

**Compal Confidential**

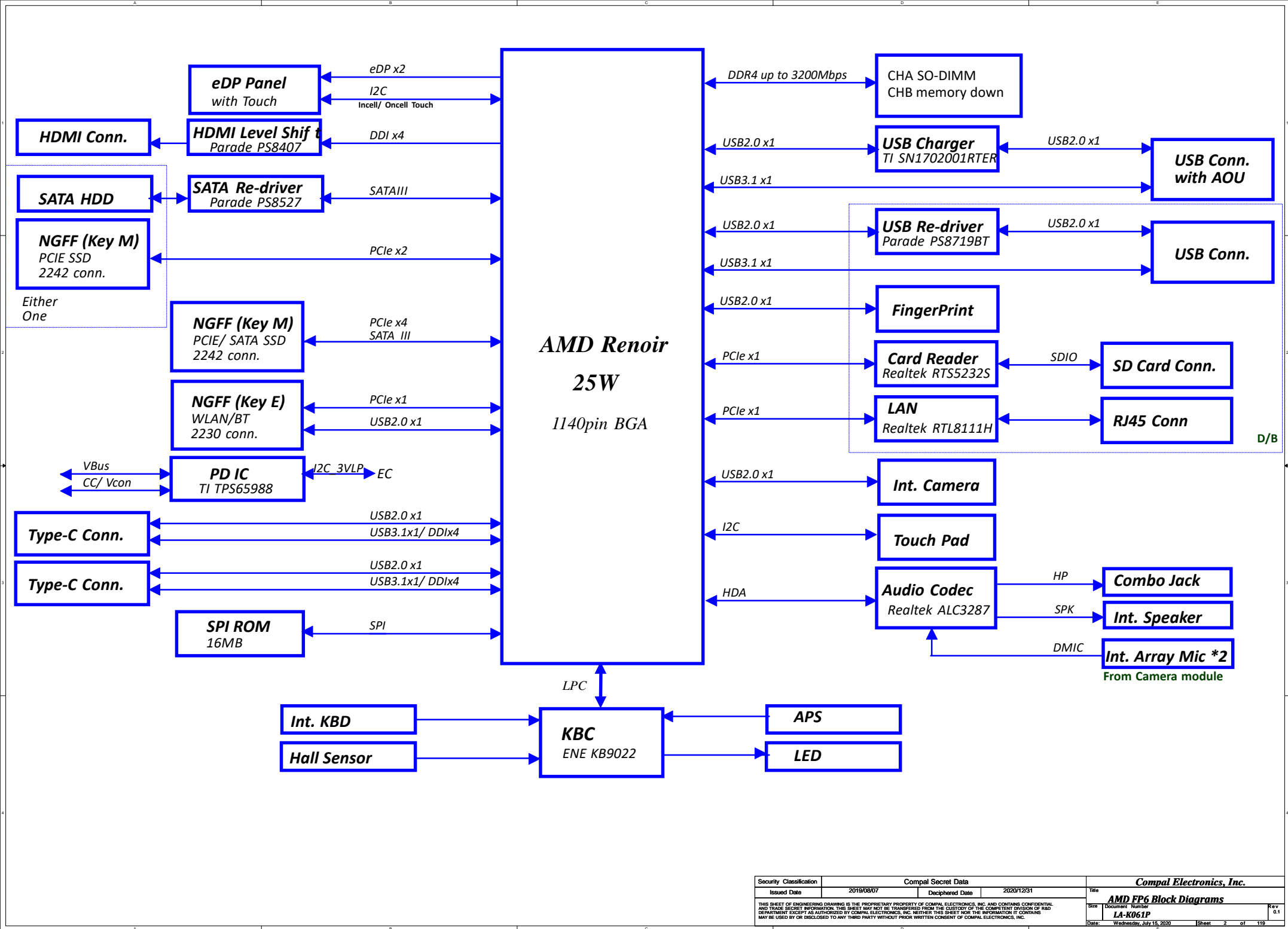
**FLV3A MB Schematic Document**

**LA-K061P**

**Rev: 1.0**

**2020.06.29**

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/08/07	Deciphered Date	2020/12/31	
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	Document Number		Rev
		Date: Wednesday, July 15, 2020		Sheet 1 of 119	0.1
LA-K061P					



Voltage Rails

power plane				
State	+12.6VB	+5VALW +3VALW +1.8VALW +0.75VALW	+1.2V +2.5V	+5VS +3VS +1.8VS +0.75VS +0.6VS +APU_CORE +APU_CORE_SOC
S0	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

EC SM Bus1 address      EC SM Bus2 address

Device	Address	Device	Address
PD 65988	011b 111b	Thermal Sensor (F75305M)	1001_101xb 9Ah
Charger (ISL88739A)	0001 001x 12h	APS sensor(BMA280)	0x18

PCH I2C/SM Bus address

Device	Address	Device	Address
JDIMM1	0xA0	Touch pad(Synaptics)	0x2C
Touch Screen(AUO) 14"	0x39	Touch pad(ELAN)	0x15
Touch Screen(INX) 14"	0x10	Touch pad(Cirque)	0x2C
Touch Screen(BOE) 15"	0x20		
Touch Screen(IVO) 15"	0x10		

SMBUS Control Table

SOURCE	KB9022	APU	BATT	CHARGER	KB9022	PD IC	Thermal Sensor
EC_SMB_CK1	KB9022	X	V	V	V	V	X
EC_SMB_DA1	+3VL		+3VL	+3VL	+3VL	+3VL	
EC_SMB_CK2		V	X	X	V	X	V
EC_SMB_DA2	+3VS	+3VS			+3VS		+3VS

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

BOM Structure Table

Item	BOM Structure
Memory Down - SDP Package	SDP@
Memory Down - DDP Package	DDP@
Keyboard BackLight	KBL@
Finger Print	FP@
Non Finger Print SKU	NONFP@
Touch Screen	TOUCH@
TPM SKU	TPM@
NON TPM SKU	NONTPM@
Nuvton TPM	Nuvton@
ST TPM	ST@
Nations TCM	Nations@
APS SKU	APS@
NONAPS SKU	NONAPS@
AOU SKU	AOU@
NONAOU SKU	NONAOU@
EMI pop	EMI@
EMI un-pop	@EMI@
ESD pop	ESD@
ESD un-pop	@ESD@
RF pop	RF@
RF un-pop	@RF@
HDT pop	HDT@
HDT un-pop	X76@

USB 2.0 Port Table

Port	External USB Port
0	USB2/3 Port (Type-C1)
1	USB2/3 Port (IO - 1)
2	Camera
3	
4	USB2/3 Port (Type-C2)
5	USB2/3 Port (IO - 2)
6	Fingrt Print
7	NGFF BT

DDI Port Table

Port	Lane
0	eDP
1	HDMI
2	TYPE C1 (PD + CC)
3	TYPE C2 (PD + CC)

USB 3.0 Port Table

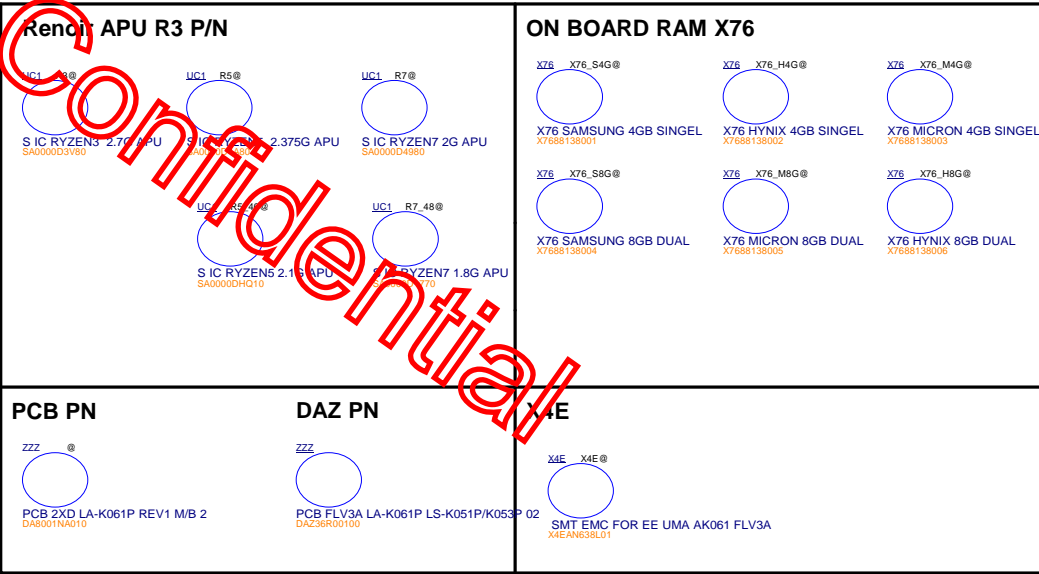
Port	External USB Port
0	USB2/3 Port (Type-C1)
1	USB2/3 Port (IO - 1)
4	USB2/3 Port (Type-C2)
5	USB2/3 Port (IO - 2)

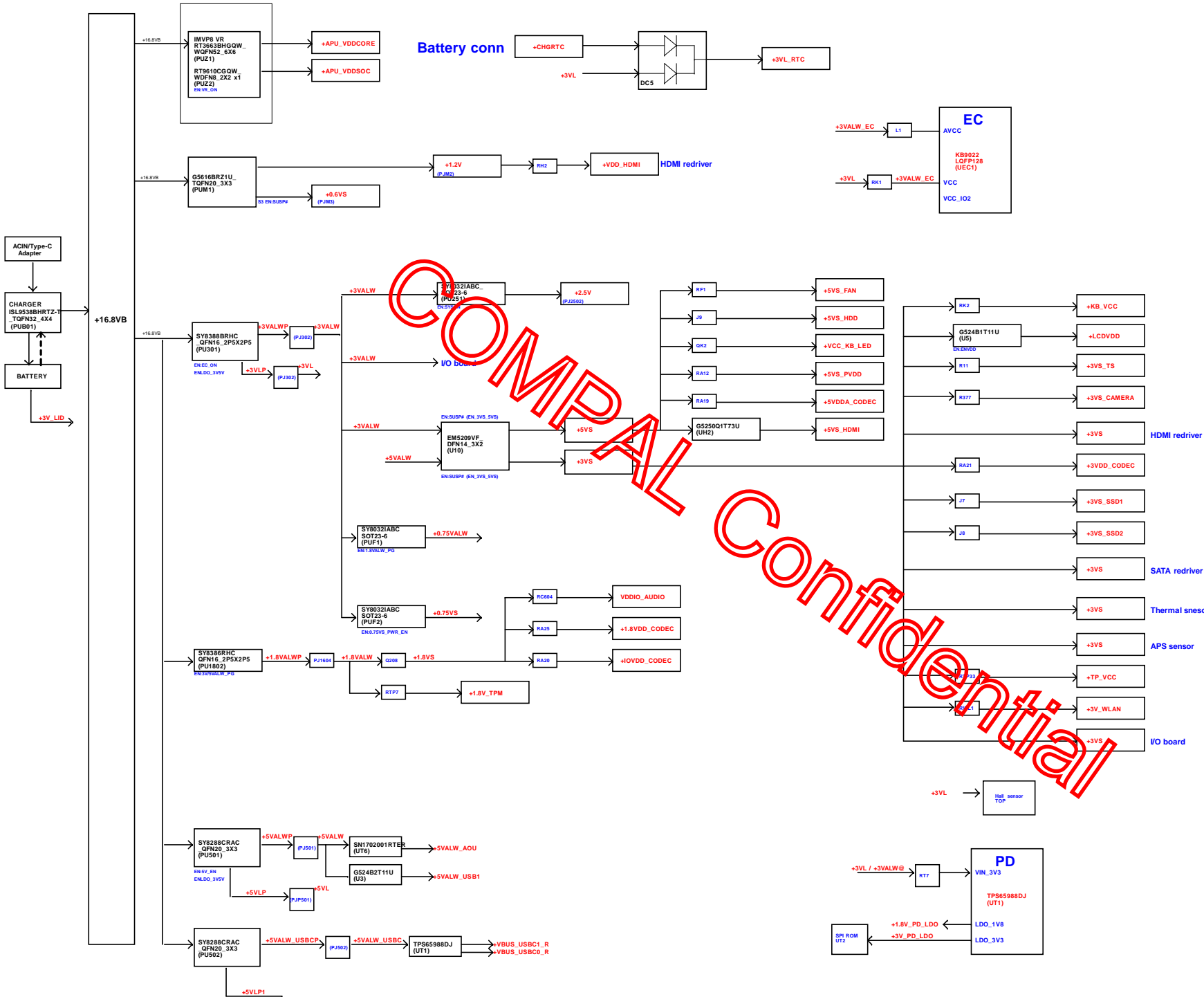
GPP Port Table

Port	Lane	
0	0	
1	1	
2	2	
3	3	
4	4	CardReader
5	5	LAN
6	6	NGFF WLAN
7	7	
8	8	
9	9	
10	10	
11	11	SSD2

SATA Port Table

Port	External SATA Port
0	
1	
2	HDD
3	





Power Sequence

Boot

Shut  
Down

EC Pin 110 Input

EC Pin 112 Output

AC Plug

EC Pin 114 Input

EC Pin 100 Output

EC Pin 122 Output

EC Pin 123 Input

EC Pin 6 Input

EC Pin 95 Output

EC Pin 116 Input

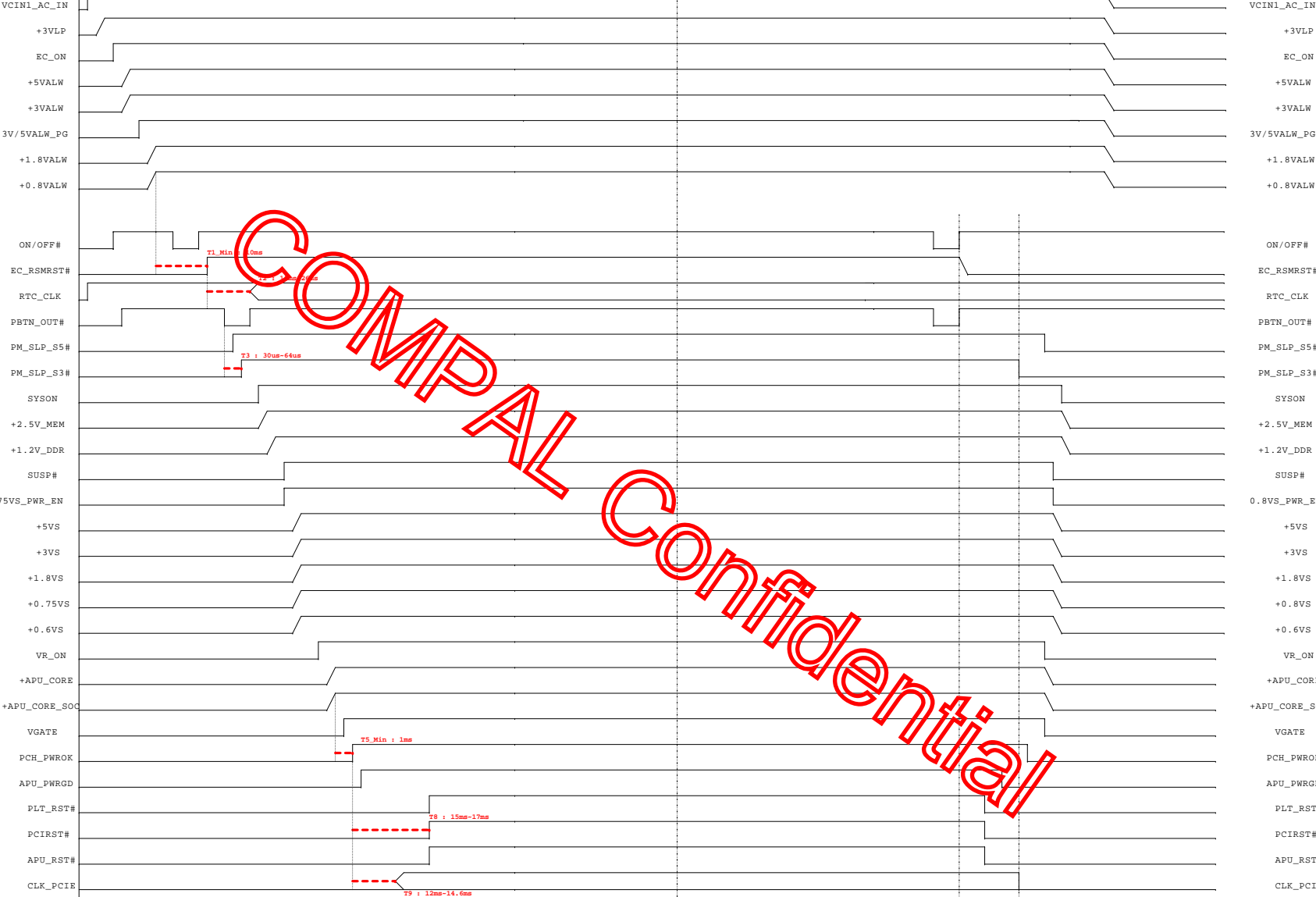
EC Pin 99 Output

EC Pin 121 Output

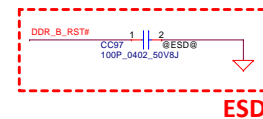
EC Pin 36 Input

EC Pin 32 Output

EC Pin 13 Input

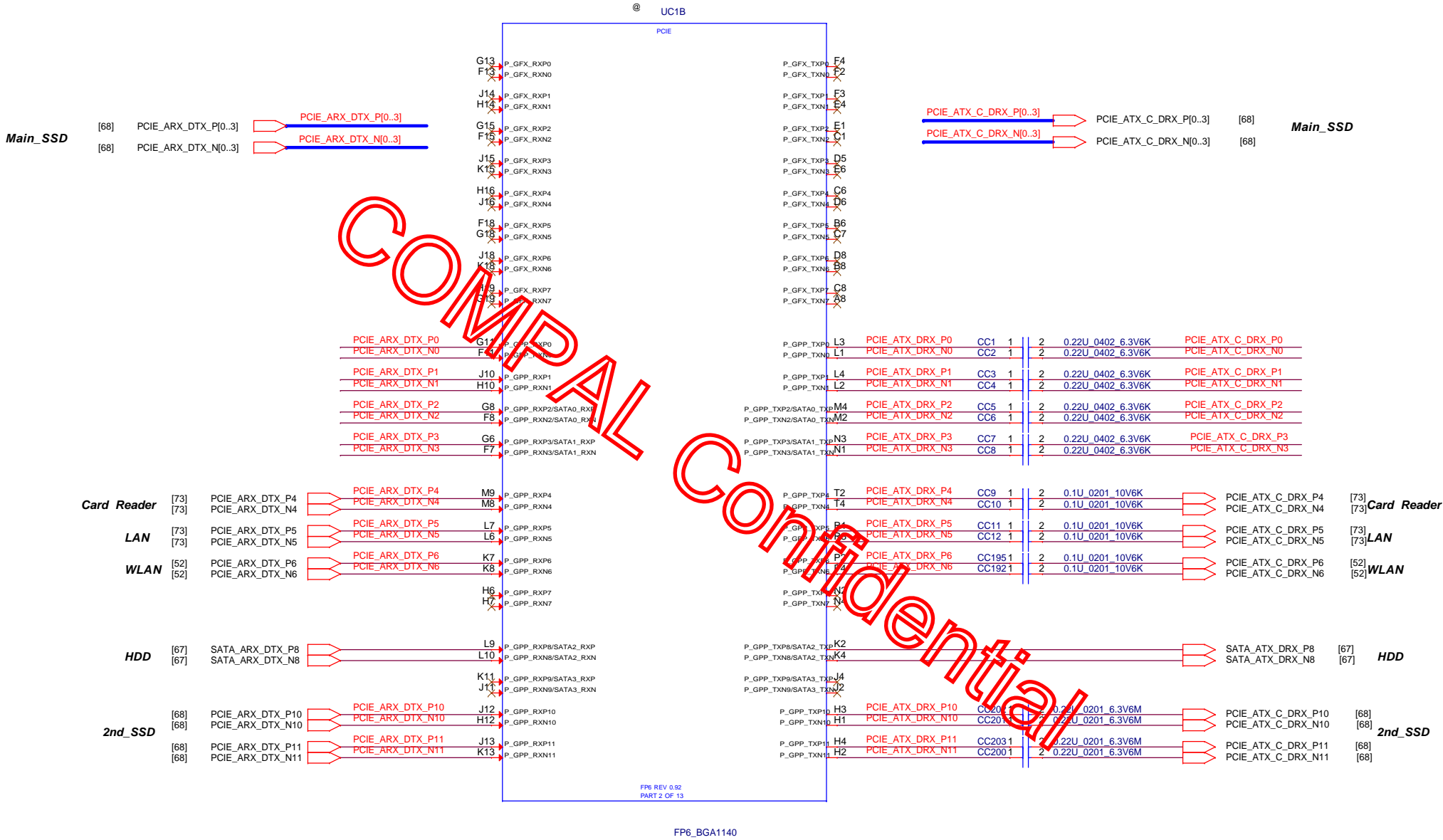


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Power Sequence	
				Size	Document Number
				LA-K061P	
				Date:	Wednesday, July 15, 2020
				Sheet	5 of 119
				Rev	0.1



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/07/26	Deciphered Date	2020/05/15	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.				FP6 DDR4 MEMORY I/F		
				Size	Document Number	Rev
				Custm	LA-K061P	0.1
Date:				Wednesday, July 15, 2020	Sheet	6 of 119

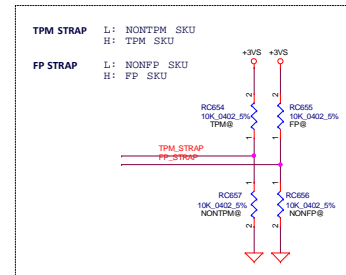
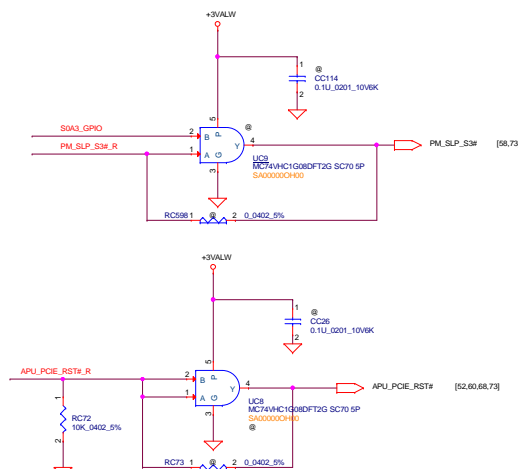
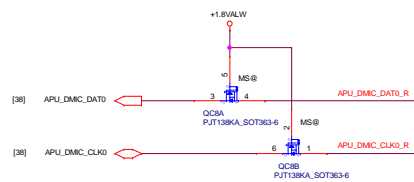
Main Func = CPU



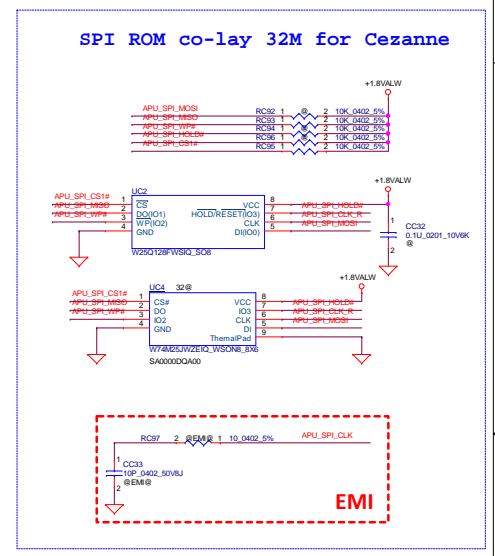
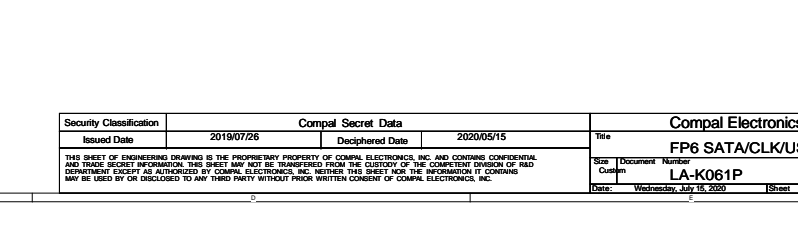
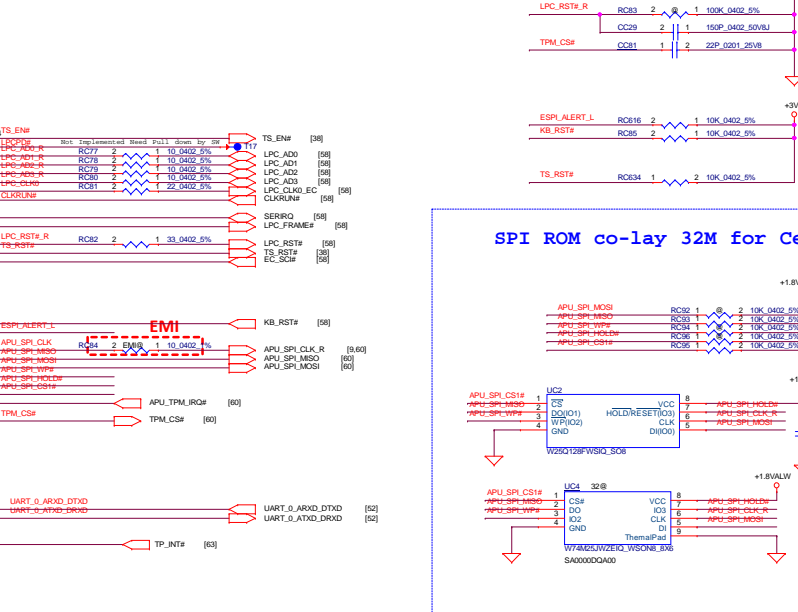
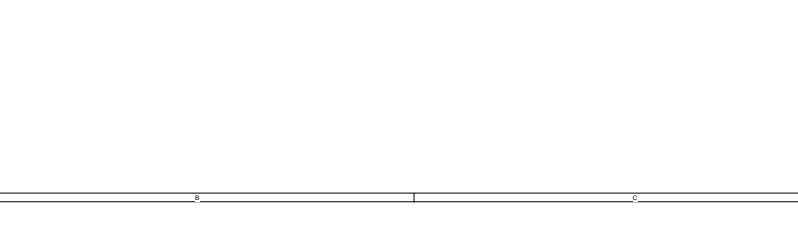
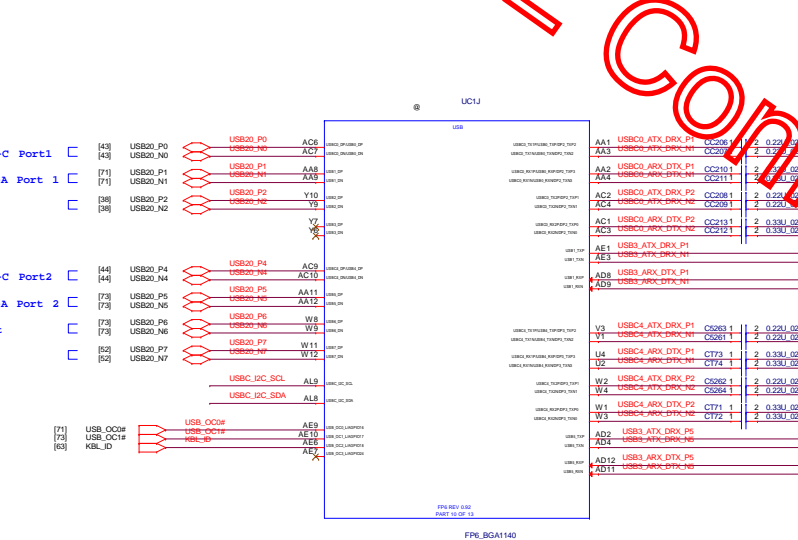
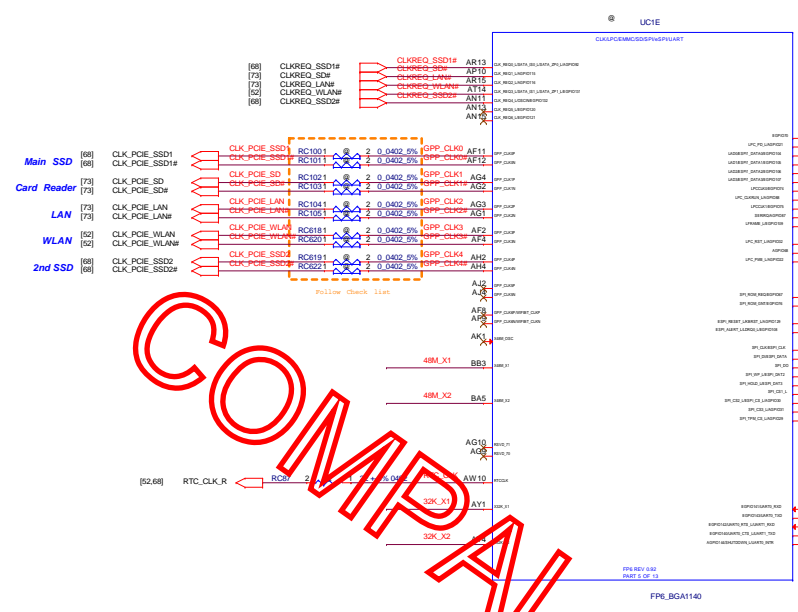
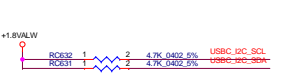
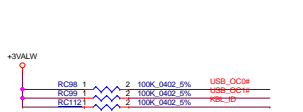
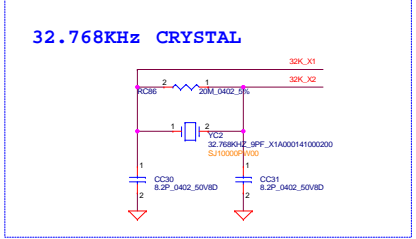
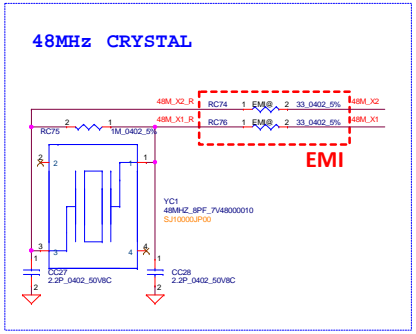
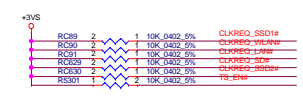
Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2019/07/26		Deciphered Date		2020/05/15		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.						FP6 PCIE/UMI					
						Size		Document Number		Rev	
						Custom		LA-K061P		0.1	
						Date:		Wednesday, July 15, 2020		Sheet 7 of 119	

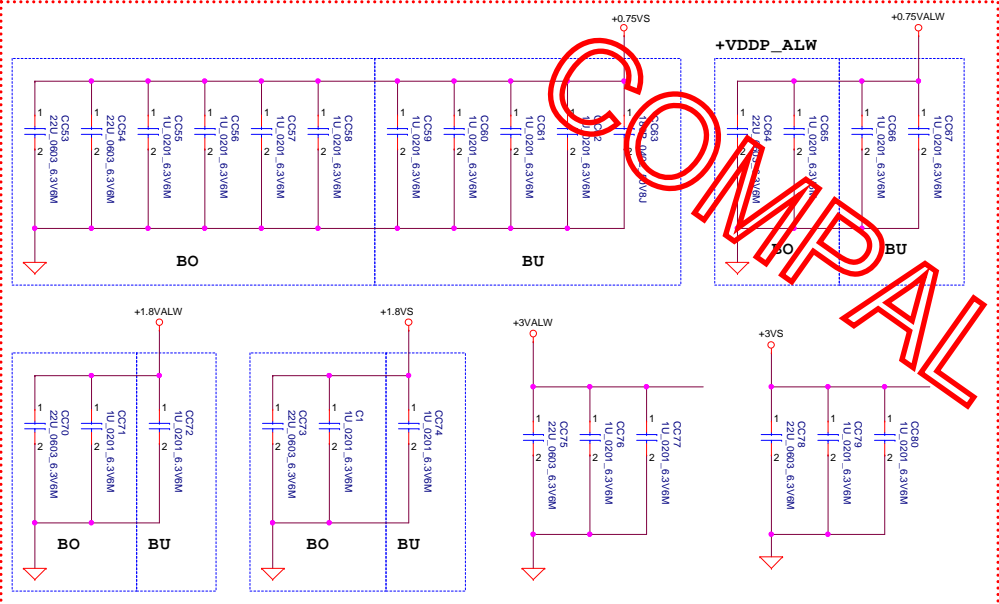
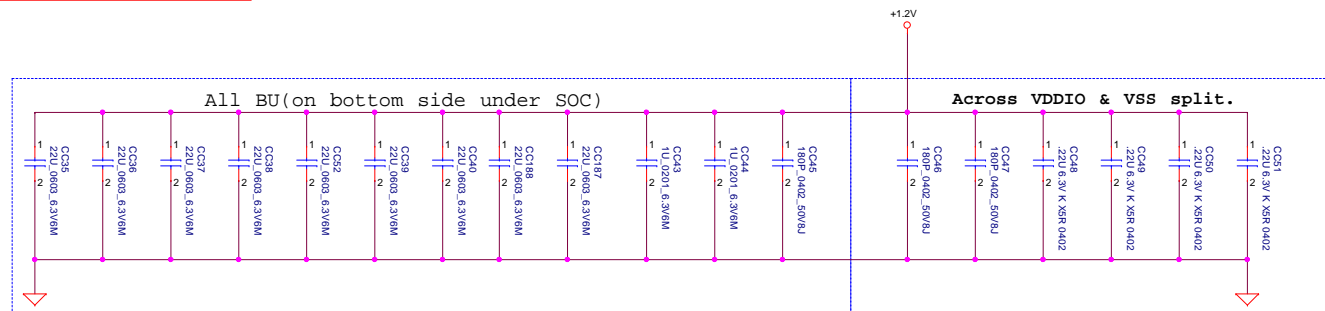
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/07/26	Deciphered Date	2020/05/15	Title	FP6 DISP/MISC:HDT	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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 0.1
				Custom	LA-K061P	
				Date:	Wednesday, July 15, 2020	Sheet 8 of 119



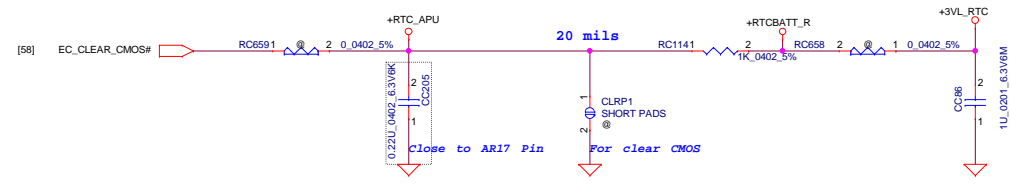
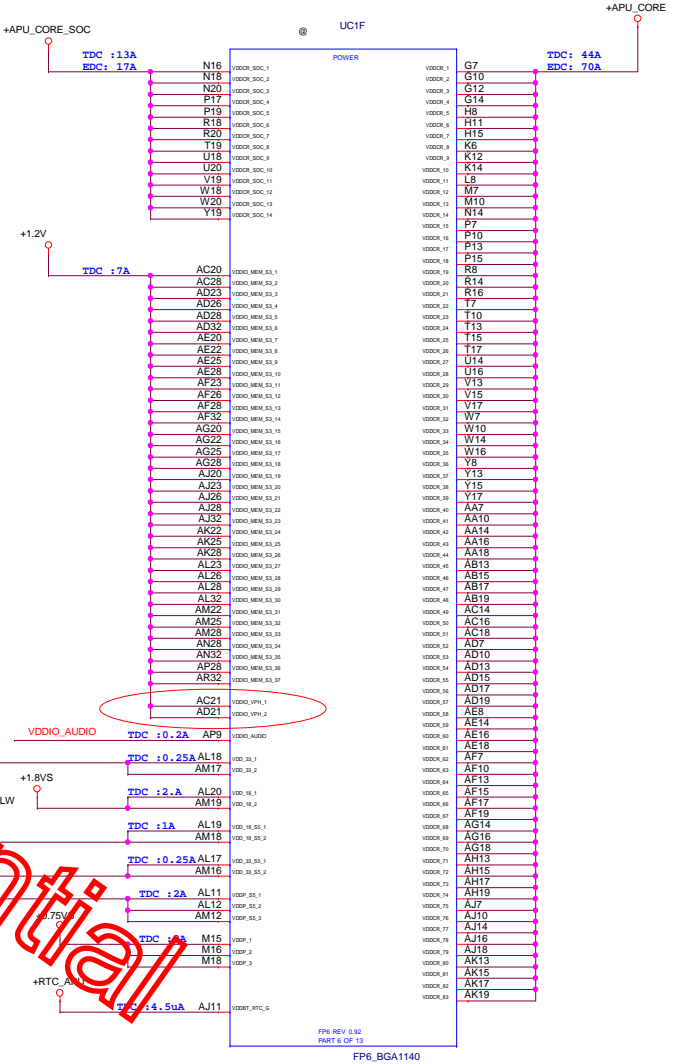
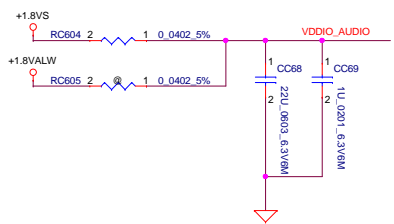


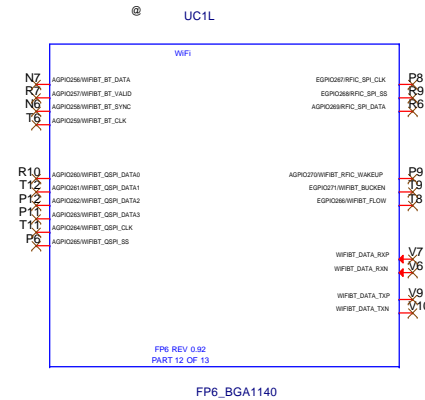
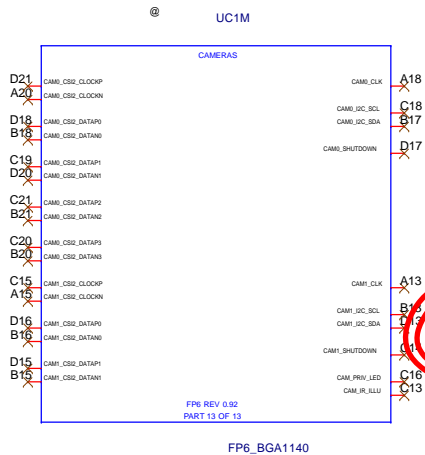
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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





Note : Cap placemet need to close APU





COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/07/26	Deciphered Date	2020/05/15	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.				FP6 GND	
Size	Document	Number	Rev	LA-K061P	
Custom			0.1		
Date:	Wednesday, July 15, 2020	Sheet	12	of	119

Main Func = CPU



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/07/26	Deciphered Date	2020/05/15	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.				FP6 GND	
Size		Document	Number	Rev	
Custom			LA-K061P	0.1	
Date:		Wednesday, July 15, 2020		Sheet	13 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	14 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	15 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	16 of 119
				Rev	0.1
				LA-K061P	



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	17 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	18 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	19 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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-K061P
				Date:	Wednesday, July 15, 2020
				Sheet	20 of 119
				Rev	0.1

COMPAL Confidential

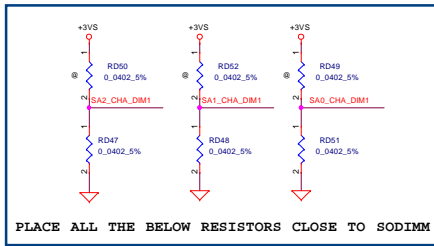
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/08/07	Deciphered Date	2020/12/31	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 for SOC/PCH/FCH	
		Size	Document Number		Rev
		LA-K061P		0.1	
Date:		Wednesday, July 15, 2020		Sheet	21 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for SOC/PCH/FCH
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
				Date:	Wednesday, July 15, 2020
				Sheet	22 of 119
				Rev	0.1
				LA-K061P	

# CHANNEL-A

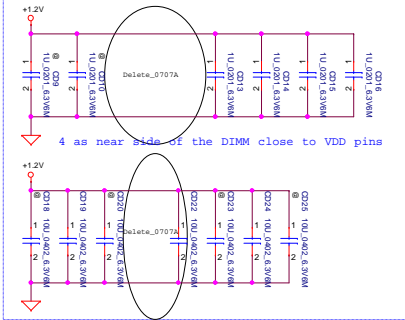
JDIMM1 ADDRESS (PLACE CLOSE TO DIMM)



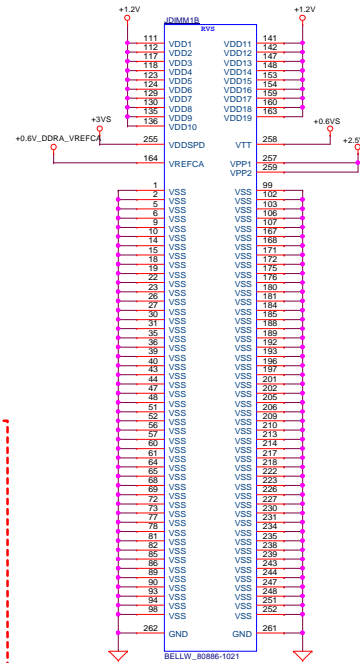
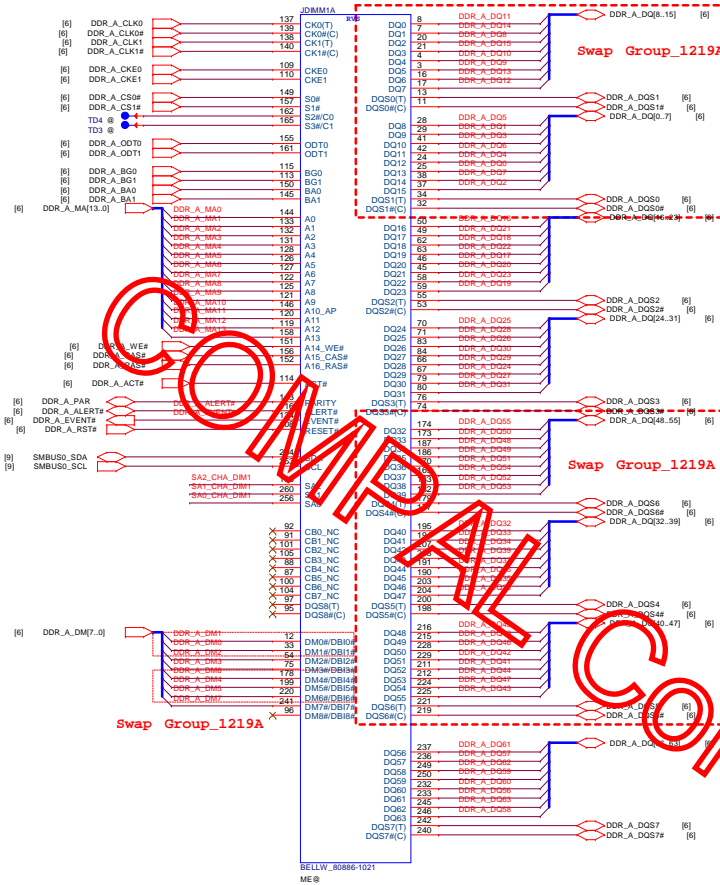
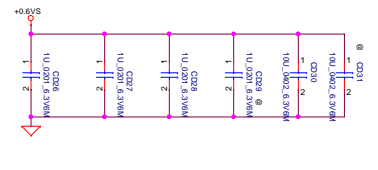
```
SPD ADDRESS FOR CHANNEL A :
WRITE ADDRESS:
READ ADDRESS:
SA0 = 0; SA1 = 0; SA2 = 0.
DDR4 POR OPERATING SPEED: 1867 MT/S
STRETCH GOAL IS 2133 MT/S
```



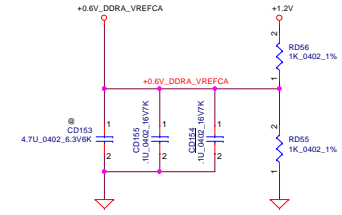
Layout Note:  
Place near JDIMM1



Place these caps on the VTT plane close to DIMM

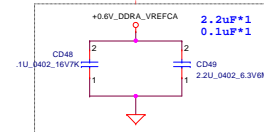


**Standard Type**  
2-3A to 1 DIMMs/channel

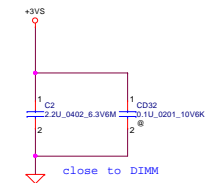
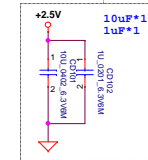


Note:  
Check voltage tolerance of  
VREF\_DQ at the DIMM socket

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

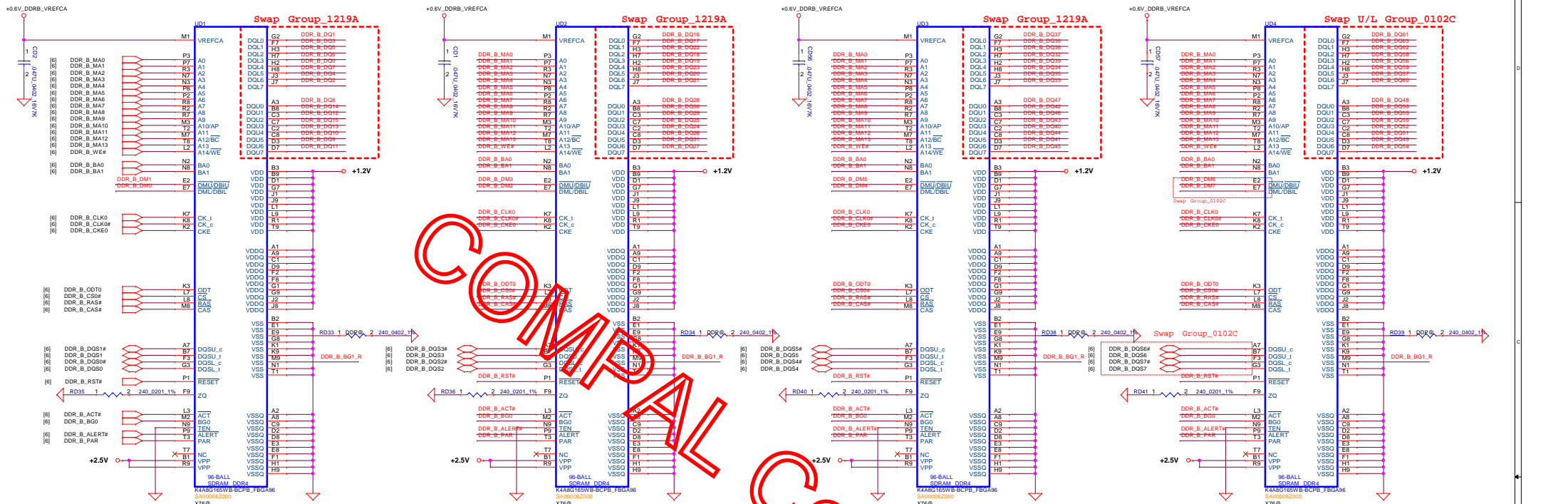


Layout Note:  
Place near JDIMM2

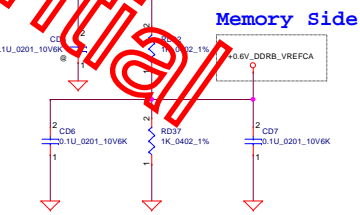
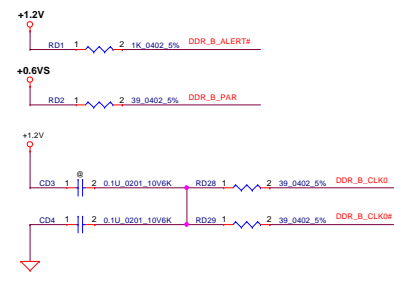
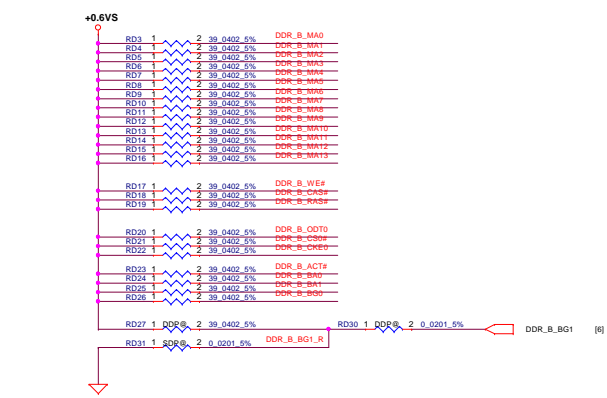


Security Classification	Compal Secret Data			Title <b>Compal Electronics, Inc.</b>				
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Rev <b>Reserve for DDR2</b>				
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. THIS SHEET OF INFORMATION SHALL 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 COMPAL ELECTRONICS, INC. THIS SHEET OF INFORMATION IS THE PROPERTY OF COMPAL ELECTRONICS, INC. AND IS TO BE USED ONLY FOR THE PURPOSES AUTHORIZED BY COMPAL ELECTRONICS, INC. IT IS NOT TO BE DISTRIBUTED OUTSIDE OF COMPAL ELECTRONICS, INC. OR TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.				Sheet	Document Number	Rev		
				Date: <b>Wednesday, July 15, 2020</b>			<b>LA-K061P</b>	<b>0.1</b>
				Sheet <b>23</b> of <b>119</b>				

CHANNEL-B



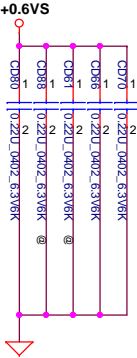
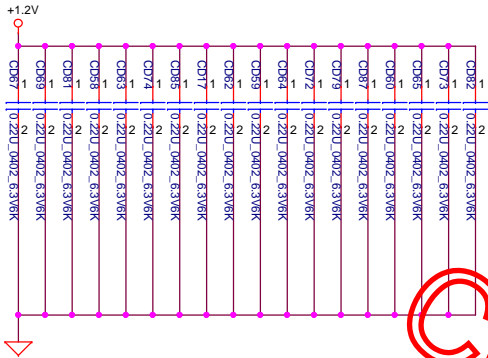
[6] DDR\_B\_DQ[63..0]  
[6] DDR\_B\_DM[7..0]



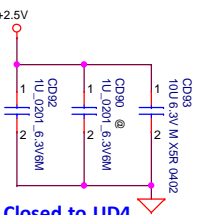
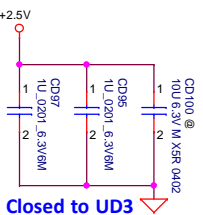
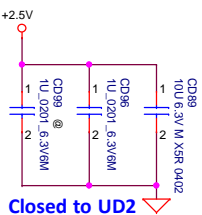
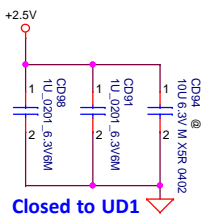
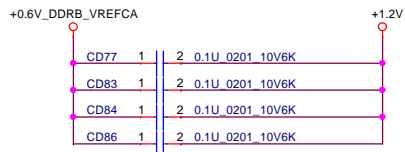
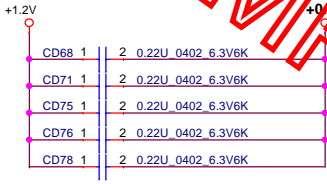
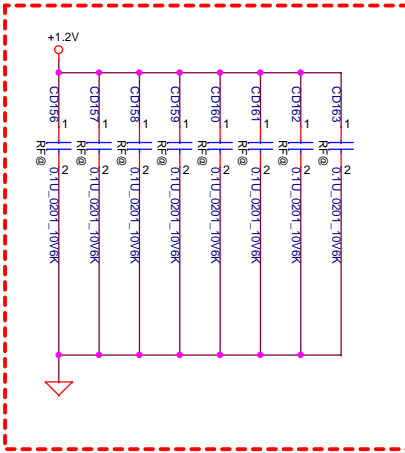
VREF traces should be at least 20mils wide  
20mils spacing to other signals



DRAM DOWN DECOUPLING



RF requirement\_0407A



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/08/07		Title	
		Deciphered Date		DDR4 CHM1: DIMM1	
				Size Document Number	
				LA-K061P	
				Date: Wednesday, July 15, 2020	
				Sheet 25 of 119	
				Rev 0.1	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DDR3	
				Size	Document Number
				LA-K061P	
				Date:	Wednesday, July 15, 2020
				Sheet	26 of 119
				Rev	0.1

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020				Sheet	27 of 119
				Rev	0.1

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 28 of 119		Rev 0.1	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020				Sheet	29 of 119
				Rev	0.1

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020				Sheet	30 of 119
				Rev	0.1

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for DGPU
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
				Date:	Wednesday, July 15, 2020
				Sheet	31 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 32 of 119		Rev	0.1



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for DGPU
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
				Date:	Wednesday, July 15, 2020
				Sheet	33 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for DGPU	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 34 of 119		Rev	0.1

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for N16P GDDR5 A	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 35 of 119		Rev	0.1

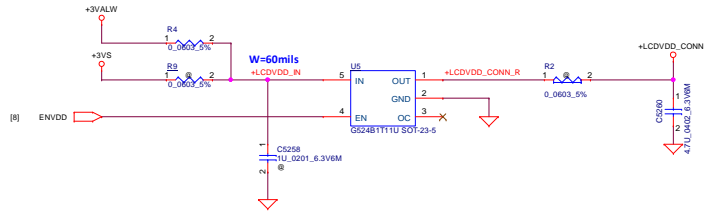
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for N16P GDDR5 A	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 36 of 119		Rev	0.1

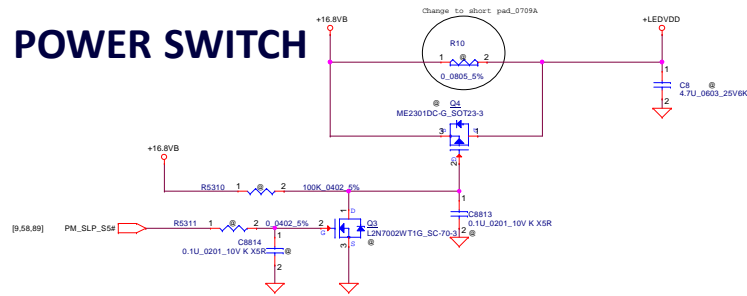
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 HAD 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>				Document Number	
				LA-K061P	
				Rev 0.1	
Date: Wednesday, July 15, 2020				Sheet 37 of 119	

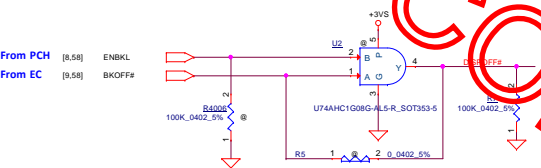
LCD POWER SWITCH



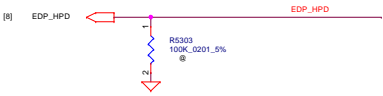
LED POWER SWITCH



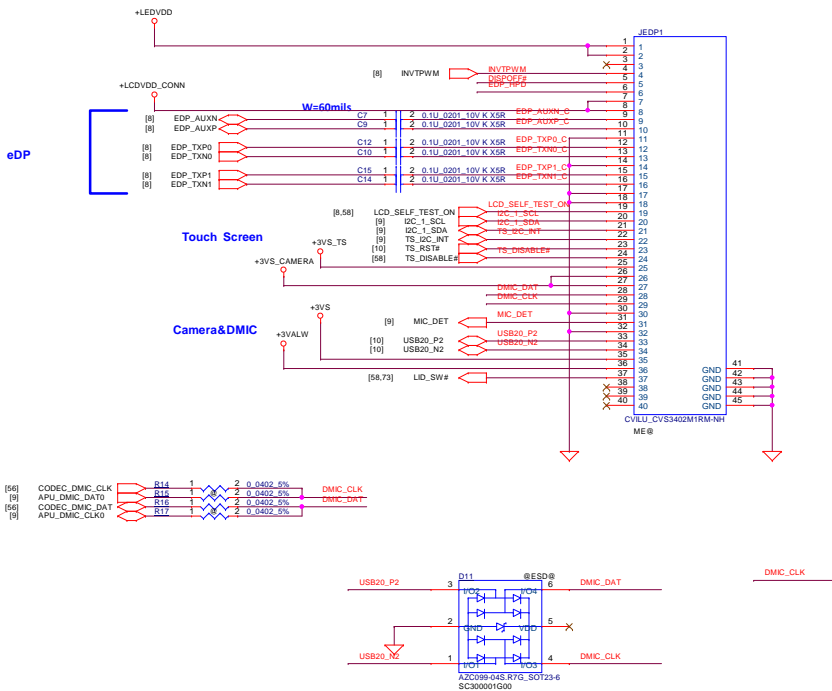
DISPLAY OFF



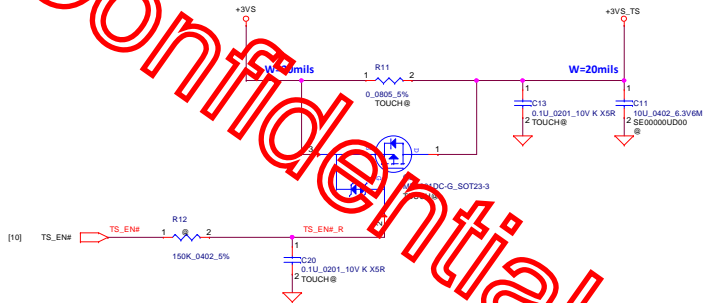
HOT PLUG DETECT



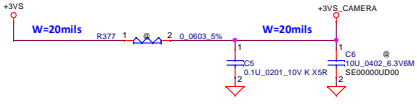
eDP CONNECTOR



Touch Screen POWER CIRCUIT



CAMERA POWER CIRCUIT

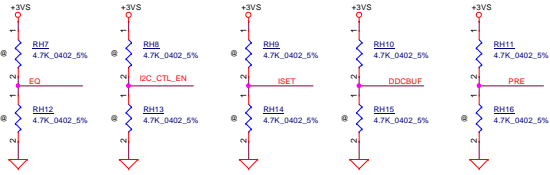
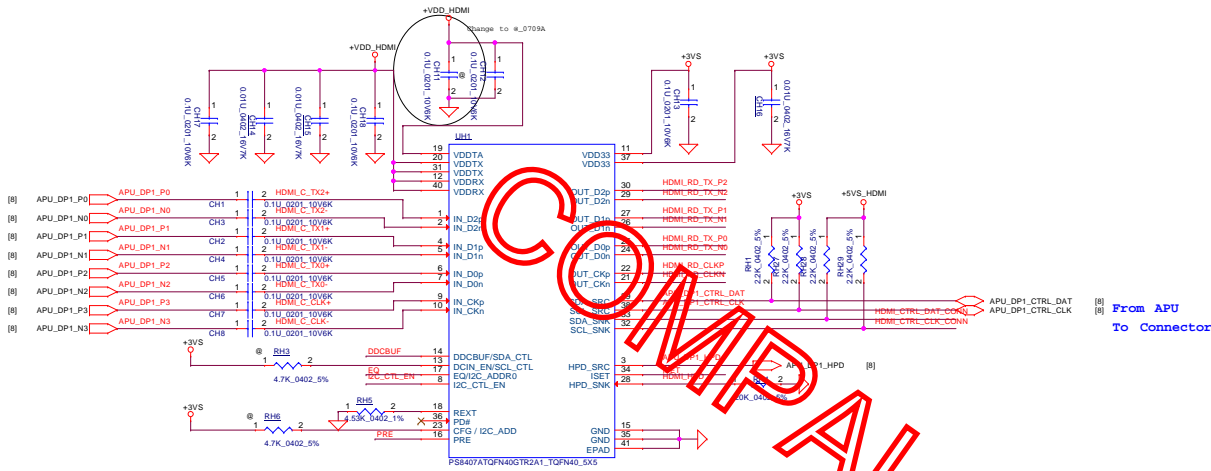


# HDMI

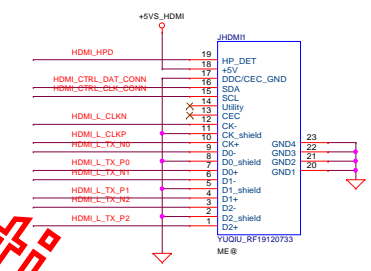
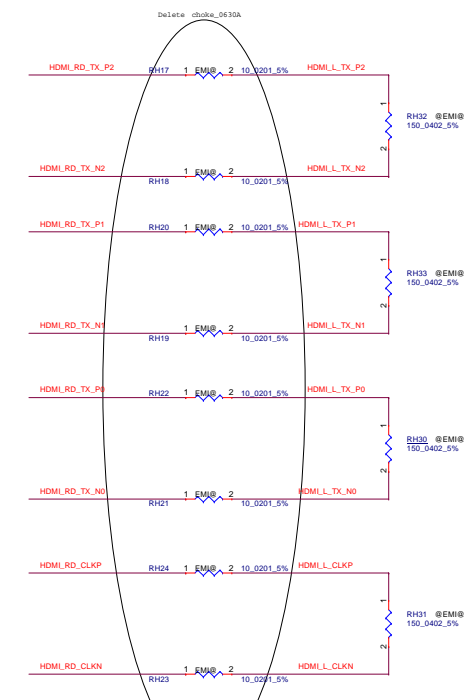
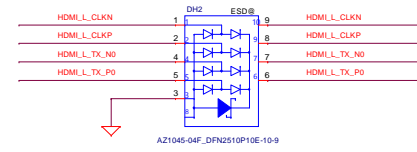
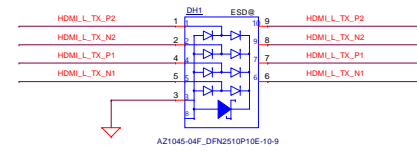
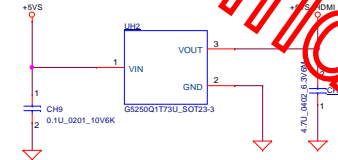
PS8407 w/ Jitter Cleaning  
+VDD\_HDMI -> 1.2V/ 1.35V/ 1.5V



## HDMI Active Level Shifter for 4K2K resolution



Current Limit Target : 400mA  
Requirement : 300mA  
HDMI Spec : 50mA - 400mA



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				Rev	0.1
Date: Wednesday, July 16, 2020				Sheet	39 of 119

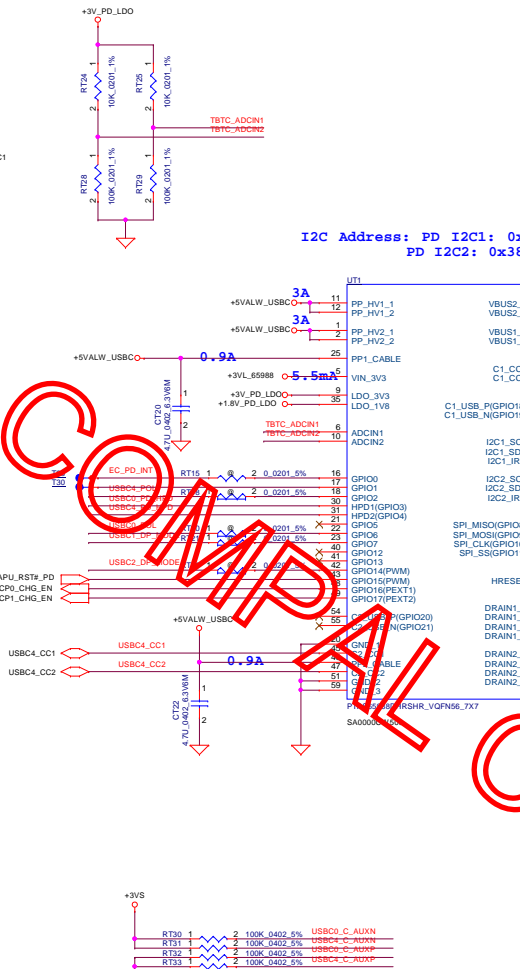
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	CloverFalls Conn
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Wednesday, July 15, 2020
				Sheet	40 of 119
				Rev	0.1
				LA-K061P	

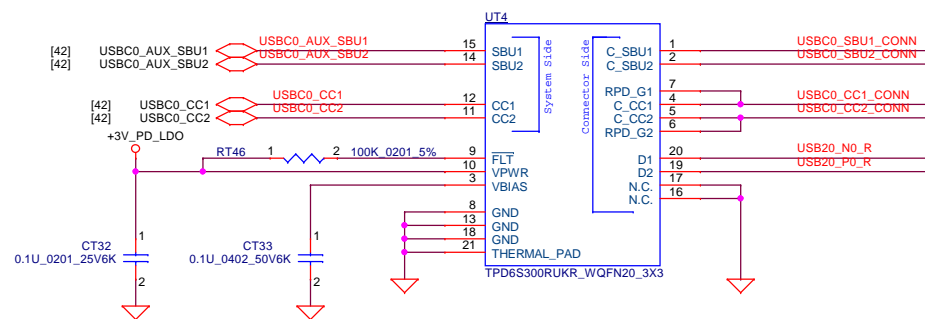
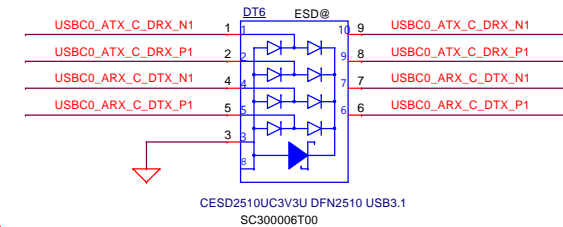
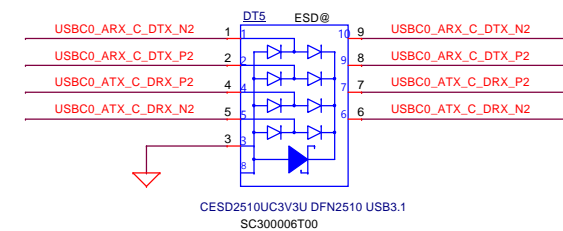
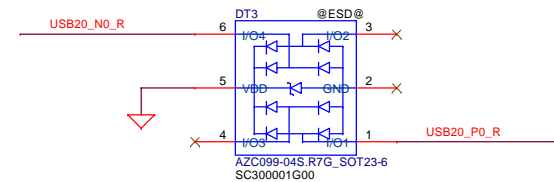
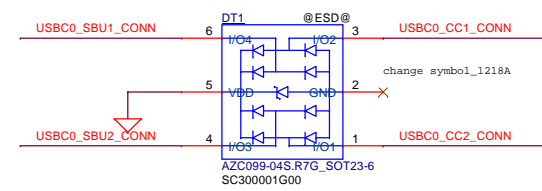
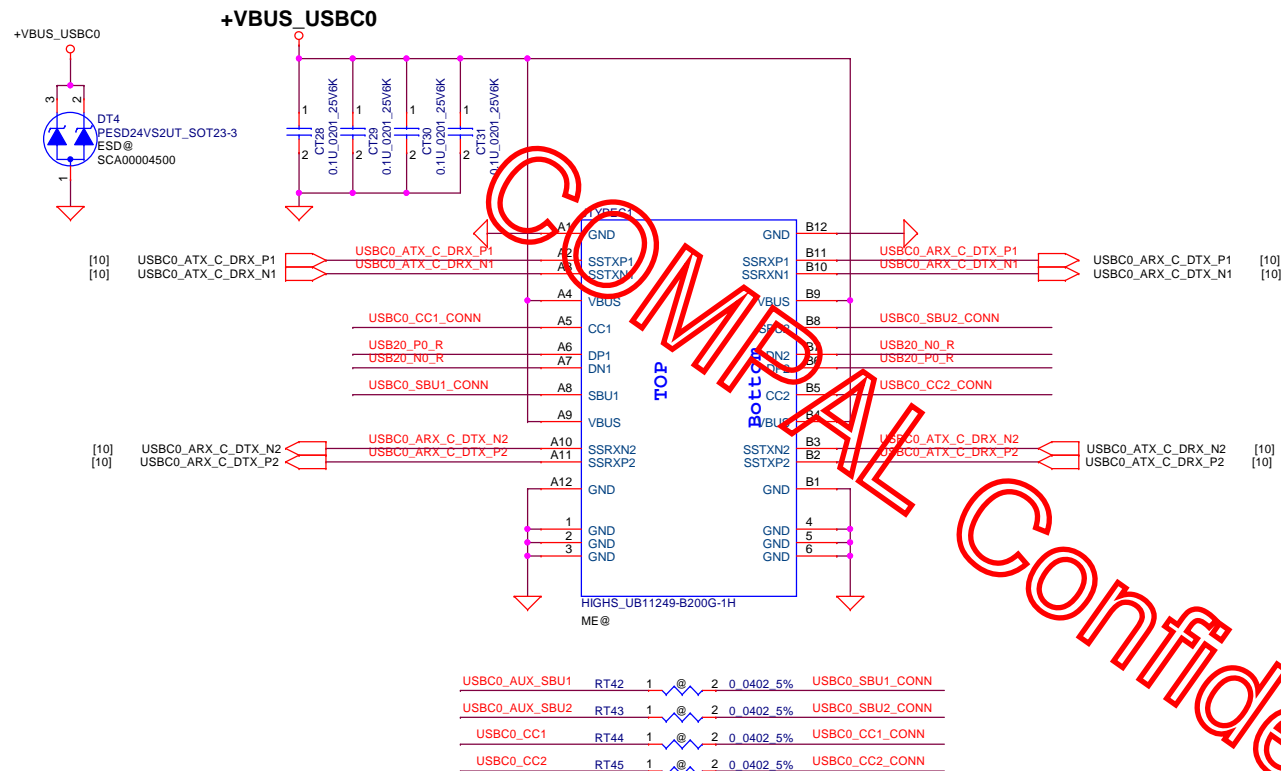
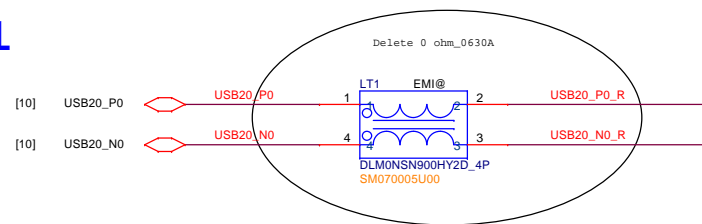


COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for CRT	
				Size	Document Number
				LA-K061P	
				Date	Wednesday, July 15, 2020
				Sheet	41 of 119
				Rev	0.1

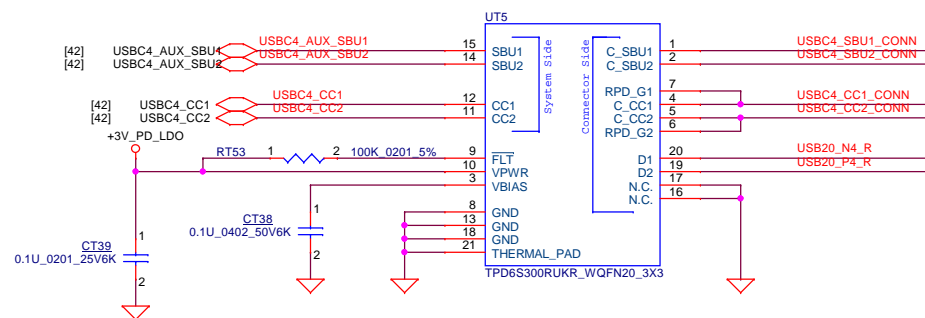
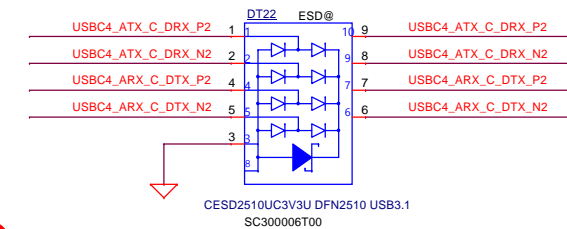
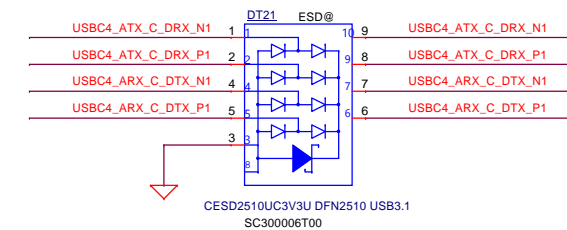
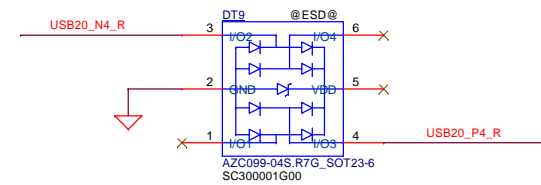
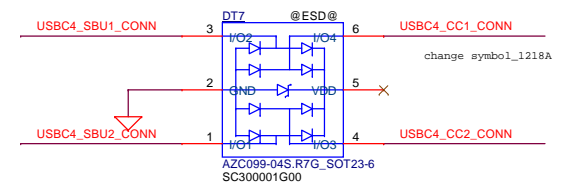


## TYPE-C PORT1



Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				<b>TBT TYPE-C Port1 (1/2)</b>		
				Size	Document Number	Rev
					<b>LA-K061P</b>	0.1
				Date:	Wednesday, July 15, 2020	Sheet 43 of 119

Diagram illustrating the connection of USB20\_P4 and USB20\_N4 to a device. The device is labeled "Delete 0 ohm\_0630A" and "EMT@". It has pins 1, 2, 3, and 4. Pin 1 is connected to USB20\_P4, pin 2 to USB20\_P4\_R, pin 3 to USB20\_N4\_R, and pin 4 to USB20\_N4. The device is also labeled "DLM0NSN900HY2D\_4P" and "SM070005U00EMT Suggest".



Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>		
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title <b>TBT TYPE-C Port0 (1/2)</b>		
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 0.1
				<b>LA-K061P</b>		
				Date:	Wednesday, July 15, 2020	Sheet 44 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				TBT TYPE-C Port1 (2/2)	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 45 of 119		Rev 0.1	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				TBT TYPE-C Port2 (1/2)	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 46 of 119		Rev 0.1	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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&amp;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>				TBT TYPE-C Port2 (2/2)	
				Document Number	
				LA-K061P	
Date: Wednesday, July 16, 2020				Sheet	47 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		TBT TYPE-C Port3 (1/2)	
2019/08/17		2020/12/31		Rev	
THIS SHEET OR 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.		LA-K061P		Rev	
DATE: Wednesday, May 16, 2020		Sheet		48 of 119	



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2019/08/07	Deciphered Date	2020/12/31	
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 for TBT TYPE-C Port3 (2/2)	
		Size	Document Number		Rev
		LA-K061P		0.1	
Date:		Wednesday, July 15, 2020		Sheet	49 of 119

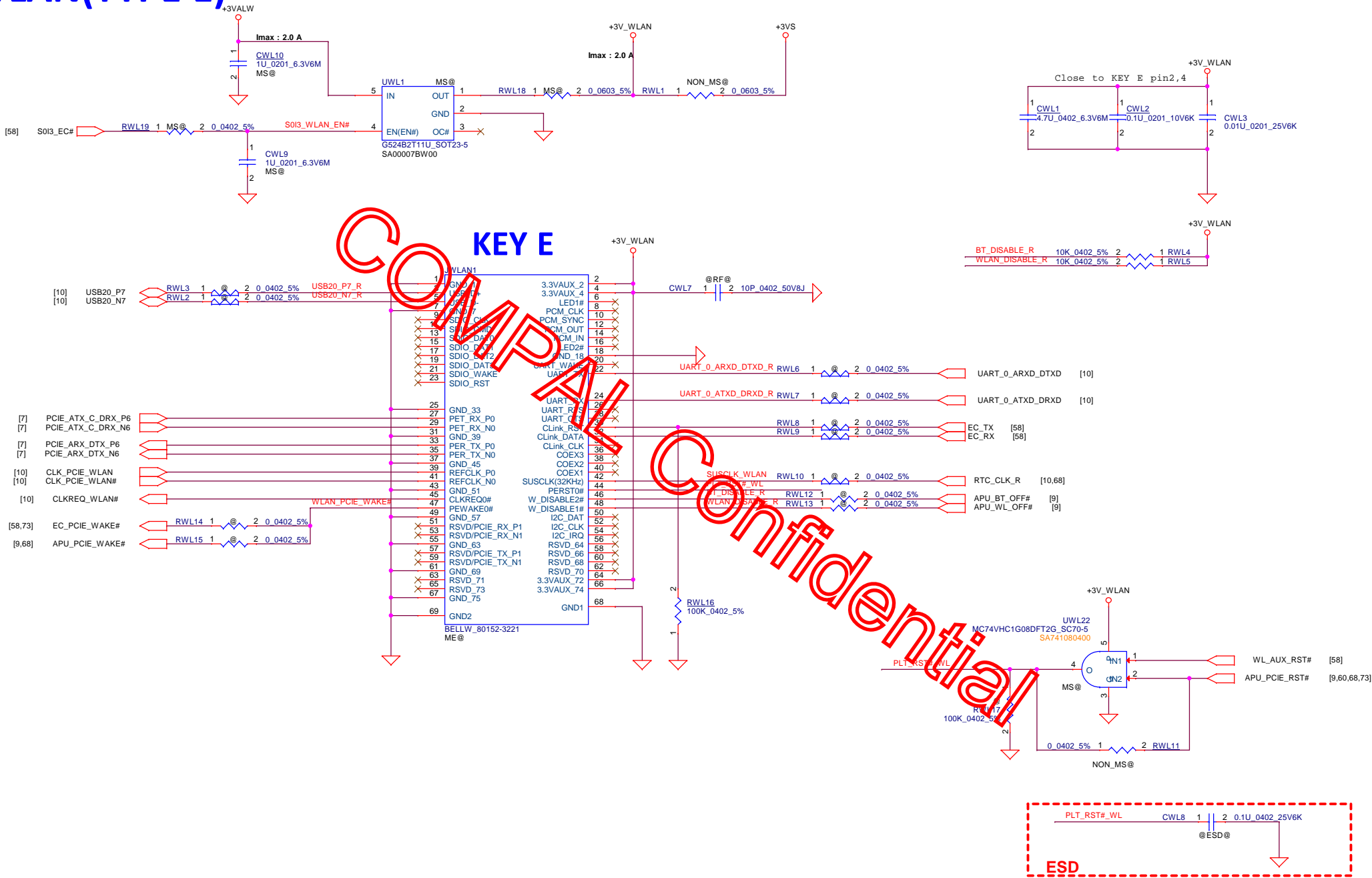
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 HAD 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>				TYPE-C Power Path	
				Document Number	
				LA-K061P	
Date: Wednesday, July 16, 2020				Sheet	60 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 HAD 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>				LAN-RTL8111H	
				Rev 0.1	
Date: Wednesday, July 16, 2020				Sheet 51	of 119

WLAN(TYPE E)



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				NGFF WL(KEY E) / WWAN(KRY B)	
Size	Document Number	LA-K061P		Rev	0.1
Date	Wednesday, July 15, 2020	Sheet	52	of	119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for WIGIG/WIDI
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
				Date:	Wednesday, July 15, 2020
				Sheet	53 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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
				Date:	Wednesday, July 15, 2020
				Sheet	54 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

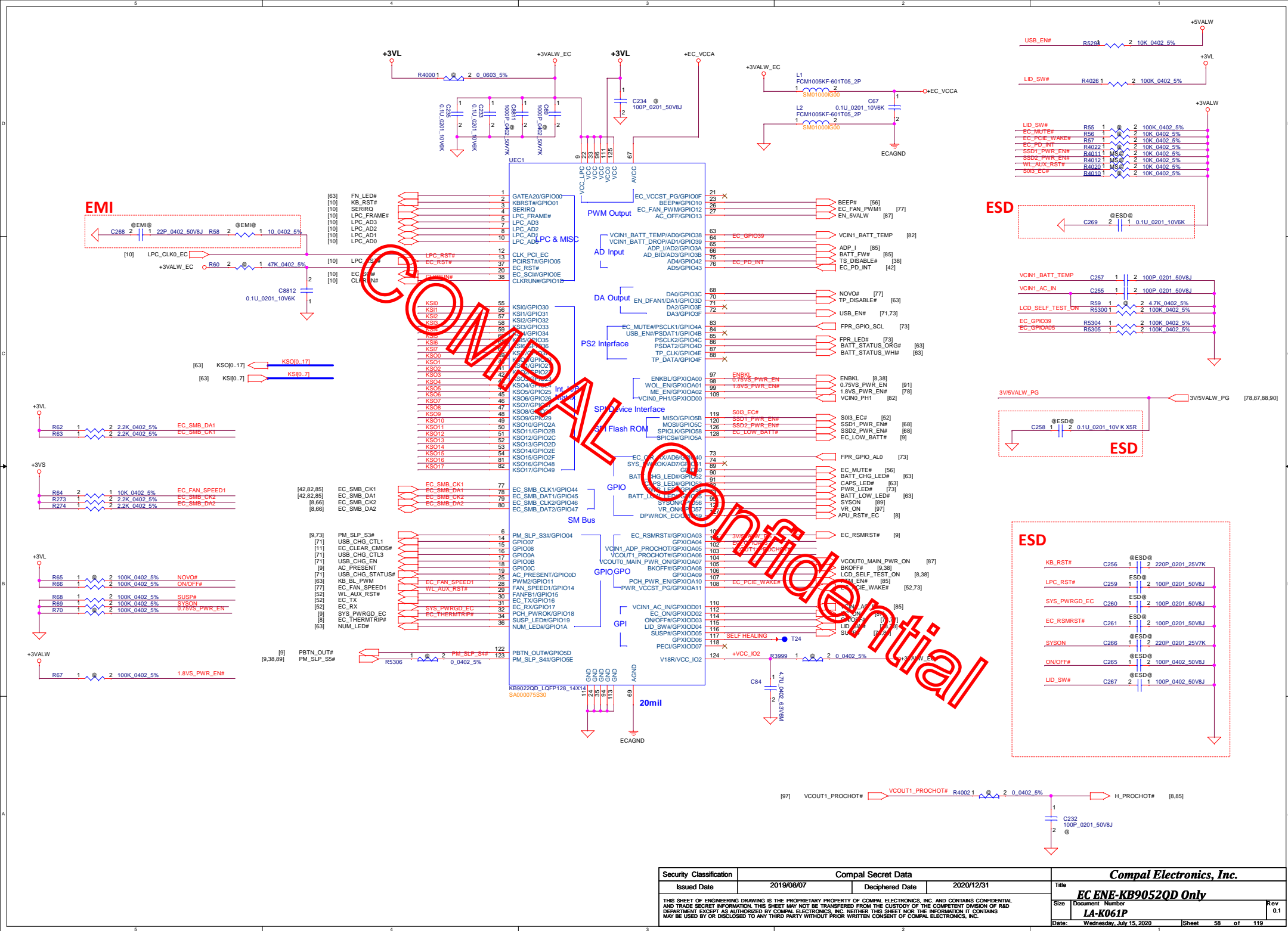
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 for PCIE Device	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 55 of 119		Rev 0.1	





COMPAL Confidential

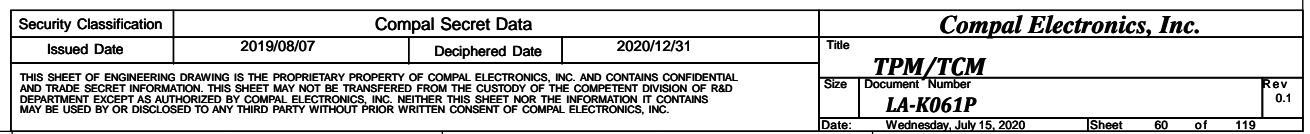
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 for Audio Ampfilter	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020				Sheet	57 of 119
				Rev	0.1



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve for KBC&SIO
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
				Date:	Wednesday, July 15, 2020
				Sheet	59 of 119
				Rev	0.1
				LA-K061P	

1.Nuvton\_NPCT750LABYX  
2.ST\_ST33HTPH2E32AAE8  
3.Nations\_Z32H330TC



The diagram illustrates the electrical connections between the APU (Application Processor Unit) and the EC KB9022 (Embedded Controller). The APU is represented by a blue box on the left, and the EC KB9022 is represented by a blue box on the right. The connections are as follows:

- SMBUS Connections:**
  - APU AN12 (SMBUS0\_SCL\_R) and AP12 (SMBUS0\_SDA\_R) are connected to the EC KB9022 SMBUS0\_SCL and SMBUS0\_SDA pins. A 2.2K resistor is connected between the APU and the EC KB9022 on the SCL line. The SMBUS Address for the APU is 0xA0.
  - EC KB9022 pins B22 (EC\_SMB\_CK2) and D22 (EC\_SMB\_DA2) are connected to the APU. The SMBUS Address for the EC KB9022 is 0x9A.
- I2C Connections:**
  - EC KB9022 pins 79 (EC\_SMB\_CK2) and 80 (EC\_SMB\_DA2) are connected to the APU. The I2C Address for the EC KB9022 is 0x30.
- Sensors and Controllers:**
  - UN1 F75305M Thermal sensor:** Connected to EC\_SMB\_CK2 and EC\_SMB\_DA2. SMBUS Address: 0x9A.
  - UN12 BMA280 APS sensor:** Connected to EC\_SMB\_CK2 and EC\_SMB\_DA2. SMBUS Address: 0x30.
  - UTP1 TPS65988DJ PD controller:** Connected to EC\_SMB\_CK1 and EC\_SMB\_DA1. SMBUS Address: 0x70.
  - PUB1 BQ25710RSNR:** Connected to EC\_SMB\_CK1 and EC\_SMB\_DA1. SMBUS Address: 0x12.
- Power Connections:**
  - A +3VS supply is connected to the APU and the EC KB9022.
  - A 2.2K resistor is connected between the APU and the EC KB9022 on the SCL line.

The diagram illustrates the AMD Renoir FP6 chip and its connections to various components. The chip is represented by a large blue rectangle with the text "AMD Renoir FP6" in the center. To the left of the chip are three components: EC (Embedded Controller), TPM (Trusted Platform Module), and Finger Print. To the right are LAN (Local Area Network), Wire LAN, SSD1 (Solid State Drive 1), SSD2 (Solid State Drive 2), and Card Reader. Below the chip are two clock outputs: 32.768K MHZ and 48M MHZ. The connections are as follows:

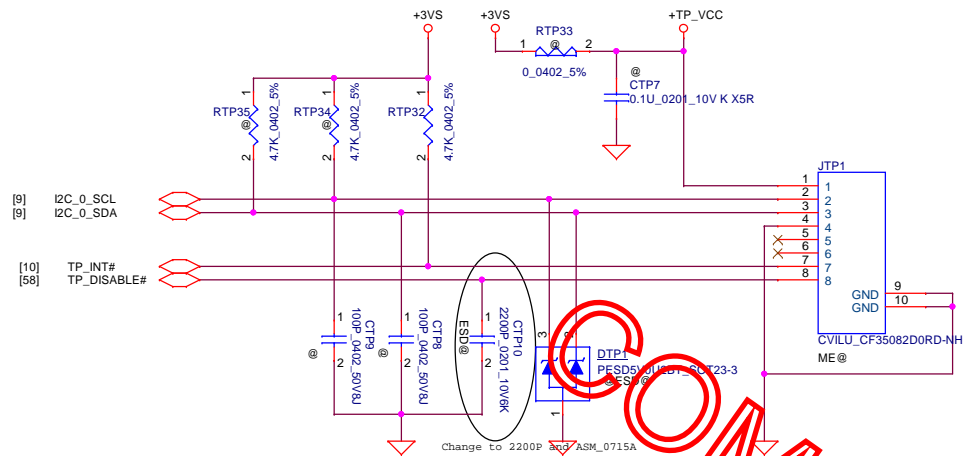
- EC:** Connected to LPC\_RST# and LPC\_CLK0\_EC.
- TPM:** Connected to APU\_PCIE\_RST#/TPM\_RST# and APU\_SPI\_CLK\_R/TPM\_SPI\_CLK.
- Finger Print:** Connected to APU\_FPR\_RST\_R/FPR\_RST.
- LAN:** Connected to CLK\_PCIE\_LAN/# and APU\_PCIE\_RST#.
- Wire LAN:** Connected to CLK\_WLAN/# and APU\_PCIE\_RST#/PLT\_RST#\_WLAN.
- SSD1:** Connected to CLK\_SSD1/# and APU\_PCIE\_RST#/AUX\_RESET#.
- SSD2:** Connected to CLK\_SSD2/# and APU\_PCIE\_RST#/AUX\_RESET#.
- Card Reader:** Connected to CLK\_SD/# and APU\_PCIE\_RST#.
- 32.768K MHZ:** Connected to the chip via two pins.
- 48M MHZ:** Connected to the chip via two pins.

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2019/07/26		Deciphered Date		2018/10/01	
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			
				SMBus block diagram			
				Size	Document Number	Rev	
Custm		LA-K061P				0.	
Date:				Wednesday, July 15, 2020		Sheet 61 of 119	

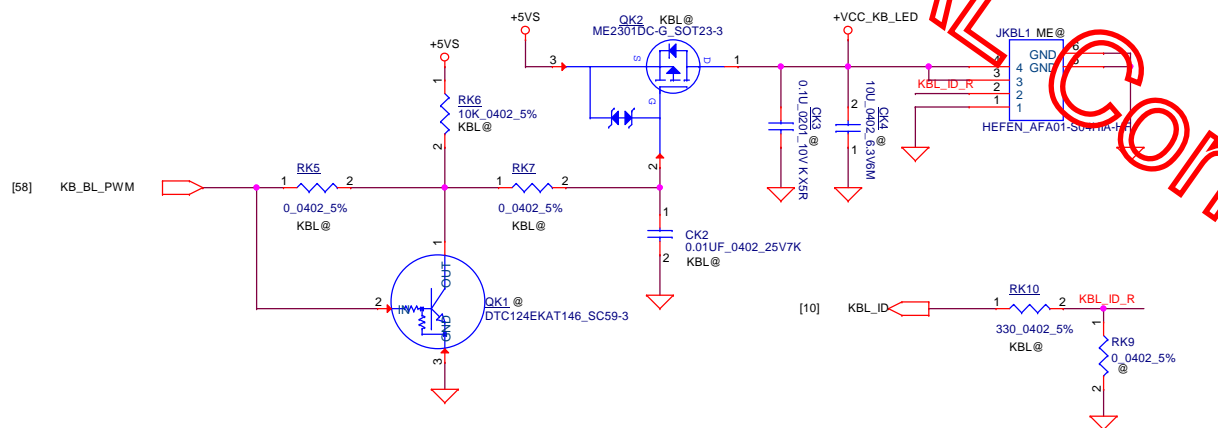
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for LEDs Controller	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 62 of 119		Rev 0.1	

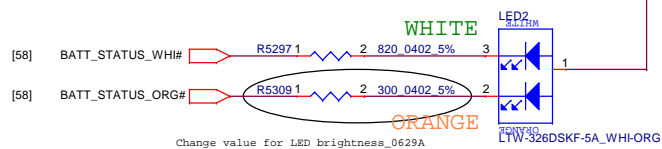
# Touch Pad



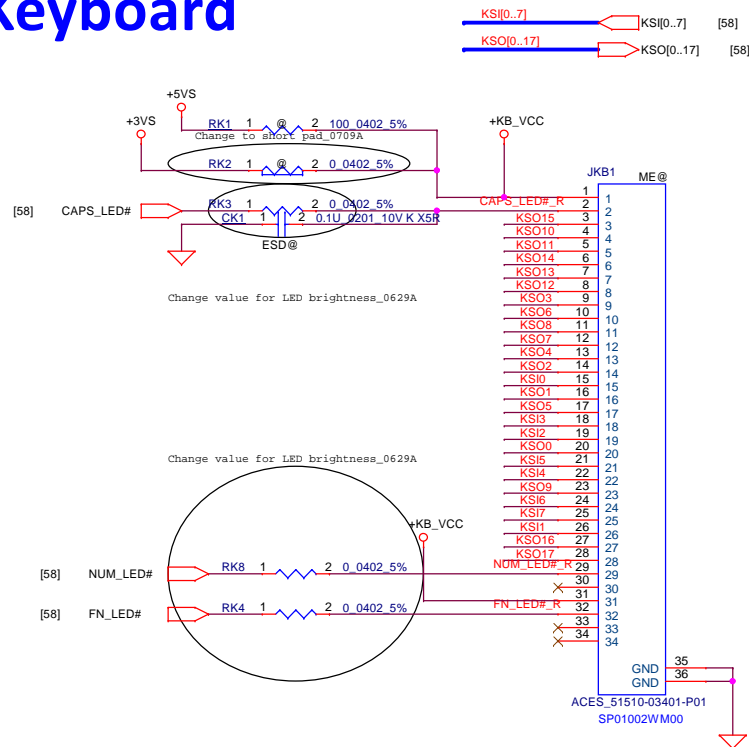
# Keyboard Backlight



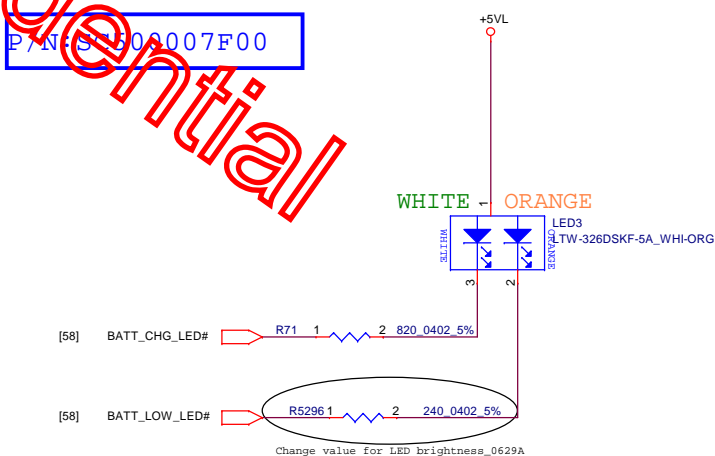
# Status LED



# Keyboard



# Charge LED



Security Classification		Compal Secret Data		Title	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	KB/TP/LED/LID	
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-K061P	
				Date	Wednesday, July 15, 2020
				Sheet	63 of 119

COMPAL Confidential

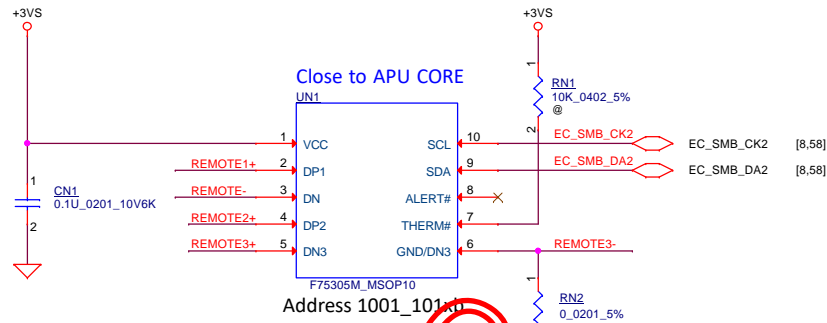
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 for KB/TP/LED/LID	
				Size	Document Number
				LA-K061P	
				Date:	Wednesday, July 15, 2020
				Sheet	64 of 119
				Rev	0.1



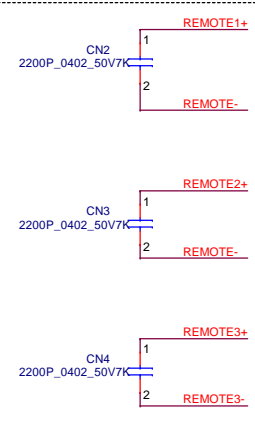
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for KB/TP/LED/LID	
				Size	Document Number
				LA-K061P	
				Date:	Wednesday, July 15, 2020
				Sheet	65 of 119
				Rev	0.1

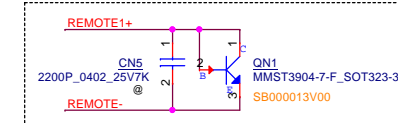
## Thermal Sensor



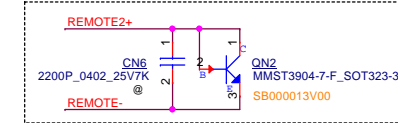
### Close to UN1



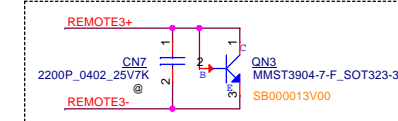
### Close to BATT Charger (JBATT1)



### Close to SSD

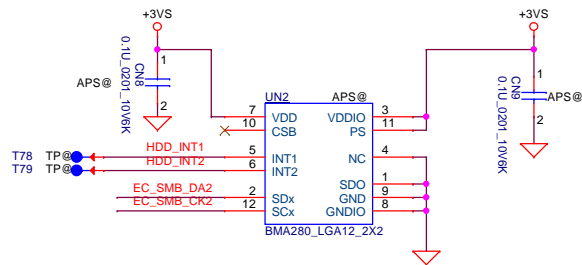


### Close to WLAN (JWLAN1)



REMOTE1,2,3 (+/-) :  
Trace width/space:10/10 mil  
Trace length:<8"

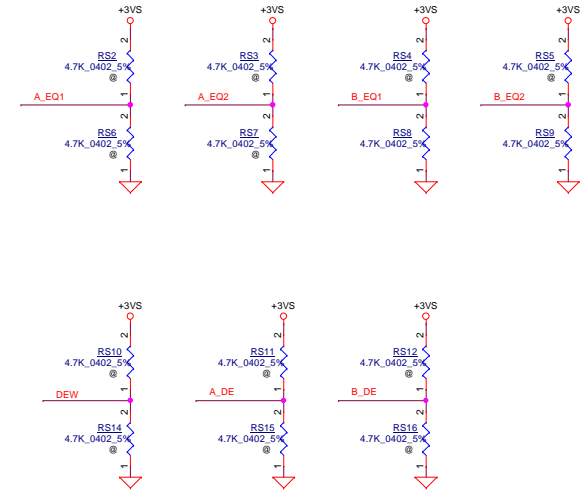
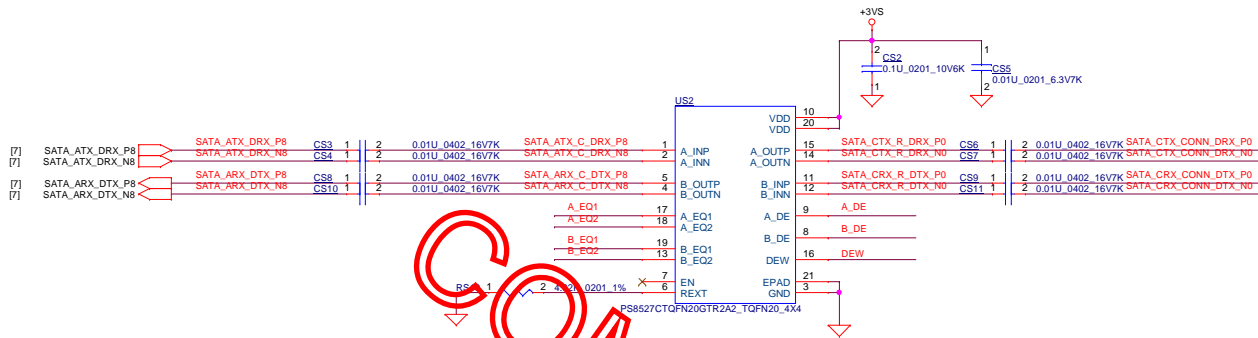
## APS G-Sensor



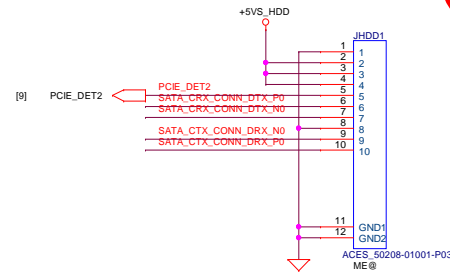
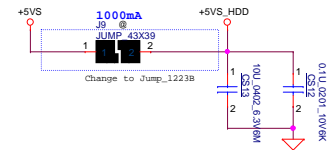
I2C Address: 0x18

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Sensor/Finger Print
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
				Date	Wednesday, July 15, 2020
				Sheet	66 of 119
				Rev	0.1

## SATA reDriver



## HDD CONN



Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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	0.1
				Date:	Wednesday, July 15, 2020
				Sheet	67 of 119
				LA-K061P	



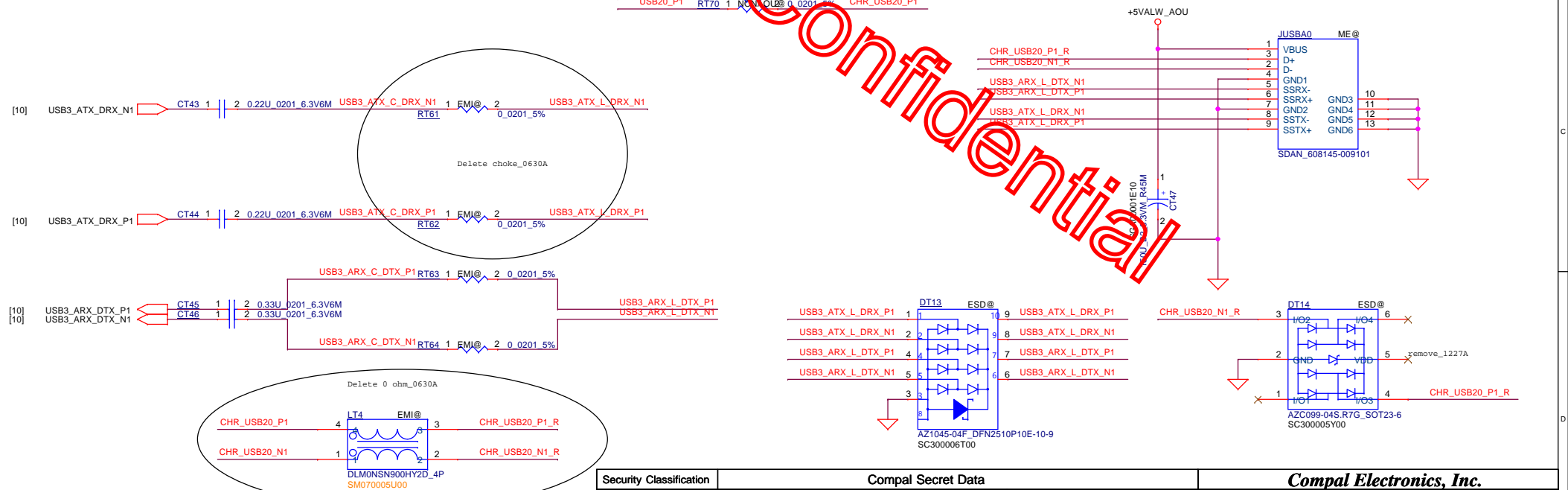
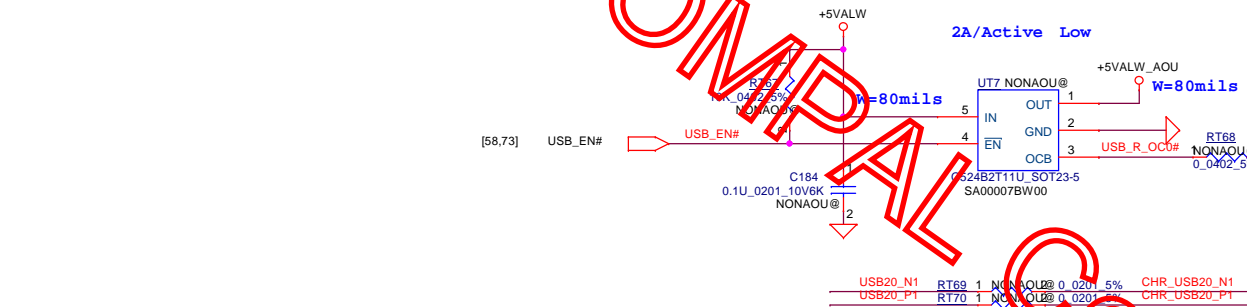
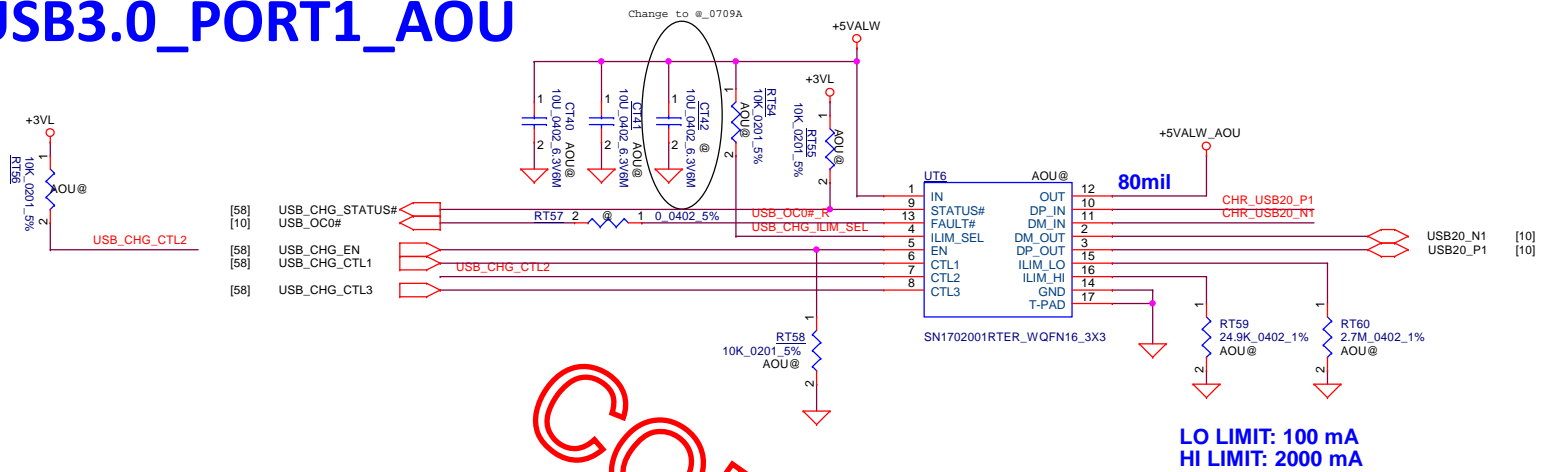
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve eMMC
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
				Date:	Wednesday, July 15, 2020
				Sheet	69 of 119
				Rev	0.1
				LA-K061P	

COMPAL Confidential

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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.				Card Reader RTS5227S		
				Size	Document Number	Rev
					LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet 70 of 119

# USB3.0\_PORT1\_AOU



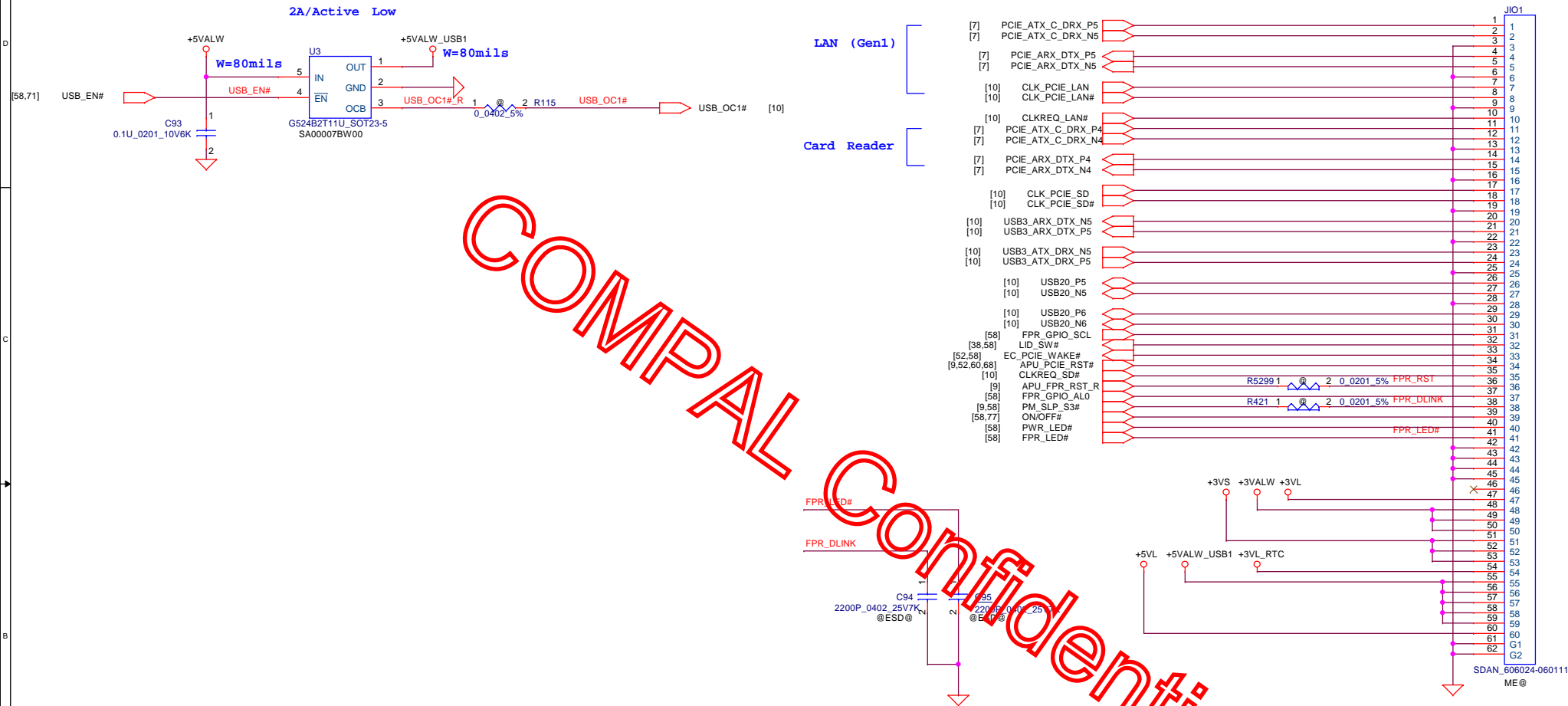
Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b>		
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	<b>USB2/USB3 TYPEA1&amp;2</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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
					<b>LA-K061P</b>	0.1
				Date:	Wednesday, July 15, 2020	Sheet 71 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	Reserve USB2/USB3 TYPEA
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
				Date:	Wednesday, July 15, 2020
				Sheet	72 of 119
				Rev	0.1
				LA-K061P	



USB3.0 SW to IO/B



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 USB2/USB3 DB	
Size		Document Number			Rev
		LA-K061P			0.1
Date:		Wednesday, July 15, 2020		Sheet	73 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for Dock	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020				Sheet	74 of 119
				Rev	0.1

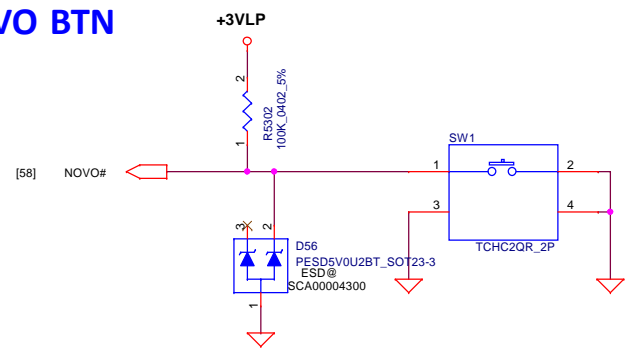
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for USB	
				Size	Document Number
				LA-K061P	
Date: Wednesday, July 15, 2020		Sheet 75 of 119		Rev 0.1	

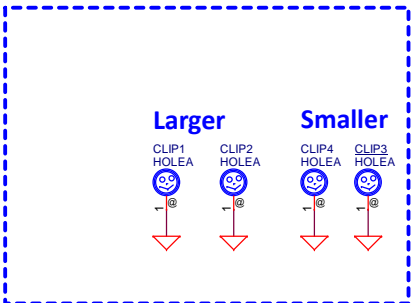
COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	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 for USB	
				Size	Document Number
				LA-K061P	
				Date	Wednesday, July 15, 2020
				Sheet	76 of 119
				Rev	0.1

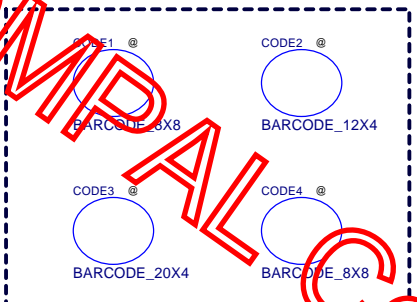
NOVO BTN



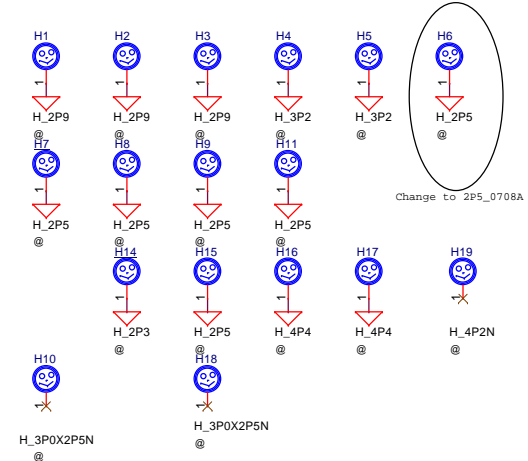
Shielding Clip



LASER BARCODE



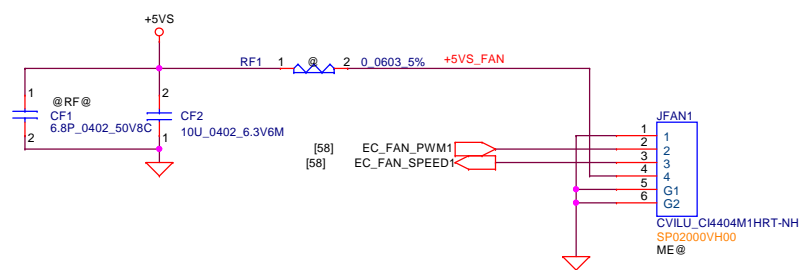
Screw Hole



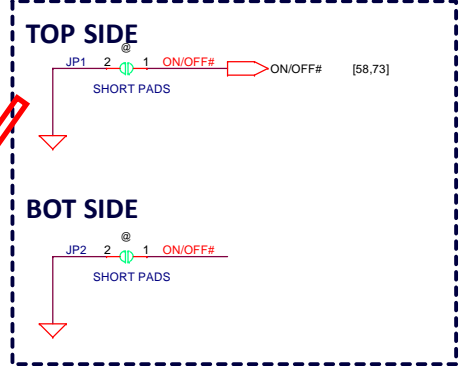
Fiducial Mark



CPU Fan Control Circuit



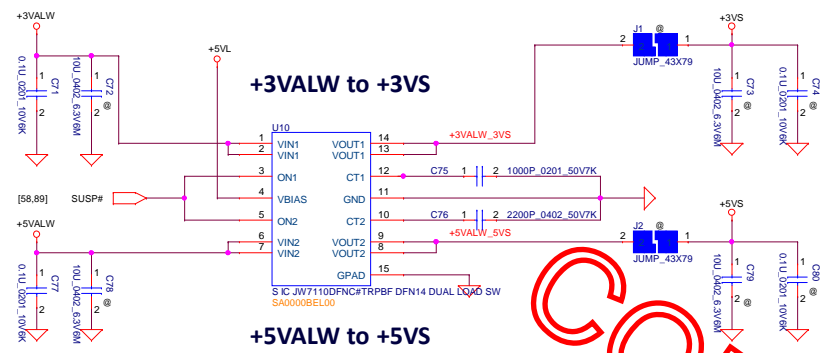
ON/OFF# SHORT PADS



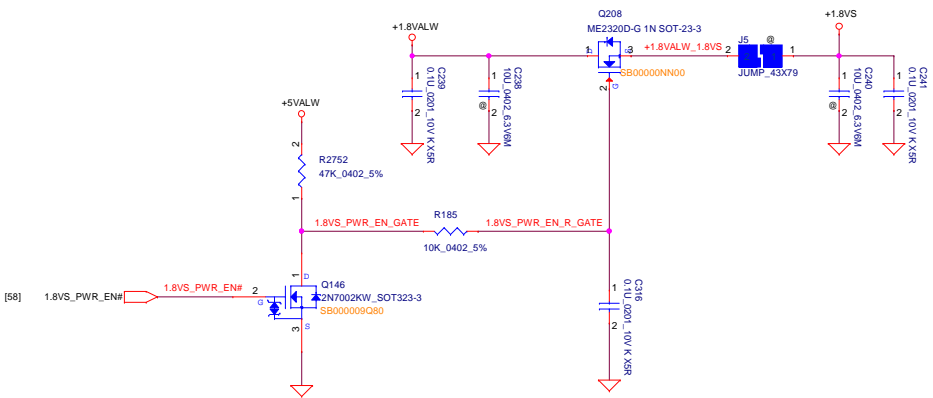
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	PWRBTN/ FAN / Screws
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
				Date	Wednesday, July 15, 2020
				Sheet	77 of 119
				Rev	0.1

DC to DC

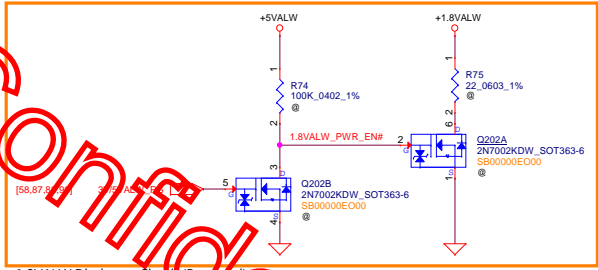
+3VALW to +3VS / +5VALW to +5VS



+1.8VALW to +1.8VS



DISCHARGE CIRCUIT



COMPAL Confidential

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2019/08/07	Deciphered Date	2020/12/31	Title	XDP/CMC/APS Debug Conn	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet 79 of 119

HW FVT PIR List

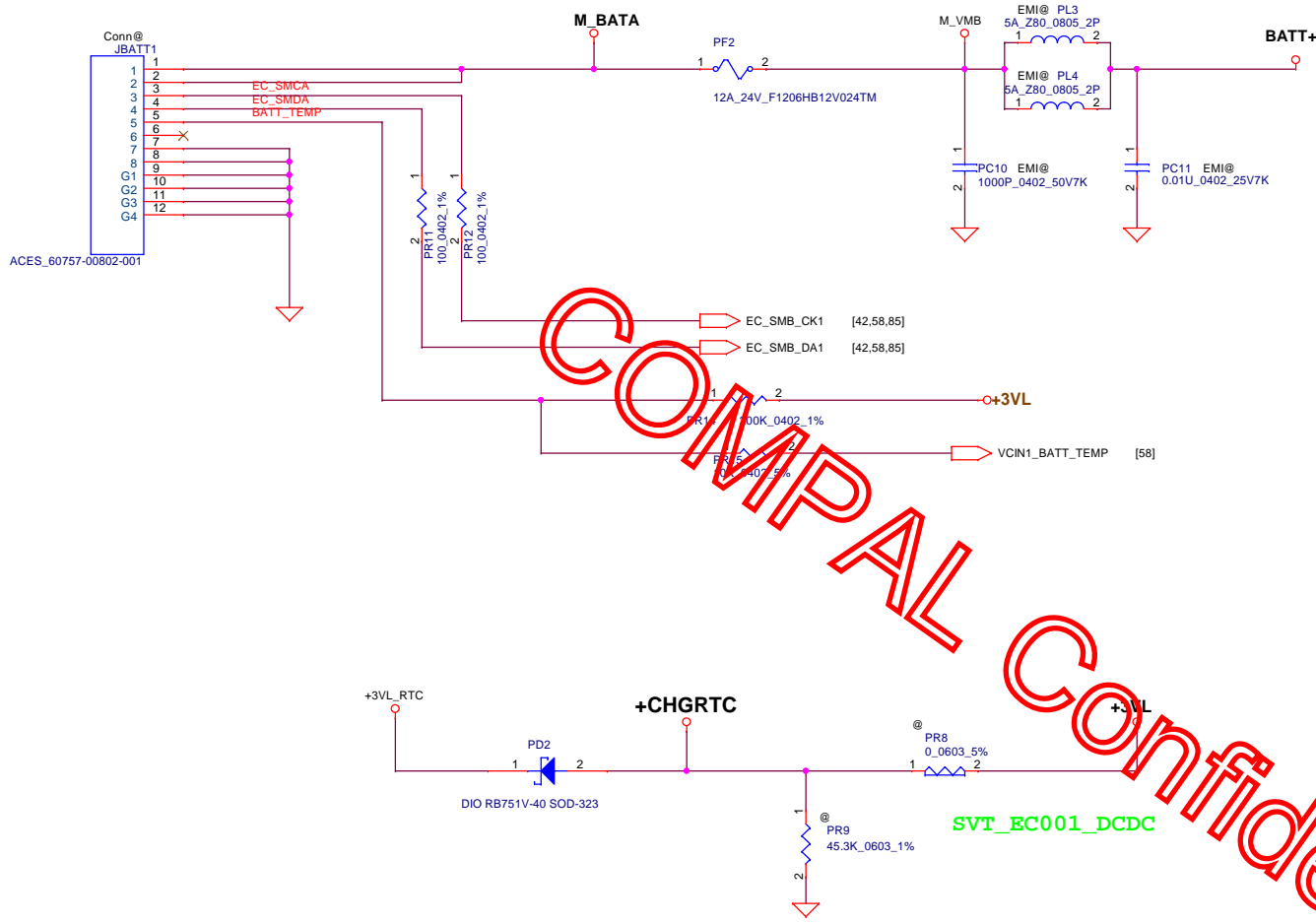
NO	DATE	PAGE	MODIFICATION LIST
1	20/06/29	63	Change RK2, RK4, RK8 to 0 ohm for KB LED brightness
2	20/06/29	63	Change R5309 to 300ohm & R5296 to 240ohm for brightness
3	20/06/30	39	Delete Choke, reserve 10ohm only for EMI
4	20/06/30	43, 44	Delete 0ohm reserve choke only for EMI
5	20/06/30	71	Delete USB20 0ohm reserve choke only for EMI
6	20/06/30	71	Delete USB30 Choke, reserve 0ohm only for EMI
7	20/06/30	42	Change CT2 to buke Cap for TDMS issue
8	20/07/07	23	Delete CD11, CD12, CD21 for 0ohm reduce and shielding interfere

COMPAL Confidential

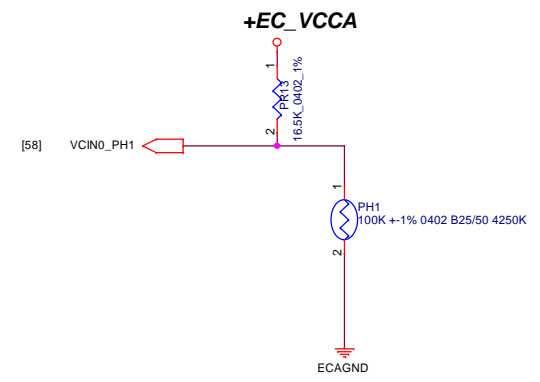


COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet



PH201 under CPU botten side :  
CPU thermal protection at 93 +3 degree C  
Recovery at 56 +3 degree C

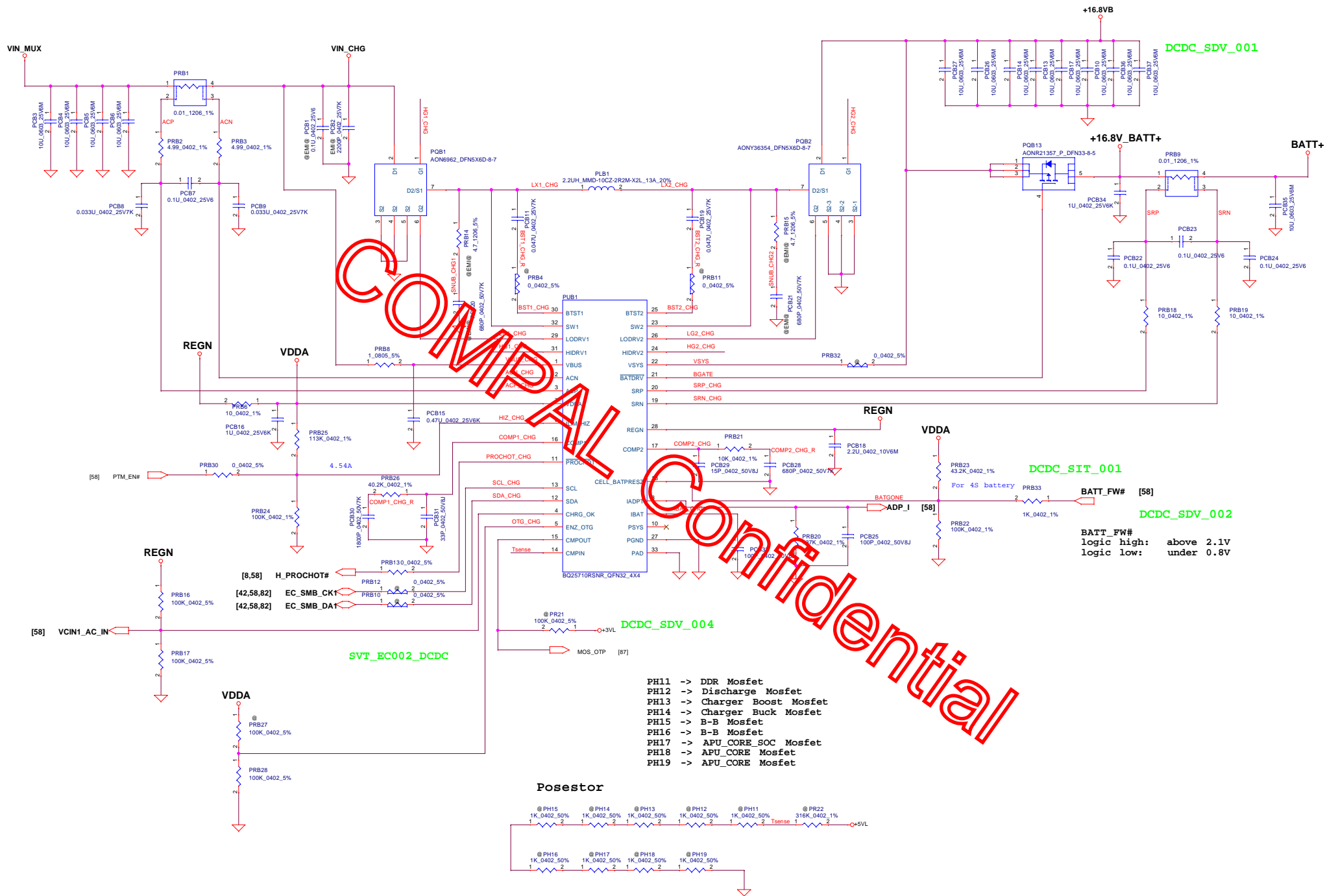


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title	PWR- BATTERY CONN/OTP/RTC
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS 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 LA-K061P
				Date: Wednesday, July 15, 2020	Sheet 82 of 119



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	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&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	84 of 119	

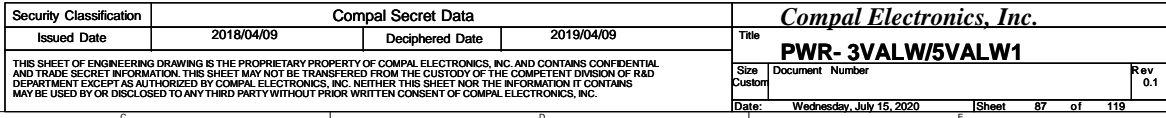


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title	PWR-CHARGER
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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	0.1
				Document Number	LA-K061P
				Date	Wednesday, July 15, 2020
				Sheet	85 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	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&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	86 of 119	

SY8286B\_V3\_single.mdd  
SY8286B\_V3\_dual.mdd

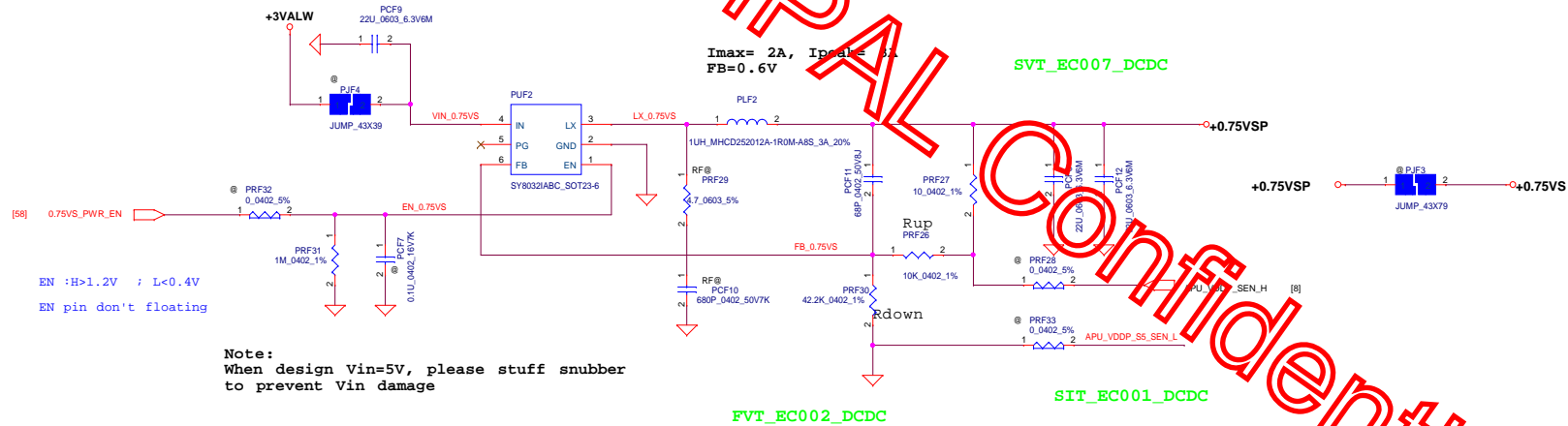
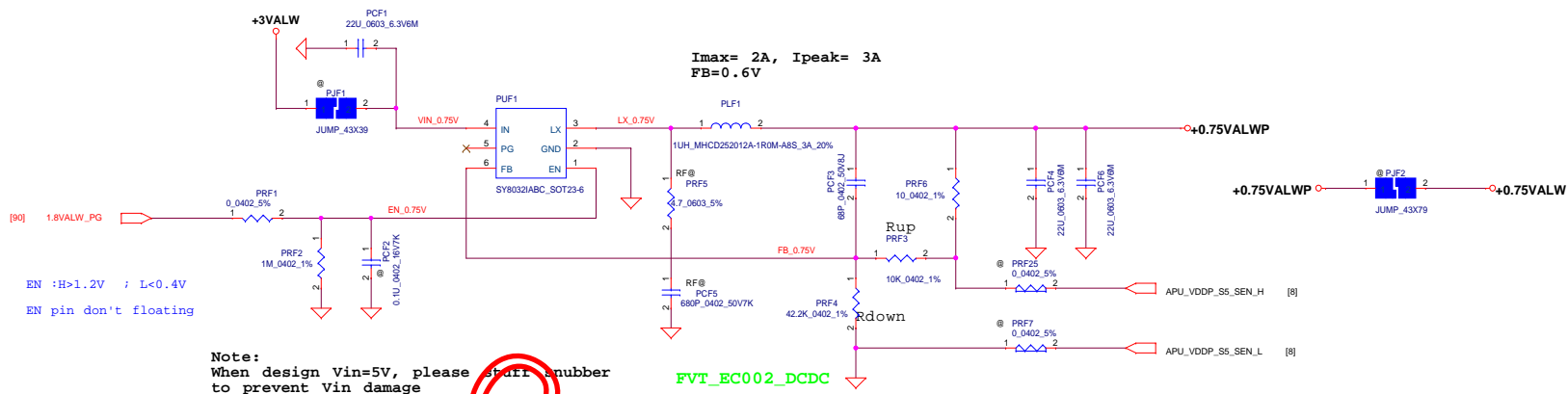












Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2018/12/18	Deciphered Date	2019/12/18	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				0.75VALWP		
Size	C	Document Number		Rev	0.1	
Date:	Wednesday, July 15, 2020	Sheet	81	of	119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date:				Wednesday, July 15, 2020	Sheet 92 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	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- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	93 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date:				Wednesday, July 15, 2020	Sheet 94 of 119	

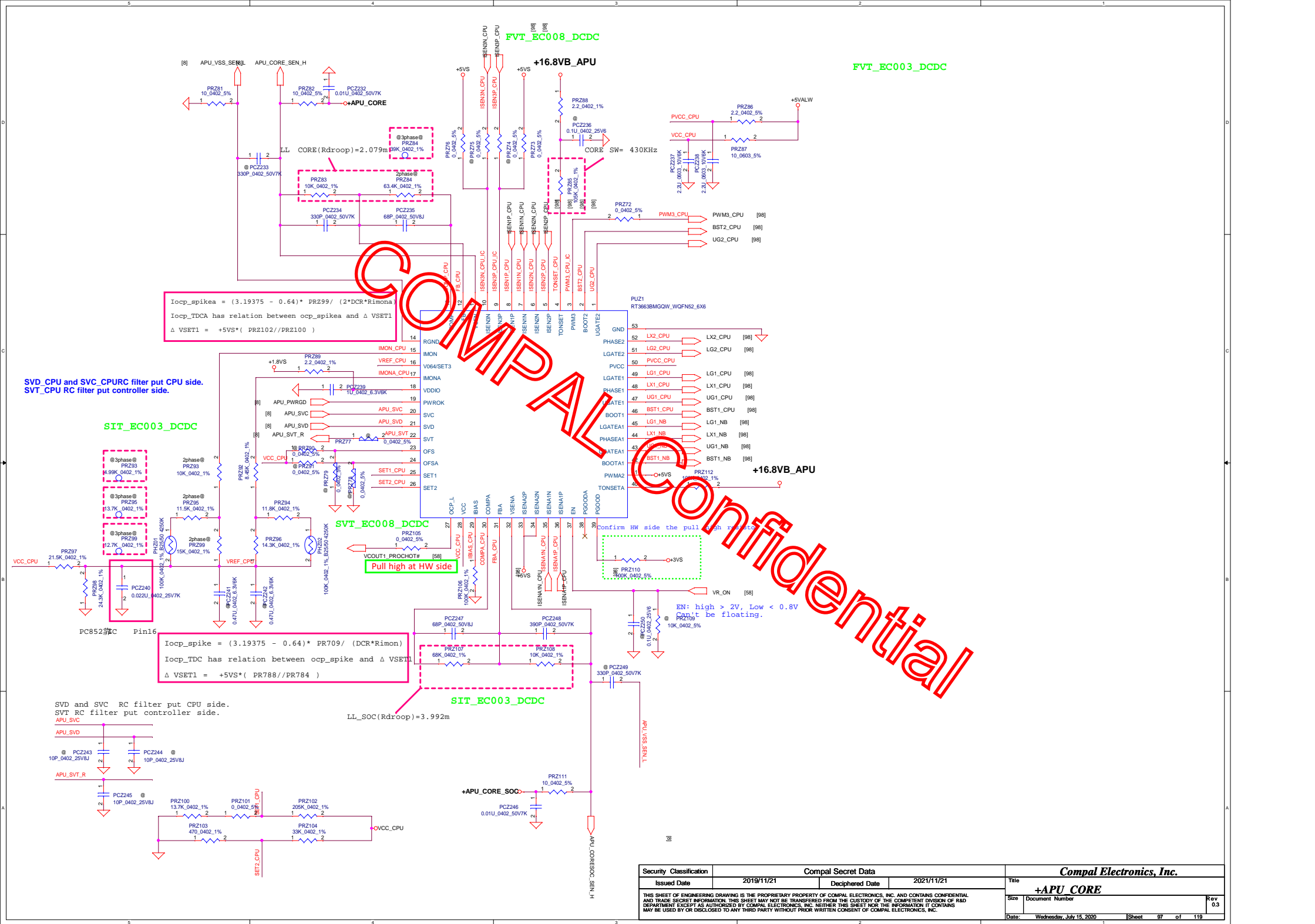
COMPAL Confidential

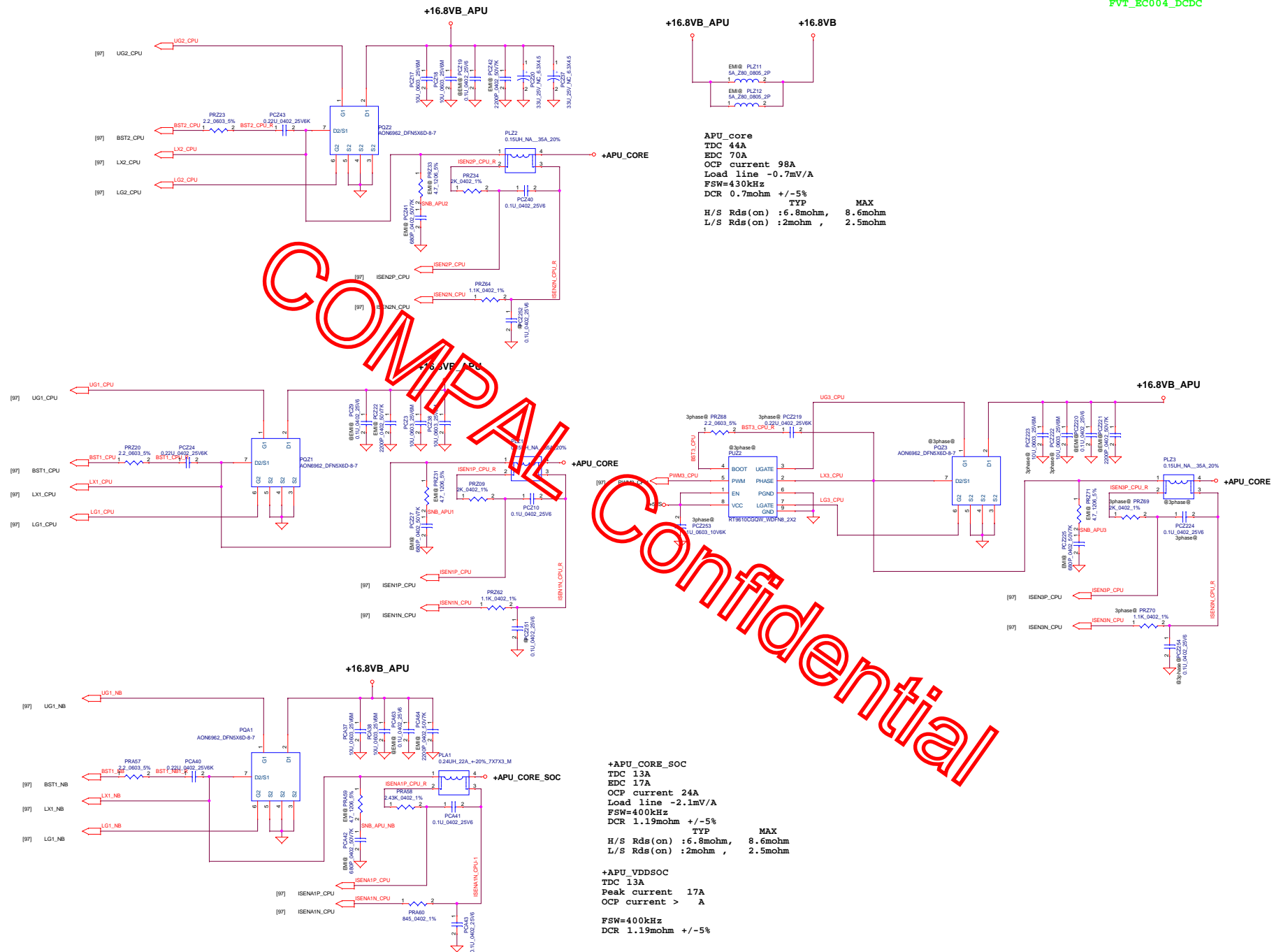
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title		
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	95 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date:				Wednesday, July 15, 2020	Sheet 96 of 119	







COMPAL Confidential

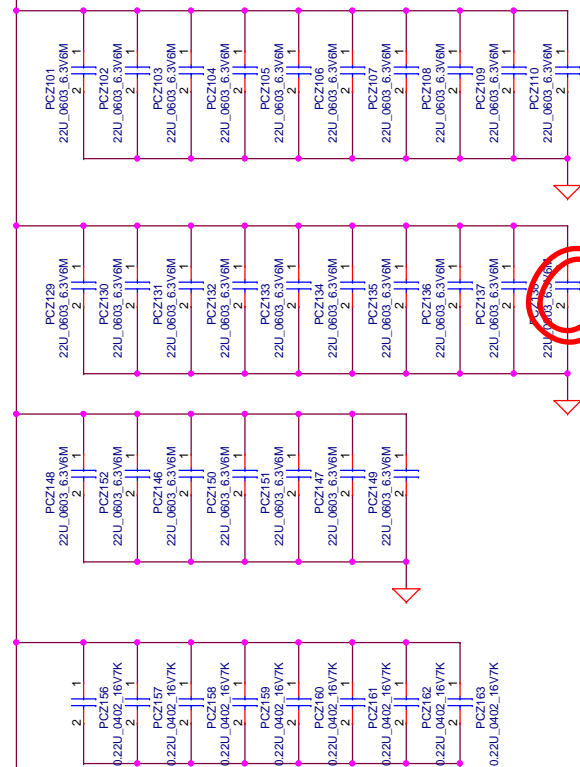
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title		
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	99 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	100 of 119	

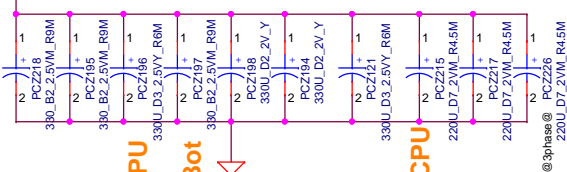
+APU\_CORE

+APU\_CORE



FVT\_EC005\_DCDC

+APU\_CORE



Under CPU

Bot

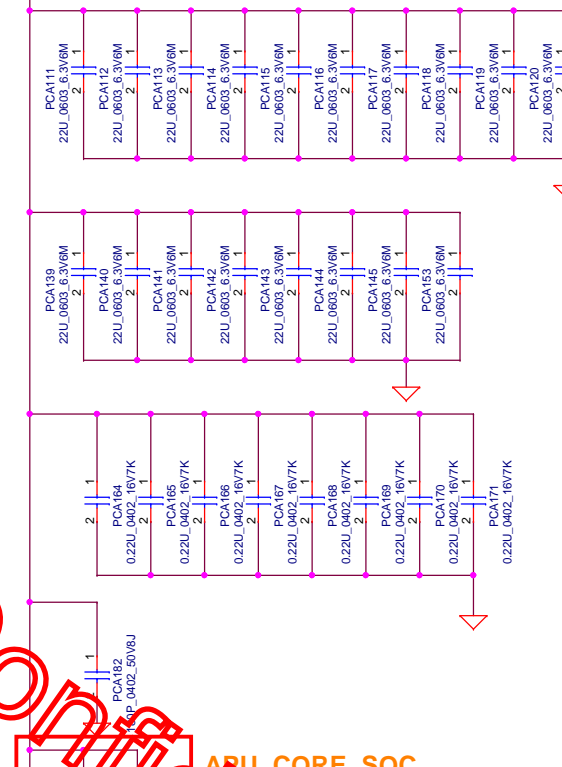
Under CPU

APU\_CORE  
330uF\*7 220uF \*2  
22uF\*35  
0.22uF\*8  
180pF\*1

330u is common part SGA00009S00

+APU\_CORE\_SOC

+APU\_CORE\_SOC



near CPU

330u is common part SGA00009S00

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/12/18	Deciphered Date	2019/12/18	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				+APU_CORE Cap	
Size	Document Number	Rev		Date	
Custom	LA-K061P	0.1		Wednesday, July 15, 2020	
Sheet		101		of	
119					

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title PWR- Reserve	
<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&amp;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>				Size Custom	Document Number LA-K061P
				Rev 0.1	
Date: Wednesday, July 15, 2020				Sheet	102 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	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&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	103 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	106 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2019/05/23	Deciphered Date	2021/05/31	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&amp;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>				PWR- Reserve		
				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	107 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date:				Wednesday, July 15, 2020	Sheet 108 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title PWR- Reserve	
<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&amp;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>				Size Custom	Document Number LA-K061P
				Date Wednesday, July 15, 2020	Rev 0.1
				Sheet	109 of 119

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet



COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	113 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	114 of 119	

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
<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&amp;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>				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
				Date:	Wednesday, July 15, 2020	Sheet

COMPAL Confidential

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		Deciphered Date		Title		
2019/05/23		2021/05/31		PWR- Reserve		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				Custom	LA-K061P	0.1
Date: Wednesday, July 15, 2020				Sheet	118 of 119	

Item	Reason for change	PG#	Modify List	Date	Phase
EVT 1	For 4 Cell voltage level as Vender suggestion	85	Add two capacitor PCB36 / PCB37 of 10U_0603_25V6M	2020/01/31	A
2	For EC COMMON design as battery FW update feature	85	Add one Oohm (PRB33) and BATT_FW#	2020/01/31	A
3	Tuning PRM5 for 1.2V OCP to 12.6A	89	Tuning PRM5 from 23.7K0402 to 27K_0402(BOM change)	2020/02/04	A
4	For Pull high change	85	PR21 pull high from +3VLP to +3VL	2020/02/04	A
FVT 1	Sequence change	88	PU502.12 change from 5V_3V_EN to 5V_EN	2020/03/19	B
2	Offset 0.75V as test.	91	PRF4, PRF30 from 39.2K to 42.2K	2020/03/19	B
3	Co-lay 3phase ==> CP20200317_0011	97	Change VR controller from RT3662 to RT3663	2020/03/26	B
4	Co-lay 3phase ==> CP20200317_0011	96	Add 3-phase for co-lay	2020/03/26	B
5	Co-lay 3phase ==> CP20200317_0011	101	1. PCB37, PCZ195, PCZ218 from D2 size to B2 size 2. Reserve 22uF 10 & Polymar cap *1	2020/03/26	B
6	Pull down resistor change from Oohm to 10K	90	PR1820 change from 6.7K0402 ohm to 10K_0402	2020/04/9	B
7	EMI request Snubber	87.88	1. PR502>> 4.7_1206, PR513 >> 680P_0402 mount 2. PR518>> 4.7_1206, PR533 >> 680P_0402 mount	2020/04/9	B
8	BOM change for CPU power 3phase sense reserve	97	Unmount PRZ74, PRZ75	2020/04/9	B
SIT 1	Batt_FW pin reserve<FVT SMT MEMO>	85	Mount PRB33 as 1K_0402	2020/06/04	C
2	0.75V remote sense <FVT SMT MEMO>	91	Mount PRF7, PRF25, PRF28, PRF33 Oohm	2020/06/04	C
3	APU APU_CORE_SOC test >> SDLE tuning	97	1. PRZ107 change from 59K_0402 to 68K_0402 2. PCZ248 change from 330P_50V to 390P_50V 3. PRZ93 change from 9.31K_0402 to 10K_0402 4. PRZ92 cahnge from 8.25K_0402 to 8.45K_0402.	2020/06/04	C
SVT 1	Shortpad change	82	PR8 chagne from 0_0603 to 0603 Shortpad	2020/07/08	Pre-MP
2	Shortpad change	85	PRB10, PRB12, PRB32, PRB4, PRB11 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
3	Shortpad change	87	PR511, PR514, PR501, PR301 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
4	Shortpad change	88	PR517, PR516 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
5	Shortpad change	89	PRM3, PRM4, PR251 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
6	Shortpad change	90	PR1813 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
7	Shortpad change	91	PRF32, PRF28,PRF33,PRF7,PRF25 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
8	Shortpad change	97	PRZ79,PRZ78,PRZ77 chagne from 0_0402 to 0402 Shortpad	2020/07/08	Pre-MP
9	For ACS5 consumption optimize	83	1. PRS3, PRS5, PRS8, PRS10chagne from 47K_0402 to 68.1K_0402 2. PRS4, PRS9 chagne from 470K_0402 to 681K_0402	2020/07/15	Pre-MP

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/23	Deciphered Date	2021/05/31	Title PWR- PIR	
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 LA-K061P
Date: Wednesday, July 15, 2020				Sheet	119 of 119