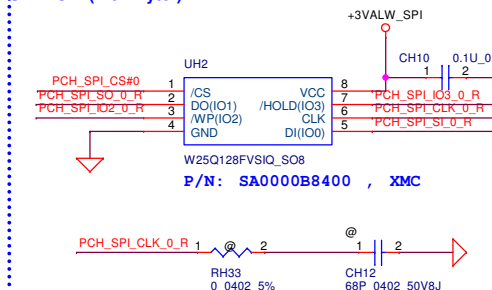
* wait confirm CG7
PDG P348 quad mode support PH1K
CRB PU 20k
#571182_CFL_PCH_EDS_Rev1.0 recommend 100k



+3VALW_PCH_PRIM
RH29 2 1 100K 0402 5% GPP_H15 STRAP

#571182_CNL_PCH_H_EDS_V1_Rev0.7
External pull-up is required. Recommend 100K if pulled up to 3.3V or 75K if pulled up to 1.8V.
571007_CFL_MOM_Archive_MW22_2017
STUFF R on GPP_H15

SPI ROM (16MByte)

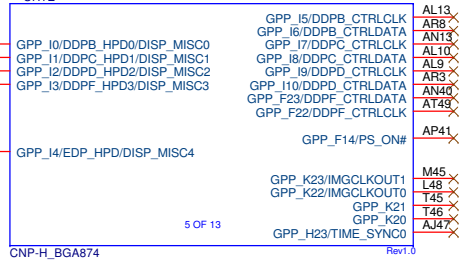


note : 1050 Use 8M rom

PCH_SPI_SI_0_R RH107 1 2 33 0402 1% PCH_SPI_SI_R
PCH_SPI_SO_0_R RH108 1 2 33 0402 1% PCH_SPI_SO_R
PCH_SPI_I03_0_R RH109 1 2 33 0402 1% PCH_SPI_I03_R
PCH_SPI_CLK_0_R RH110 1 2 33 0402 1% PCH_SPI_CLK_R
PCH_SPI_I02_0_R RH111 1 2 33 0402 1% PCH_SPI_I02_R

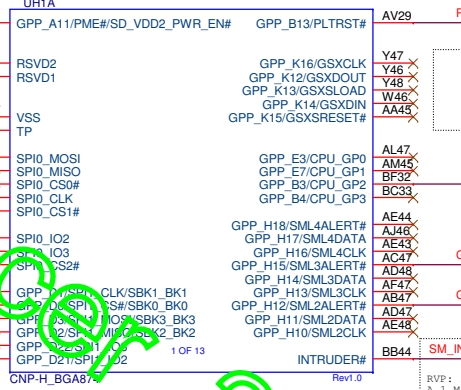
intel PDG 1.8
33 ohm for 3.3V for singel load
place 500 mil from PCH

UH1E CNP-H



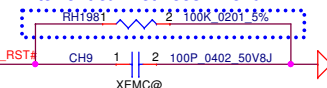
CNP-H_BGA874 Rev1.0

UH1A CNP-H



CNP-H_BGA874 Rev1.0

intel critical net recommend



GPIO Serial Expander (GSX) is the capability provided by the PCH to expand the GPIOs on a platform that needs more GPIOs than the ones provided by the PCH.

TP_INT# 2 1 DH1 RB751V40_SOD323-2 EC_TP_INT# <58,63>

GPP_H15

GPP_H12 <19> +RTCVCC

SM_INTRUDER# 1M 0402 5% 2 1 RH30

RVP: 330K
A 1 M pull-up is used on the customer reference board (CRB). This is needed to reduce leakage from Coin Cell Battery in G3 state.

PLT_RST# CH9 1 2 100P 0402 50V8J

XEMC@

TP_INT# RH28 2 1 100K 0402 5%

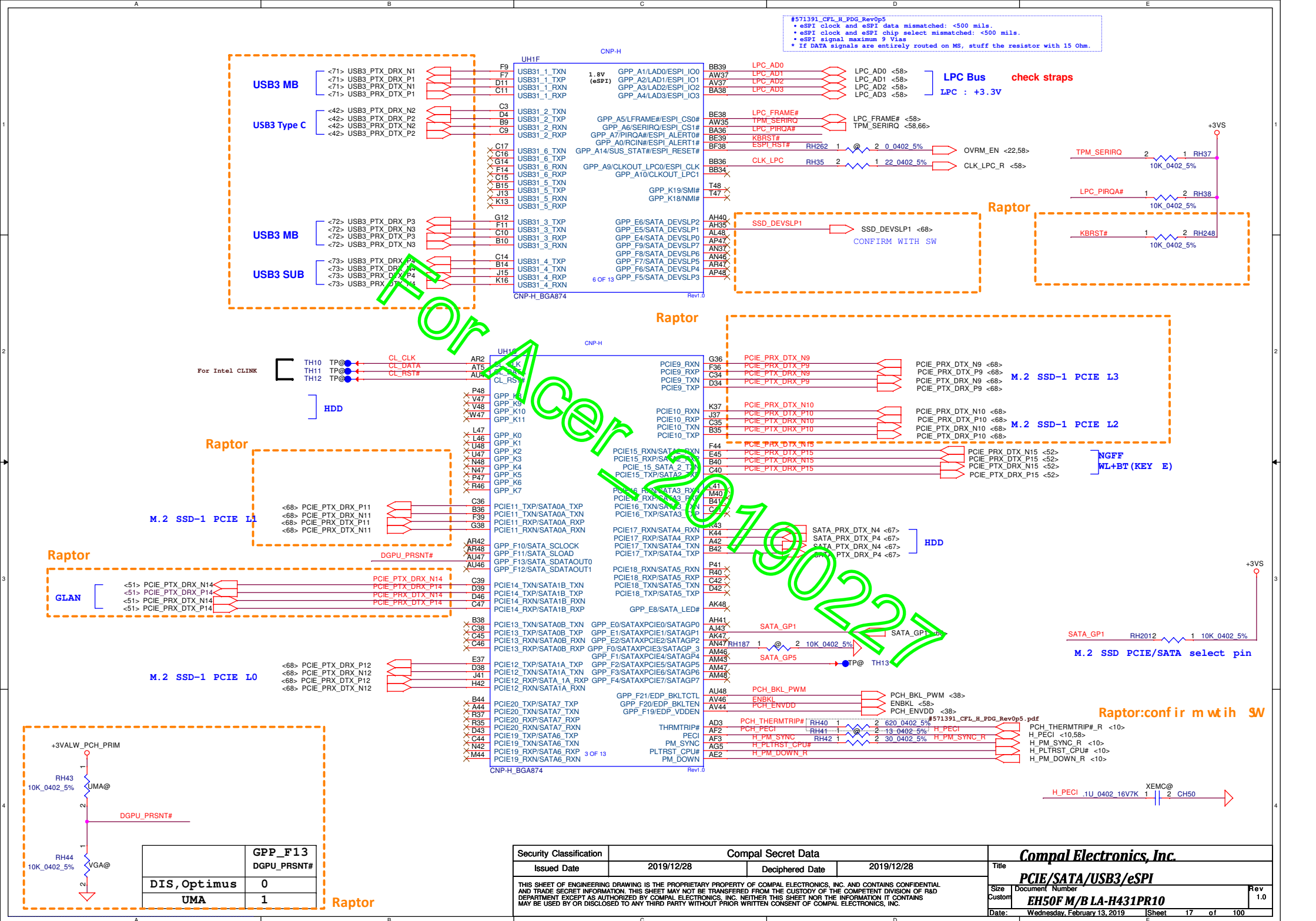
+3VS

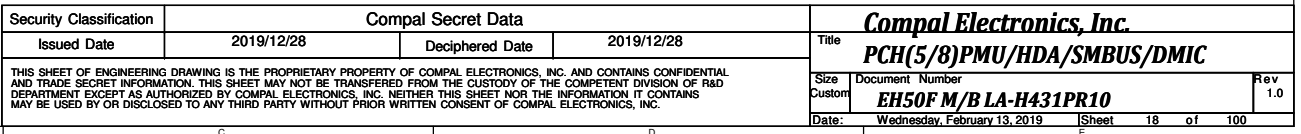
PLT_RST#

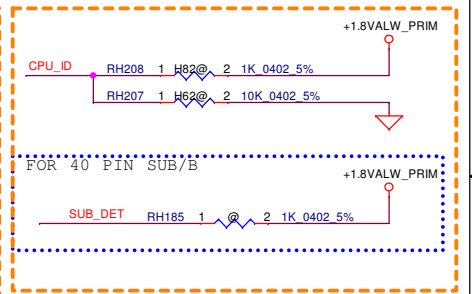
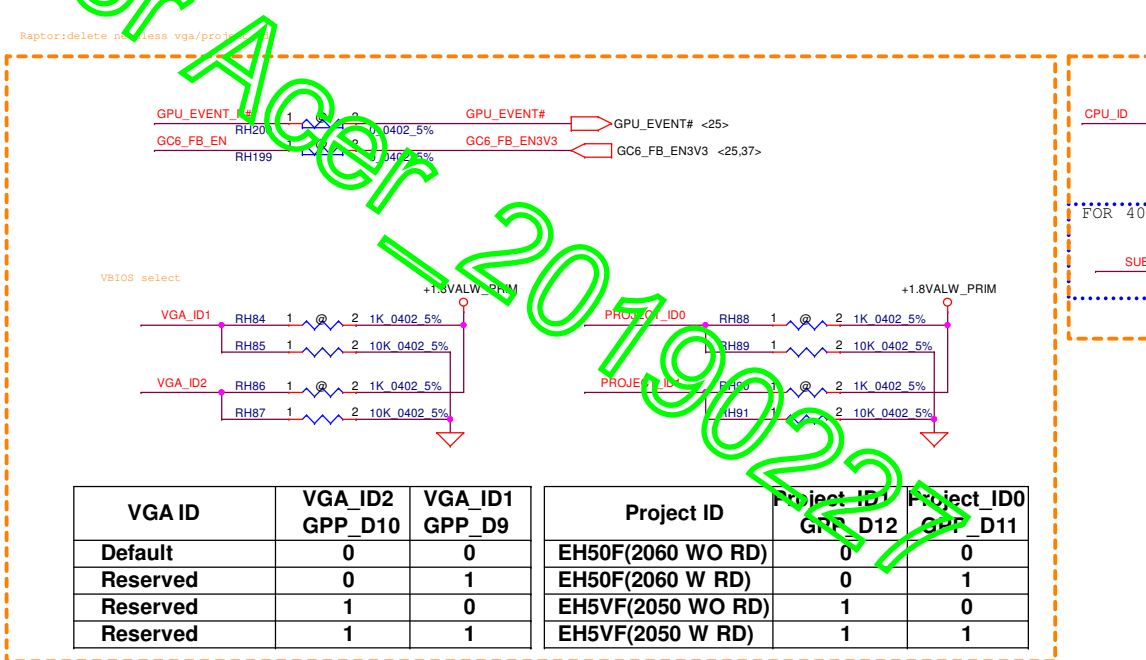
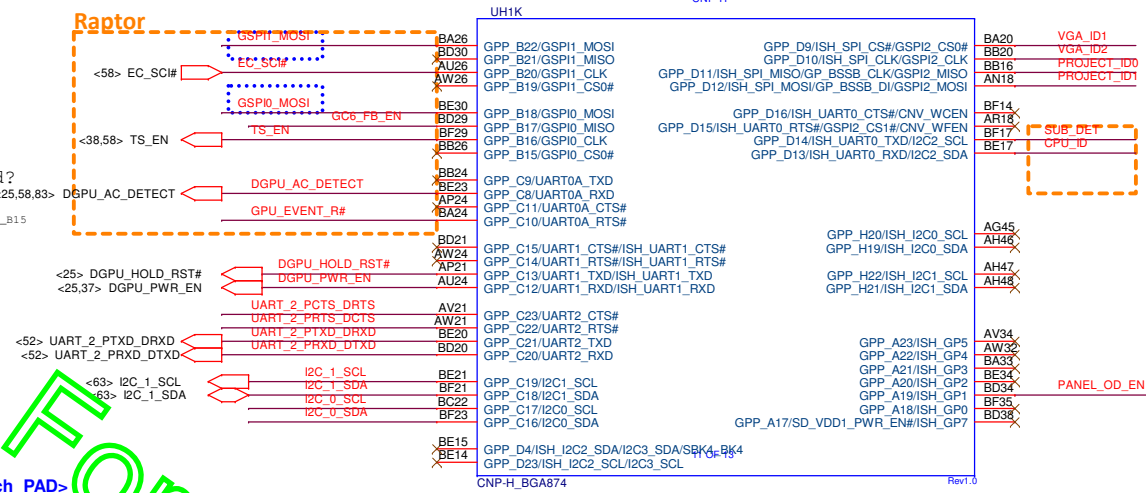
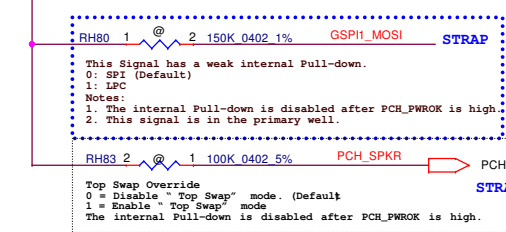
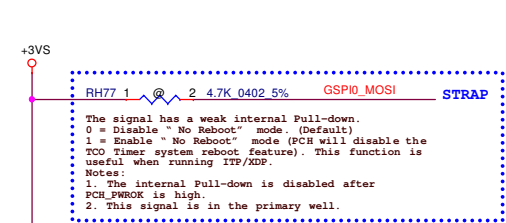
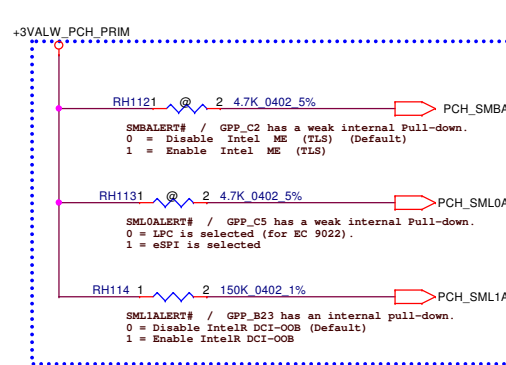
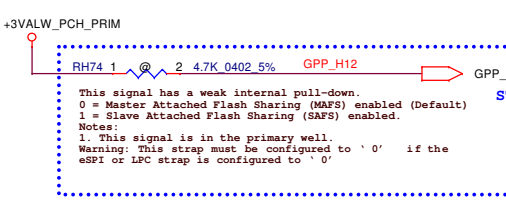
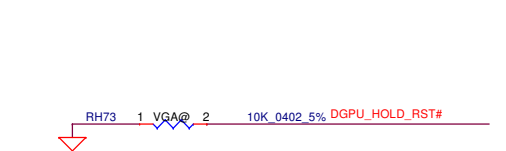
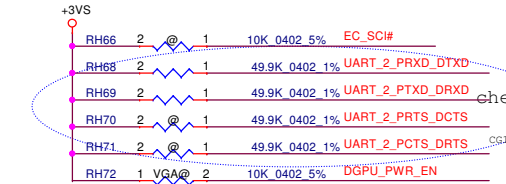
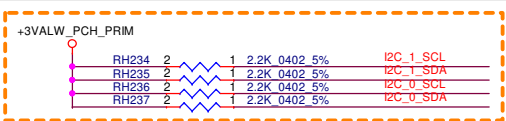
PLT_RST_BUF# <25,51,52,68>

EH50F:main source change to SA00000H00

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				PCH(3/8)DDC/SPI	
Size	Document Number	Rev		1.0	
Custom	EH50F M/B LA-H431PR10				
Date:	Wednesday, February 13, 2019	Sheet	16	of	100





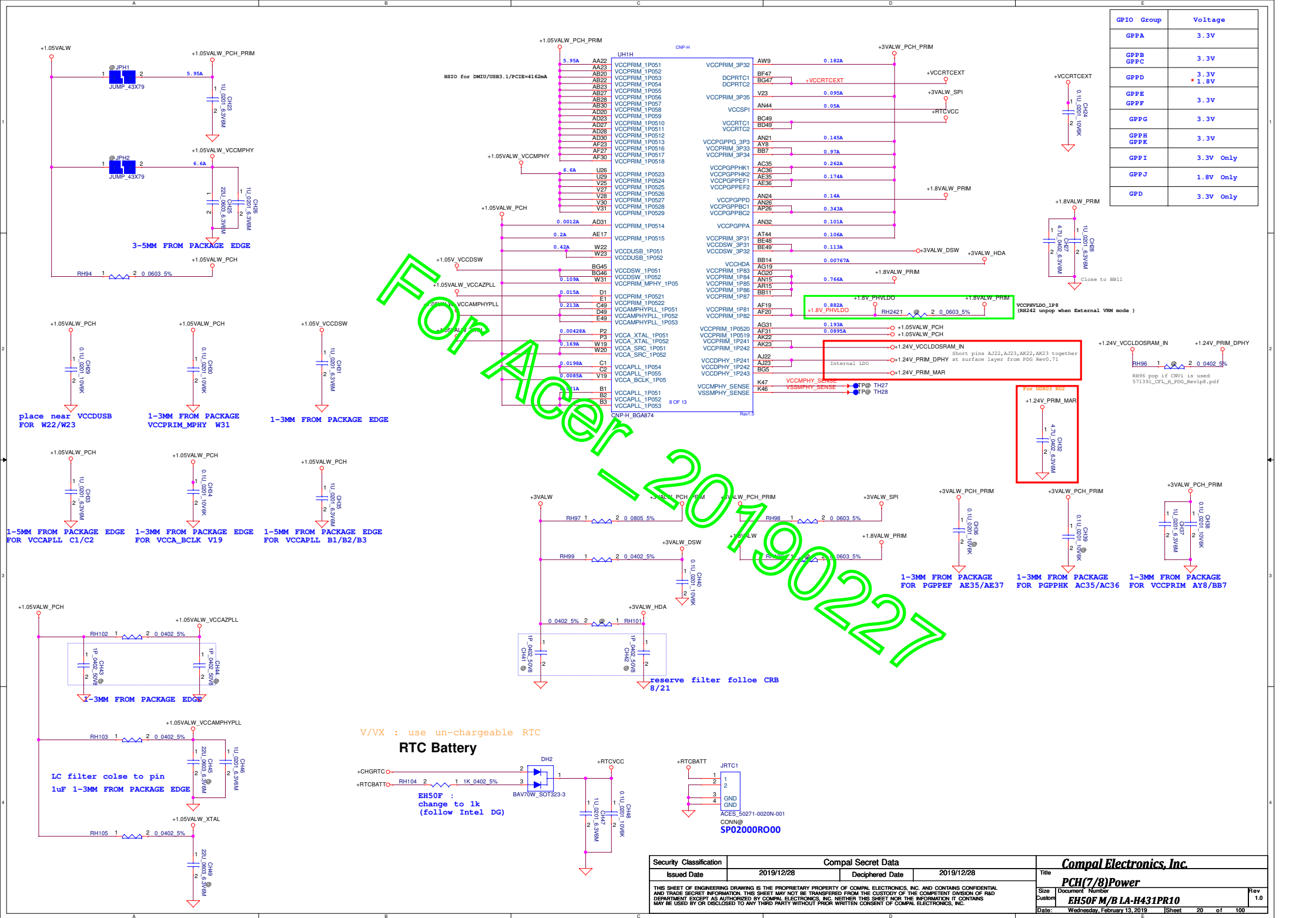


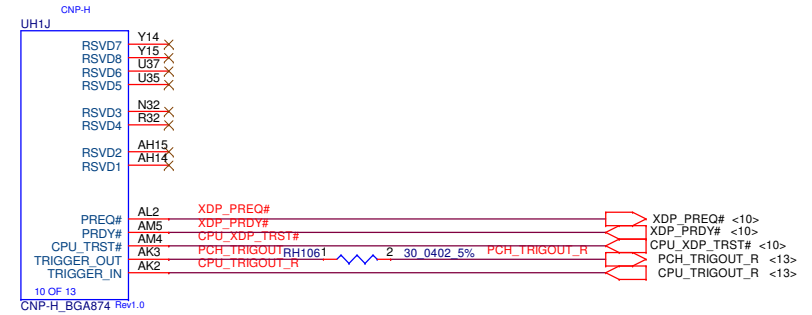
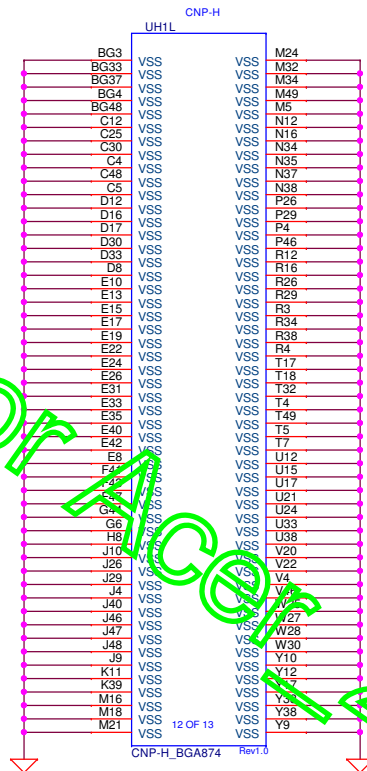
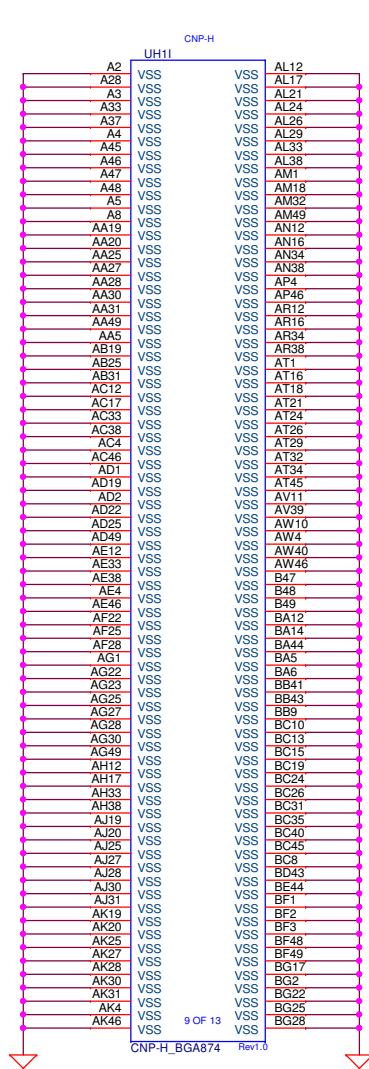
VGA ID	VGA_ID2 GPP_D10	VGA_ID1 GPP_D9	Project ID	Project_ID1 GPP_D12	Project_ID0 GPP_D11
Default	0	0	EH50F(2060 WO RD)	0	0
Reserved	0	1	EH50F(2060 W RD)	0	1
Reserved	1	0	EH5VF(2050 WO RD)	1	0
Reserved	1	1	EH5VF(2050 W RD)	1	1

SCI capability is available on all GPIOs
PCH GPIOs that can be routed to generate SMI# or NMI:
• GPP_B14, GPP_B20, GPP_B23
• GPP_C[23:22]
• GPP_D[4:0]
• GPP_E[8:0]
• GPP_I[3:0]
• GPP_G[7:0] (support SMI# only).

The voltage of all GPIO pads in each GPP group is determined by the voltage supplied to the group (either 3.3V or 1.8V), except for GPP_I and GPD group, (which are 3.3V only), and GPP_J group (which is 1.8V only).

All GPIOs have programmable internal pull-up/pull-down resistors which are off by default.
The internal pull-up/pull-down for each GPIO can be enabled by BIOS programming.





For Access 20190227

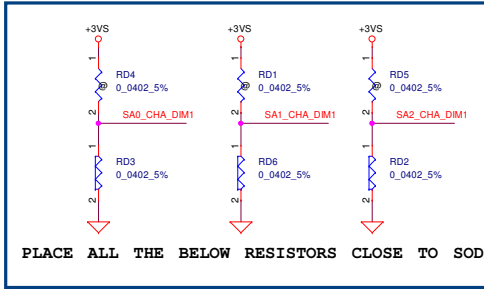
Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2019/12/28		Deciphered Date		2019/12/28		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.						PCH(8/8)GND/RSVD					
						Size		Document Number		Rev	
						Custom		EH50F M/B LA-H431PR10		1.0	
						Date:		Wednesday, February 13, 2019		Sheet 21 of 100	

CHANNEL-A

BOT REVERSE (4mm)

Interleaved Memory

TOP: JDIMM1 CONN Non-ECC DIMM

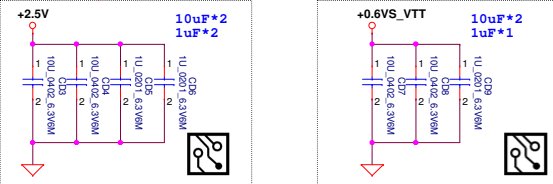


PLACE ALL THE BELOW RESISTORS CLOSE TO SODIMM

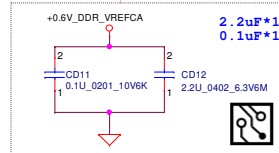
SPD ADDRESS FOR CHANNEL A :
WRITE ADDRESS: 0XA0
READ ADDRESS: 0XA1
SA0 = 0; SA1 = 0; SA2 = 0.
DDR4POR OPERATING SPEED: 1867 MT/S
STRETCH GOAL IS 2133 MT/S

Layout Note:
Place near JDIMM1.257,259

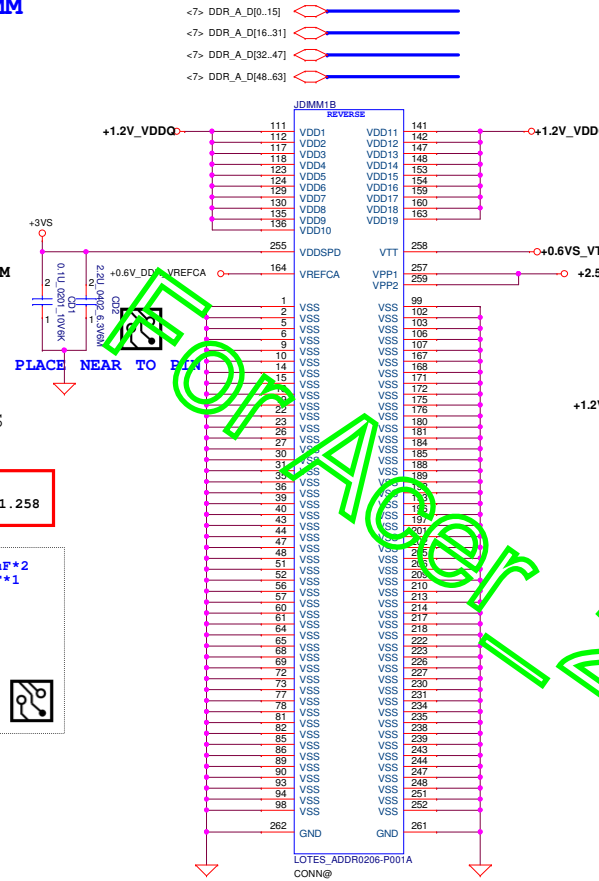
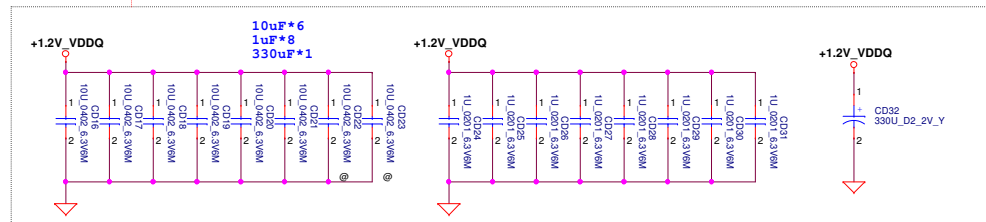
Layout Note:
Place near JDIMM1.258



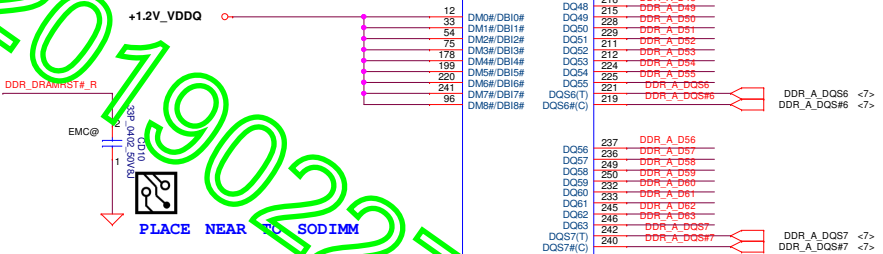
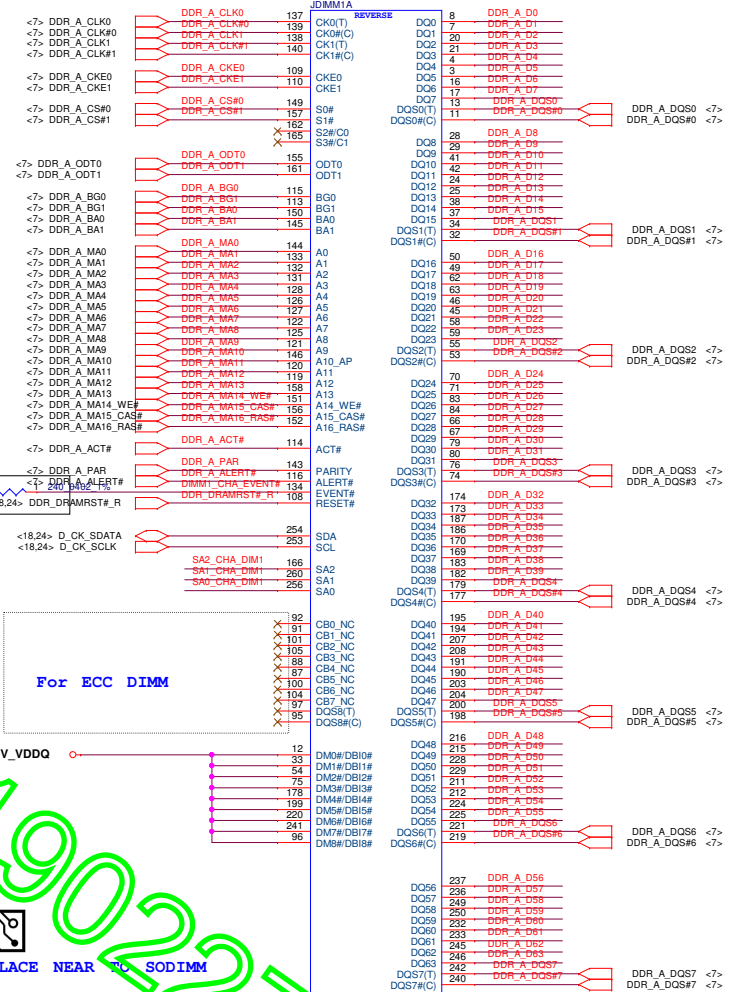
Layout Note:
PLACE THE CAP near JDIMM1. 164



Layout Note:
Place near JDIMM1



Part Number:SP07001CY00
Part Value:S SOCKET LOTES ADDR0206-P001A 260P DDR4



DIMM Side

CPU Side

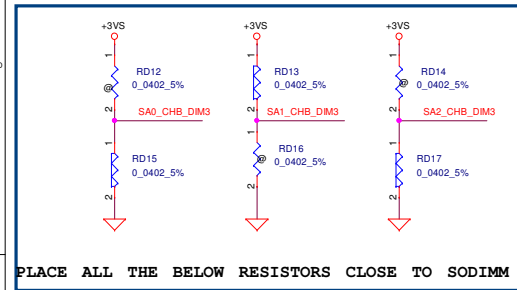
VREF traces should be at least 20 mils wide with 20 mils spacing to other signals

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
				DDRIV_CHA: DIMM0	
				Size Document Number	
				EH50F M/B LA-H431PR10	
				Date: Wednesday, February 13, 2019	
				Sheet 23 of 100	

CHANNEL-B

BOT STD (4mm) Interleaved Memory

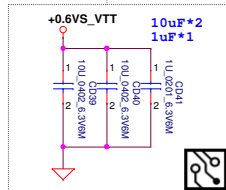
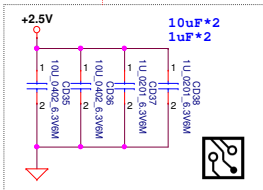
TOP: JDIMM2 CONN Non-ECC DIMM



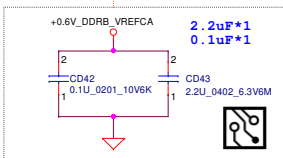
SPD ADDRESS FOR CHANNEL B :
WRITE ADDRESS: 0XA4
READ ADDRESS: 0XA3
SA0 = 0; SA1 = 1; SA2 = 0.
DDR4 POR OPERATING SPEED: 1867 MT/S
STRETCH GOAL IS 2133 MT/S

Layout Note:
Place near JDIMM2.257,259

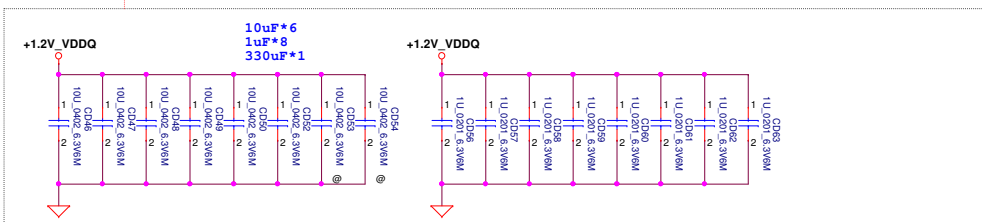
Layout Note:
Place near JDIMM2.258



Layout Note:
PLACE THE CAP WITHIN 200 MILS
FROM THE JDIMM2

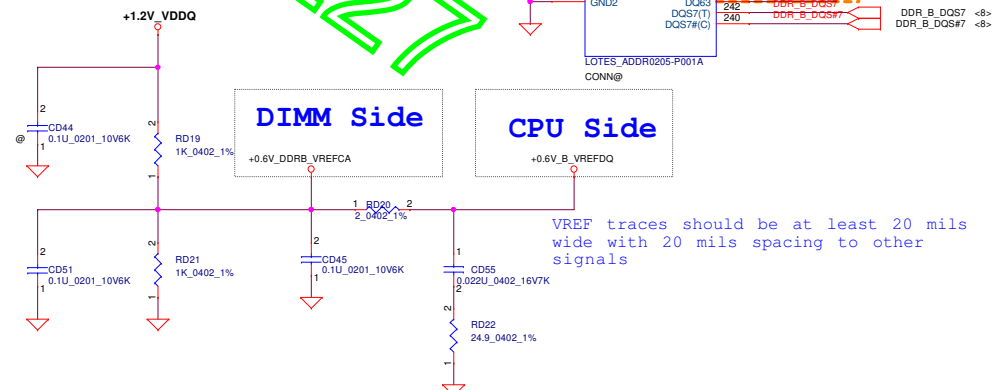


Layout Note:
Place near JDIMM2

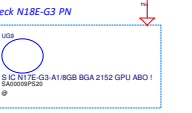


For Acer 20190227

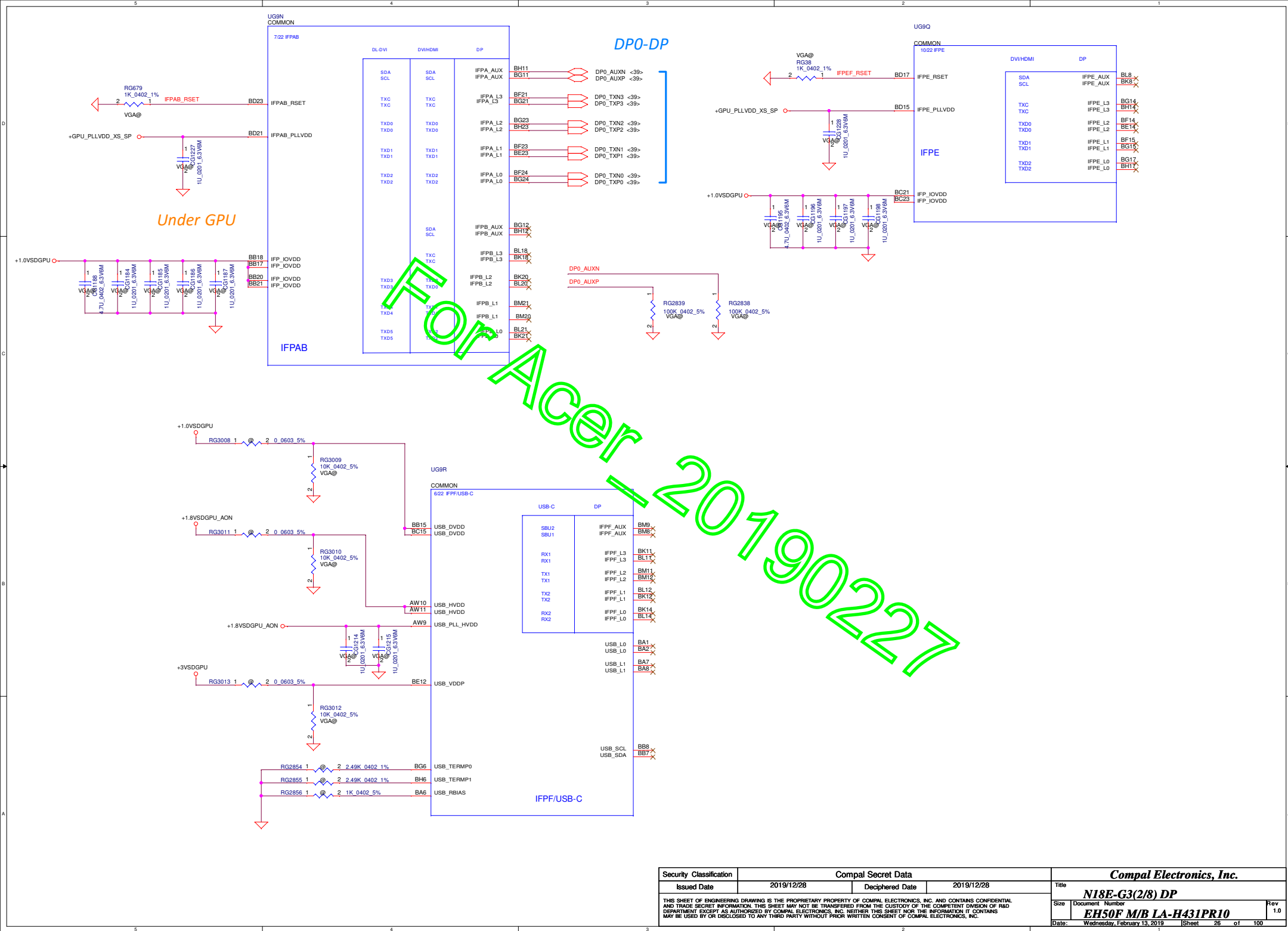
Part Number: SP07001HW00
Part Value: S SOCKET LOTES ADDR0205-P001A DDR4 STD

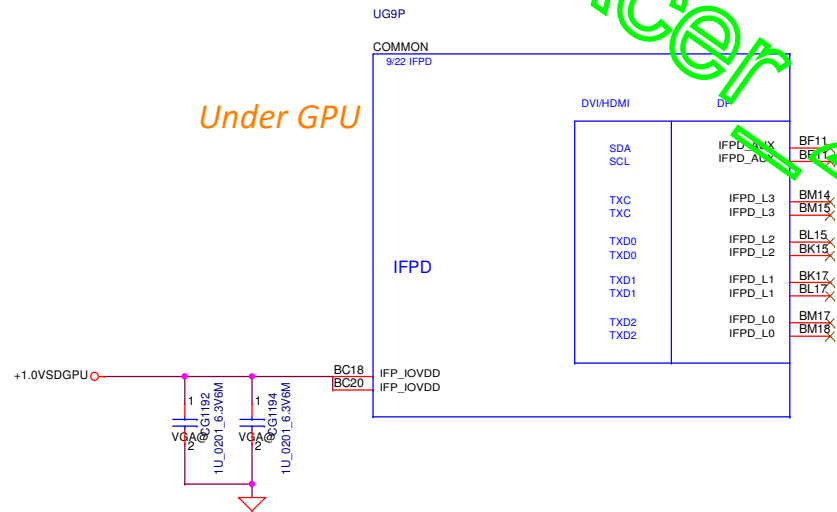
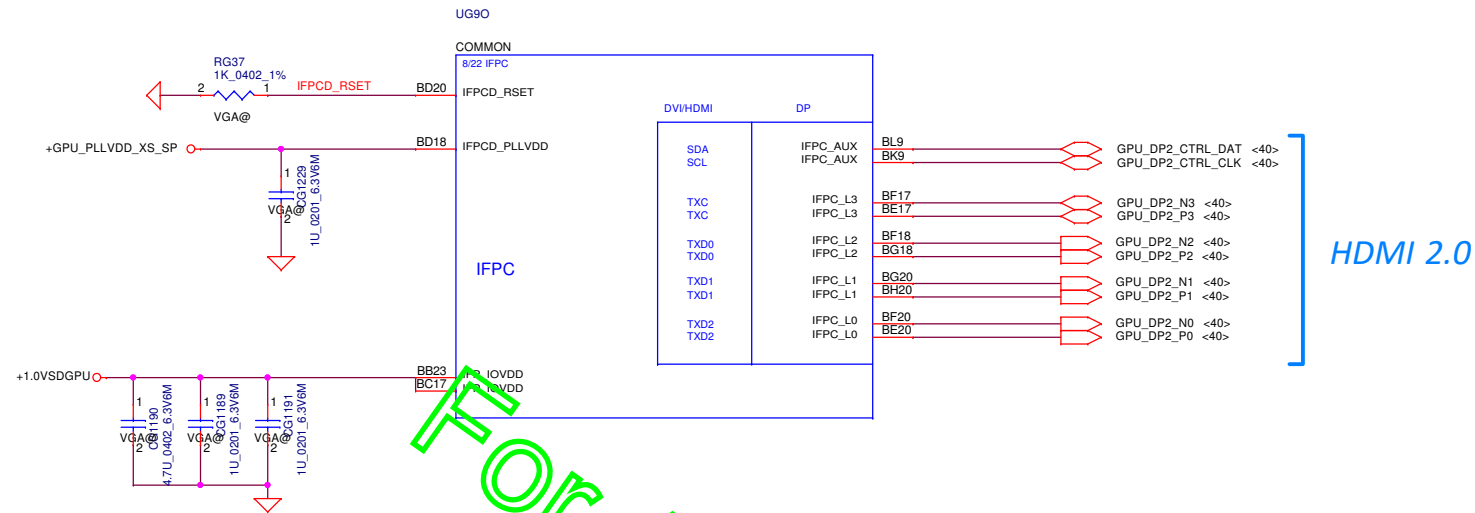


Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date		2019/12/28		Deciphered Date		2019/12/28		Title			
								DDRIV_CHB: DIMM0			
								Size Document Number			
								EH50F M/B LA-H431PR10			
								Date: Wednesday, February 13, 2019			
								Sheet 24 of 100			
								Rev 1.0			



Security Classification		Compul Secret Data		Title	
Issued Date		Deciphered Date		Title	
2019/12/28		2019/12/28		N18E-G3(1/8) PCIE,GPIO EH50F M/SB LA-3431PR10	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPUL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPANY'S DIVISION OF RND OR SUPPLEMENTED, COPIED, REPRODUCED, OR OTHERWISE DISSEMINATED WITHOUT THE WRITTEN CONSENT OF COMPUL ELECTRONICS, INC.				Size	Rev
				001	1
				001	1





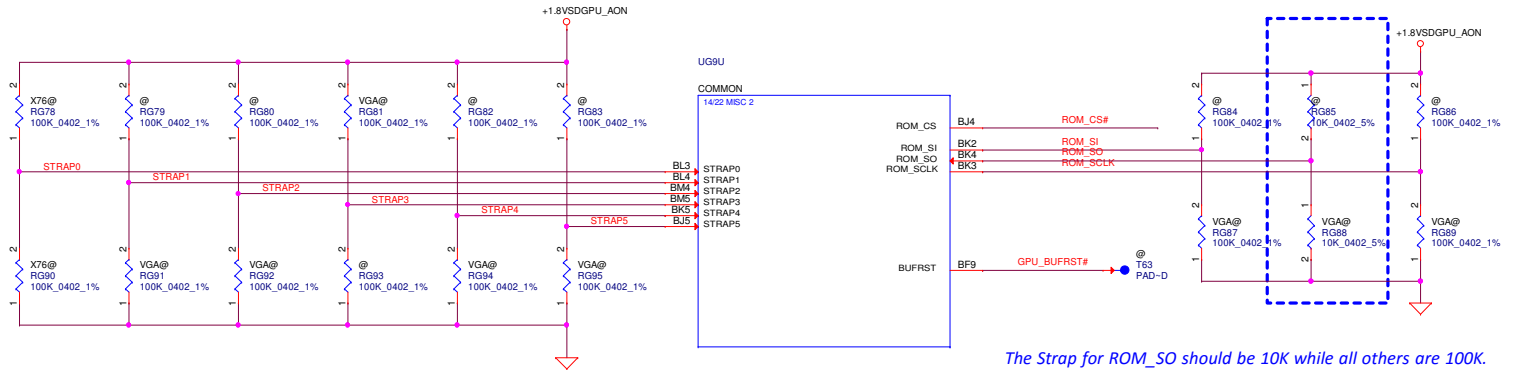
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	N18E-G3(3/8) eDP,HDMI
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
				EH50F M/B LA-H431PR10	
				Date:	Wednesday, February 13, 2019
				Sheet	27 of 100
				Rev	1.0

	(LSB)	(MSB)	(LSB)	(MSB)					
G-sync with VGA device	Strap0	Strap1	Strap2	Strap3	Strap4	Strap5	ROM_SO	ROM_SI	ROM_SCLK
Samsung K4Z80325BC-HC14	PD 100kOhm	PD 100kOhm	PD 100kOhm	PU 100kOhm	PD 100kOhm	PD 100kOhm	PD 10kOhm	PD 100kOhm	PD 100kOhm
MICRON MT61K256M32JE-14:A	PU 100kOhm	PD 100kOhm	PD 100kOhm	PU 100kOhm	PD 100kOhm	PD 100kOhm	PD 10kOhm	PD 100kOhm	PD 100kOhm

Table 1. N18E-G3 GDDR6 Recommended Memories

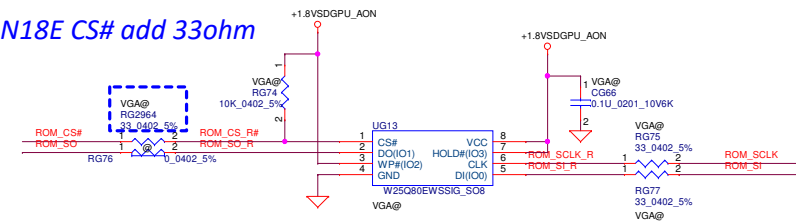
Memory Density & GB	Allowed Memory Configuration	FBVDD/Q	Vendor	Manufacturer Part Number	Die Revision	Package	Memory Z Speed Grade	Date Code	Test Plan	Status
8 GB	2GBx4	1.25V and 1.35V	Micro	MT61K256M32JE-14:A	A-010	000	14 Gbps	N/A	Full	Production candidate
			Samsung	K4Z80325BC-HC14						Production candidate

Notes:
1. For N18E-G3, the maximum allowable memory case temperature is 95 °C.
2. DVS is required. WCK: TBD

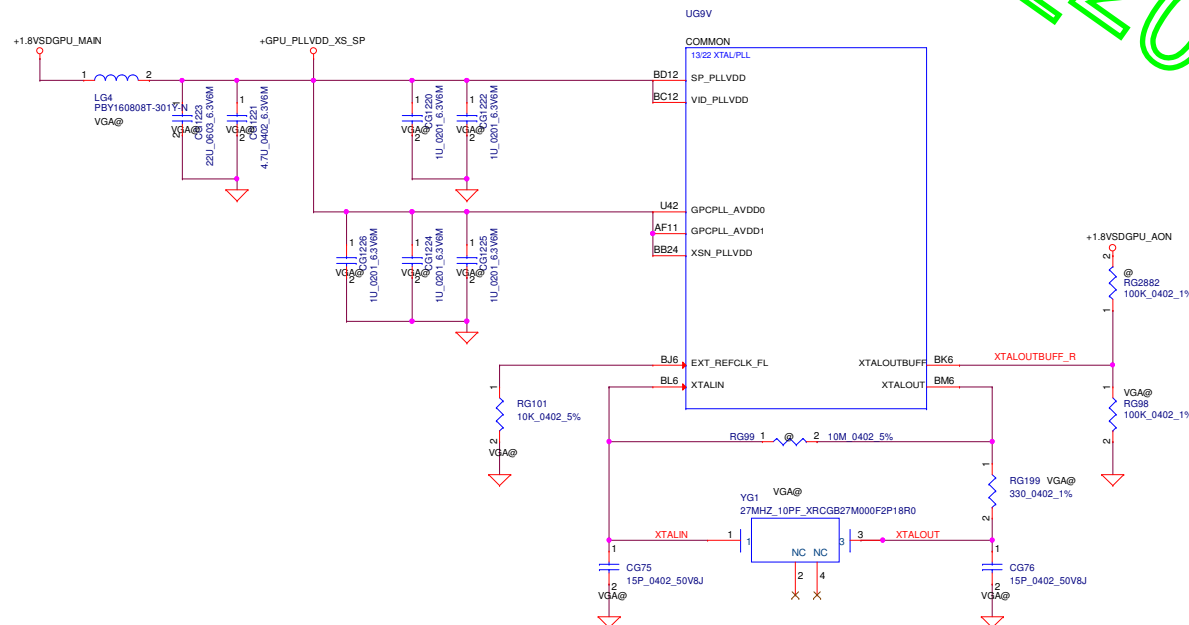


The Strap for ROM_SO should be 10K while all others are 100K.

N18E CS# add 33ohm

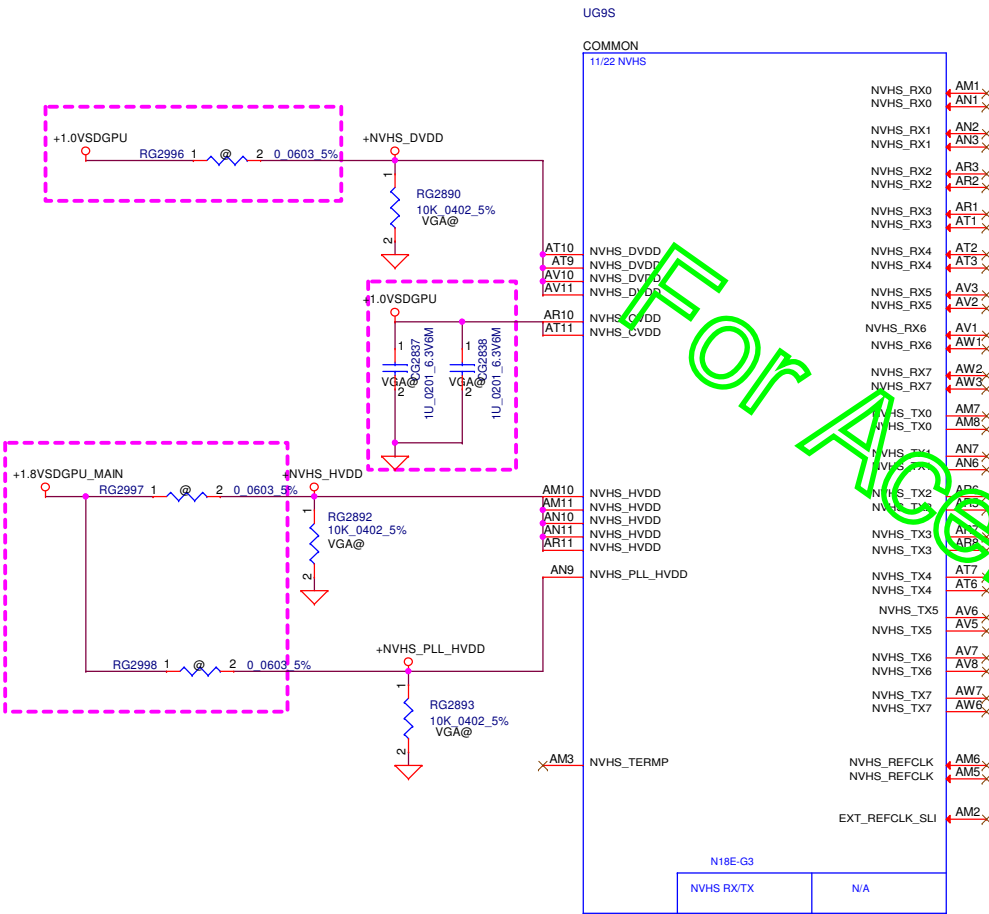


DGPU VBIOS ROM 8Mb
P/N: SA00009QP00

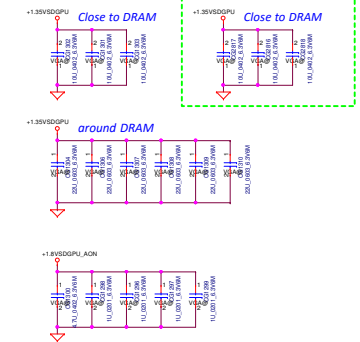
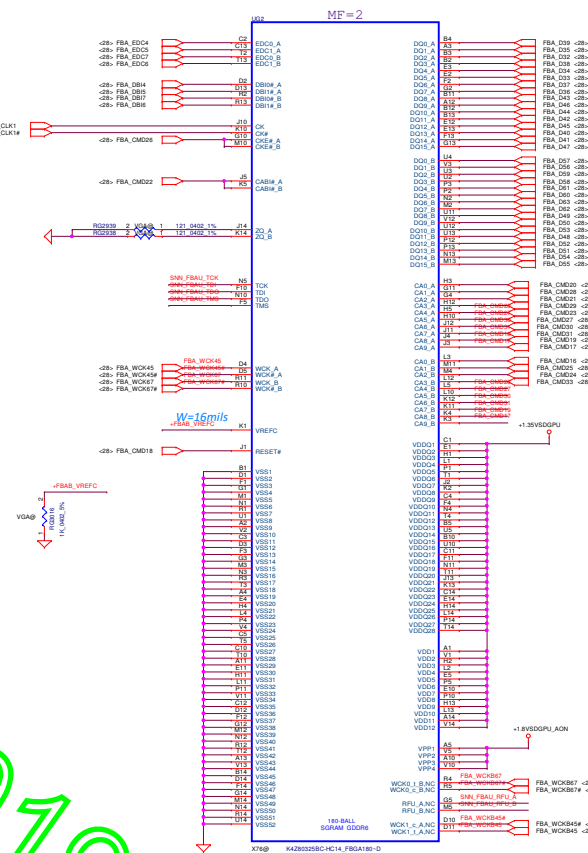


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				Rev
				1.0
				Date: Wednesday, February 13, 2019
				Sheet 31 of 100

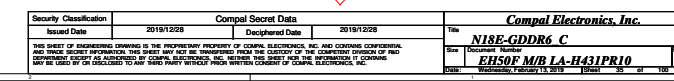
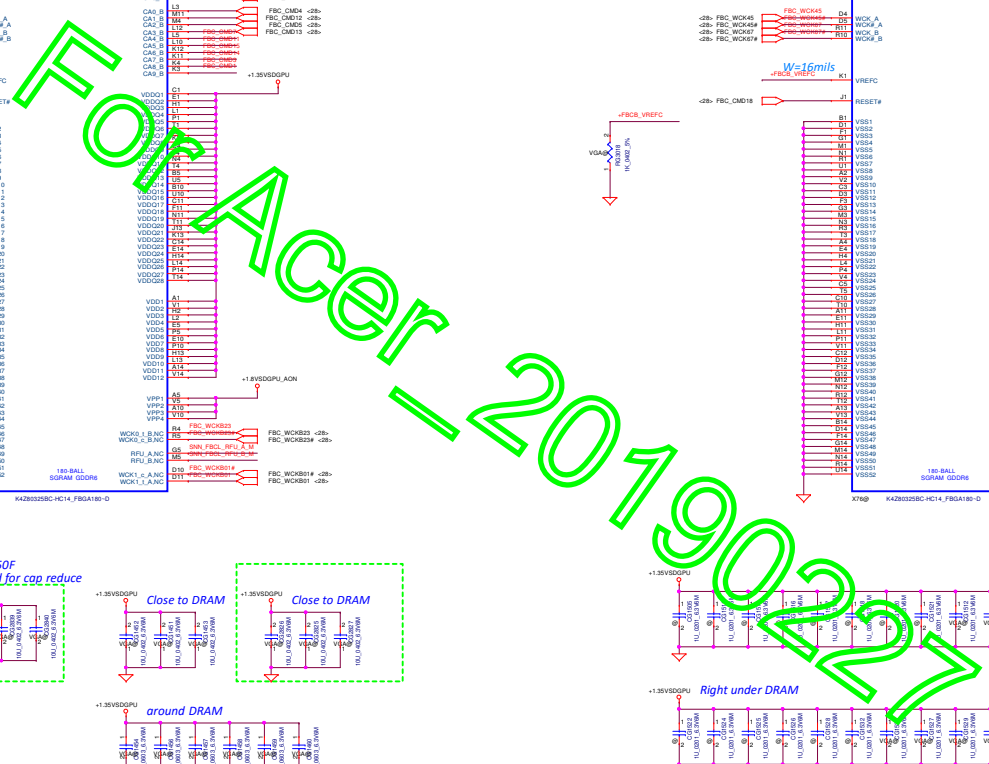
Pull down NVHS_DVDD, NVHS_CVDD, NVHS_HVDD, NVHS_PLL_HVDD rails to GND with 10K Resistor



For Approval 20190227



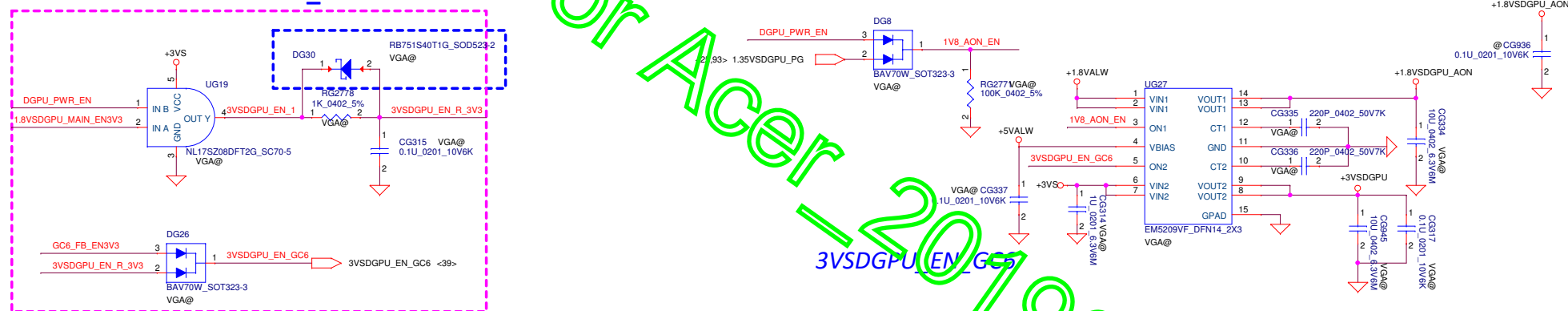
Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2018/12/28	Declassified Date	2019/12/28
THIS SET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF CHINA ROKAS CO., LTD. WITHOUT THE WRITTEN AUTHORIZATION BY COMPANY. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS DOCUMENT IS PROHIBITED. ANY VIOLATION WILL BE SUBJECT TO LEGAL ACTION.			Time
			N18E-GDDR6 A
			Size
			EHSOF / M/LB LA-H43IPR10
			Rev
			1.0



For Acer Reserve Page
20190227

Security Classification		Compul Secret Data		Compul Electronics, Inc.	
Issued Date	2019/12/28	Discharged Date	2019/12/28	Title	
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPUL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF COMPUL ELECTRONICS, INC.</small>				Reserve Page	
				EH50F M/R LA-H431PR10	
				EH50F M/R LA-H431PR10	

<19,25>	DGPU_PWR_EN								
<25,93>	1.35VSDGPU_EN								
<25,95>	NVVD1_EN								
<25>	1.8VSDGPU_MAIN_EN								
<25>	1.8VSDGPU_MAIN_EN3V3								
<19,25>	GC6_FB_EN3V3								
	<25> OVERT#								
<25>	DGPU_PEX_RST#								



1.8VSDGPU_MAIN_EN1

RG200

0.0201 5%

1.8VSDGPU_MAIN_EN3V3

1NFGC6@

RG3014

0.0201 5%

DG27

BAV70W_SOT323

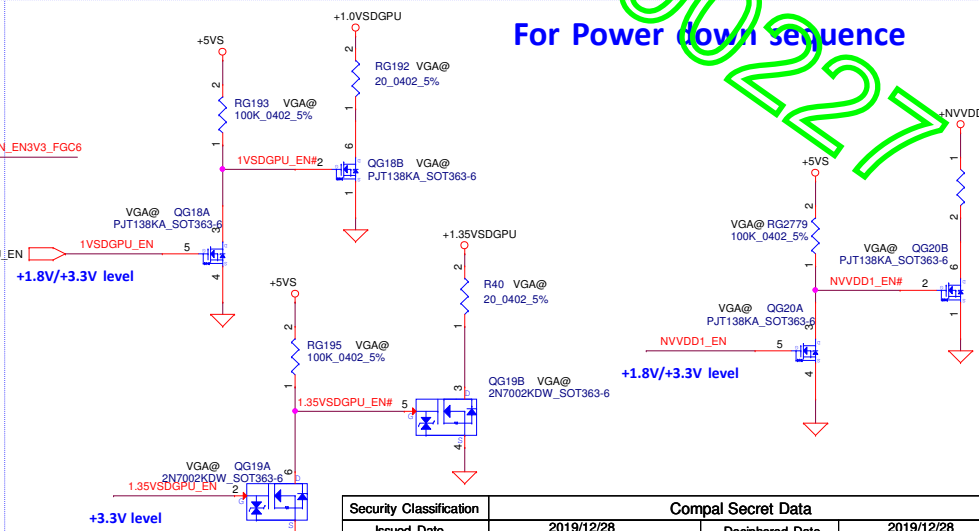
FGC6@

1.8VSDGPU_MAIN_EN3V3_FGC6

GPU_FB_EN_FGC6_AND_3V3

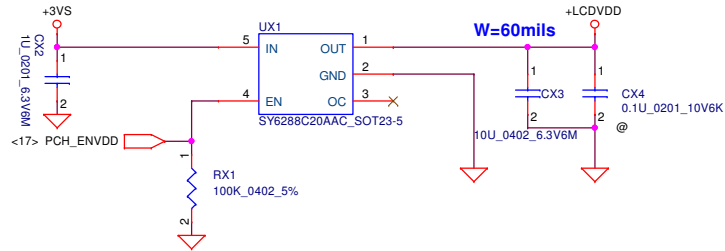
[illegible]

For Power down sequence

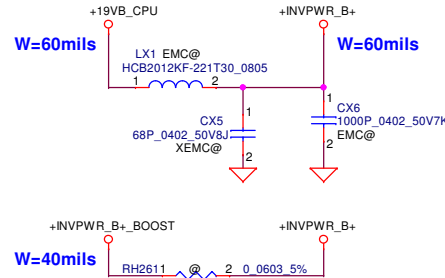


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	N18E-GPU Power control	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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
					EH50F M/B LA-H431PR10	1.0
				Date:	Wednesday, February 13, 2019	Sheet 37 of 100

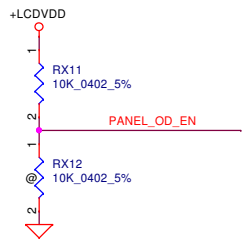
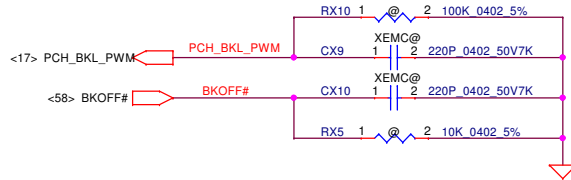
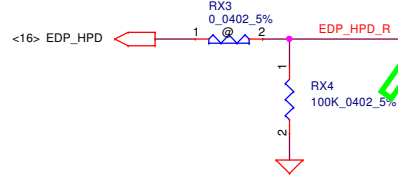
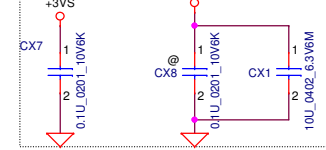
LCD POWER CIRCUIT



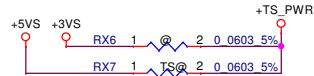
SM01000EJ00 3000ma
220ohm@100mhz
DCR 0.04



Place closed to JEDP1



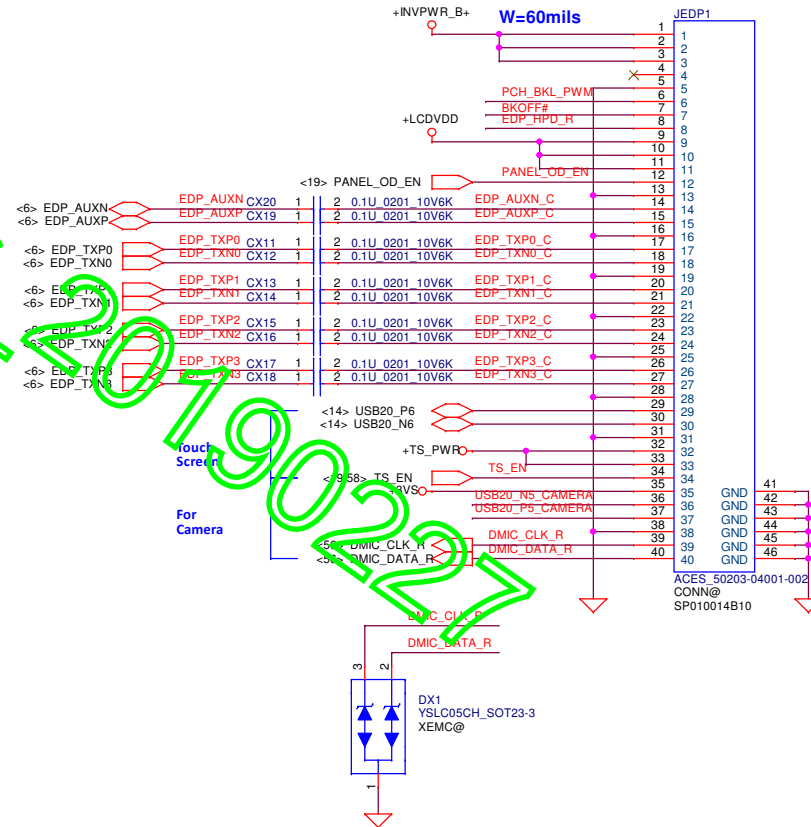
USB Touch Screen



Camera

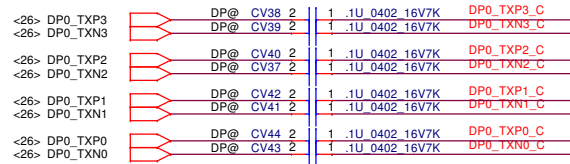


LED PANEL Conn.

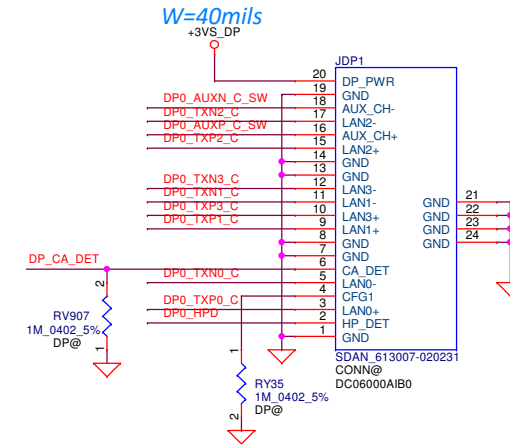
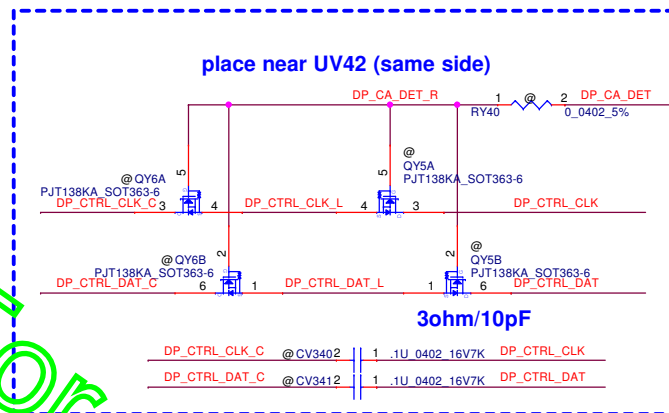
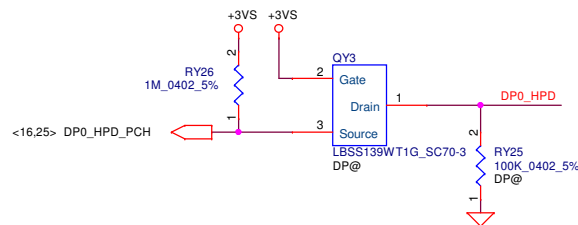


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				eDP CONN.	
Size	Document Number	Rev		1.0	
Custom	EH50F M/B LA-H431PR10				
Date:	Wednesday, February 13, 2019	Sheet	38	of 100	

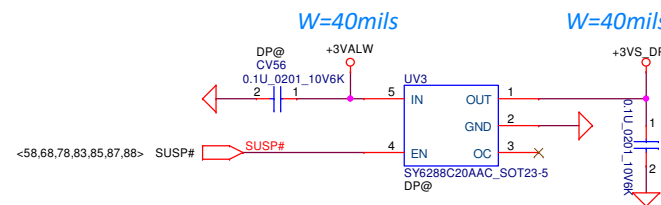
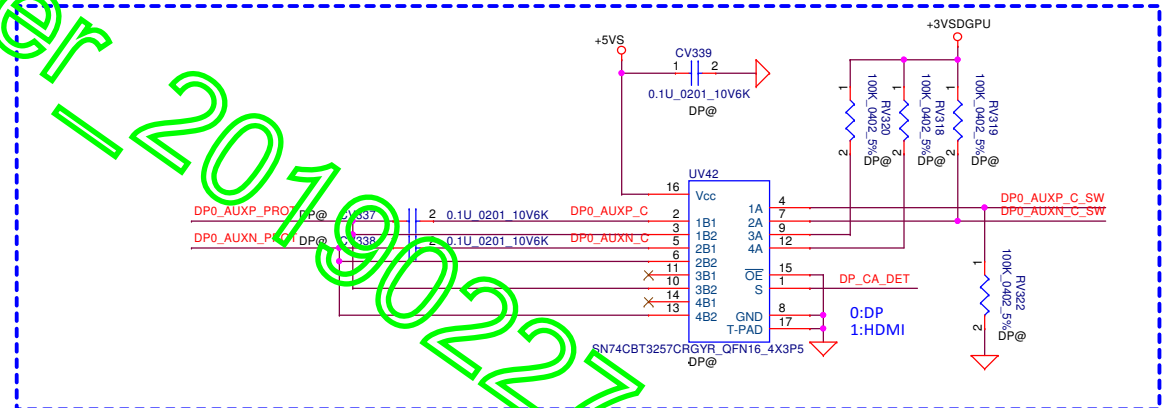
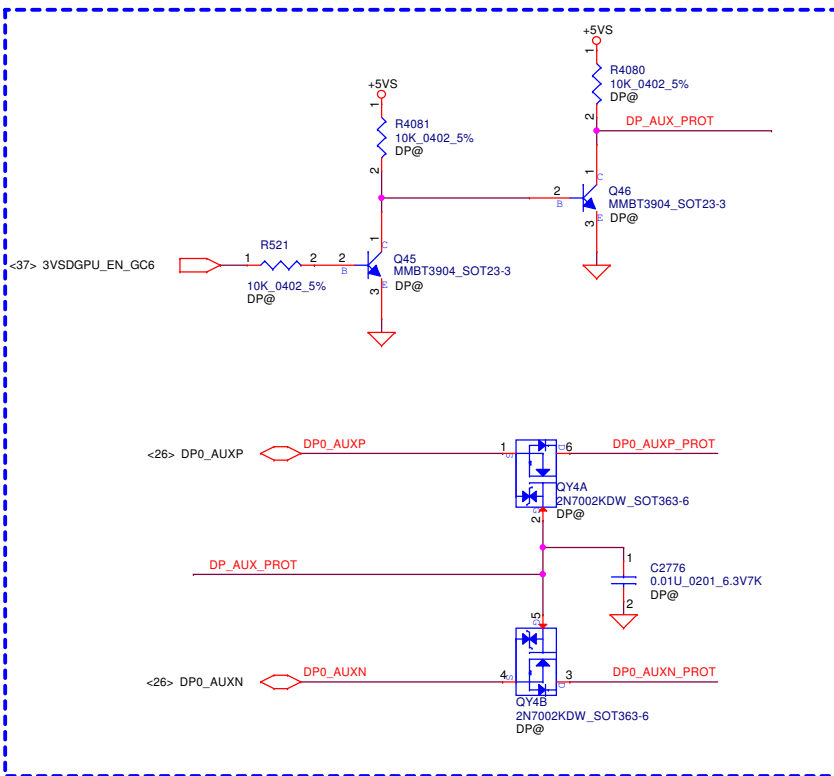
Display Port



to PCH



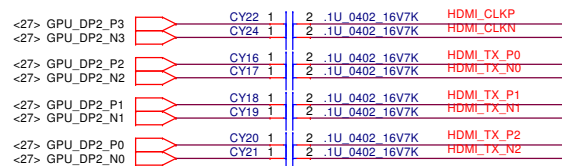
need check pin4 CFG1



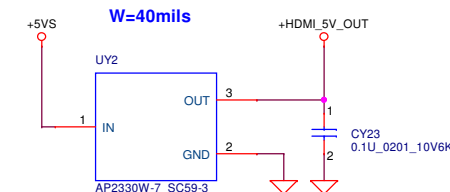
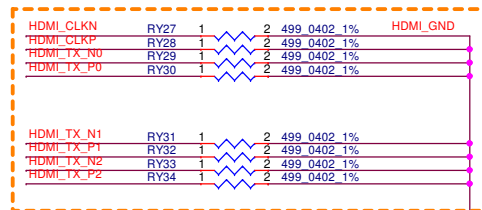
0921 change souce to +3VALW, CTRL to SUSP#

OE#	S	INPUT/OUTPUT A	Function
L	L	B1	A=B1
L	H	B2	A=B2
H	X	Z	NC

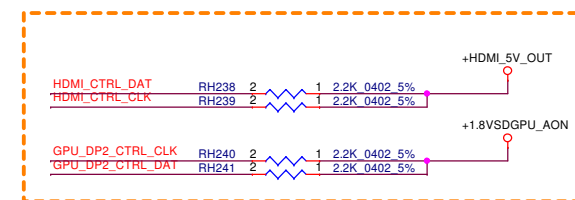
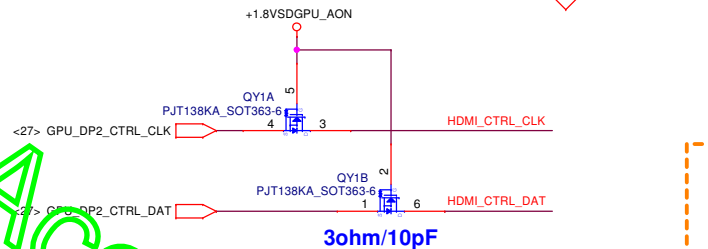
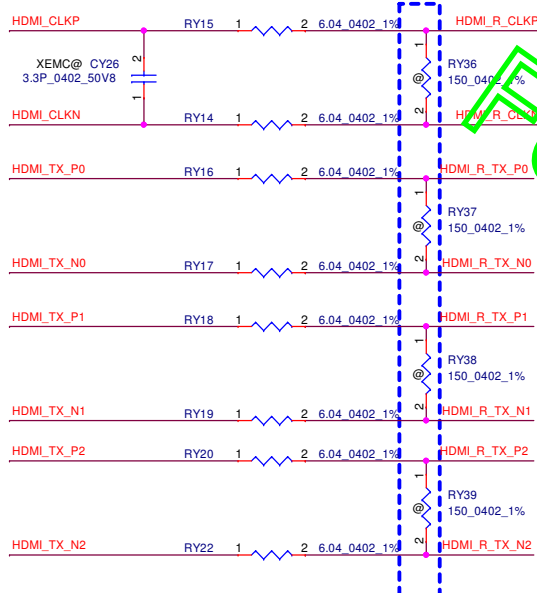
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DP CONN	
Size	Document Number	Rev		1.0	
Custom	EH50F M/B LA-H431PR10	Date		Wednesday, February 13, 2019	
Sheet		39		of 100	



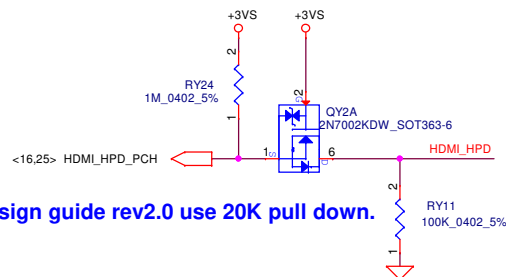
Raptor



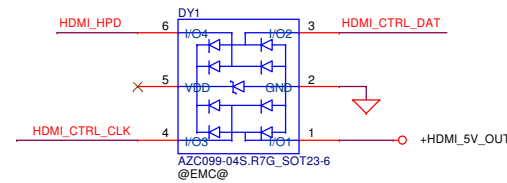
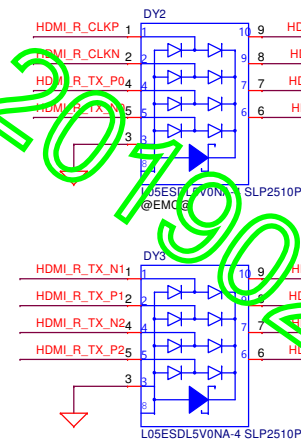
EMI request



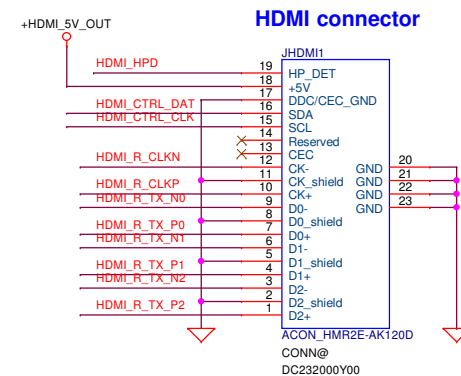
to PCH



RY11 design guide rev2.0 use 20K pull down.



P/N: SC300002900, S DIO(BR) AZC199-04S.R7G_SOT23-6 ESD

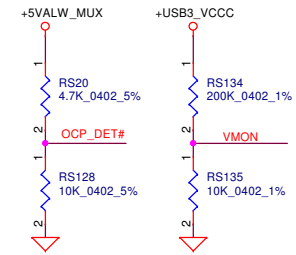
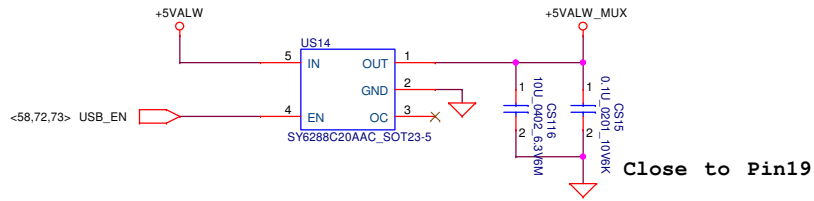


HDMI ROYALTY
ROYALTY HDMI W/LOGO+HDCP
RQ0000003HM
45@

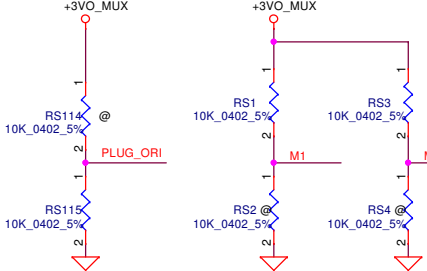
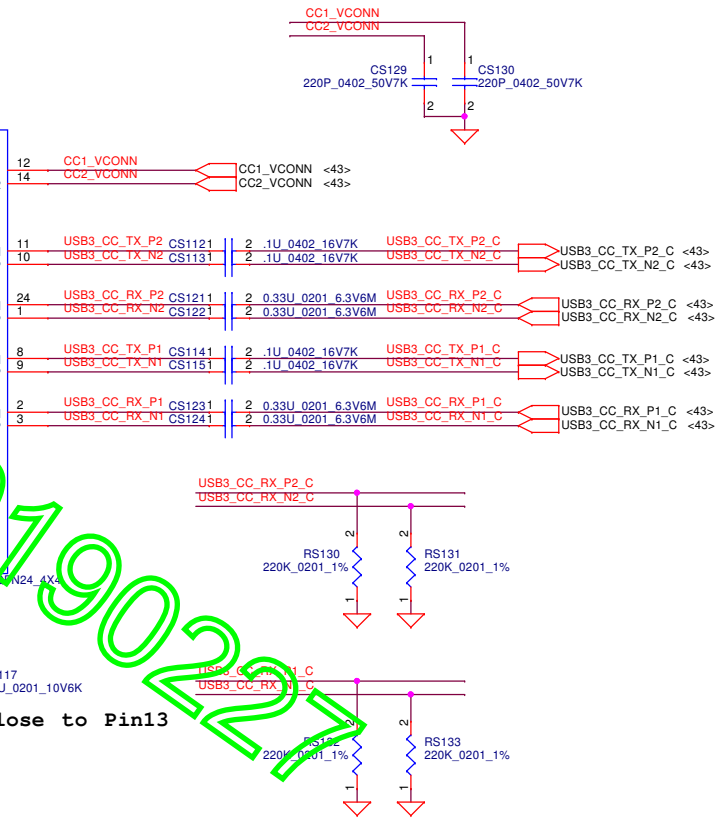
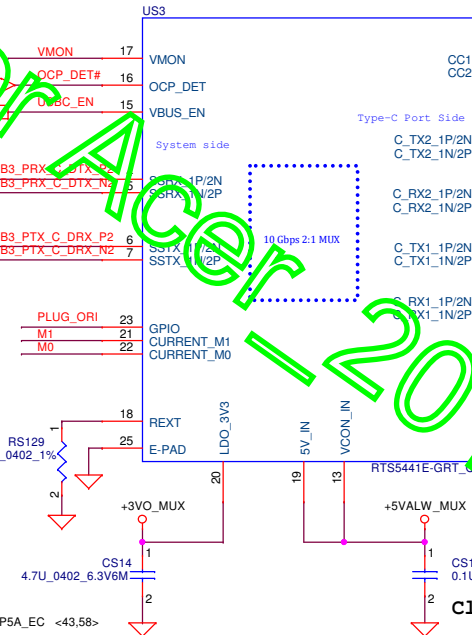
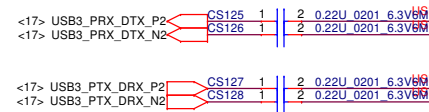
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				HDMI CONN.	
Size	Custom	Document Number	EH50F M/B LA-H431PR10		Rev 1.0
Date:	Wednesday, February 13, 2019	Sheet	40	of	100

For Access
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2019/12/28	Deciphered Date	2019/12/28			
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			
				Reserve Page			
				Size	Document Number		Rev
				Custom	EH50F M/B LA-H431PR10		1.0
				Date:	Wednesday, February 13, 2019		Sheet
C		D					

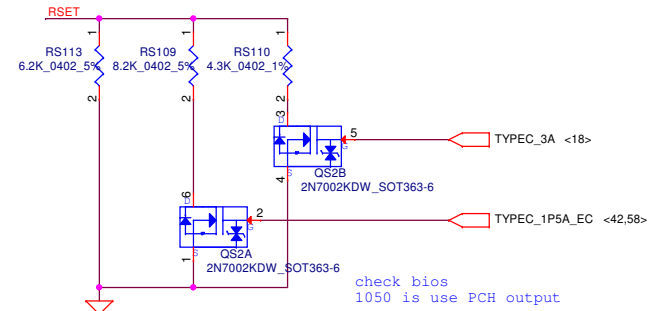
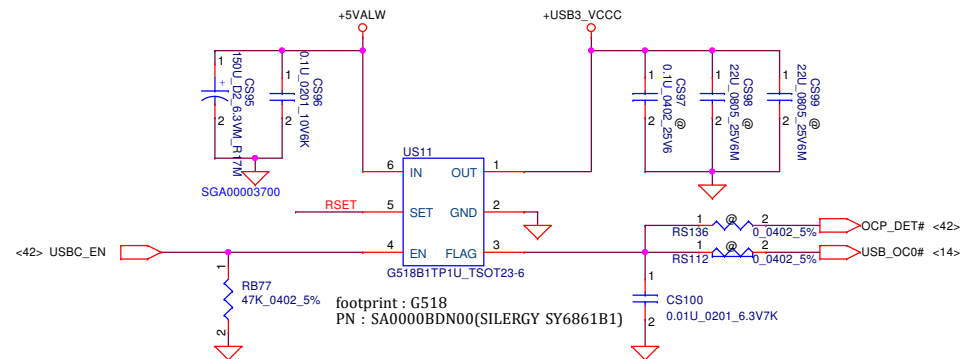


USB3.0 (Port 2)



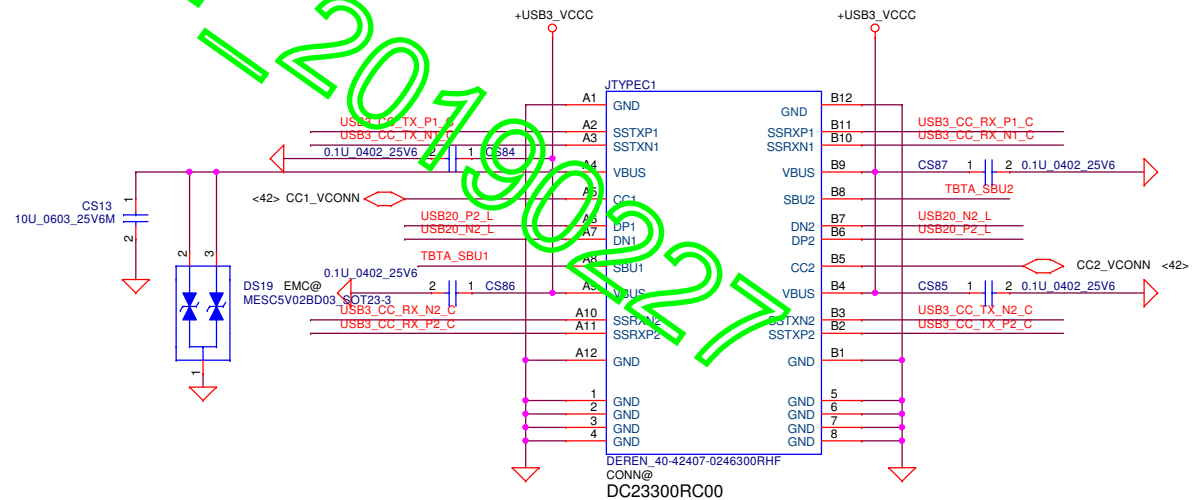
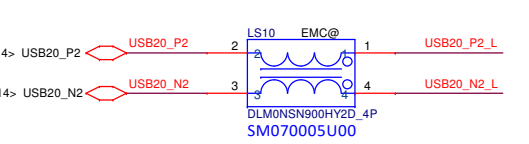
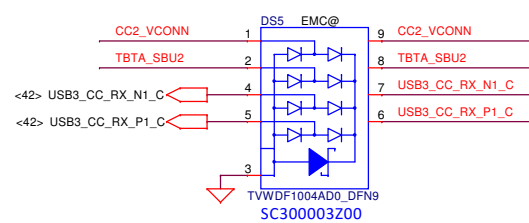
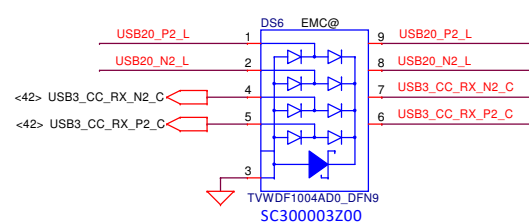
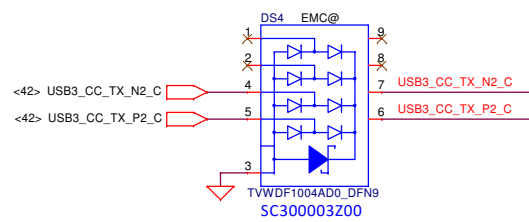
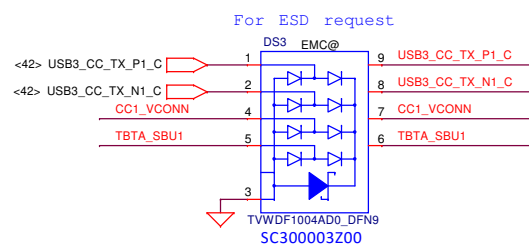
5441E Current Limit		
M1	M0	MODE
L	H	0.9A
H	L	1.5A
H	H	3A

RTS5441 M0 truth table by 2018 BIOS spec			
TYPEC_1P5A_EC	MODE	limit point	Condition
H	3A	3.5A	AC mode or Battery >30%
L	1.5A	1.92A	Battery <30% when DC mode



Initial Current mode selection	
USBC_EN	V BUS
L	0
L	0
H	0
H	1

G518 MOS Current Limit				
GPP_B1 (TYPEC_1P5A)	GPP_B4 (TYPEC_3A)	RSET(kΩ)	MODE	limit point
L	L	6.2	0.9A	1.09A
L	H	3.53	1.5A	1.92A
H	L	2.54	2A	2.67A
*H	H	1.94	3A	3.5A



CC1_VCONN & CC2_VCONN need 20mil trace width.

Security Classification		Compal Secret Data		Title	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				CC+USB TYPE C	
Size	Document	Number	Rev	EH50F M/B LA-H431PR10	
Date:	Wednesday, February 13, 2019	Sheet	43	of 100	

For Access
Reserve Page
-20190227

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				Reserve Page		
				Size	Document Number	Rev
				Custom	EH50F M/B LA-H431PR10	
Date:				Wednesday, February 13, 2019	Sheet	44 of 100

For Acer
Reserve Page
_20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Reserve Page	
<small>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.</small>				8559 Document Number	Rev 1.0
				EHS0FM/B LA-H431PR10	
Date: Wednesday, February 13, 2019				Sheet 45 of 100	

For Acceptance
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				Reserve Page	
				Size Custom	Document Number
				Date: Wednesday, February 13, 2019	Sheet 46 of 100
				Rev	1.0
				EH50F M/B LA-H431PR10	

For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2019/12/28	Deciphered Date	2019/12/28			
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			
				Reserve Page			
				Size	Document Number		Rev 1.0
				Custom	EH50F M/B LA-H431PR10		
				Date: Wednesday, February 13, 2019			
C		D		Sheet	47	of 100	

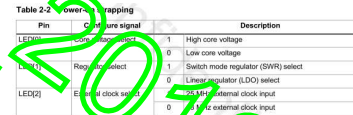
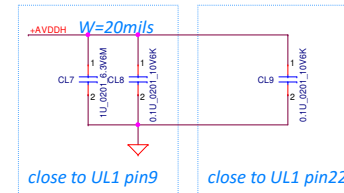
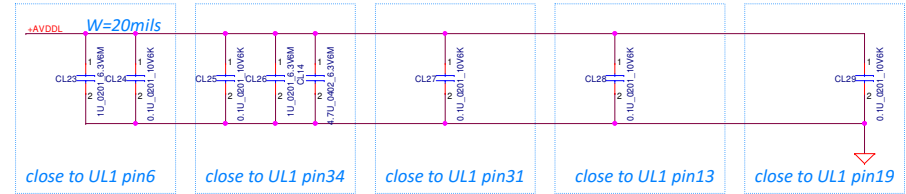
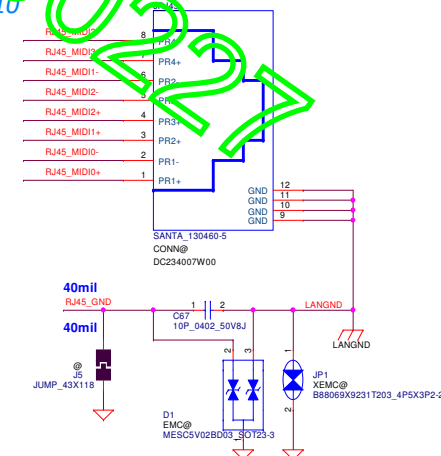
For Access
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/12/28	Deciphered Date	2019/12/28	
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		Reserve Page	
		Size	Document Number		Rev
		Custom	EH50F M/B LA-H431PR10		1.0
Date:		Wednesday, February 13, 2019		Sheet	48 of 100

For Acer
Reserve Page
20190227

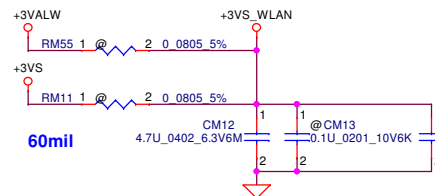
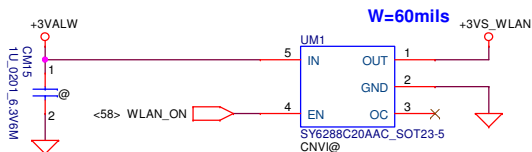
For Acceptance
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 50 of 100	

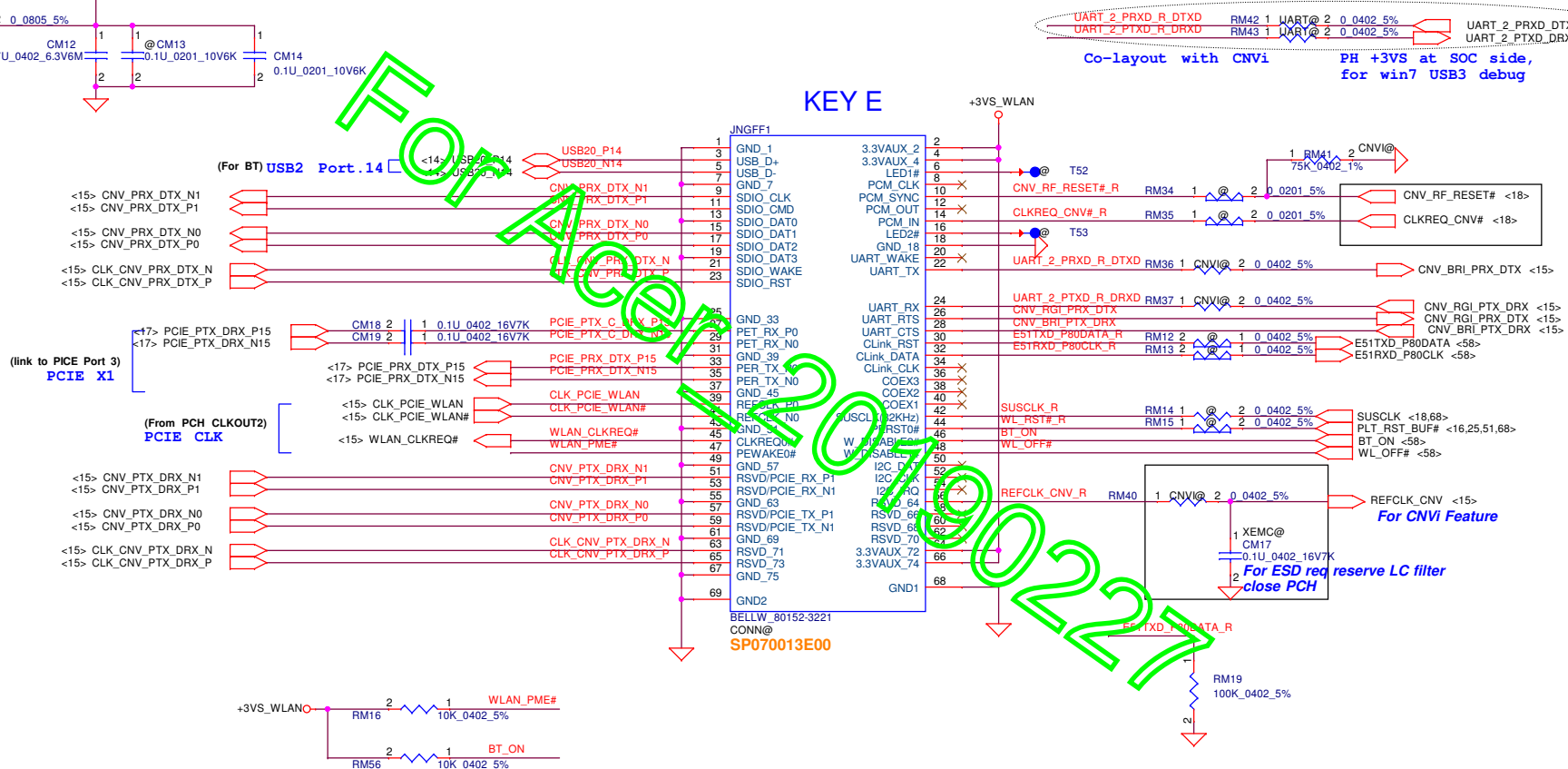
 LAN Connector

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	LAN E2400	
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 BY E-MAIL OR DISCLOSED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR AUTHORIZED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				EH50F M/B LA-H431P10		
				Date:	Wednesday, February 13, 2019	Sheet 51 of 100

Wireless LAN



NGFF WL+BT (KEY E)



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	WLAN M.2	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Custom	
				Document Number		Rev
				EH50F M/B LA-H431PR10		1.0
Date:	Wednesday, February 13, 2019	Sheet	52	of	100	

For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	53 of 100
				Rev	1.0

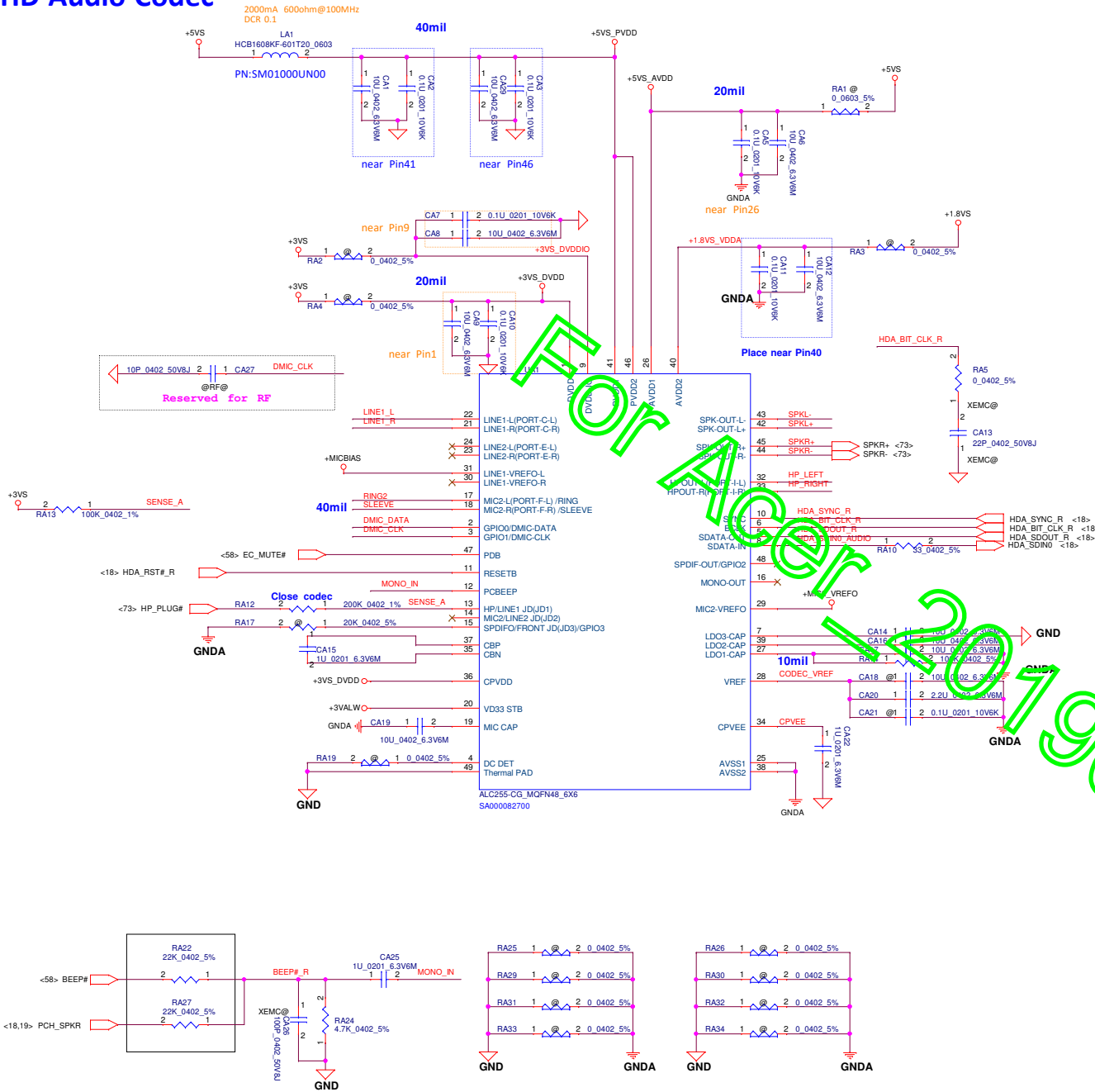
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 54 of 100	

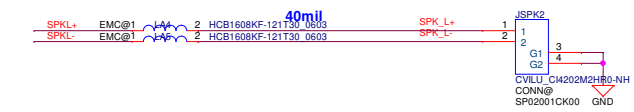
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	55 of 100
				Rev	1.0

HD Audio Codec

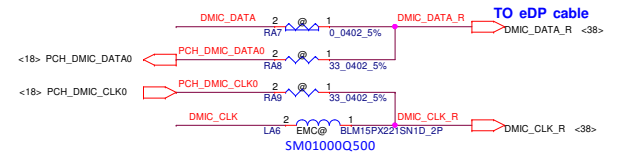


Int. Speaker Conn.

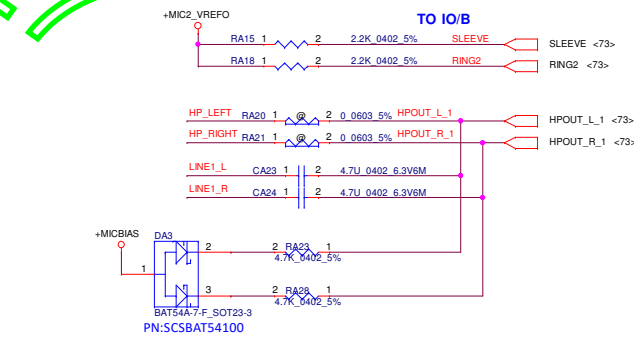


Digital MIC

MIC BOM upload by Audio Team



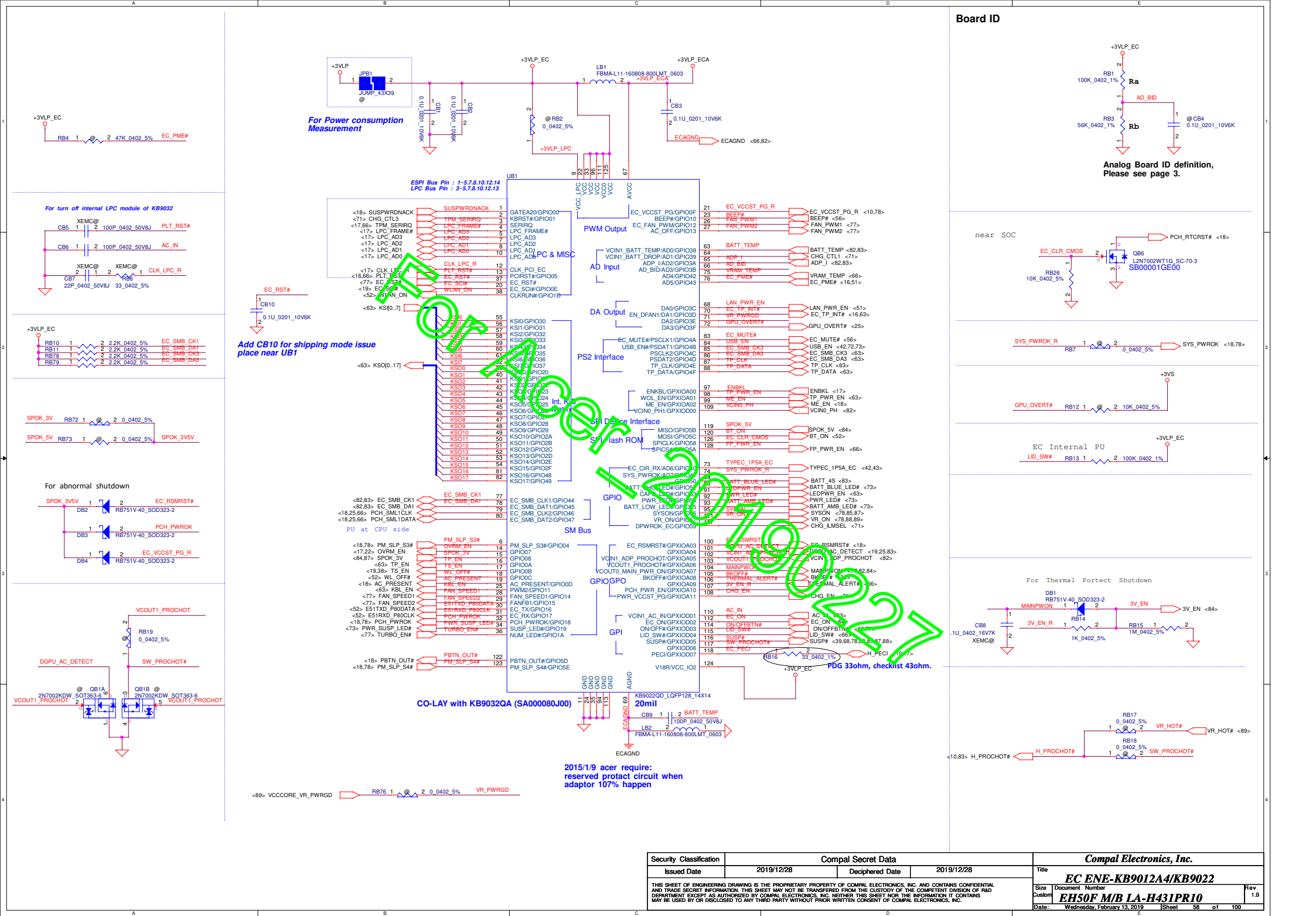
Headphone Out



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				HD Audio Codec ALC255	
Size	Document Number	Rev		Date	
	EH50F M/B LA-H431PR10	1.0		Wednesday, February 13, 2019	
		Sheet		56 of 100	

For ACCE
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title		
<small>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.</small>				Reserve Page		
				Size	Document Number	Rev
				Custom	EH50F M/B LA-H431PR10	1.0
Date: Wednesday, February 13, 2019				Sheet	57 of 100	



Security Classification		Compal Secret Data	
Issued Date	2019/12/28	Deciphered Date	2019/12/28
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.	
Document Number		EC ENE-KB9012A4/KB9022	
Customer		EH50F M/B LA-H431PR10	
Date:	Wednesday, February 13, 2019	Sheet	58 of 100

For Acerve
Reserve Page
-20190227

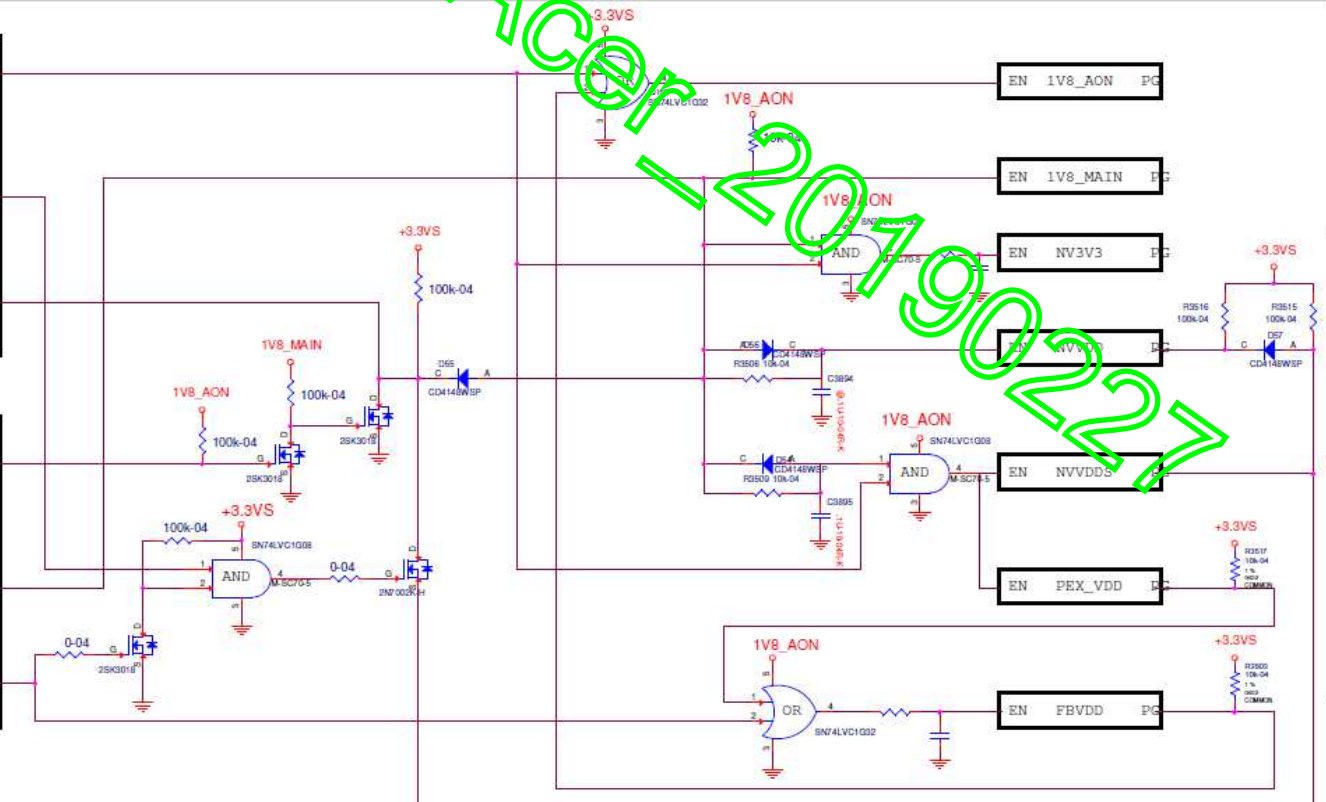
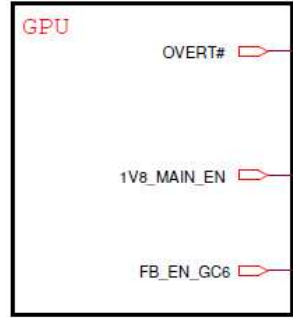
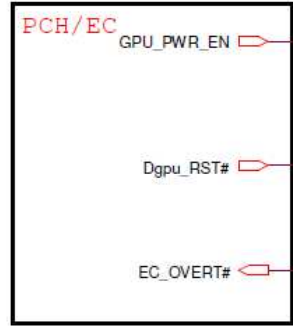
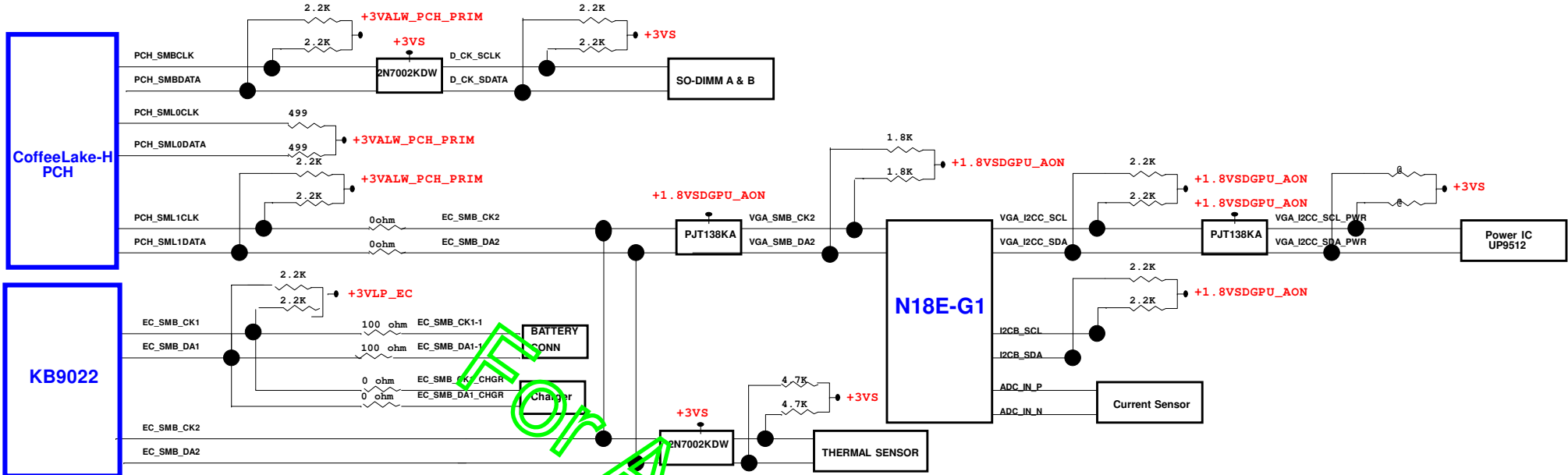
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	59 of 100
				Rev	1.0

For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 60 of 100	

CoffeeLake-H
PCH

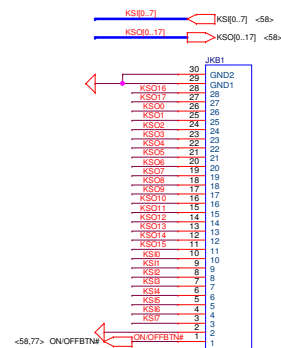
KB9022



For Approval
Reserve Page
20190227

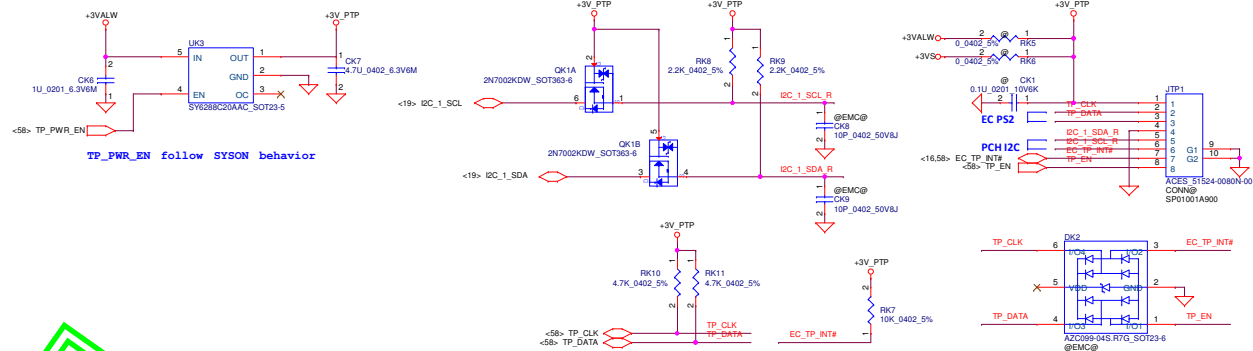
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Rev
				Document Number	1.0
				Date:	Wednesday, February 13, 2019
				Sheet	62 of 100

KB Conn.



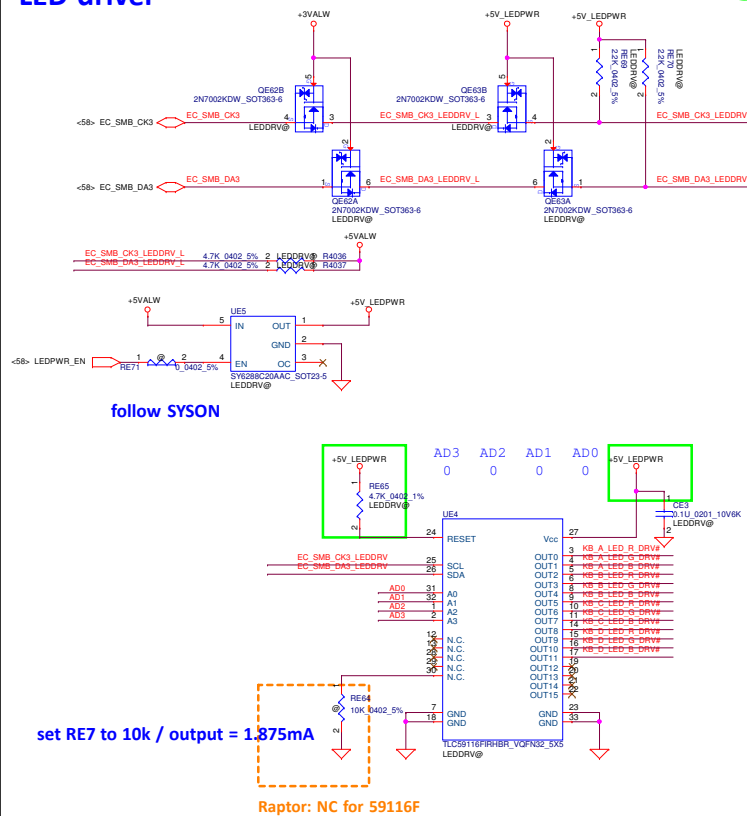
SP01000G000

Touch Pad



LED driver

KB BackLight



Raptor: NC for 59116F

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	KB/TP/LEDs(TLC59116F)
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 OR 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	EH50F M/B LA-H431PR10
				Date	Wednesday, February 13, 2019
				Sheet	63 of 100

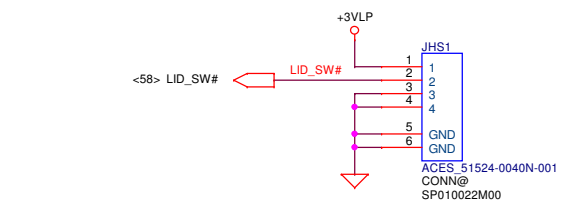
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	64 of 100
				Rev	1.0

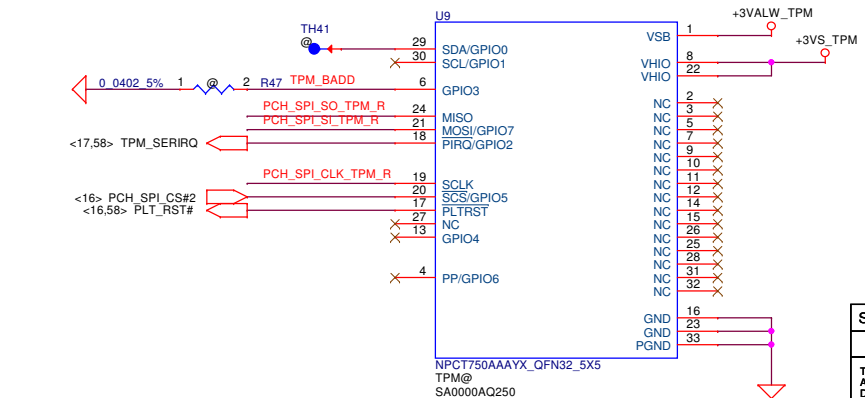
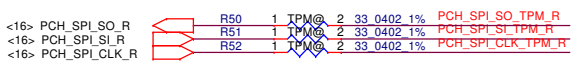
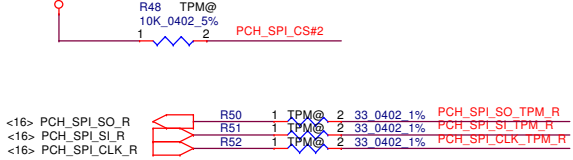
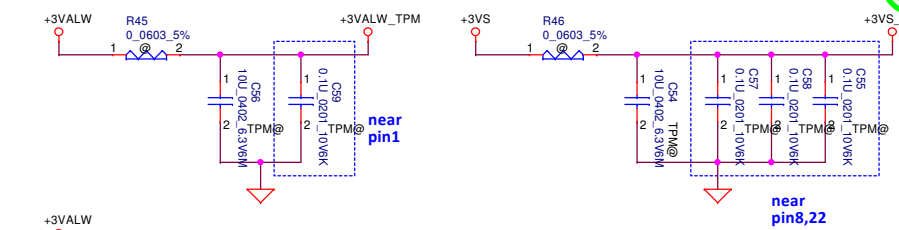
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 65 of 100	

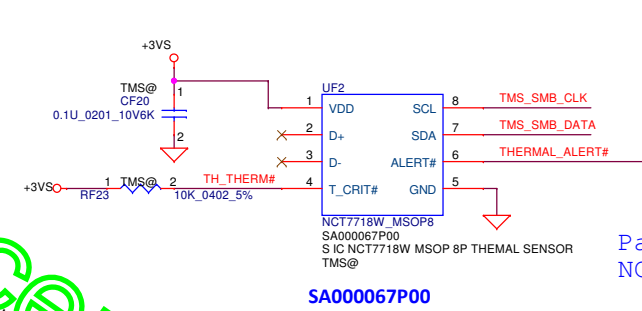
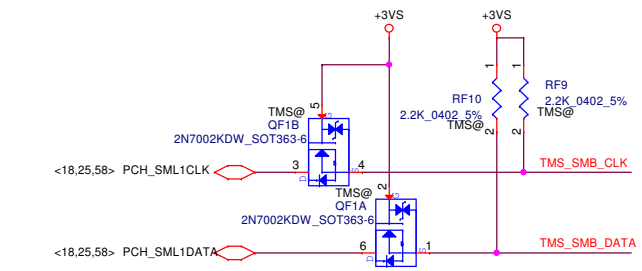
To Hall sensor/B



TPM

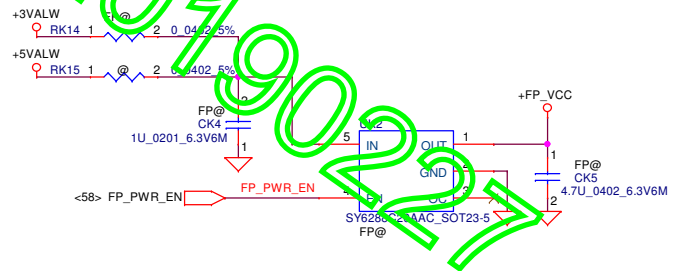


THERMAL SENSOR

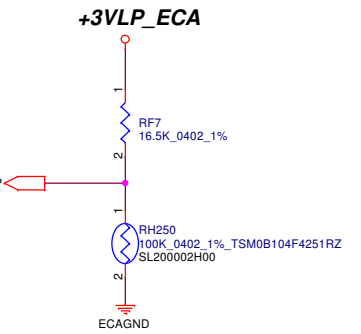


Part Number NCT7718W
SMBUS ADDRESS 1001_1000b

Finger Print

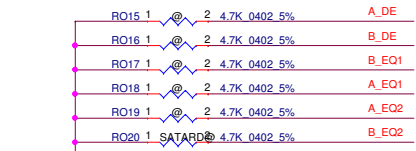
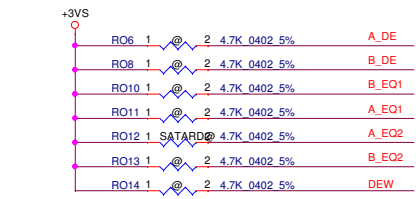
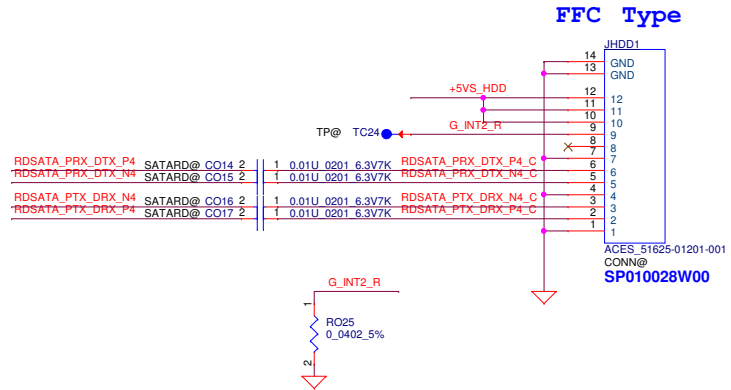
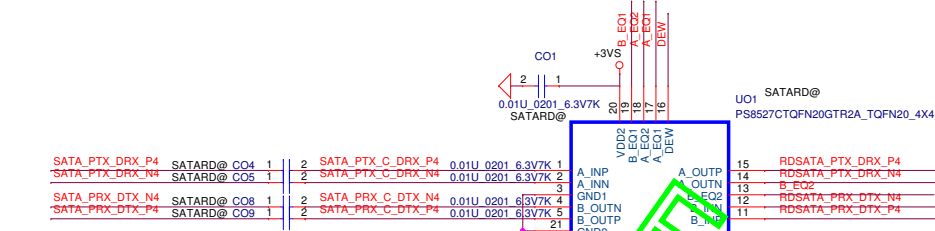
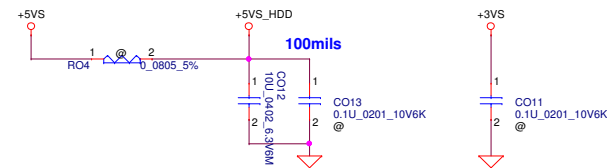
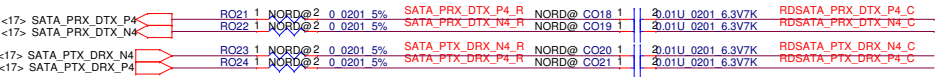


Close to VRAM choke



PIN	ETU801	FA577E-1200
1	+FP_VCC (5V)	+FP_VCC (3V)
2	USBP	D+
3	USBN	D-
4	GND	GND
5	NC	NC
6	NC	NC
7	NC	NC
8	NC	NC

SATA Re-Driver and cable HDD Conn.



USE 8527 re-driver
SA00007JU10

Chip Enable. Internally pulled up at ~150KΩ

EN	Status
L	Chip disabled
H	Chip enabled(default)

Programmable output de-emphasis level setting for channel A.
Internally tied to VDDI/2(M status).

A_DE	De_Emphasis
M	-3.5dB(Default)
L	0dB
H	-6dB

Programmable output de-emphasis level setting for channel B.
Internally tied to VDDI/2(M status).

B_DE	De_Emphasis
M	-3.5dB(Default)
L	0dB
H	-6dB

Equalizer control and program for channel A.
Internally tied to VDDI/2 (M status).

A_EQ2	A_EQ1	EQ for channel loss
L	M	2.4dB
L	L	7.4dB
L	H	14.4dB
M	M	12.2dB(default)
M	L	9.4dB
M	H	13.3dB
H	M	6.2dB
H	L	11.2dB
H	H	5dB

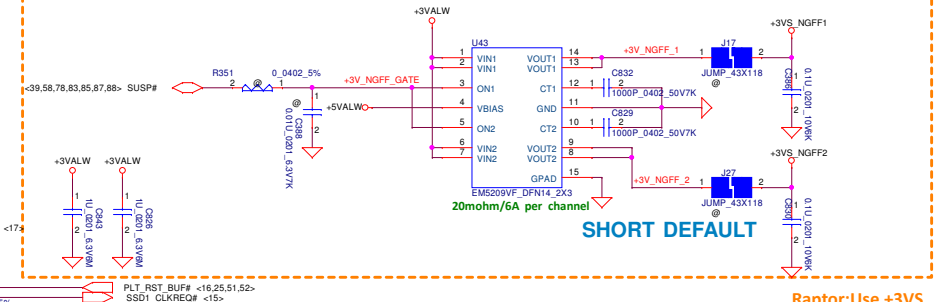
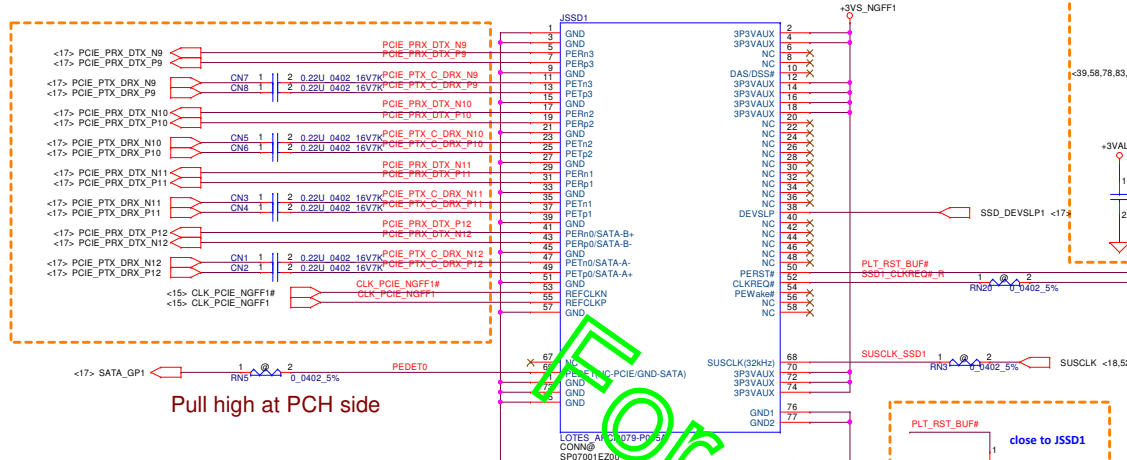
Equalizer control and program for channel B.
Internally tied to VDDI/2(M status).

B_EQ2	B_EQ1	EQ for channel loss
L	M	2.4dB
L	L	7.4dB
L	H	14.4dB
M	M	12.2dB(default)
M	L	9.4dB
M	H	13.3dB
H	M	6.2dB
H	L	11.2dB
H	H	5dB

Raptor:LANE REVERSAL for SATA/PCIE
Combo Lanes

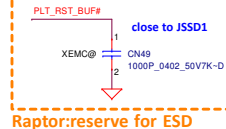
SSD NGFF Slot_1 Key M (left side)

+3VS_NGFF PWR



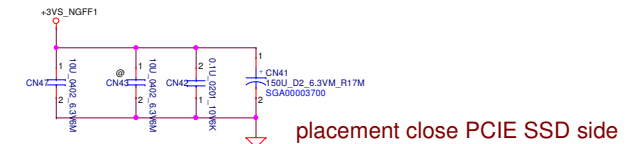
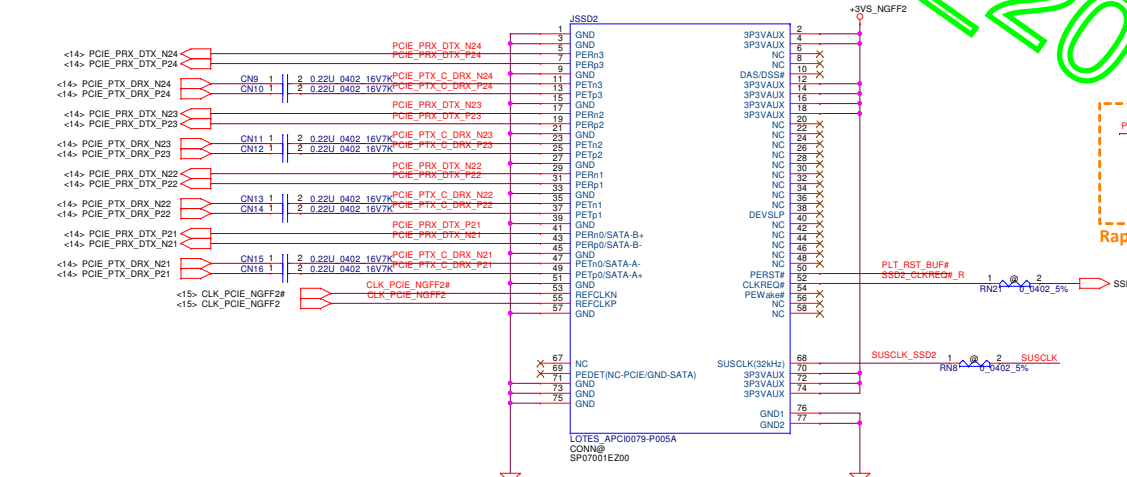
Raptor:Use +3VS

Pull high at PCH side



Raptor:reserve for ESD

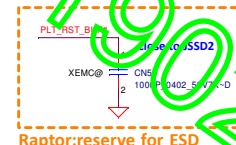
SSD NGFF Slot_2 Key M (left side)



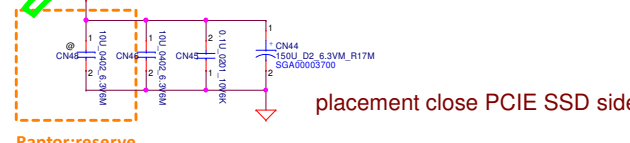
placement close PCIE SSD side

Raptor:reserve

PEDET	Module Type
0	SATA
1	PCIE



Raptor:reserve for ESD



placement close PCIE SSD side

Raptor:reserve

PEDET	Module Type
0	SATA
1	PCIE

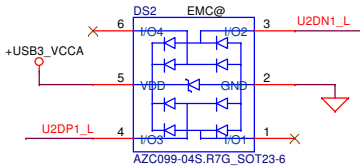
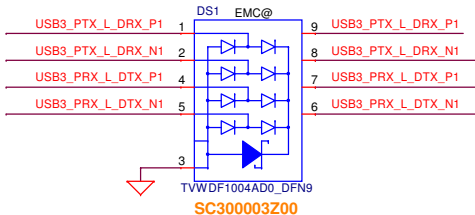
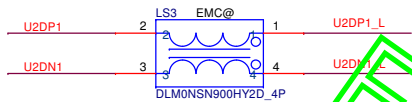
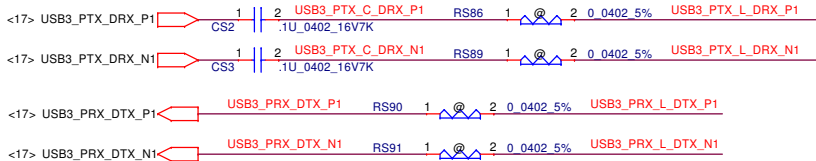
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	69 of 100
				Rev	1.0

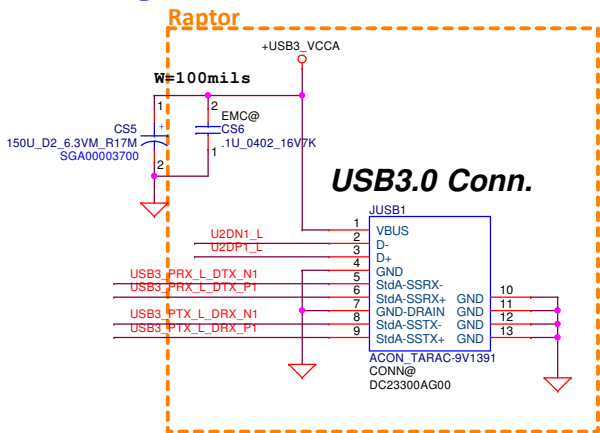
For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	70 of 100
				Rev	1.0

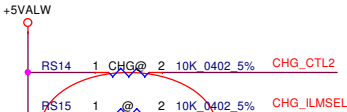
USB3.0 /2.0 CMC



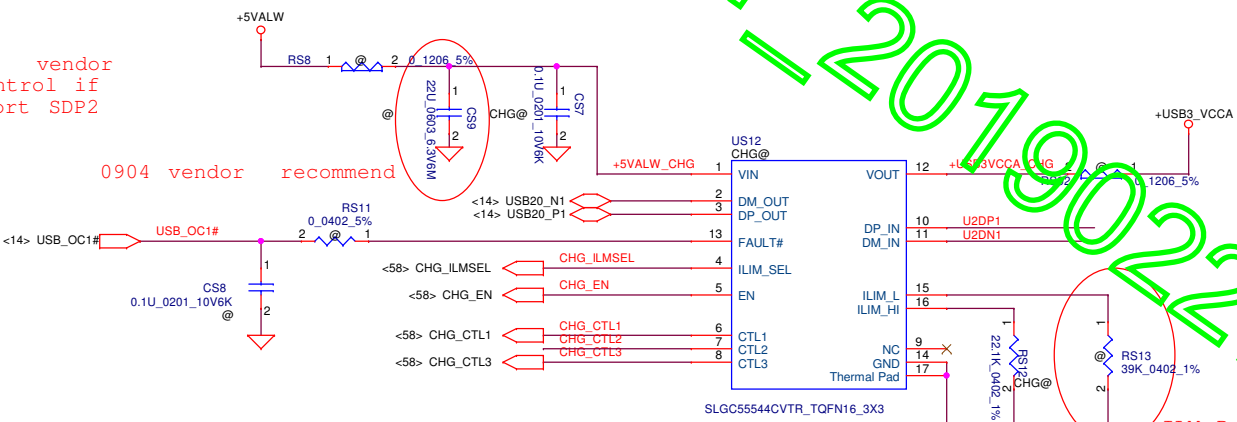
Charger Port



USB Host Charger



0911 Rerserve PU, vendor suggest to EC control if future need support SDP2



0904 vendor recommend

0831 Reserve ILIM_L R as vendor recommend

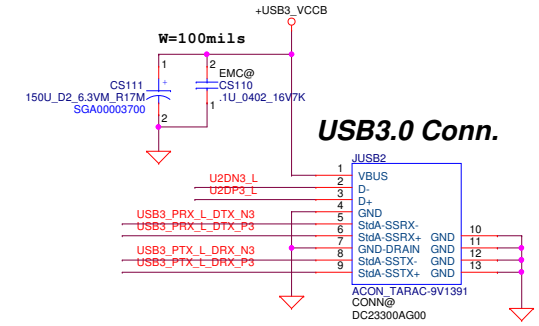
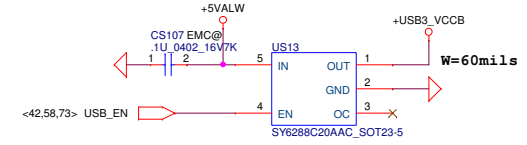
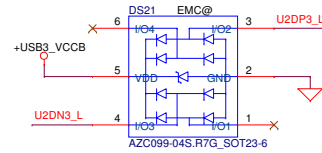
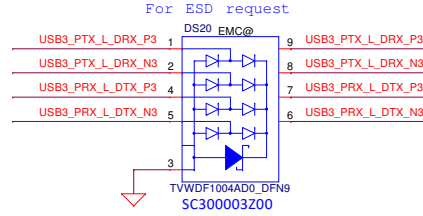
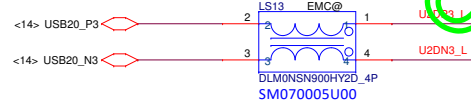
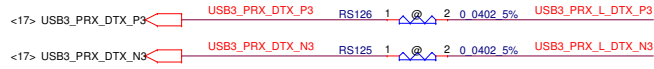
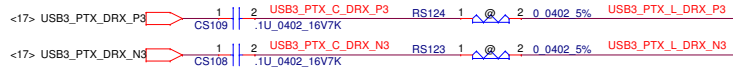
ILM R vaule
Ios (mA)=50250/R (Kohm)
ILIM_Hi=2273mA
ILIM_L=1288mA (reserve)

USB Host Charger Truth Table

CHG_EN	CTL1	CTL2	CTL3	ILIM_SEL	MODE	Current Limit Setting	Note
0	0	1	0	1	SDP1-OFF	ILIM_H	Port power off
1	0	1	0	1	SDP1	ILIM_H	Data Lines Connected
1	0	1	1	1	DCP Auto	ILIM_H	Data Lines Disconnected
1	1	1	1	1	CDP	ILIM_H	Data Lines Connected

Security Classification		Compal Secret Data				Compal Electronics, Inc.							
Issued Date		2019/12/28		Deciphered Date		2019/12/28		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.								USB TYPEA with Charger					
								Size		Document Number		Rev	
								Custom		EH50F M/B LA-H431PR10		1.0	
								Date: Wednesday, February 13, 2019		Sheet 71 of 100			

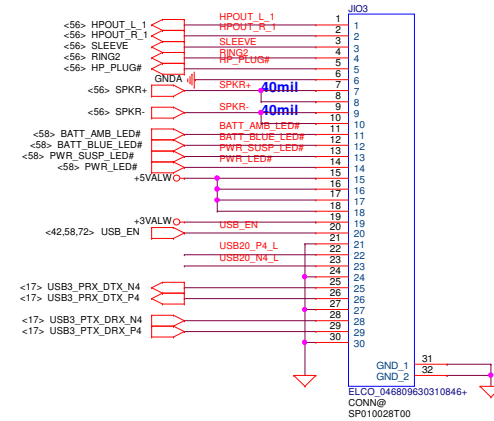
USB3.0



For Acer_20190227

Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2019/12/28				Title			
Deciphered Date				2019/12/28				USB3.0 Conn/USB Charger			
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				Rev			
				Document Number				1.0			
				EH50F M/B LA-H431PR10							
				Date: Wednesday, February 13, 2019				Sheet 72 of 100			

For Acer_20190227



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/12/28	Deciphered Date	2019/12/28	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.				IO/XBOX DB		
				Size	Document Number	Rev
				EH50F M/B LA-H431PR10		1.0
Date:	Wednesday, February 13, 2019	Sheet	73	of	100	

For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	74 of 100
				Rev	1.0

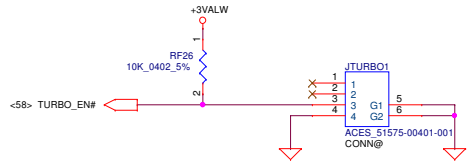
For Archive
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 75 of 100	

For Acer
Reserve Page
20190227

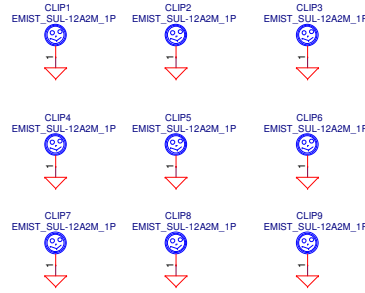
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/12/28	Deciphered Date		2019/12/28
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	
				Reserve Page	
				Size	
Date: Wednesday, February 13, 2019				Sheet	76 of 100

Turbo Key

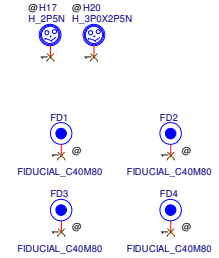
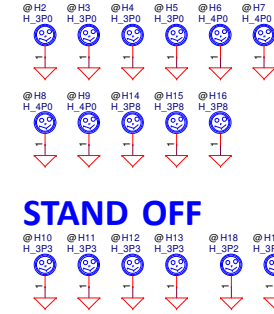


SP01002LG00

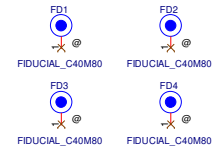
Clips



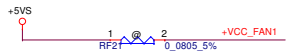
SCREW



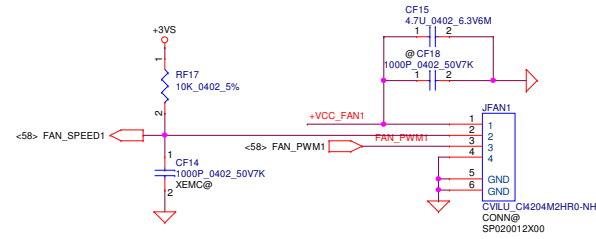
STAND OFF



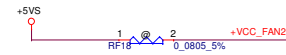
CPU FAN Conn



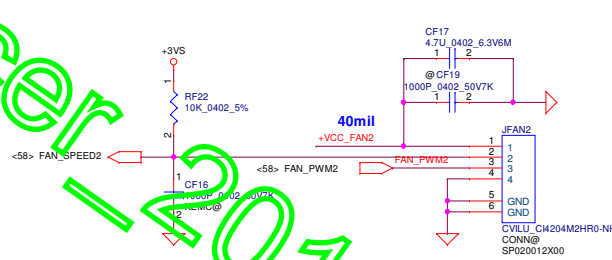
Raptor



GPU FAN Conn

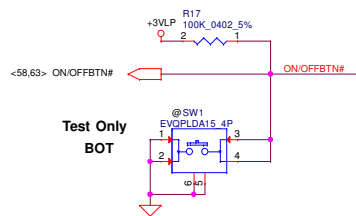


Raptor



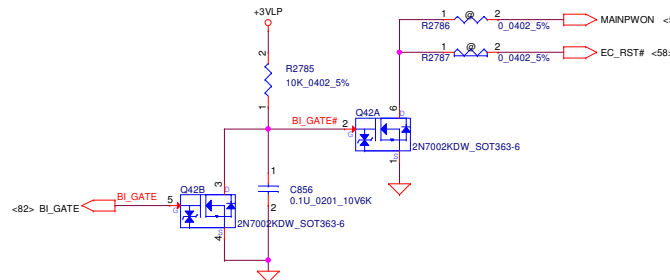
PCB P/N

ON/OFF BTN



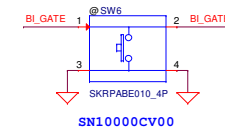
Test Only
BOT

Reset Circuit



BI_GATE PH to +RTCVCC at PWR side

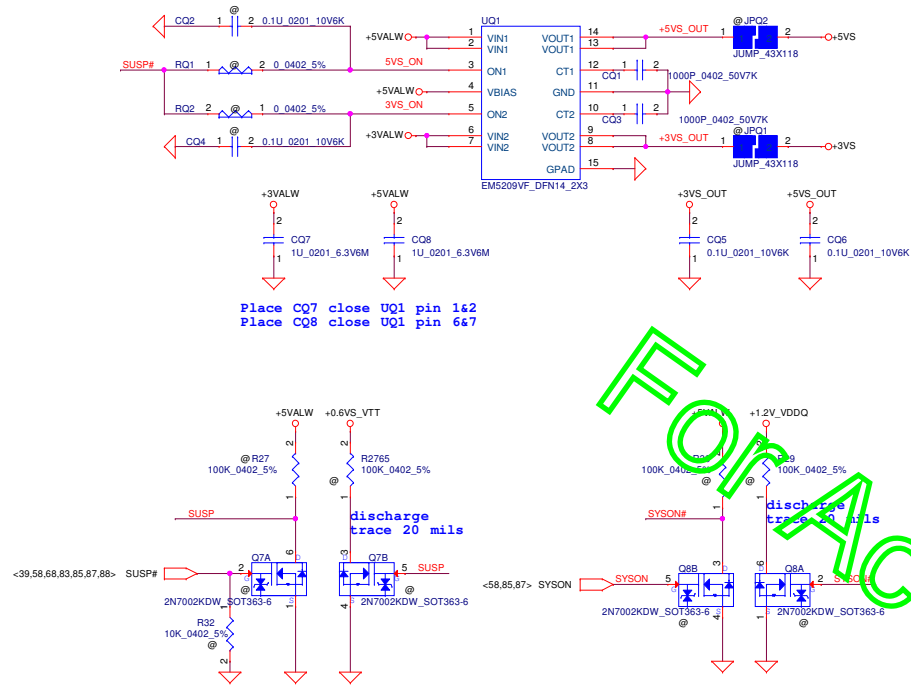
Reset Button



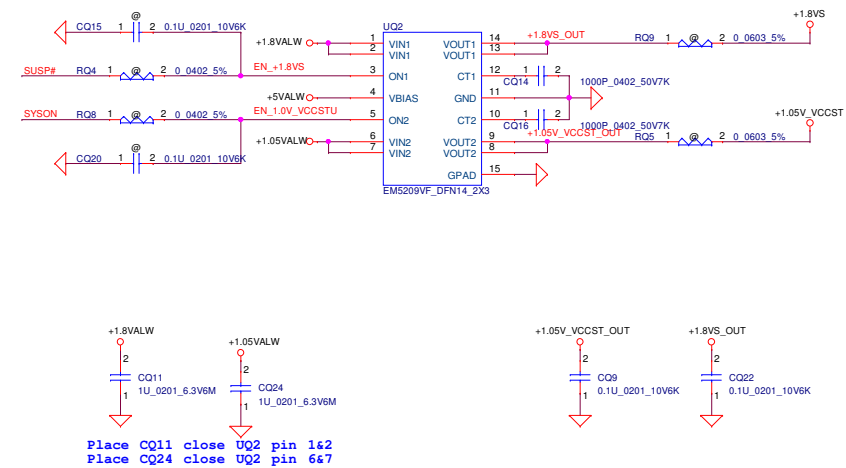
SN10000CV00

Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2019/12/28				Deciphered Date			
2019/12/28				2019/12/28				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.				PWRBTN/PCB P/N/SCREW/FAN				Size			
				EH50F M/B LA-H431PR10				Rev			
				Date: Wednesday, February 13, 2019				Sheet 77 of 100			

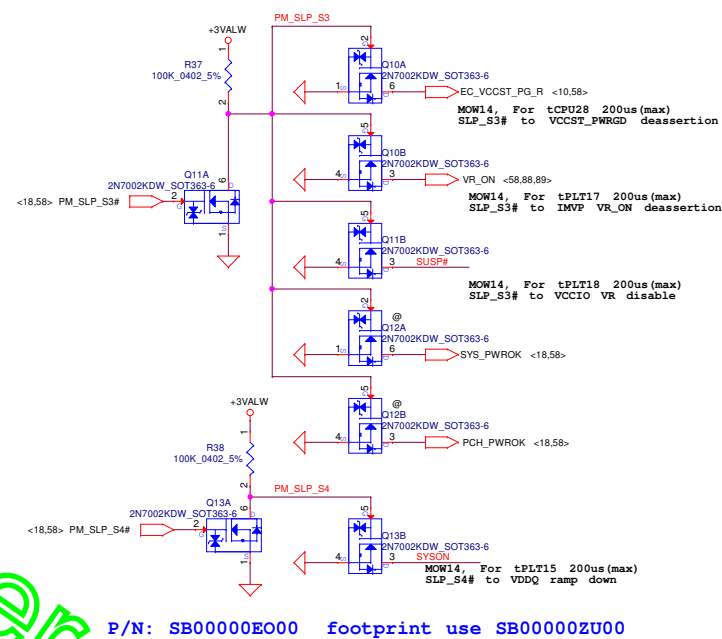
System DC interface



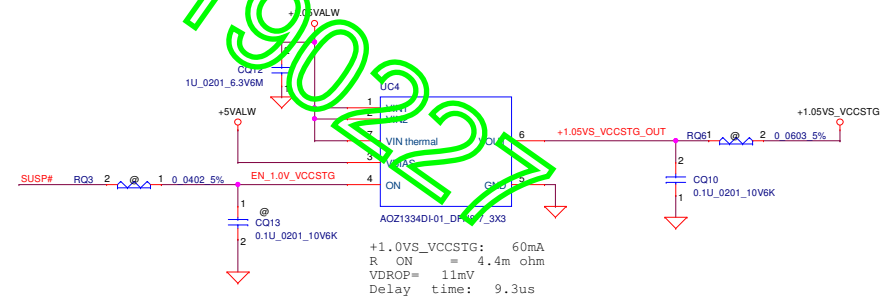
+1.05VALW TO +1.05V_VCCST /+1.8VALW TO +1.8VS



For Power ON/Off Sequence



~~+1.05VALW TO +1.05VS_VCCSTG~~



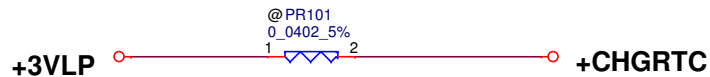
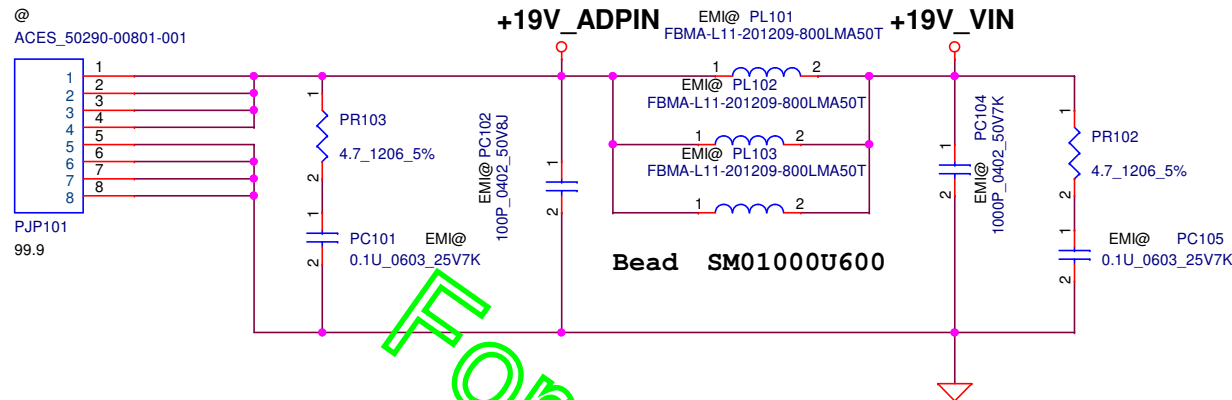
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title DC INTERFACE	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Custom	1.0
				Date: Wednesday, February 13, 2019 Sheet 78 of 100 EH50F /MB LA-H431PR10	

For Acerve
Reserve Page
-20190227

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date:	Wednesday, February 13, 2019
				Sheet	79 of 100
				Rev	1.0

For Acerve
Reserve Page
-20190227

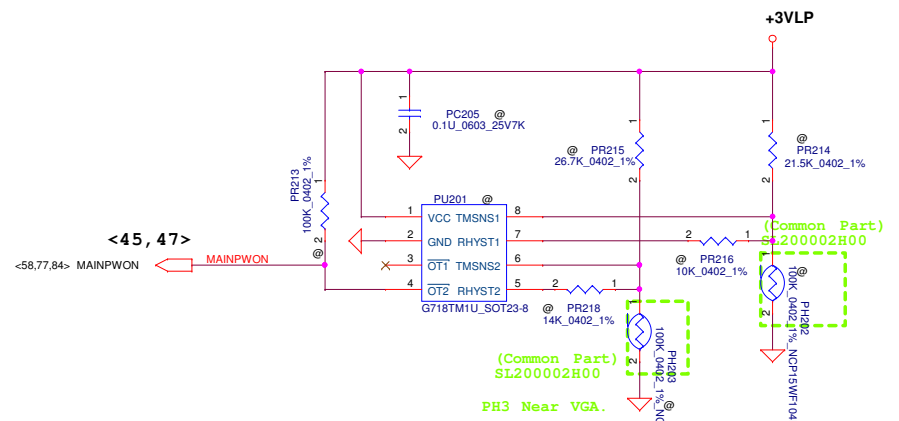
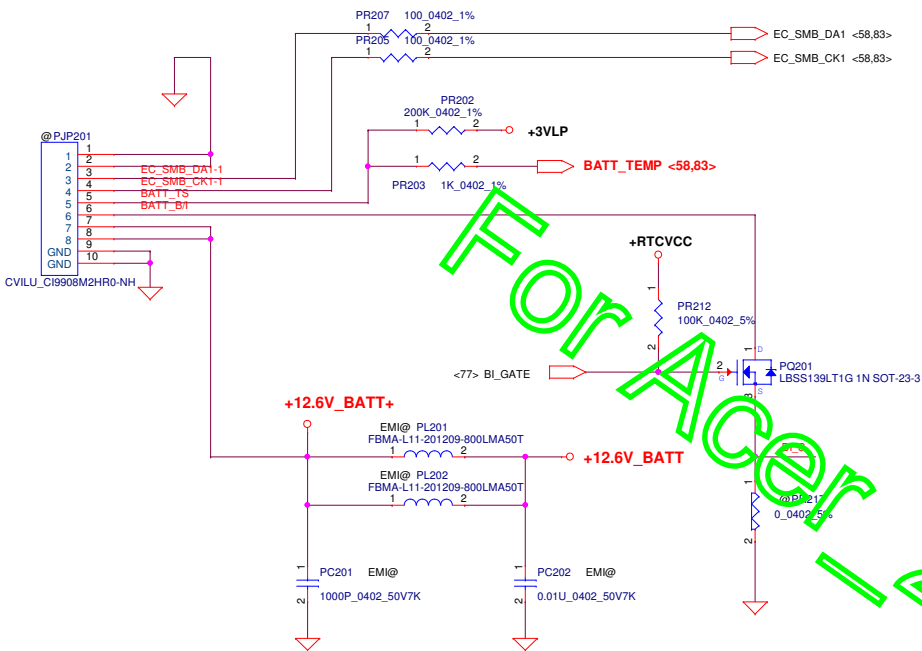
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/12/28	Deciphered Date	2019/12/28	Title	Reserve Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number EH50F M/B LA-H431PR10
				Date: Wednesday, February 13, 2019	Rev 1.0
				Sheet 80 of 100	



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/11/03	Deciphered Date	2017/06/14	Title	DCIN
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom	Document Number DH53F M/B LA-F991P
				Date:	Wednesday, February 13, 2019
				Sheet	81 of 100
				Rev	0.1

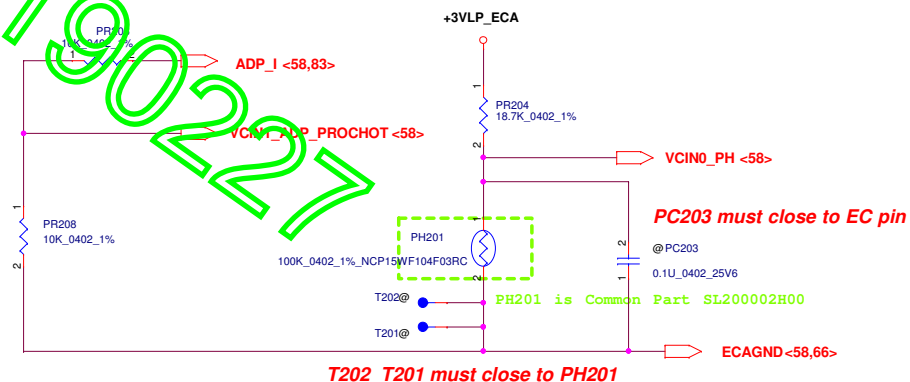
Battery Bot Side

- PIN1 GND
- PIN2 GND
- PIN3 SMD
- PIN4 SMC
- PIN5 TEMP
- PIN6 BI
- PIN7 Batt+
- PIN8 Batt+

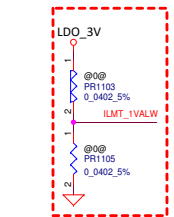


When PR204=18.7K

For KB9022 OTP	Active	Recovery
VCIN0_PH (V)	89'C, 1V	56'C, 2V
PH202 (ohm)	8.0524K	26.11K



$$ADP_I = 20 * I(\text{adapter}) * 0.01$$
$$I(\text{adapter}) = \text{adapter (W)} * 130\% / 19$$



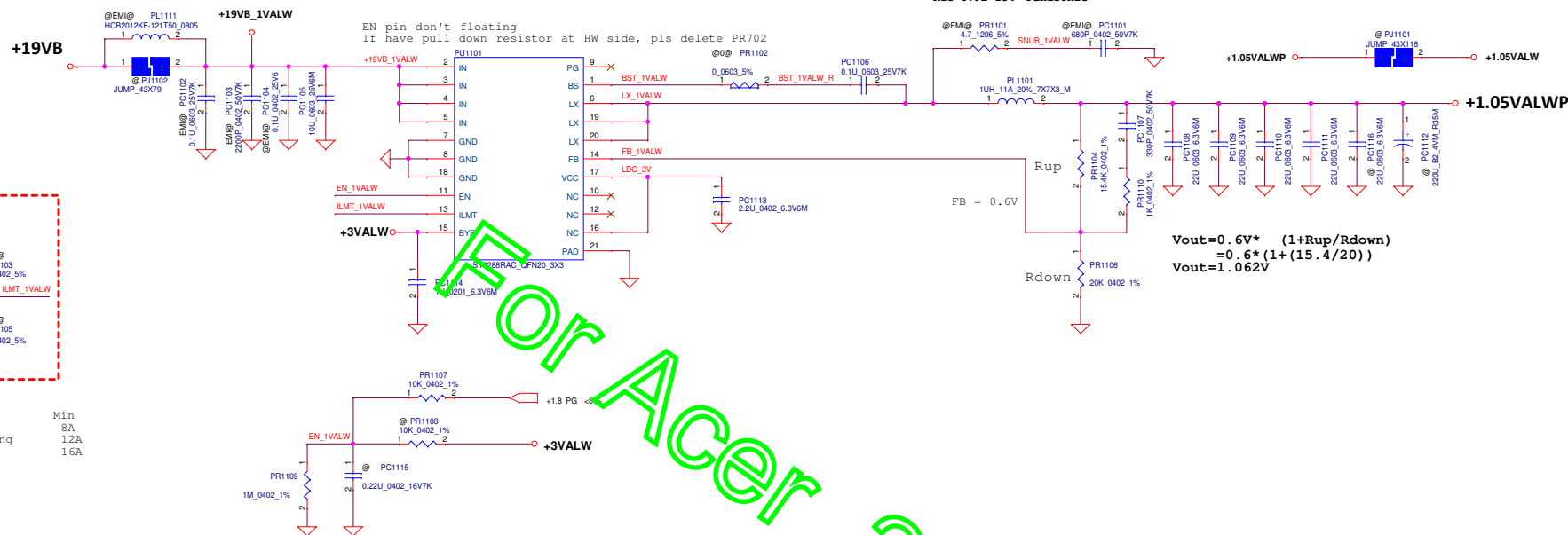
8288RAC

Min

ILMT='0' 8A

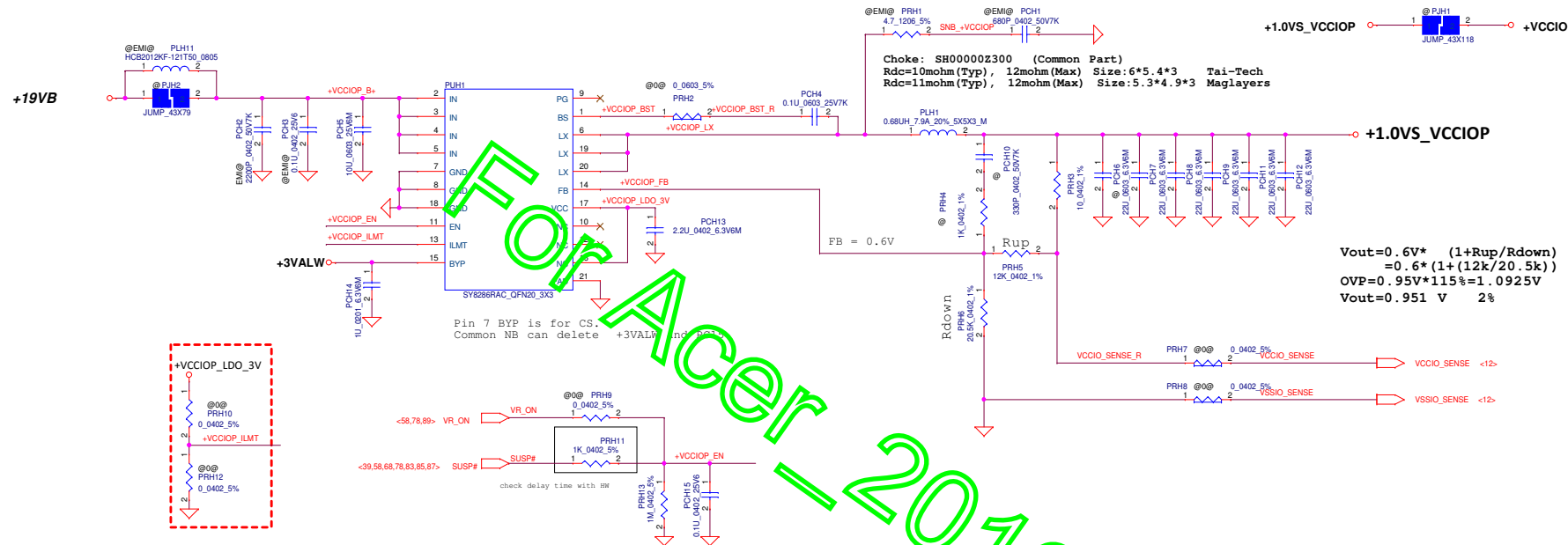
ILMT='Floating' 12A

ILMT='1' 16A



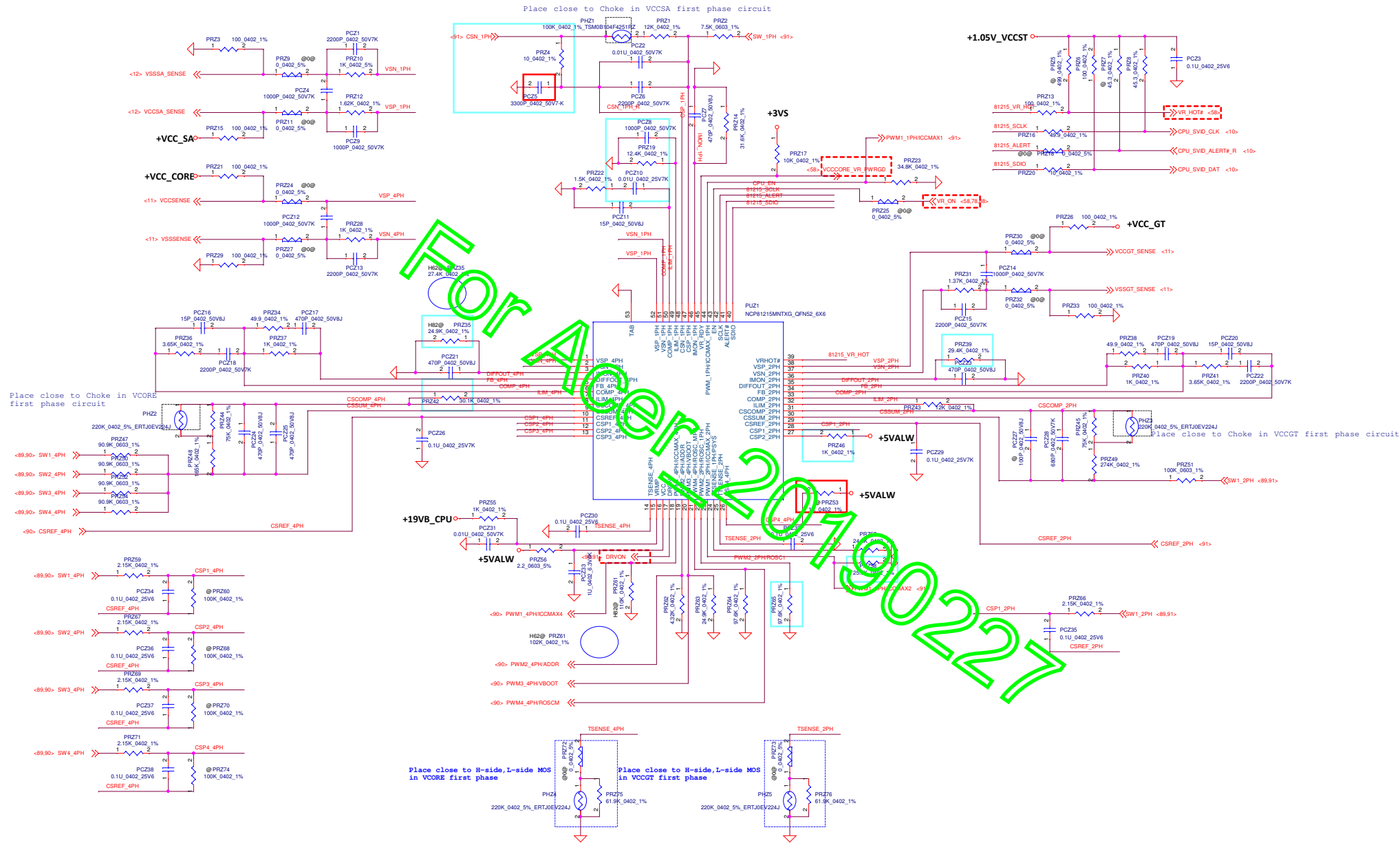
Choke 1uH SH00000YE00 (Common Part)
(Size:6.86 x 6.47 x 3 mm)
(DCR:6.2m~7.2m Ohm)

Choke: SH00000YE00 Size:7x7x3 (Common Part)
Rdc=6.7mohm(Typ), 7.4mohm(Max) CYNTEC
Rdc=Xmohm(Typ), 11mohm(Max) TOKO
Rdc=5.2mohm(Typ), 7.2mohm(Max) Maglayers
Rdc=8.3mohm(Typ), 10mohm(Max) Tai-Tech
Rdc=6.7mohm(Typ), 7.4mohm(Max) Chilisun
Rdc=6.9±15% Panasonic

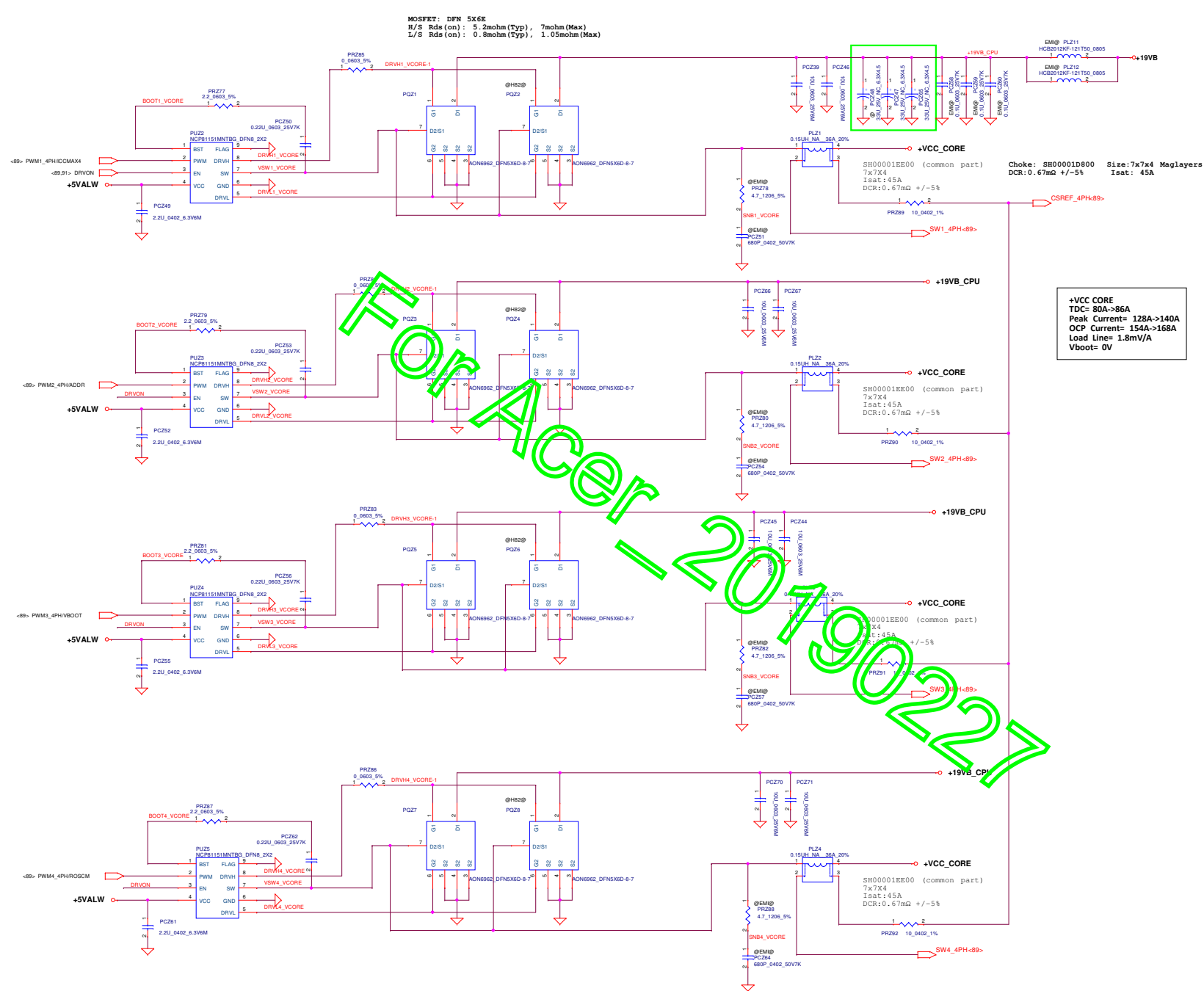


8286RAC			
ILMT='0'	Min	Typ	Max
ILMT=Floating	6.5A	7.5A	8.5A
ILMT='1'	9.5A	10.5A	11.5A
	12.5A	13.5A	14.5A

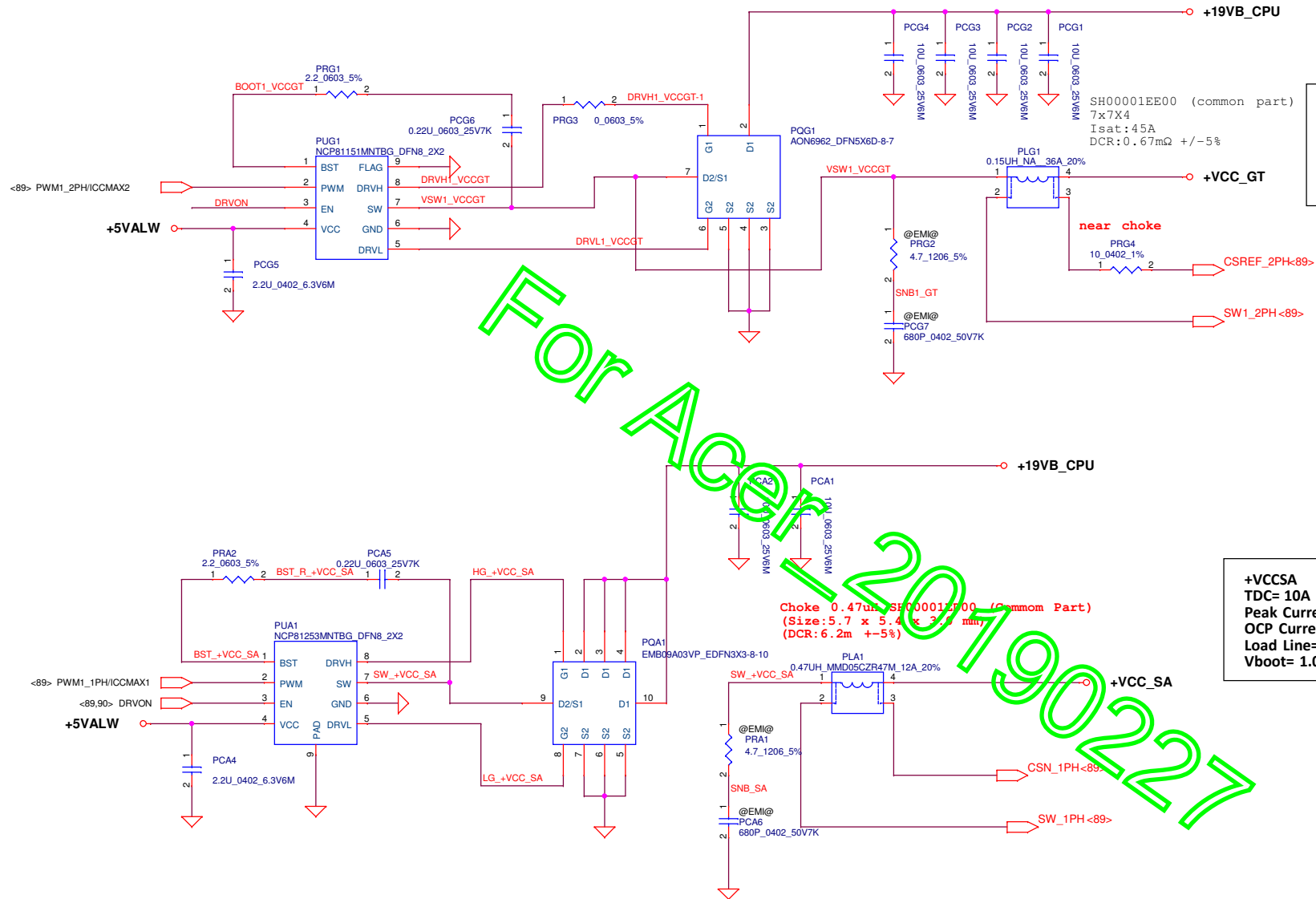
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/11/03	Deciphered Date	2017/06/14	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DH53F M/B LA-F991P
Size	C	Document Number	1.0VS_VCCIO	Rev
Date:	Wednesday, February 13, 2019	Sheet	88	of 100



Security Classification		Compal Secret Data		Title	
Issued Date	2016/02/01	Deciphered Date	2017/12/31	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 TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. WITHIN THE SHEET FOR 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	CPU IC SKL H 42
				Date:	Wednesday, February 13, 2019
				Sheet	88 of 100



Main Func = VCCGT/+VCCSA



+VCCGT
TDC= 25A
Peak Current= 32A
OCP Current= 39A
Load Line= 2.7mV/A
Vboot= 0V

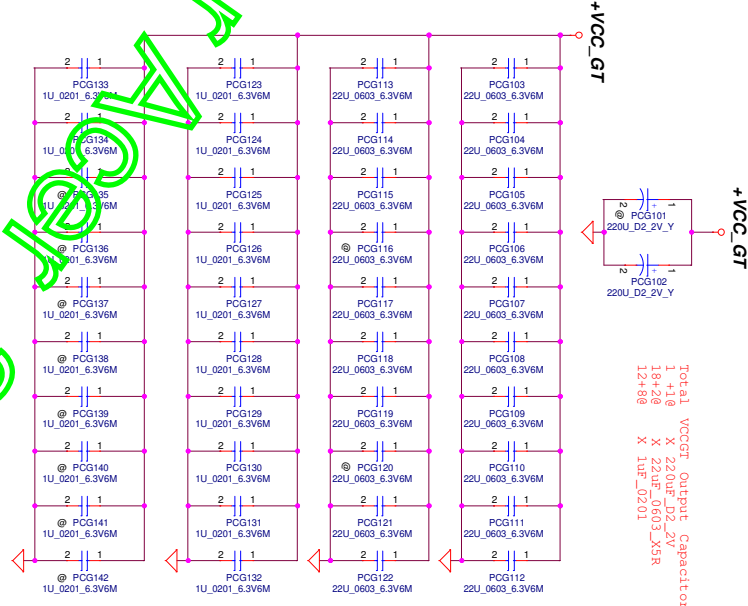
+VCCSA
TDC= 10A
Peak Current = 11A
OCP Current= 13A
Load Line= 10.3mV/A
Vboot= 1.05V

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2016/01/06	Deciphered Date	2017/01/06	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.				+VCC GT/+VCC SA		
				Size	Document Number	Rev
				C1PRG LA-E051P		
Date:				Wednesday, February 13, 2019	Sheet 91	of 100



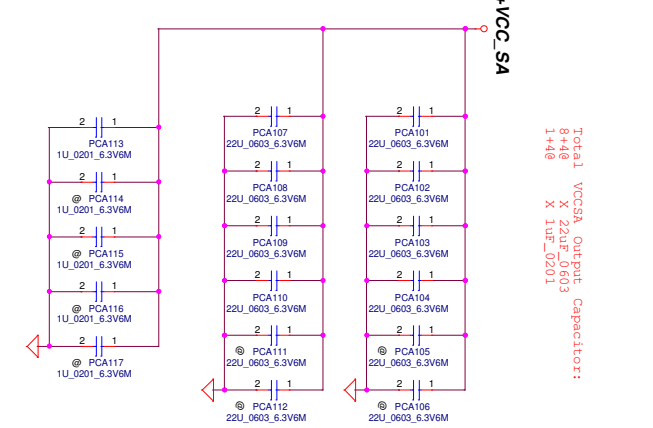
+VCC_CORE

H82 Total VCCORE Output Capacitor:
1 X 220uF_D2_2V_Y
28 +130 X 22uF_0603_X5R (H82: 22 +130)
24 +60 X 1uF_0201



+VCC_GT

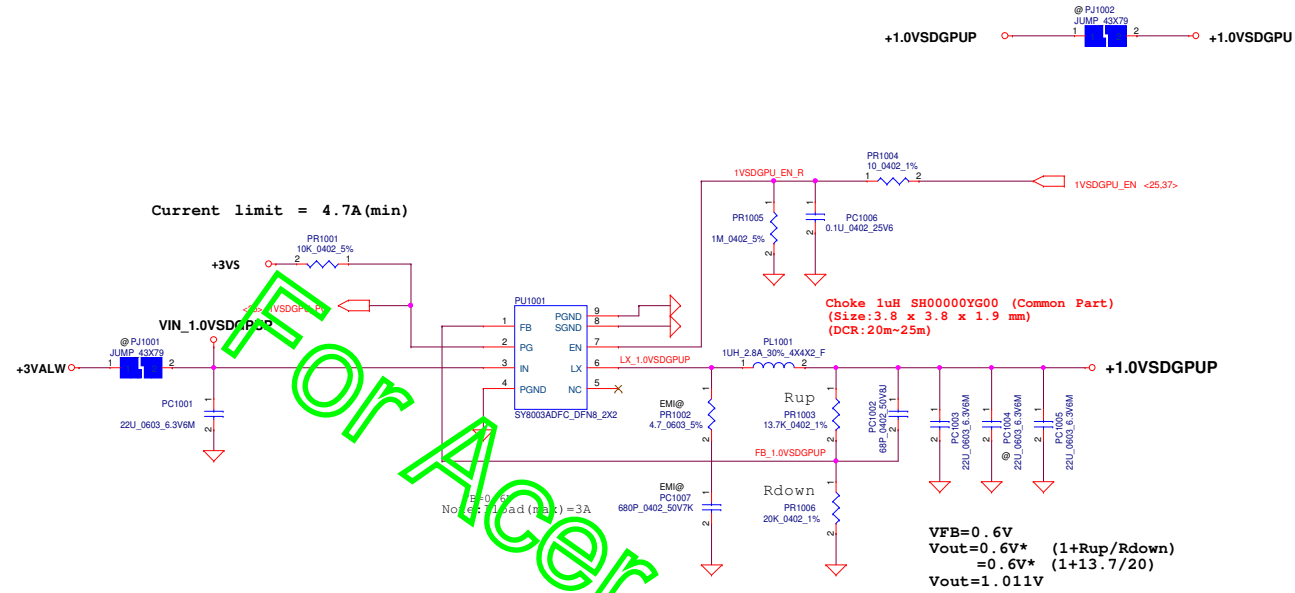
Total VCCGT Output Capacitor:
1 +110 X 220uF_D2_2V_Y
18 +20 X 22uF_0603_X5R
12 +60 X 1uF_0201



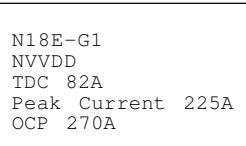
+VCC_SA

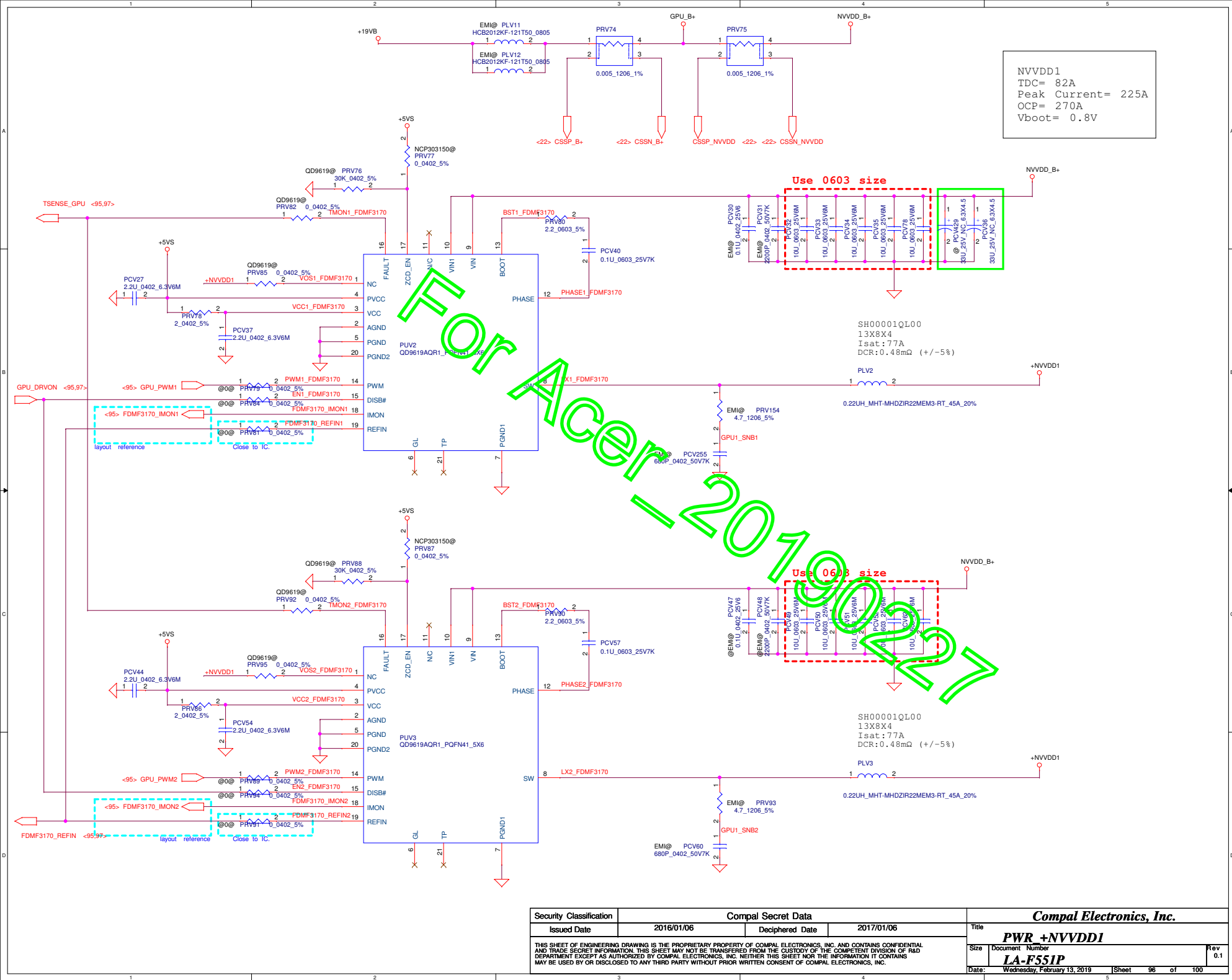
Total VCCSA Output Capacitor:
8 +40 X 22uF_0603
1 +40 X 1uF_0201

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	NA	Deciphered Date	2014/07/04	Title	DHS3F M/B LA-F991P
THIS SHEET IS UNCLASSIFIED AND THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. NO PART OF THIS SHEET IS TO BE RELEASED TO THE PUBLIC OR TO ANY OTHER PERSON WITHOUT THE WRITTEN CONSENT OF COMPAQ ELECTRONICS, INC.		Size	Document Number	Rev	0.1
Date		Wednesday, February 13, 2019	Sheet	32	100

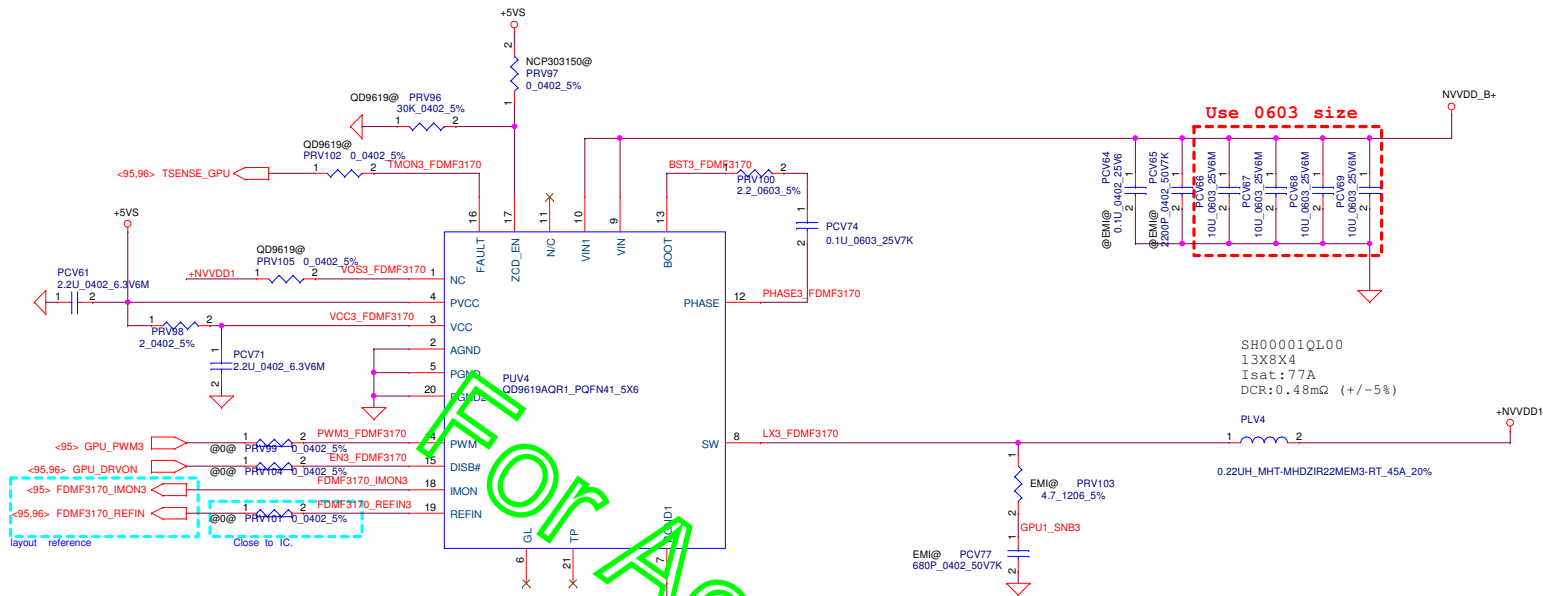


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/11/03	Deciphered Date	2017/06/14	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				1.05VSDGPU
				Document Number
				DH53F M/B LA-F991P
				Rev
				0.1
				Date: Wednesday, February 13, 2019
				Sheet 94 of 100



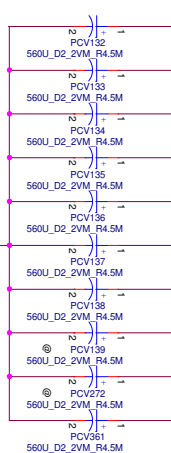


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/01/06	Deciphered Date	2017/01/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				LA-F551P	Rev 0.1
				Date	Wednesday, February 13, 2019
				Sheet	96 of 100



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/01/06	Deciphered Date	2017/01/06	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.				PWR +NVVDD1	
Size	Document	Number	Rev	LA-F551P	
Date: Wednesday, February 13, 2019				Sheet	97 of 100

+NVDD1 Place near GPU



Place under GPU

N18E-G1
+NVDD
Imax: 8.2A
Ipeak: 22.5A
560uF_D2_R4.5 X 10
22uF_0603 X 10 0X6
10uF_0402 X 23
1uF_0201 X 113 (93+20)

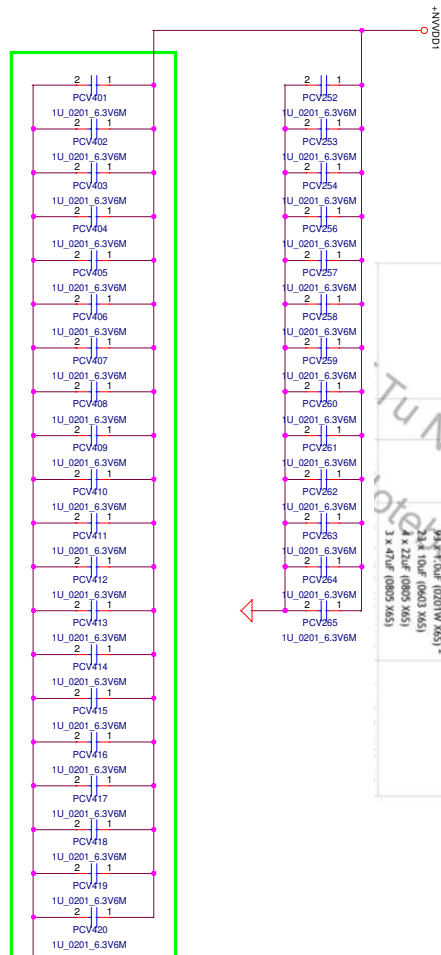
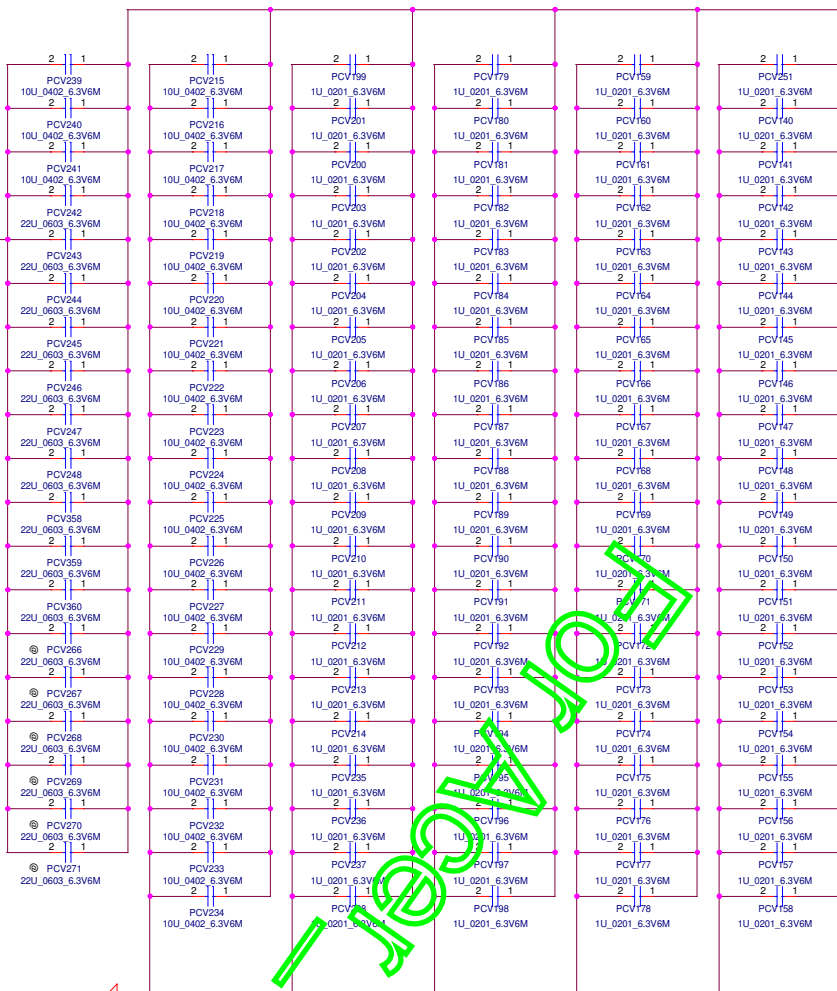


Table 5.10 GB48-256 Power Rail Filtering

Rail (CPU Rail) Name	Balls	Voltage	Filtering under GPU	Filtering Near GPU
GB48-256 Package				
NVDD	Varies	(85 x 0.70uF (0201W x65) 2 x 470uF (Pocap))		
		4 x 22uF (0603 X65)		
		3 x 47uF (0805 X65)		
		1 x 10uF (0603 X65)		
		1 x 47uF (0805 X65)		

Security Classification	Compal Security Data	Title
Issued Date	2016/01/06	Deciphered Date
2016/01/06		2017/01/06
This sheet of engineering drawing is the property of Compal Electronics, Inc. and contains confidential information. It is to be used for the purpose of manufacturing only. It is not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written consent of Compal Electronics, Inc.		
Size	Document Number	Rev
1A-F531P		1.1
DATE: Wednesday, February 13, 2019	Sheet	98 of 100

Compal Electronics, Inc.

PWR VGA DECOUPLING

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

Page 1 of 2 for PWR

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
01	Design Update	EVT EA Tuning	0.2	P86, P93 P95, P98	Change the PCV139, PCV272 from pop to un-pop. Change the PRW13 from 383K_0402_1% (SD034383380) to 499K_0402_1% (SD034499380). Change the PCW27 from pop to un-pop, and . PCW27.2 net name change from +1.35VSDGPU to Vsense_+1.35VS_VGAP. Change the PCW21, PCW22 From 4700P_0402_50V (SE074472K80) to 2200P_0402_50V(SE074222K80). Change the PUV8, PCV9 from pop to un-pop. Add location PRV156 0_0402_5% (SD028000080), and pop. Add location PC1116 22U_0603_6.3V (SE00000M000), and un-pop. Change the PRW17 from 56.2K_0402_1% (SD000001580) to 56K_0402_1% (SD034560280).	11/12	B
02	Design Update	Power Sequence	0.2	P93, P94	Change the PRW1 from 20K_0402_1% (SD034200280) to 1K_0402_1% (SD034100180). Change the PR1001 From 100K_0402_5% (SD028100380) to 10K_0402_5% (SD028100280).	11/13	B
03	Design Update	Solution Change	0.2	P83, P85	Change the PQB2,PQM2 from AON7506 (SB000010A00) to EMB12N03V (SB00001HV00). PQB1,PQB12,PQB13,PQM1,PQT1 footprint change to common footprint. PCZ47,PCZ65,PCV36 change to common part P/N (SF000007200). PLZ1,PLG1,PLZ2,PLZ3,PLZ4 change to common part P/N (SH00001EE00).	11/13	B
03	Design Update	Location modify	0.2	P91	Change the location from PRG5 to PUG1. Change the location from PRA3 to PUA1.	11/13	B
04	Design Update	0 ohm to R-short	0.2	P82	PR217 change from 0 ohm to R-short.	11/16	B
05	Design Update	EMI request	0.2	P93	PLW2, PCW1, PCW3, PCW32 change from un-pop to pop.	11/22	B
06	Design Update	CPU test result	0.2	P89, P92	Change the PRZ12 from 1.58K_0402_1% (SD00000WY80) to 1.62K_0402_1% (SD000003380). Change the PCZ25 from 470P_0402_50V7K (SE074681K80) to 470P_0402_50V8J (SE071471J80). Change the PRZ51 from 84.5K_0603_1% (SD014845280) to 100K_0603_1% (SD014100380). Change the PRZ35 from 25.5K_0402_1% (SD034255280) to 24.9K_0402_1% (SD034249280) . ->H82@ Change the PRZ35 from 25.5K_0402_1% (SD034255280) to 27.4K_0402_1% (SD034274280) . ->H62@ Change the PRZ61 from 110K_0402_1% (SD03410380) to 102K_0402_1% (SD028102380) . ->H62@ Change the PCZ101,PCZ104,PCZ105,PCZ122,PCZ112,PCZ107,PCZ124,PCZ171,PCZ119 from pop to un-pop. ->H82@ Change the PCZ101,PCZ104,PCZ105,PCZ122,PCZ112,PCZ107,PCZ124,PCZ171,PCZ119 PCZ110,PCZ126,PCZ133,PCZ134,PCZ137,PCZ170 from pop to un-pop. ->H62@	11/22	B
07	Design Update	Solution Change	0.3	P84, P89	Change the PRZ43 from 12.1K_0402_1% (SD034121280) to 12K_0402_1% (SD034120280). Change the PL501 P/N From SH00000II00 to SH000016700 (commonpart).	12/07	C
08	Design Update	Power Sequence	0.3	P87	PC1811 (0.47_0402_6.3V, SE124474K80) change from pop to un-pop.	12/11	C
09	Design Update	Solution Change	1.0	P83	Add location PDB2 30MA_30V_0.5UA_0.4V_SOD323-2 (SCS00009P00), and un-pop.	12/19	C
10	Design Update	Solution Change	1.0	P92	PCG116, PCG120 change from pop to un-pop (22uF_0603_6.3V, SE00000M000). PCG107, PCG108 change from un-pop to pop (22uF_0603_6.3V, SE00000M000).	12/21	C
11	Design Update	0 ohm to R-short	1.0	P85, P87 P89, P93 P95, P96 P97	PRM8,PRM10,PRW9,PRZ25,PR1801,PR2501 change from 0 ohm to R-short. PRZ9,PRZ11,PRZ18,PRZ24,PRZ27,PRZ30,PRZ32,PRZ72,PRZ73 change from 0 ohm to R-short. PRV1,PRV16,PRV18,PRV20,PRV34,PRV50,PRV54,PRV56,PRV58,PRV70,PRV145,PRV146,PRV147 change from 0 ohm to R-short. PRV12,PRV13,PRV84,PRV94,PRV104,PRV79,PRV81,PRV89,PRV91,PRV99,PRV101 change from 0 ohm to R-short.	12/28	C
12	Design Update	Solution Change	1.0	P90, P96	PCZ47,PCZ65,PCV36 (33U_25V_4.5mm OS con) change from SF000007200 to SF000007700 and pop. PCZ48,PCV429 (33U_25V_4.5mm OS con) change from SF000007200 to SF000007700 and un-pop.	01/04	C
13	Design Update	Power Sequence	1.0	P94	PR1004 change from 0_0402_5% (SD028000080) to 10_0402_5% (SD034100A80). PC1006 change from un-pop to 0.1uF_0402_25V (SE00000G880).	01/14	C2
09	Design Update	Solution Change	1.0	P83	PDB2, 30MA_30V_0.5UA_0.4V_SOD323-2 (SCS00009P00), change from un-pop to pop.	02/01	C2

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2016/11/03	Deciphered Date	2017/06/14	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.				PIR
Size	Document	Number	Rev	0.1
Custom	DH53FM/BLA-F991P			
Date:	Wednesday, February 13, 2019			Sheet 99 of 100

Item	Fixed Issue	Rev.	PG#	Modify List	Date	Phase
01						
02						
03						
04						
05						
06						
07						
08						

For Acer_20190227