

Compal Confidential

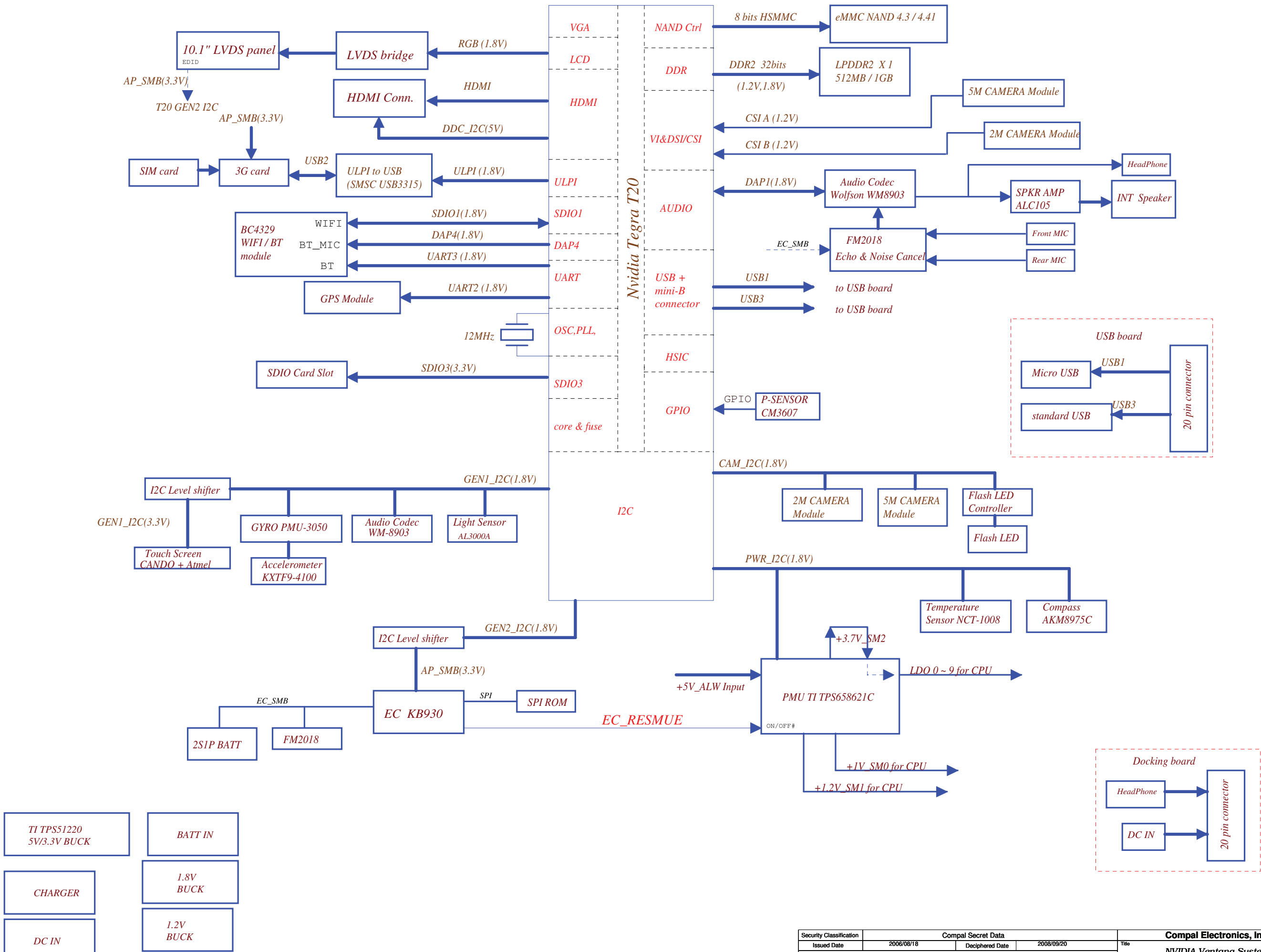
PBJ20 Schematics Document

Nvdia(T20) + LPDDRII

2010-10-07

REV: 0.4

PBJ20 system block diagram



<http://hobi-elektronika.net>

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/08/18	Deciphered Date	2008/09/20	Title	NVIDIA Ventana System
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Voltage Rails

Power Plane	Description	IDLE	Standby
VIN	Adapter power supply (12V)	ON	ON
B+	AC or battery power rail for power circuit.	ON	ON
+1.2VS_SM0	Core voltage for CPU	ON	ON
+1.0VS_SM1	CPU voltage for CPU	ON	OFF
+1.1VS_LDO1	AVDD_PLL power rail	ON	OFF
+1.2VS_LDO2	T20 RTC power rail	ON	OFF
+1.8VS_LDO4	T20 system power rail	ON	ON
+3.3VS_LDO3	T20 USB power rail	ON	OFF
+2.85VS_LDO5	Core voltage for EMMC	ON	OFF
+2.85VS_LDO6	Core voltage for CAMERA	ON	OFF
+3.3VS_LDO7	T20 HDMI power rail	ON	OFF
+1.8VS_LDO8	T20 HDMI PLL power rail	ON	OFF
+2.85VS_LDO9	T20 DDR RX power rail	ON	ON
+3VALW	3.3V always on power rail	ON	ON
+3VS	3.3V switched power rail for standby mode	ON	OFF
+5VALW	5V always on power rail	ON	ON
+1.8V	1.8V always on power rail	ON	ON
+1.8VS	1.8V switched power rail for standby mode	ON	OFF
+3.3VS_RTC	RTC power	ON	ON

STATE \ SIGNAL	EC_SYS_STANDBY#	EN_VDD_+1.8VS_S3	EN_VDD_3V3	EN_VDD_1V8
Full ON	High	High	High	High
Standby	High	High	High	High

PWR_I2C address

Device	Address
PMU	0110 100X b
E-Compass	
Temperature sensor	1001 100X b

CAM_I2C address

Device	Address
CAMERA 5M	0110 110X b
CAMERA 1.3M	1001 000X b
LED FLASH	

GEN1_I2C

Device	Address
Audio Codec	1001 010xb
Light sensor	0100 010xb
Gyro	1101 000xb

TS_I2C

Device	Address
Touch Panel	0100 110xb

GEN2_I2C

Device	Address
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AP_SMB

Device	Address
PANEL EDID	
3G Card	
EC	

EC_SMB

Device	Address
Echo Cancellation	1011 111xb
BATT	

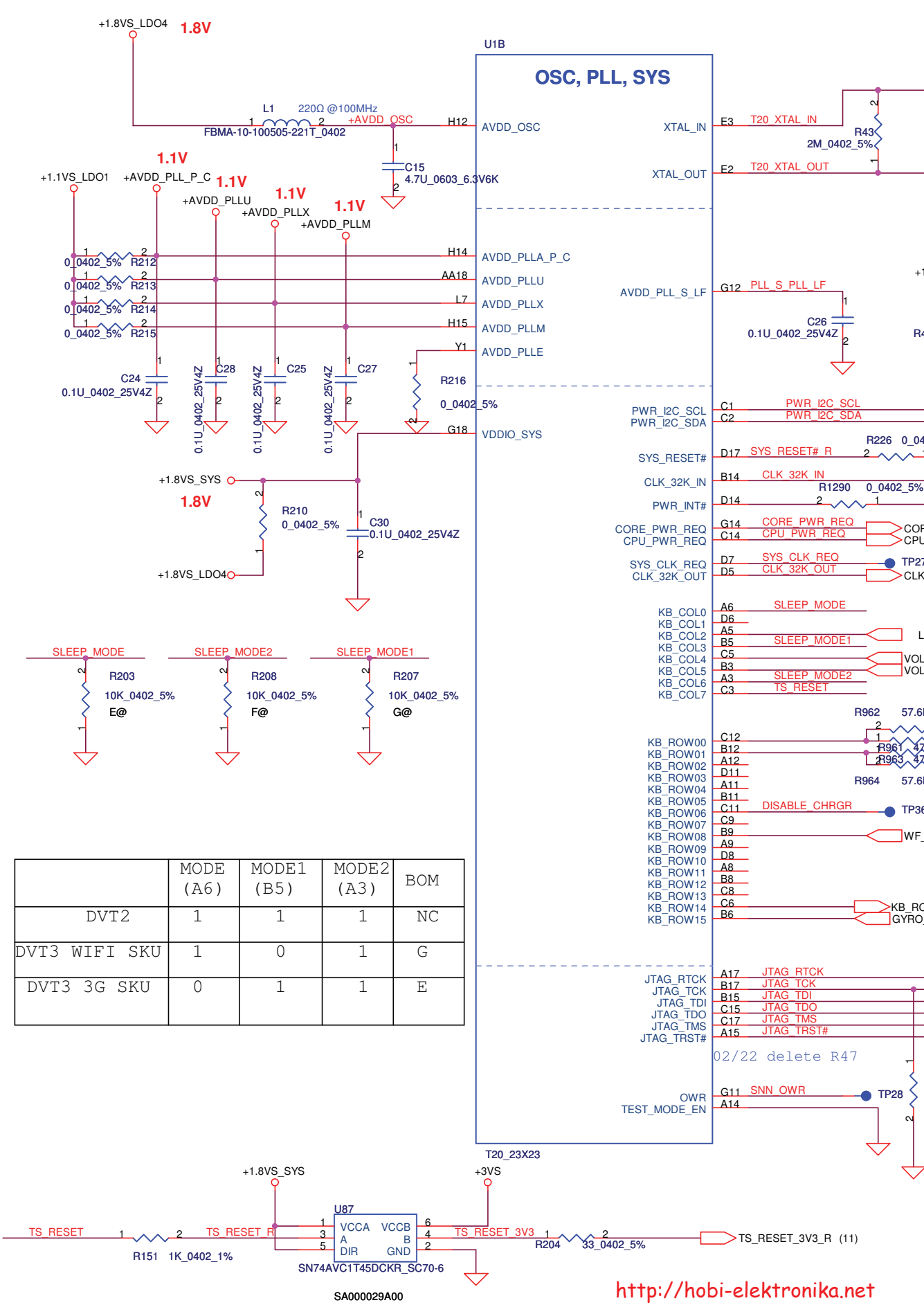
AP_SMB

Device	Address
G-sensor	0000 1111 b

DDC_I2C

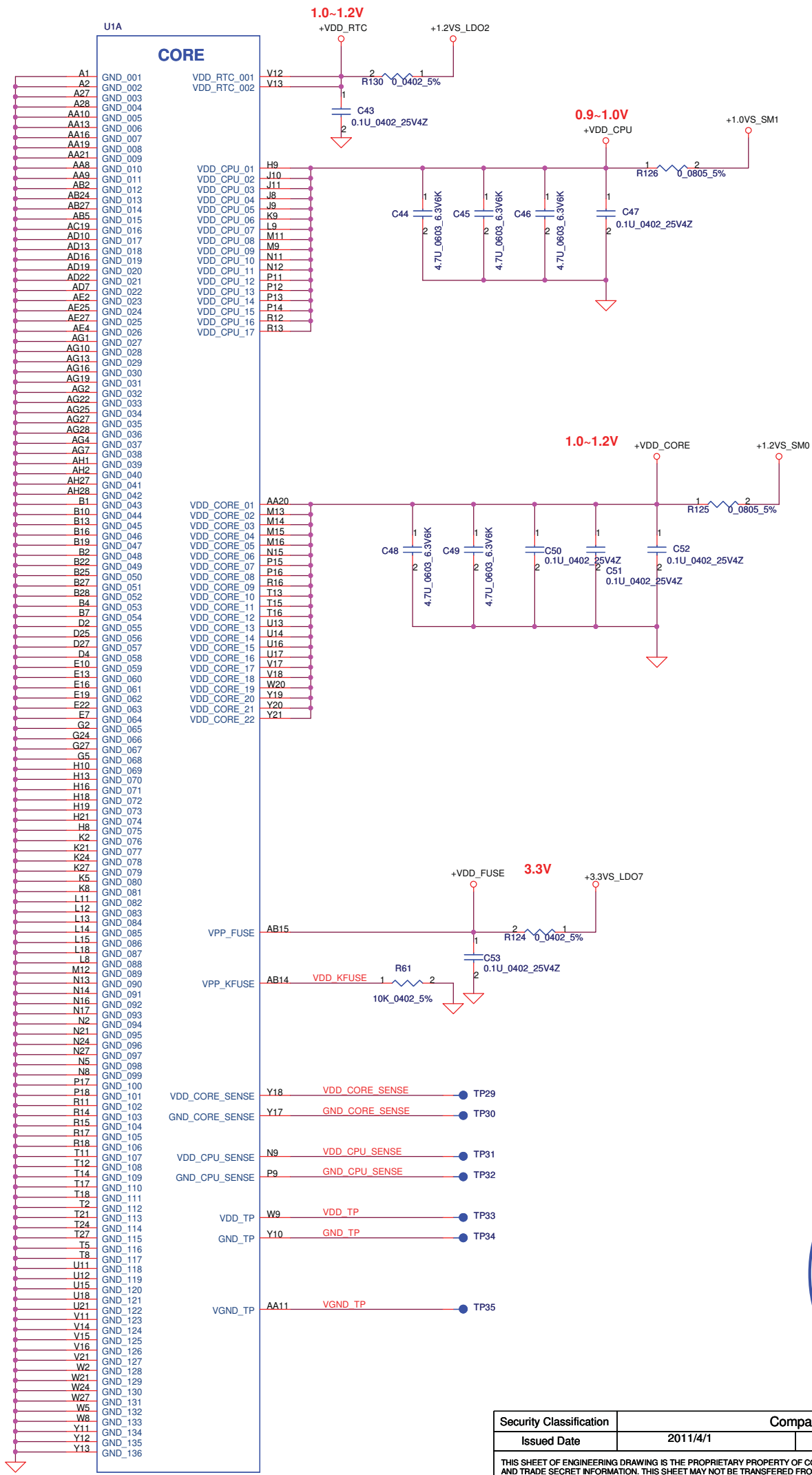
Device	Address
HDMI EDID	1010 000xb





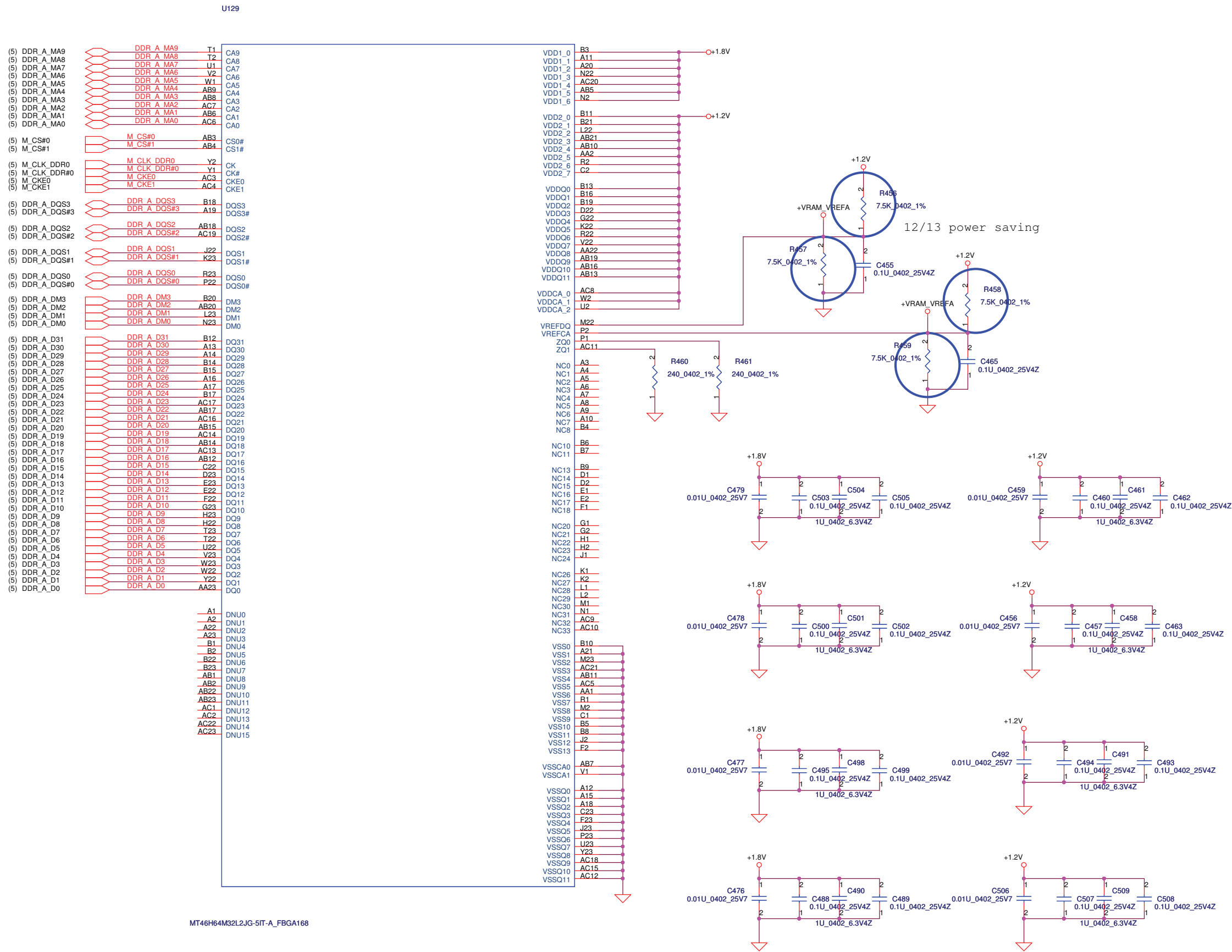
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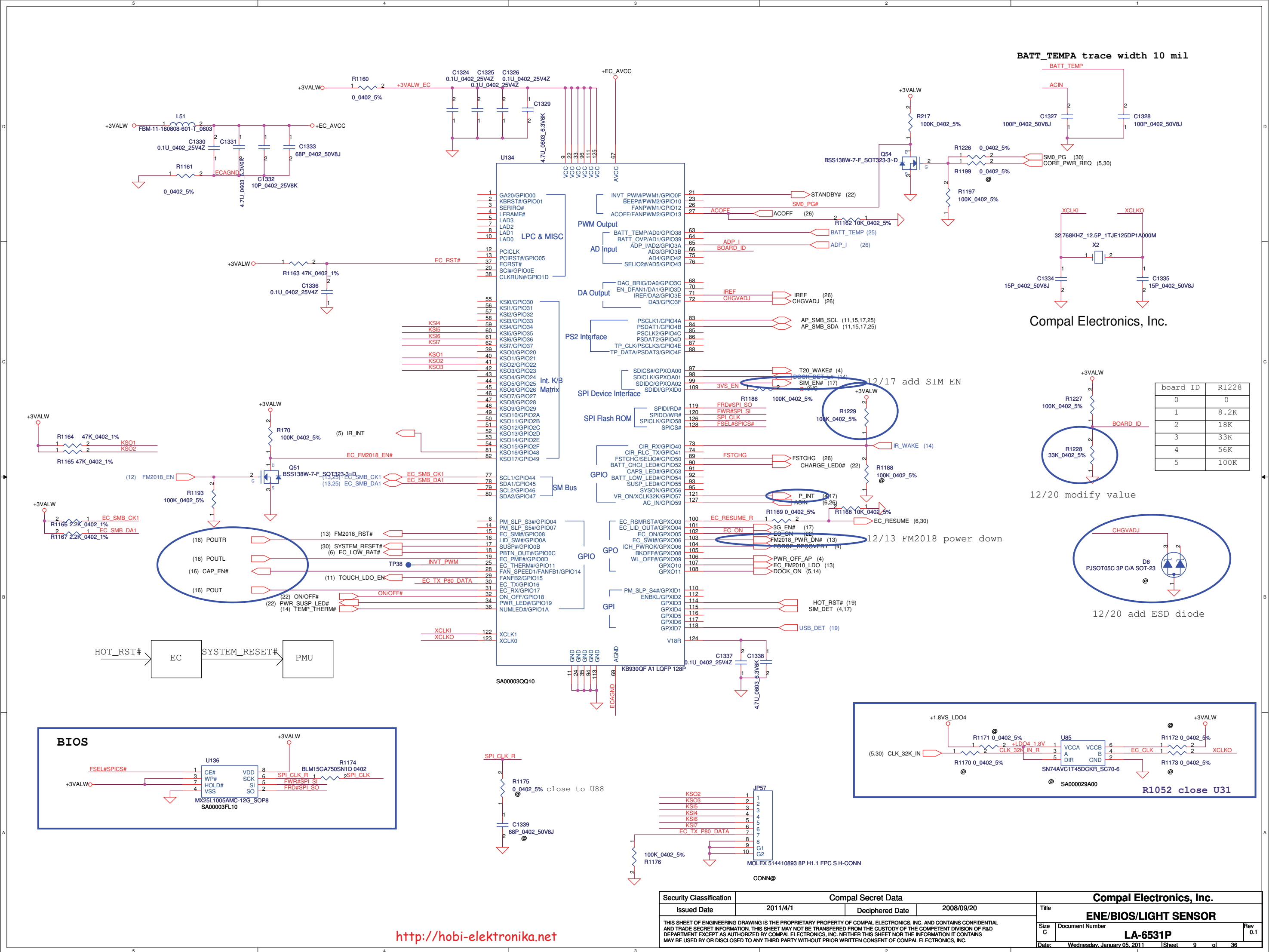
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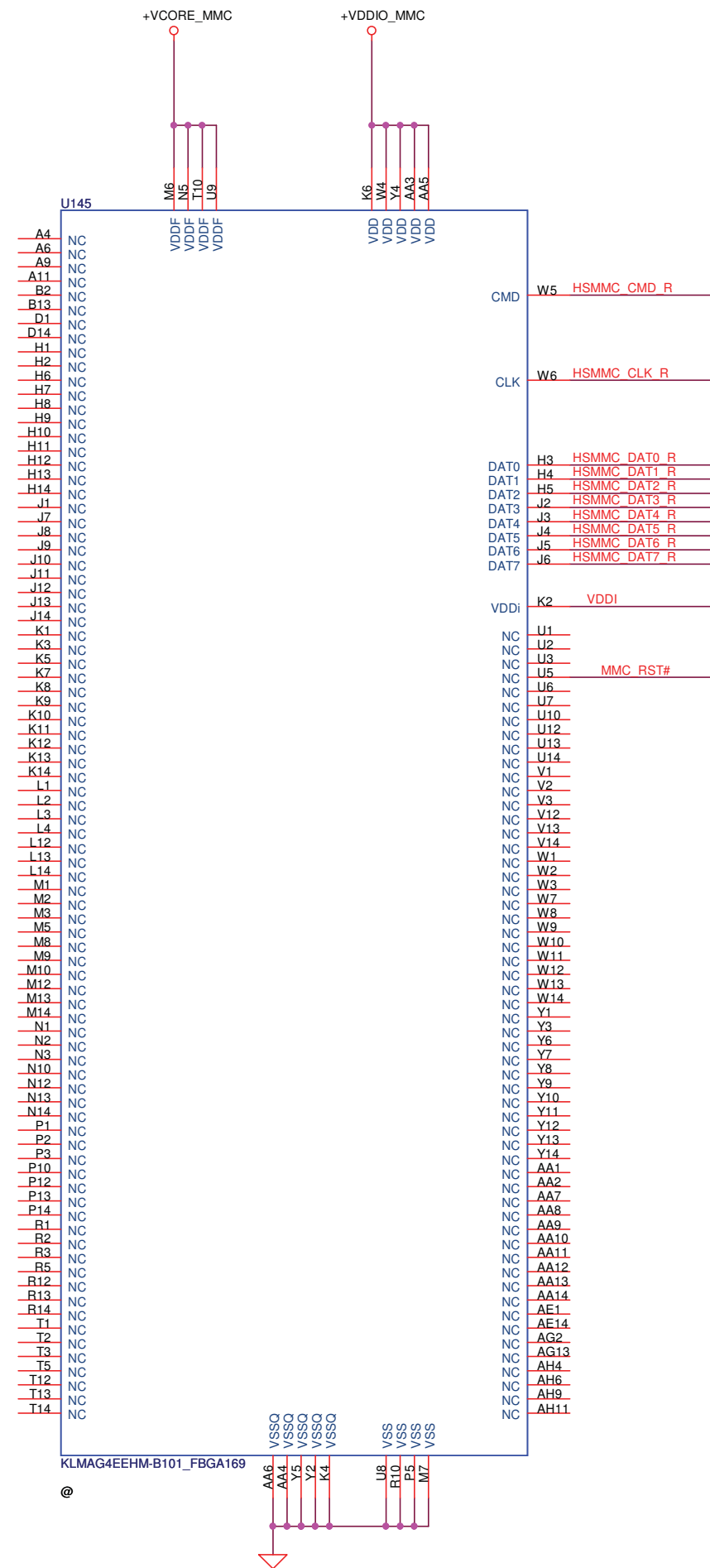
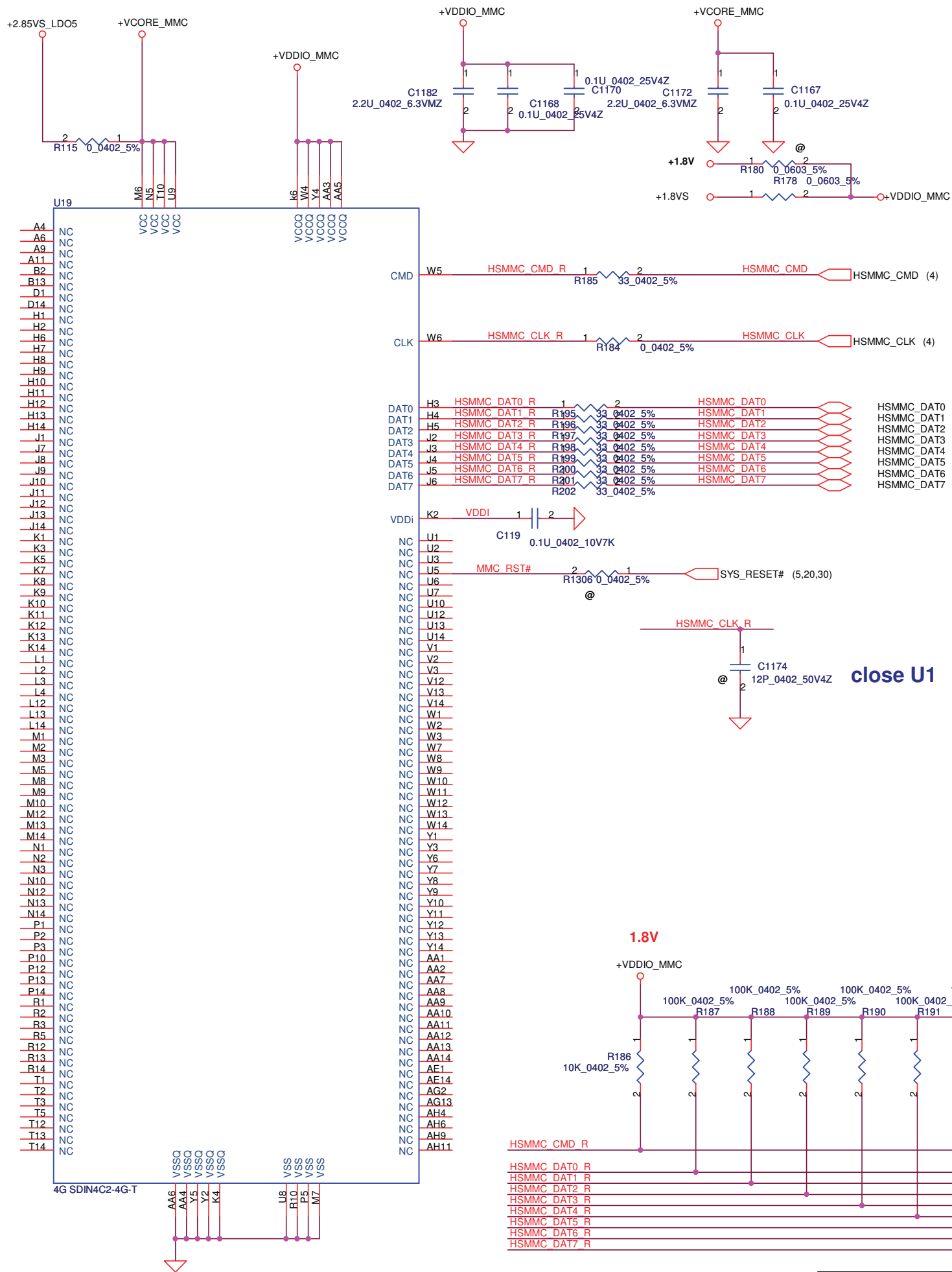


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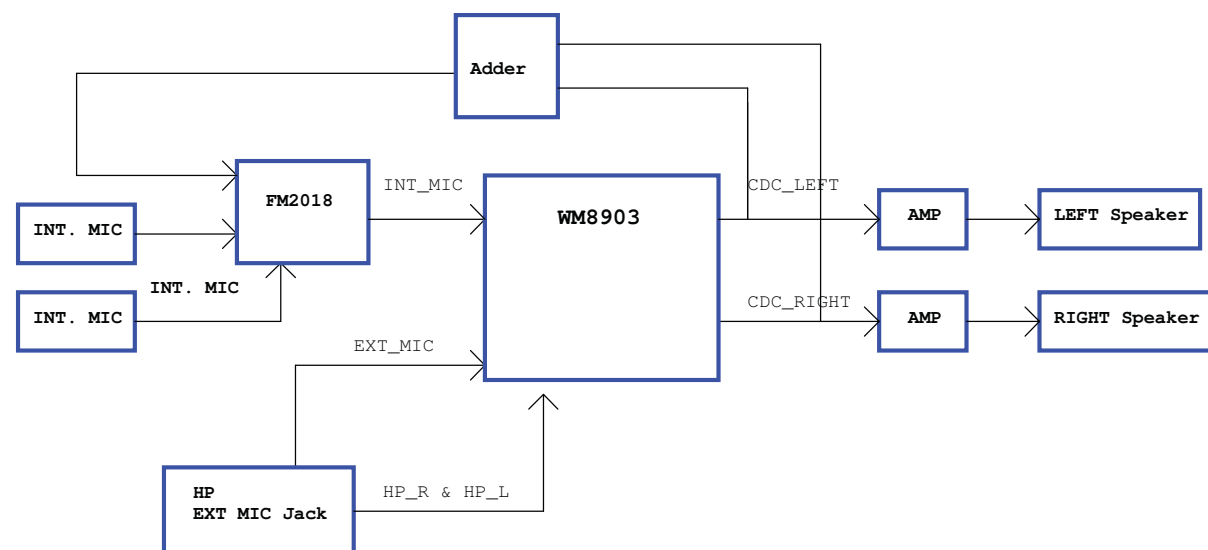
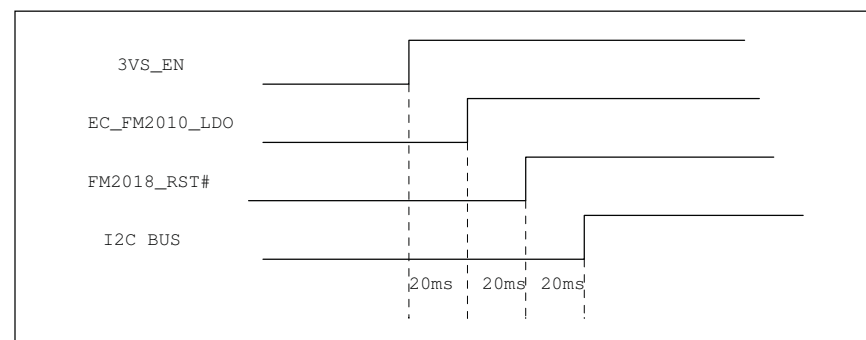
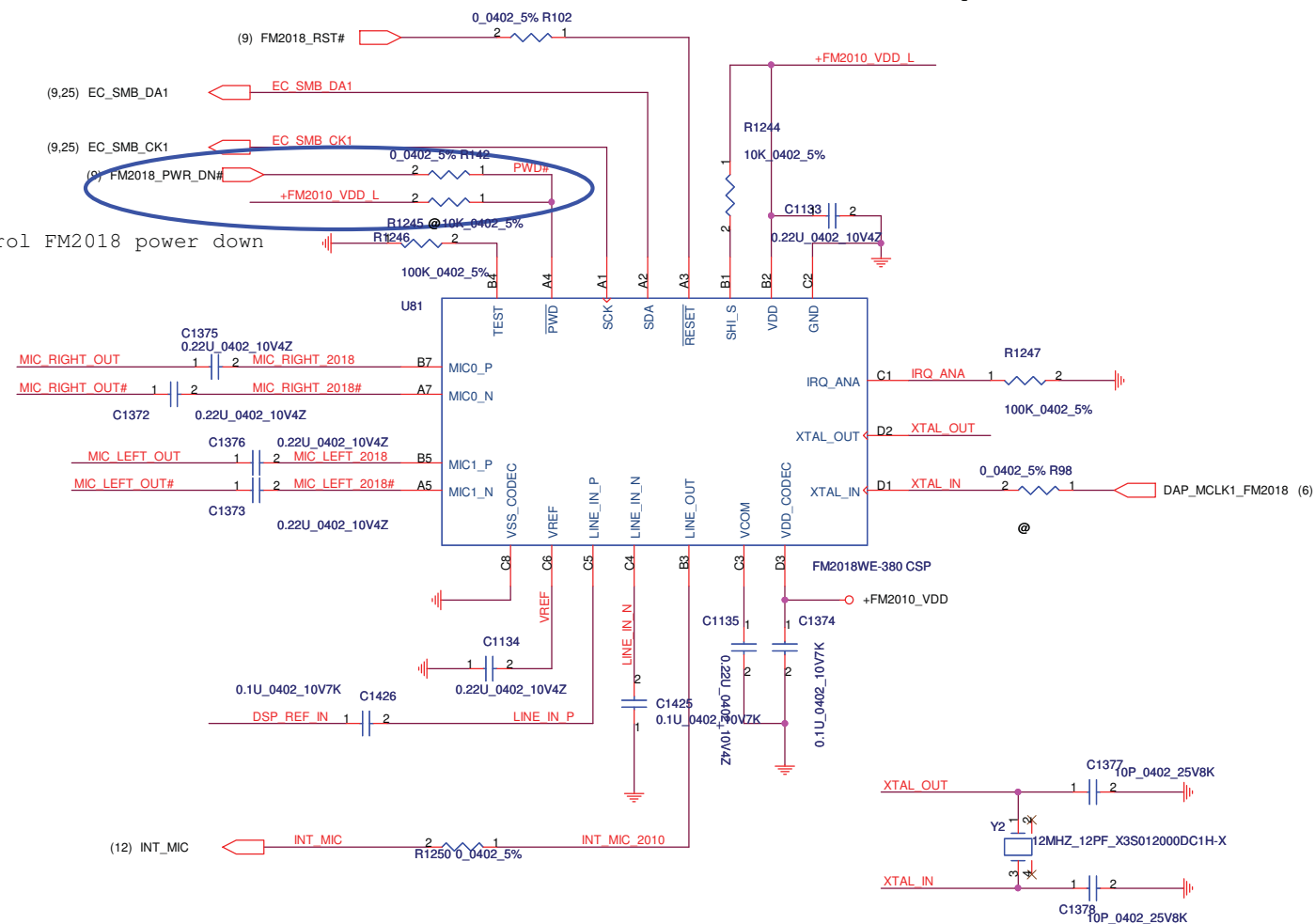
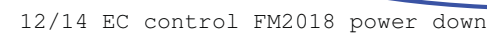
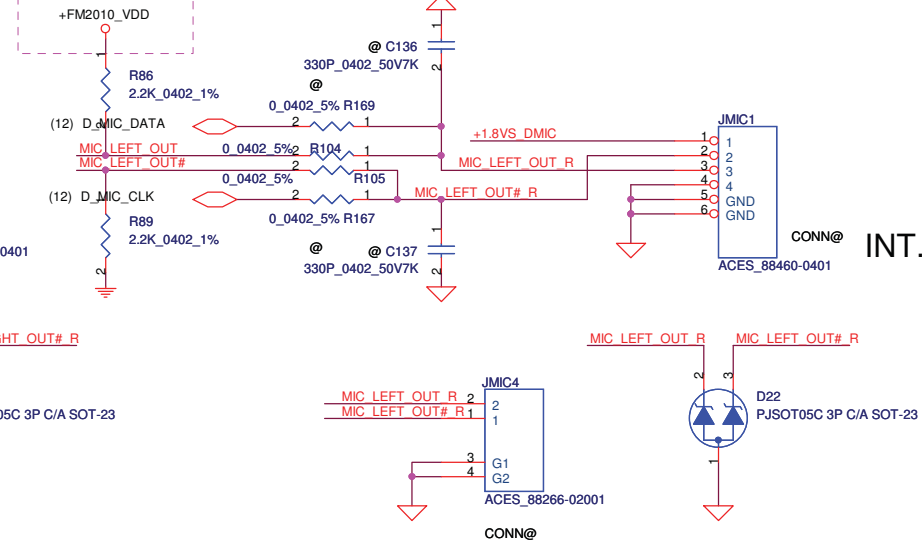
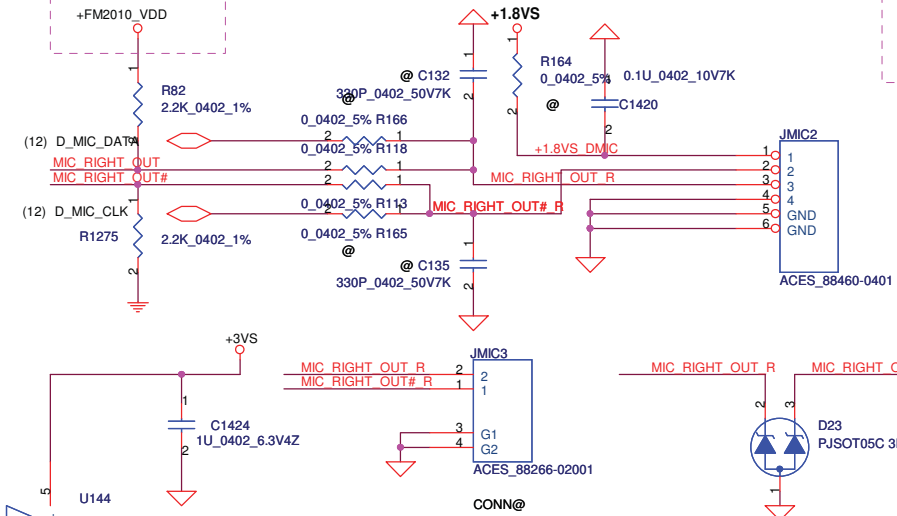
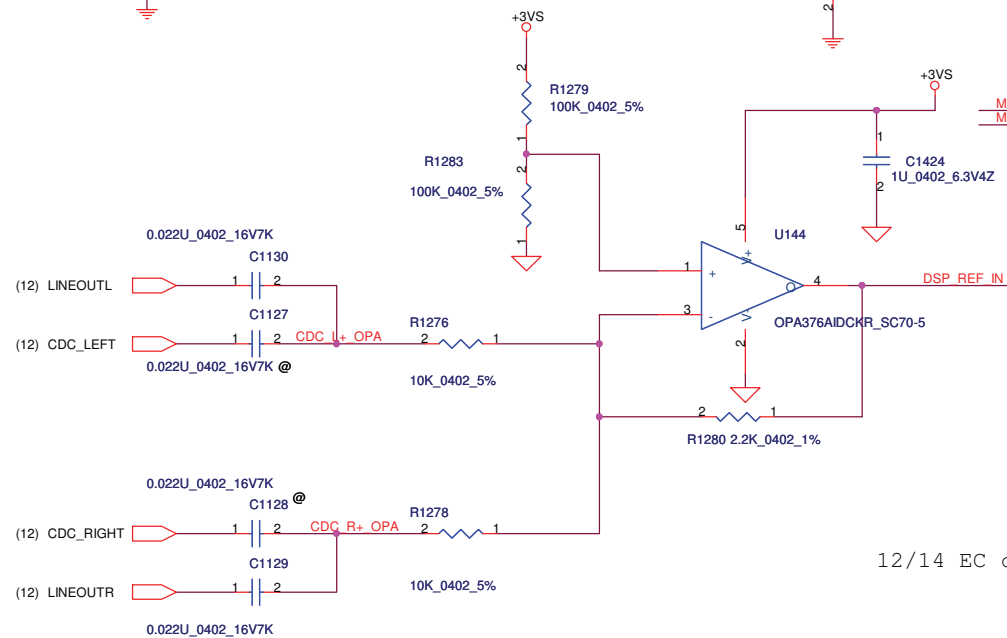
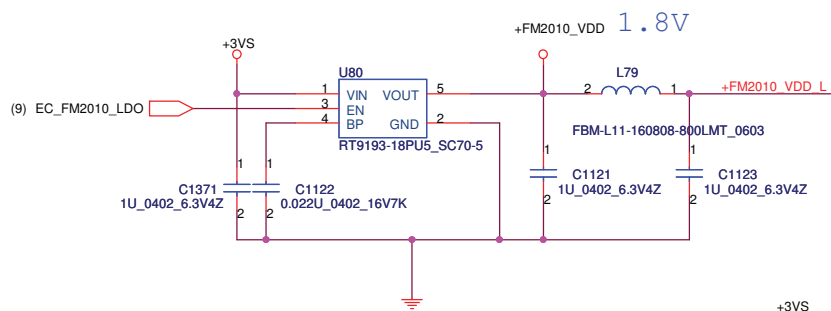




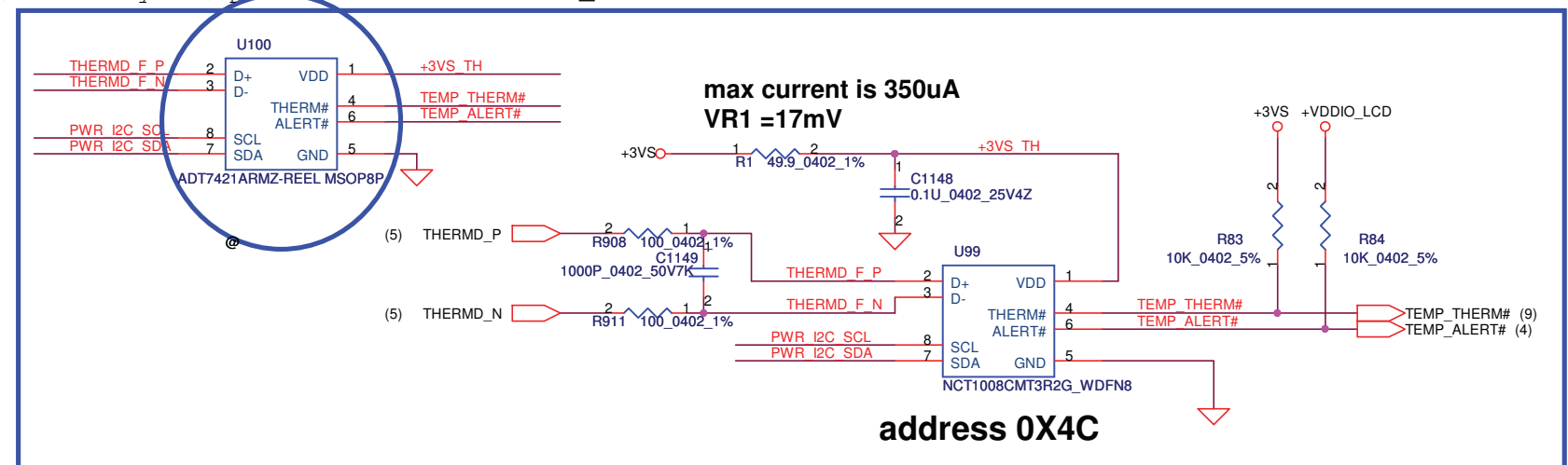
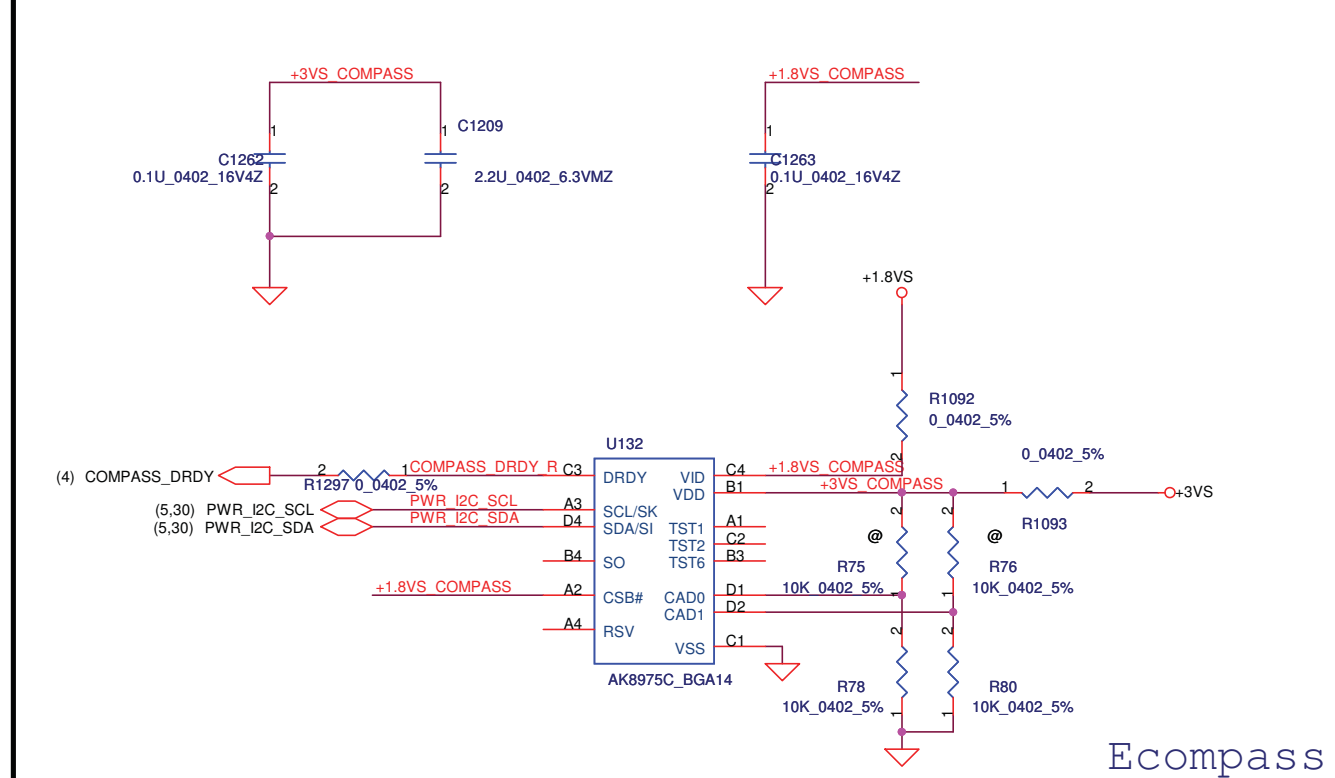
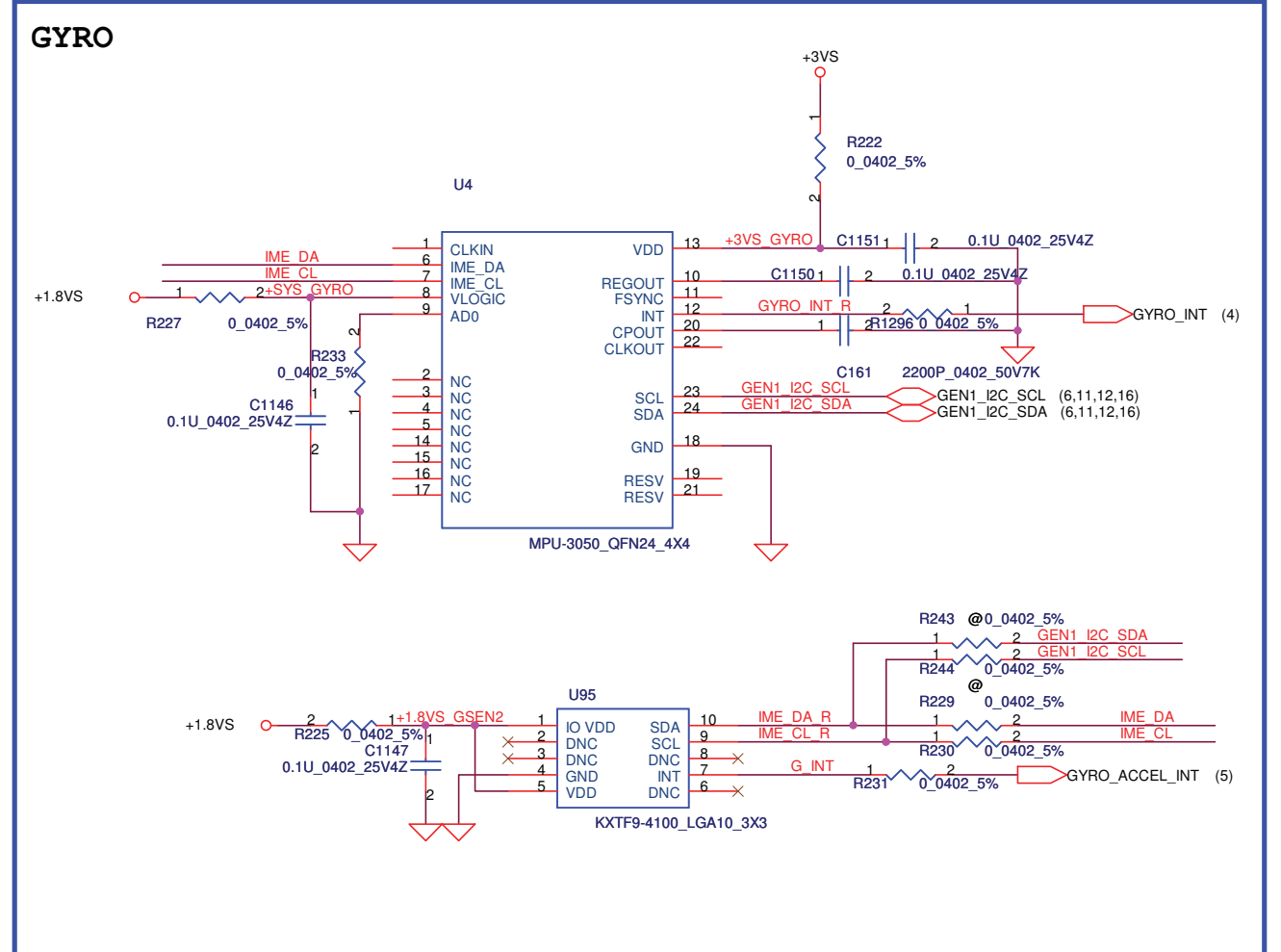
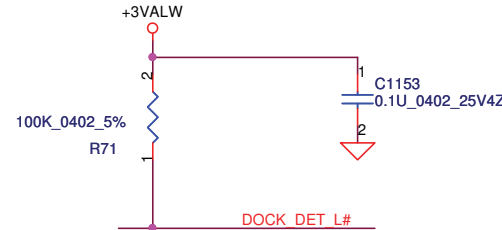
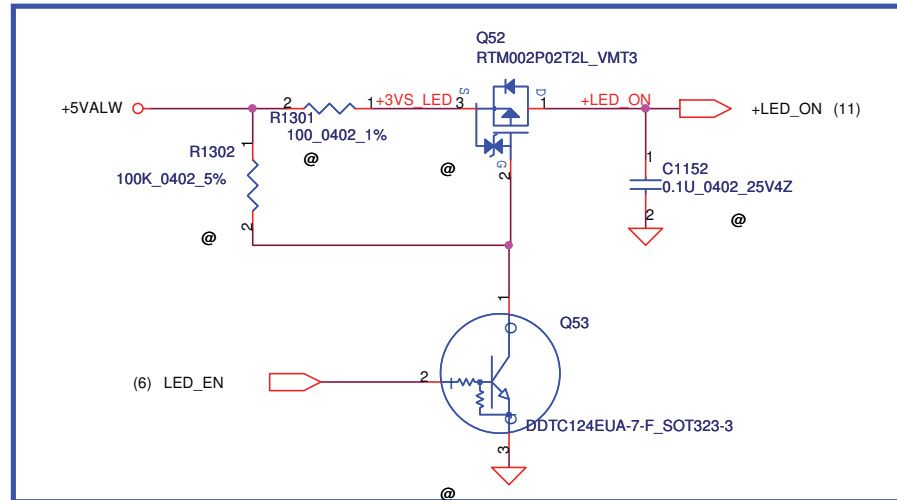
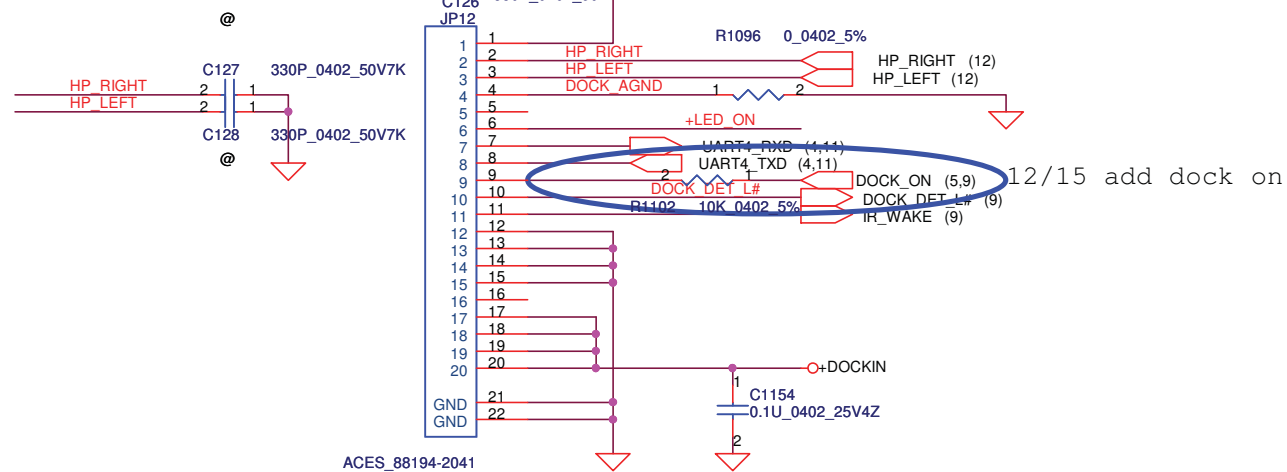


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Date: Friday, December 24, 2010				Sheet	Rev
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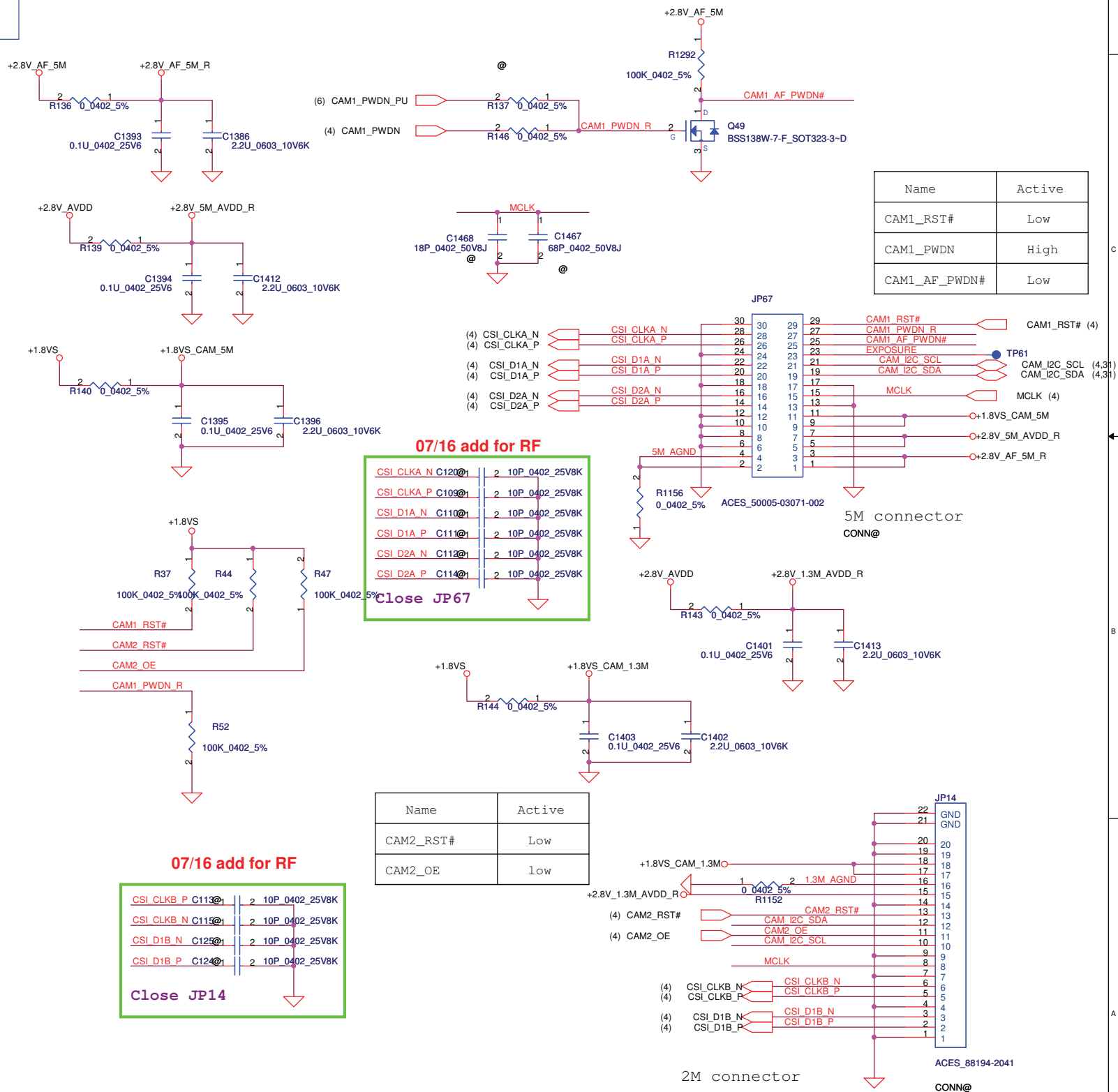
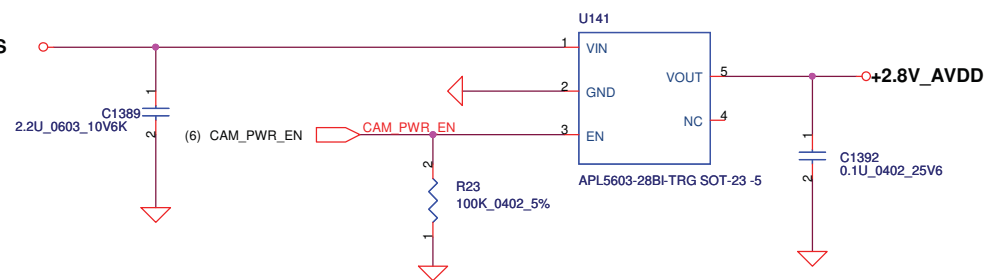
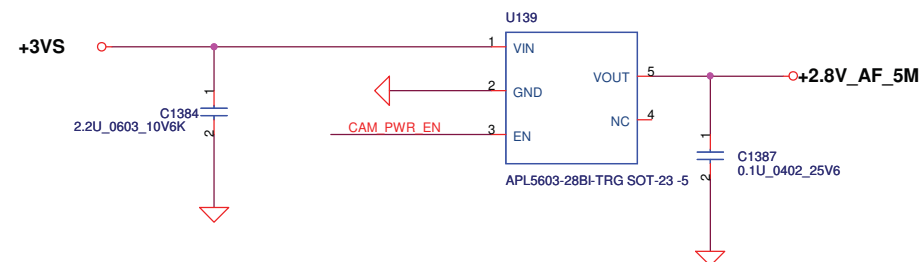
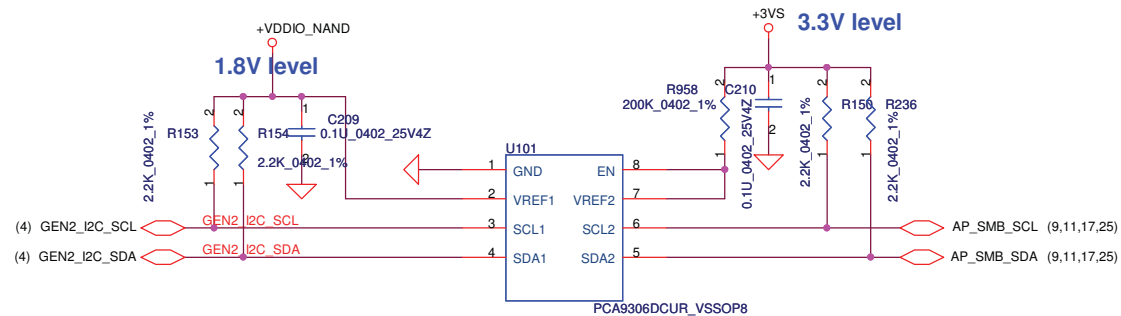


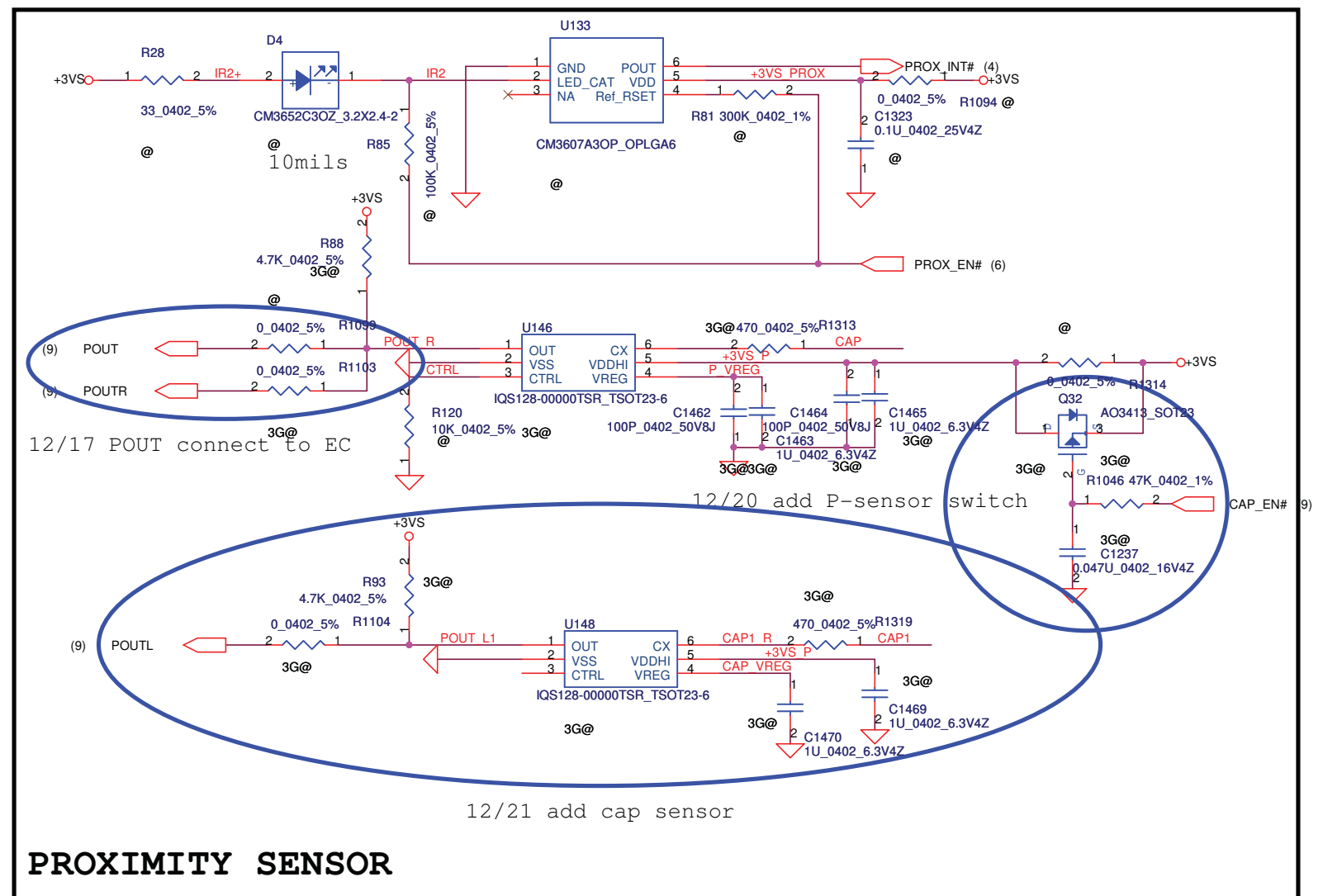
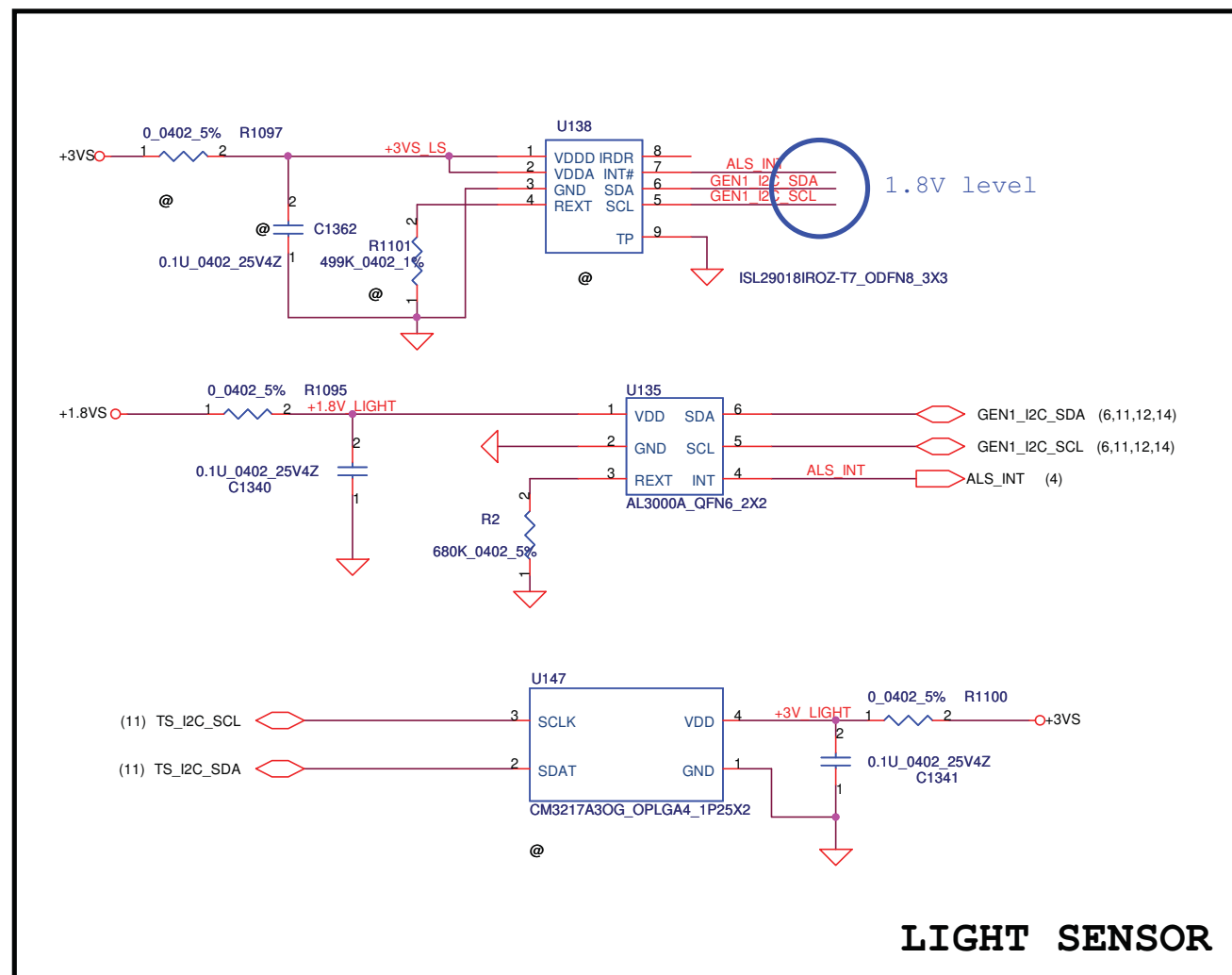
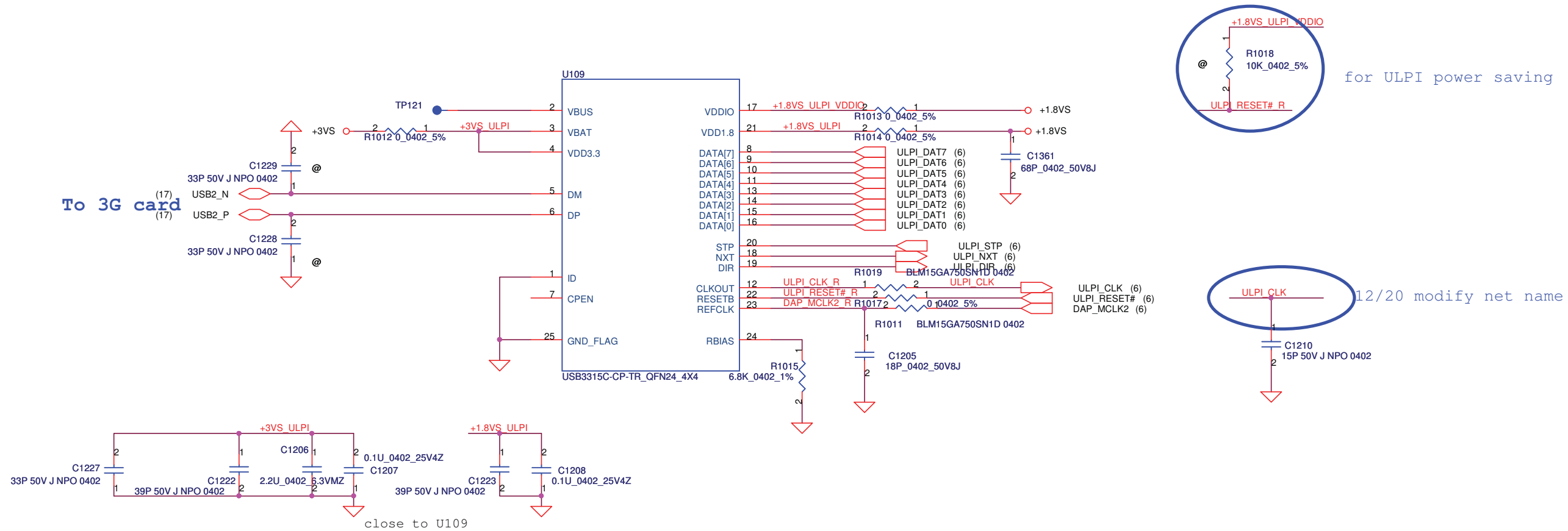
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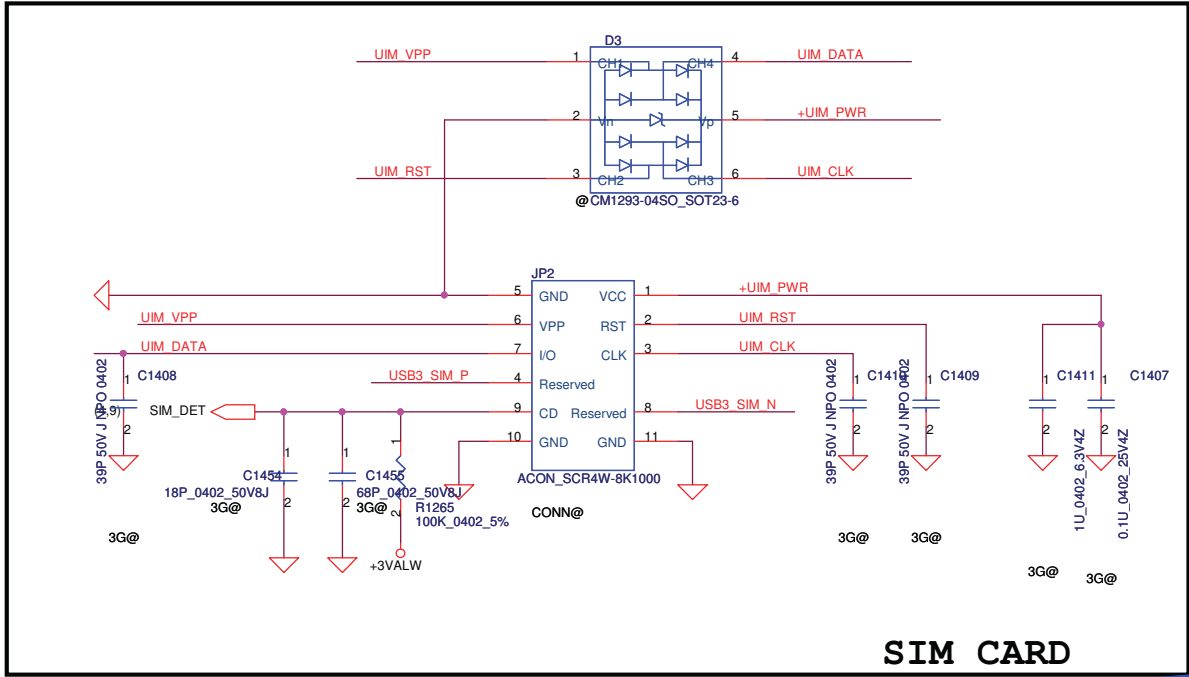


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Level shift







12/17 active high

12/08 RF request

12/08 change size 0402 to 0201

12/08 change size 0402 to 0201

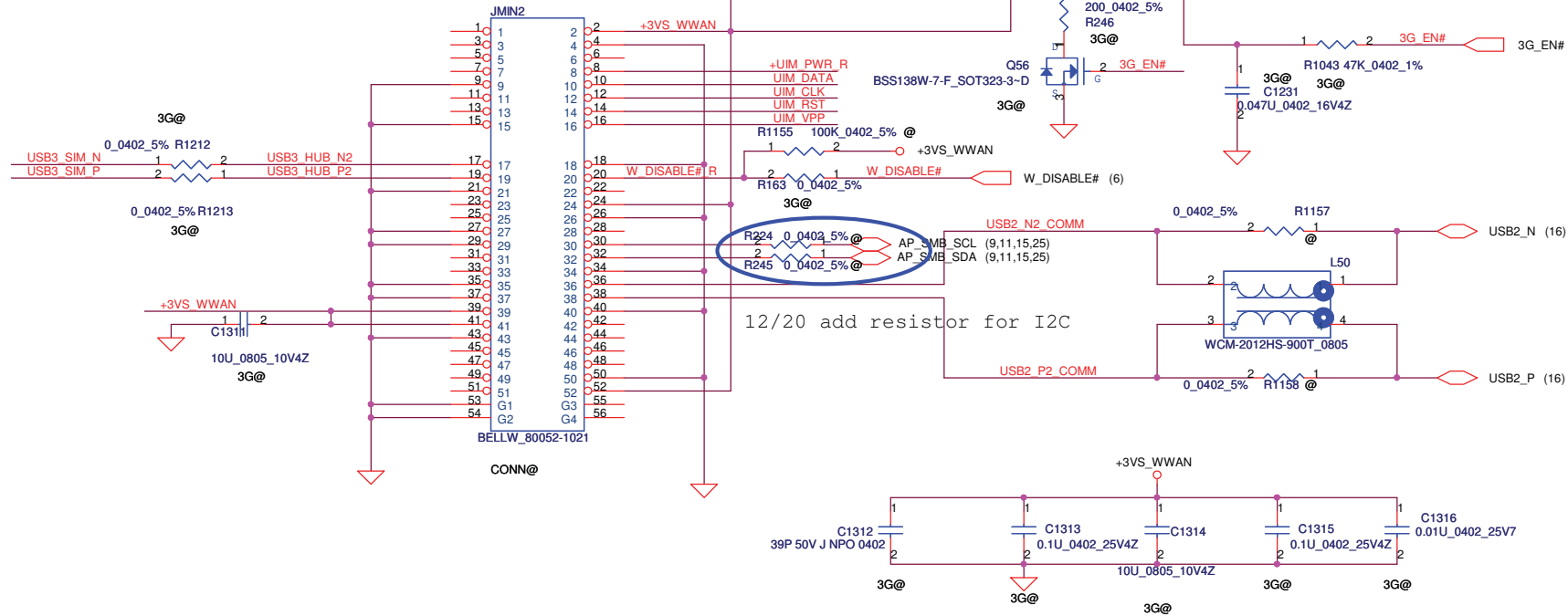
12/20 add SIM on/off circuit

12/20 add resistor for I2C

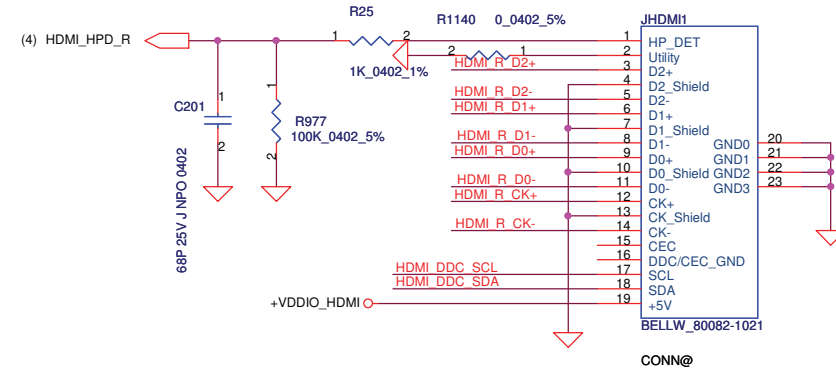
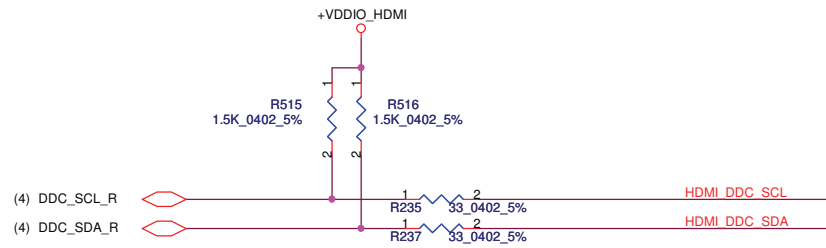
Close to WWAN CONN

From ULPI

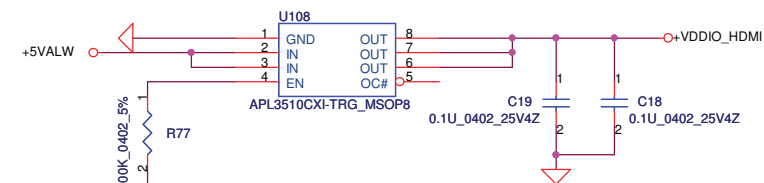
Mini-Express Card for WWAN



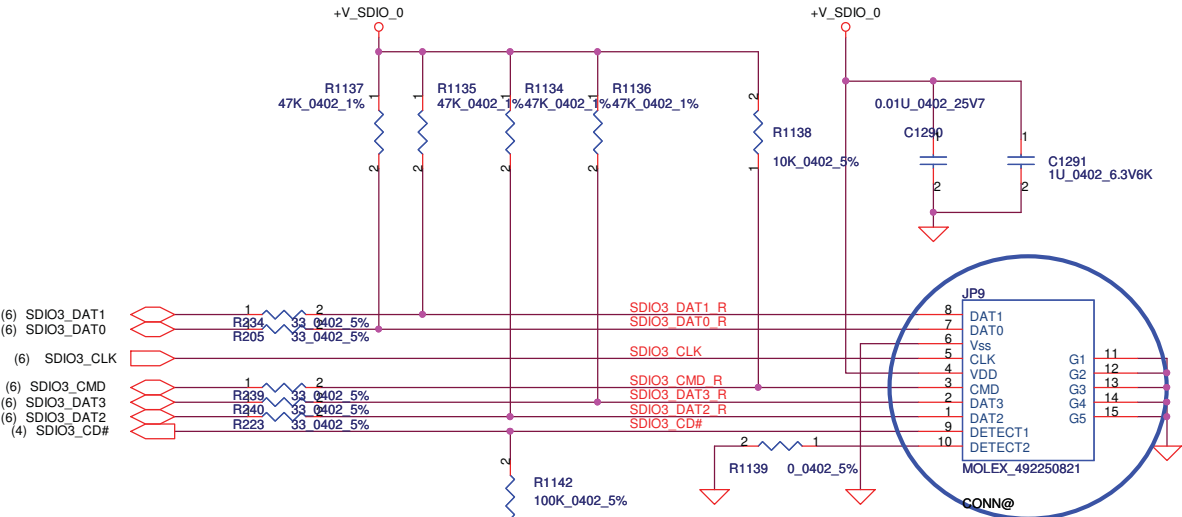
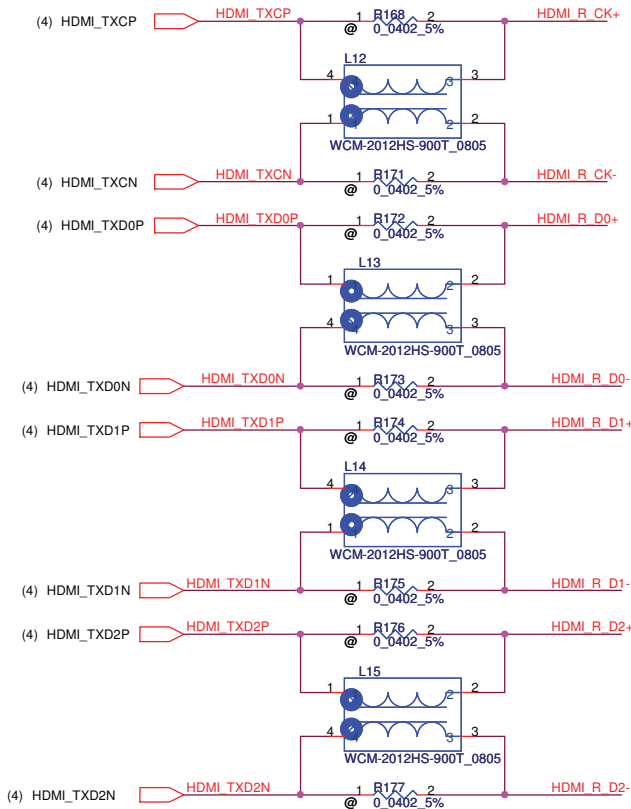
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Size	C	Document Number	LA-6531P	Rev
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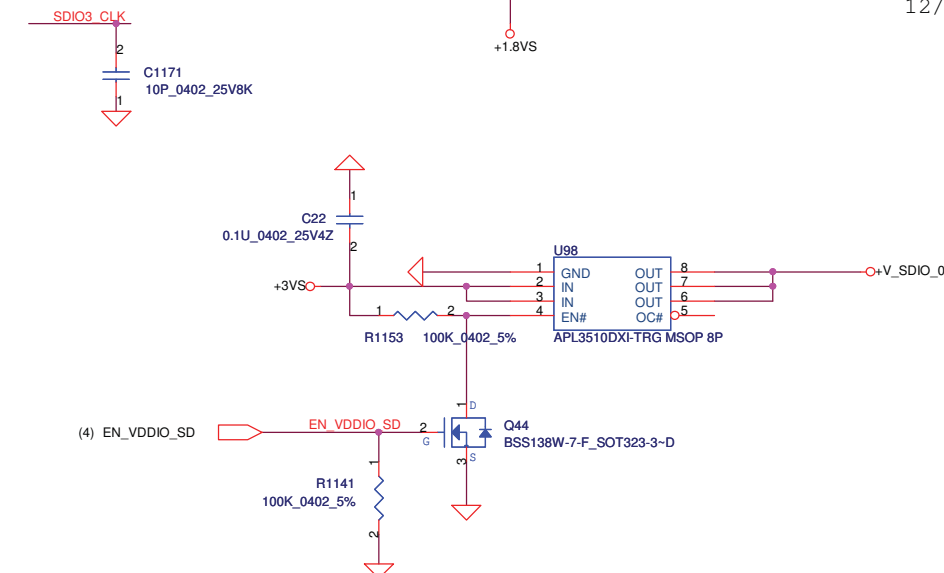
HDMI Type D Connector



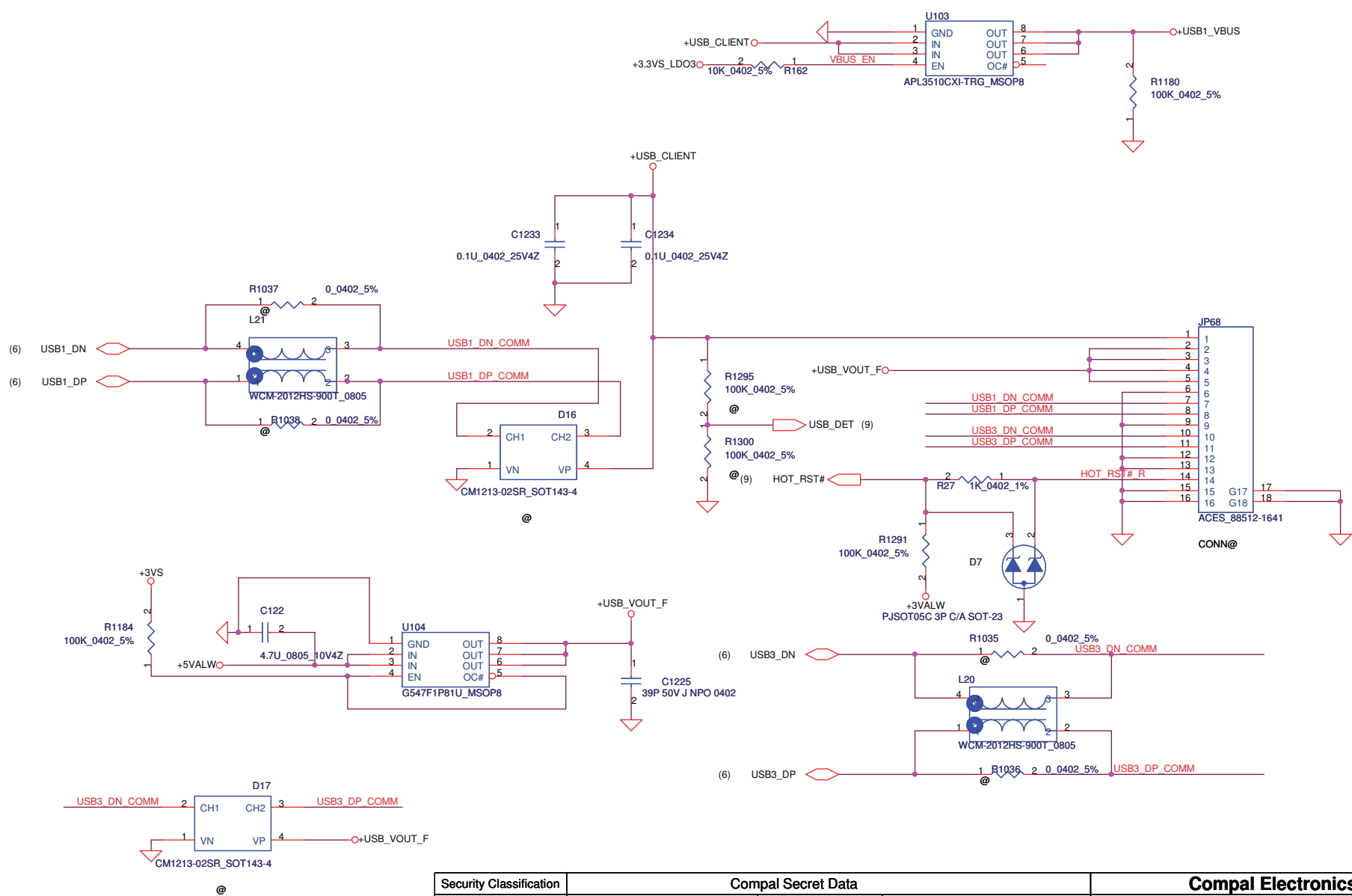
07/23 pull high

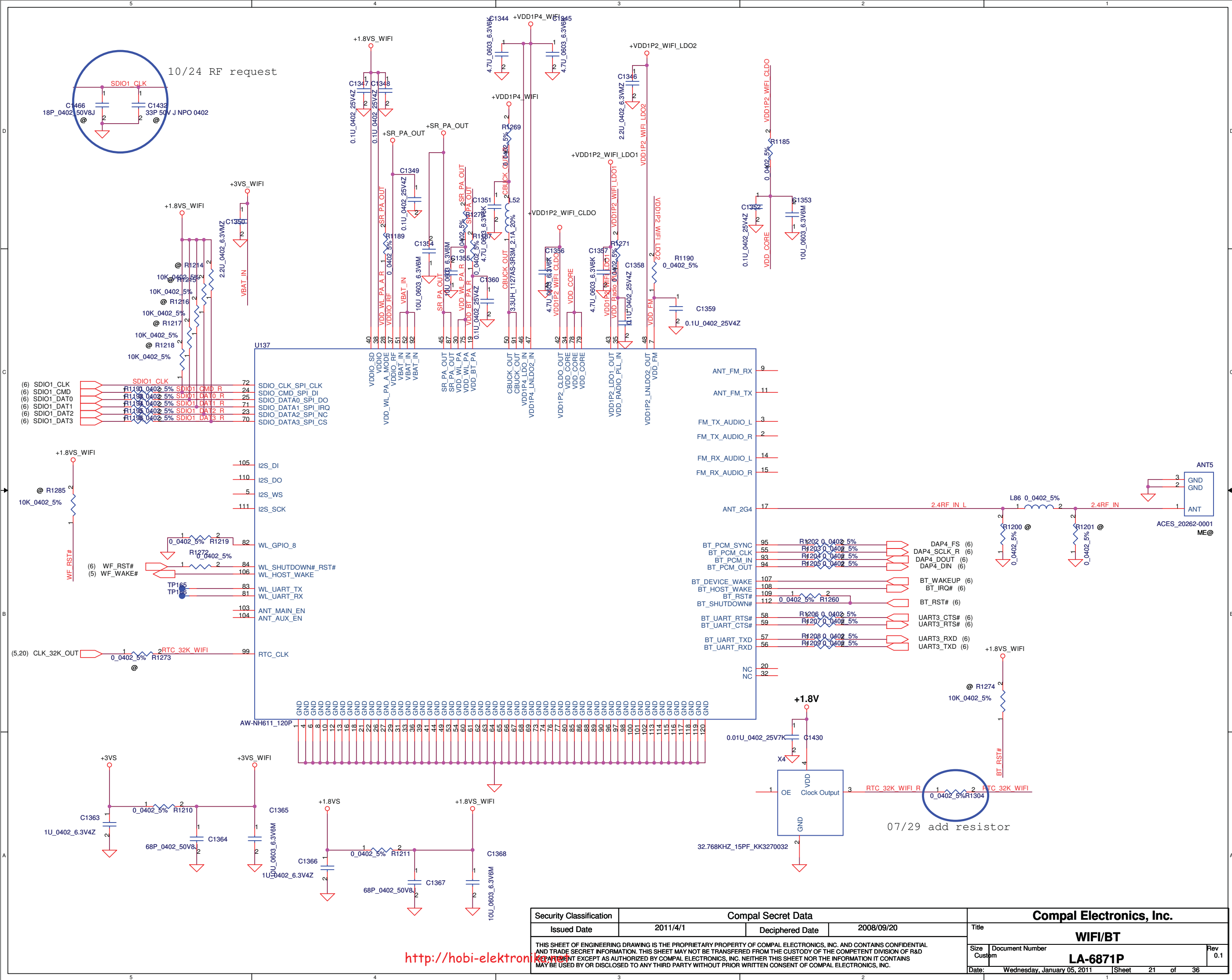


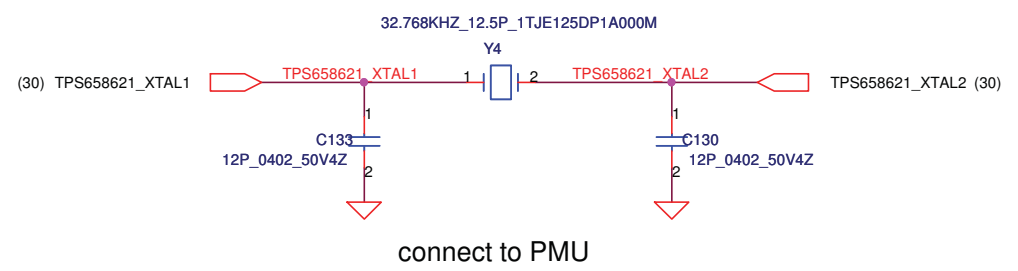
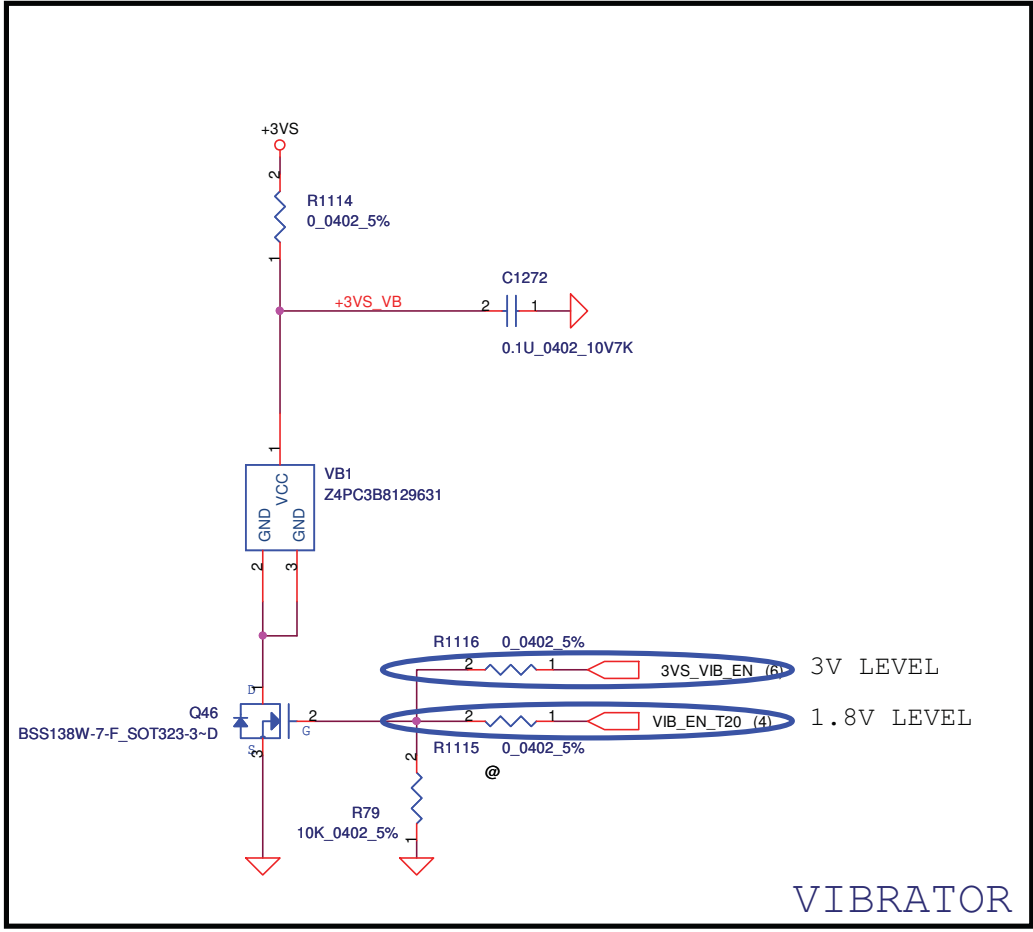
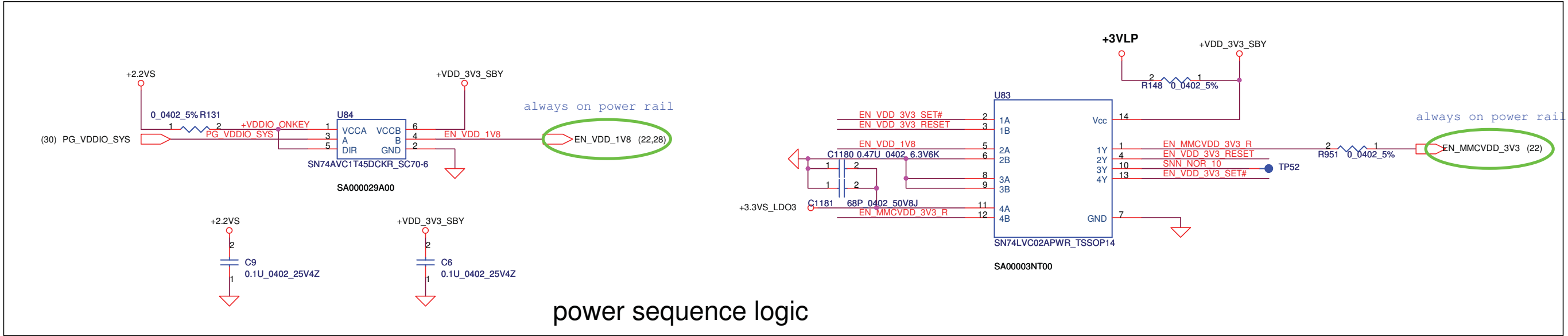
12/20 modify footprint

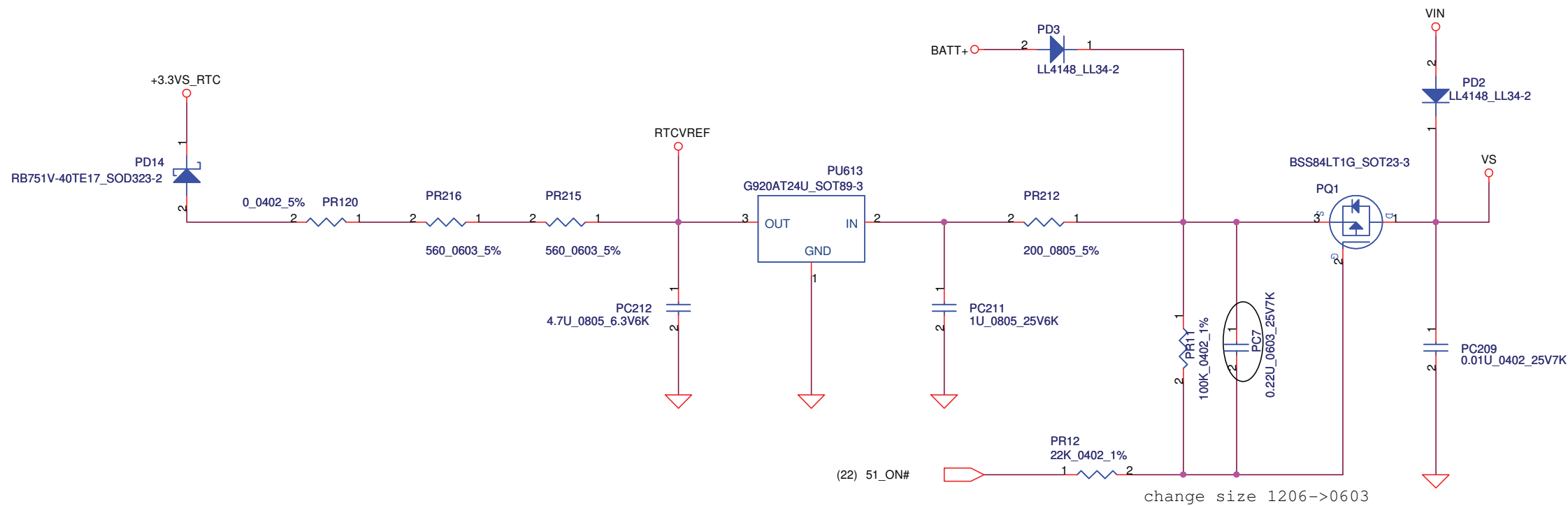
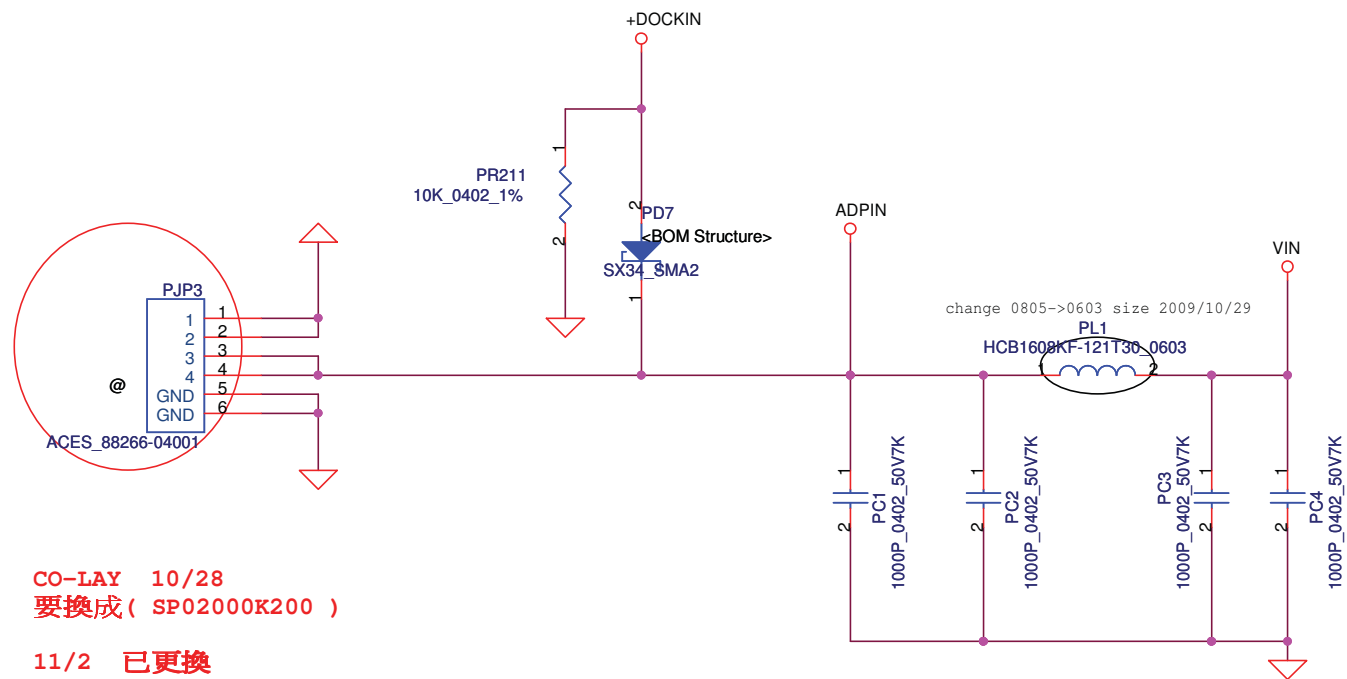


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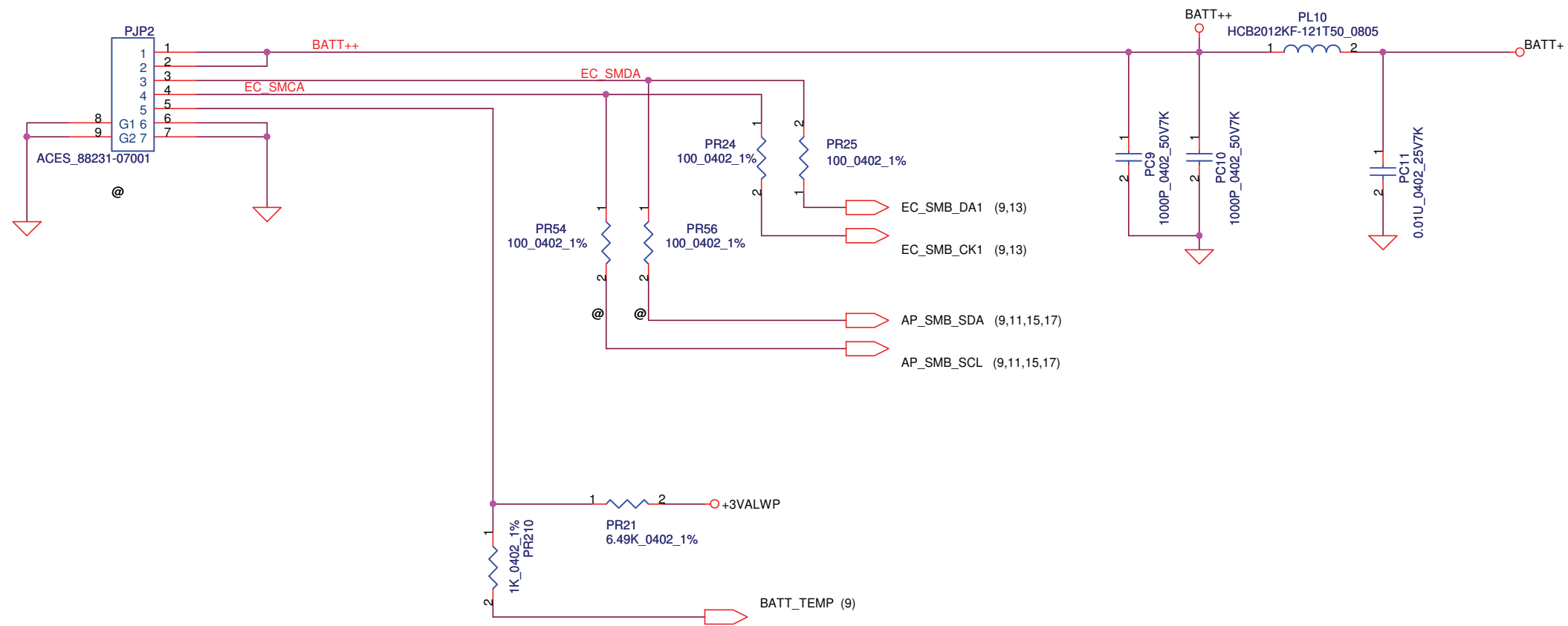






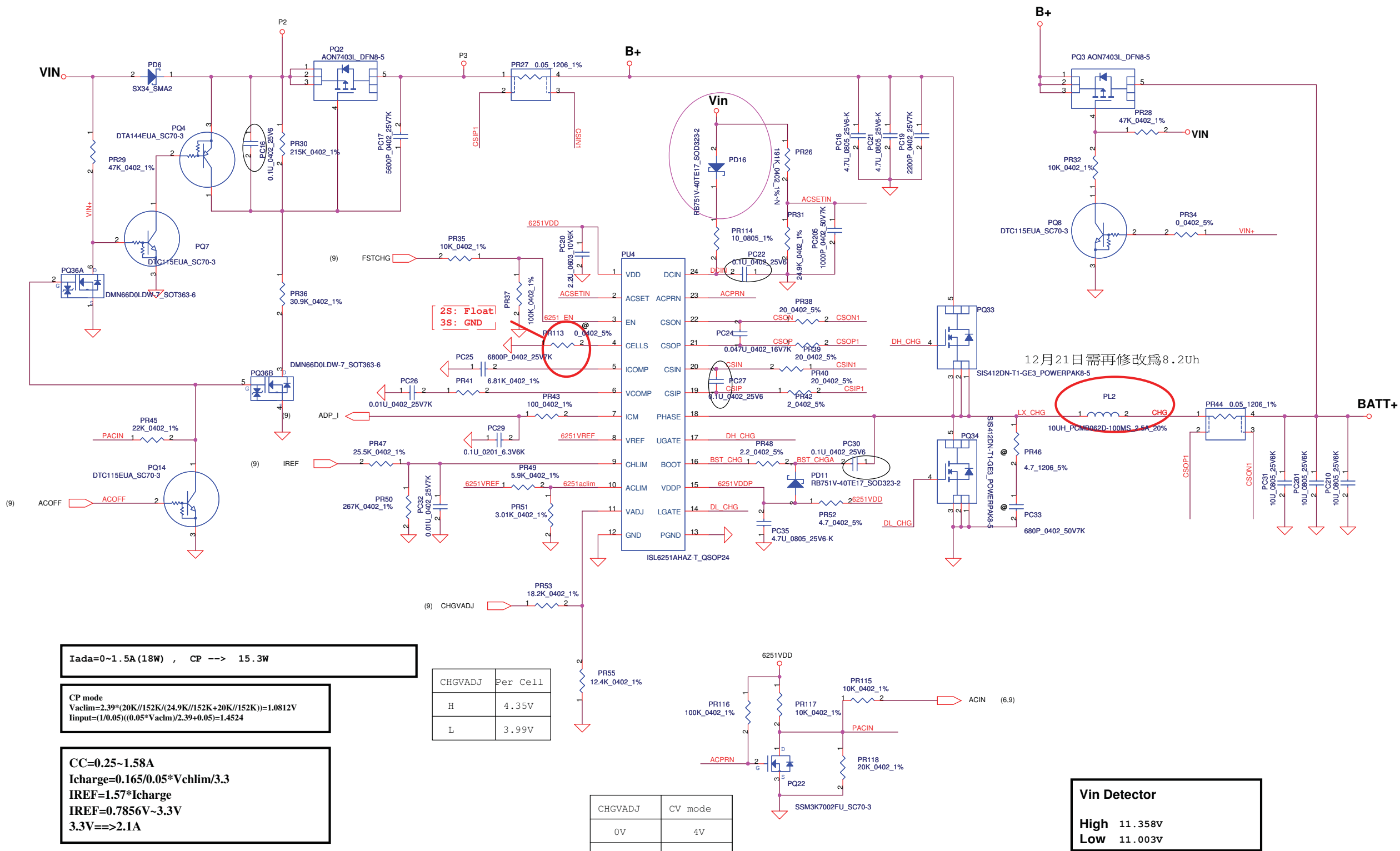
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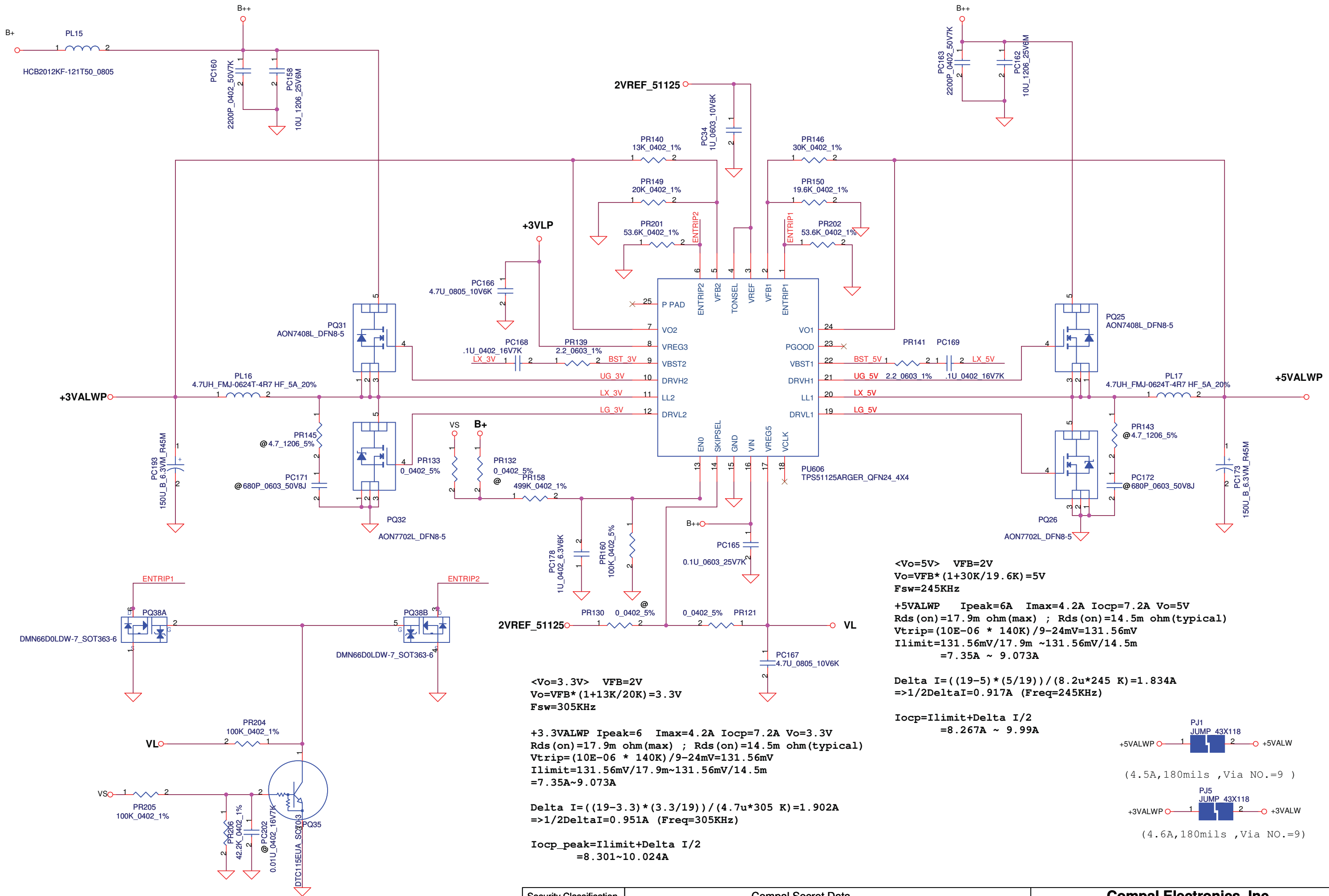
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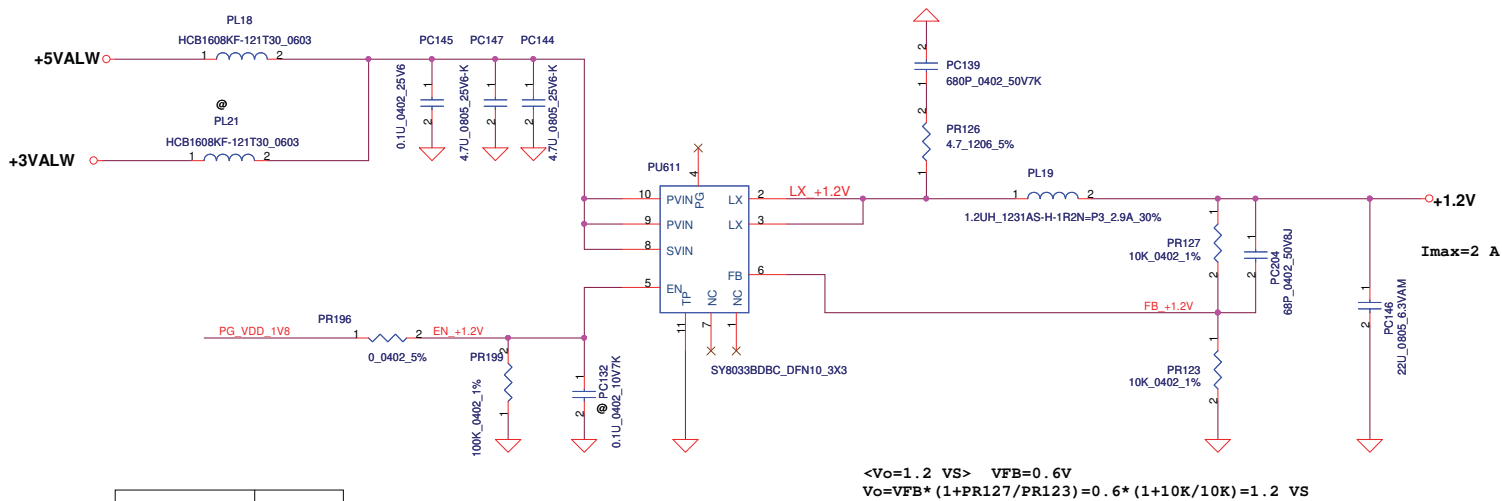
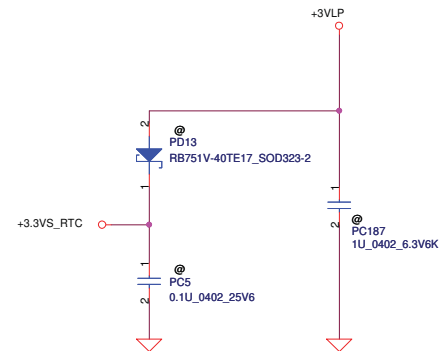
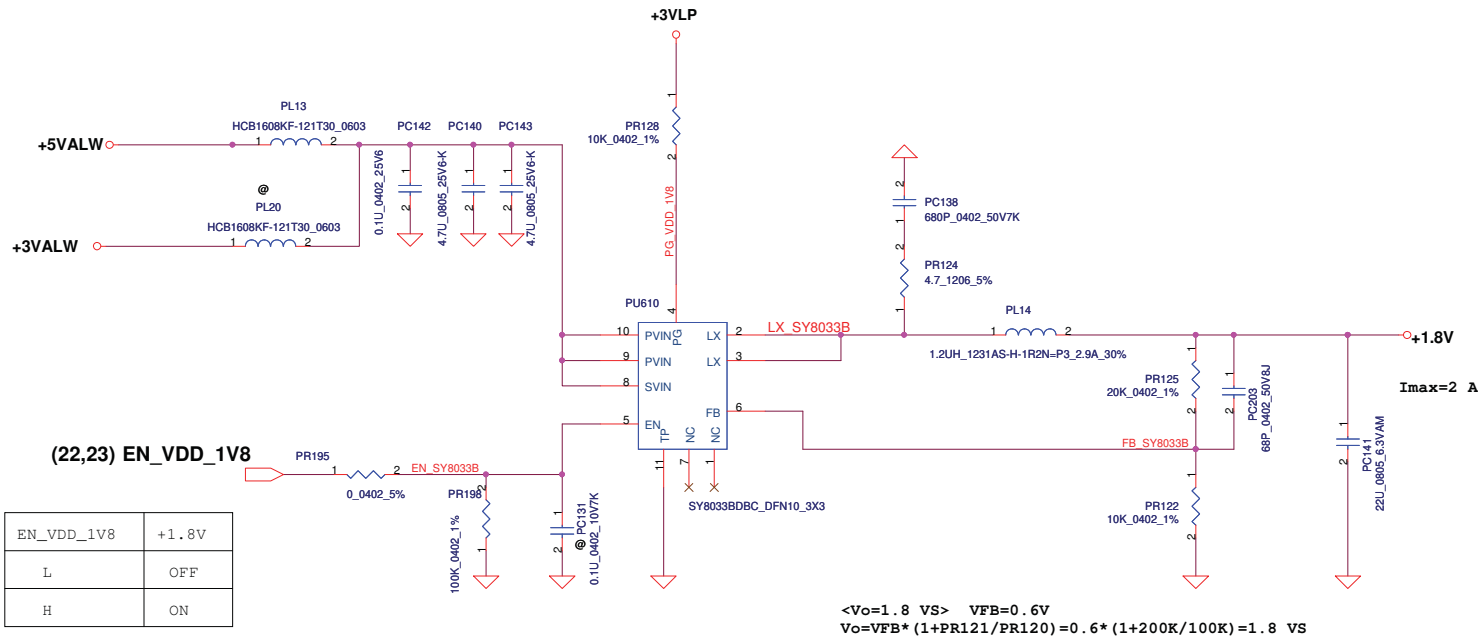
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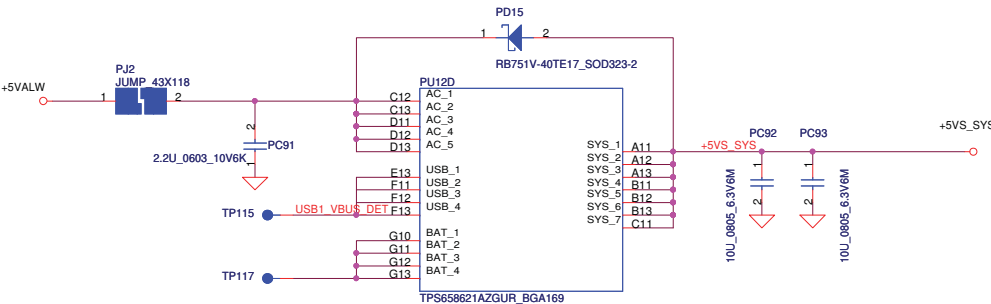


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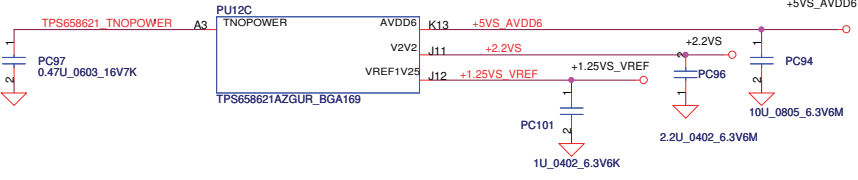
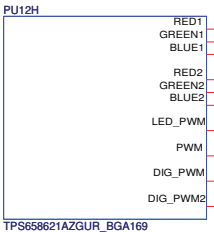
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						Custom	LA-6531P		0.2
Date:						Friday, December 24, 2010		Sheet 28 of 36	



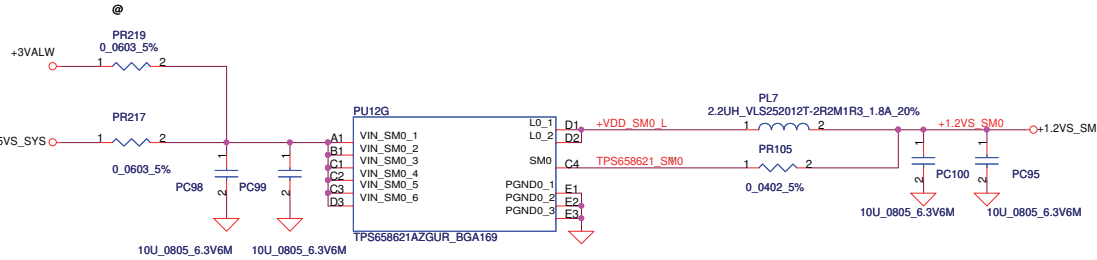
+VDD_SYS=5V
MAX current=1A



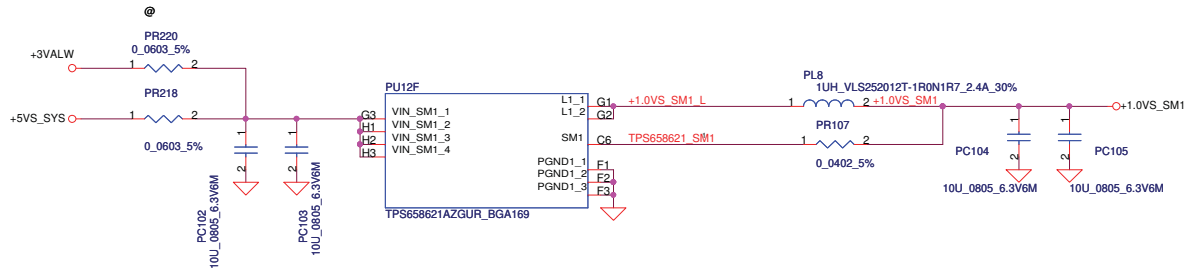
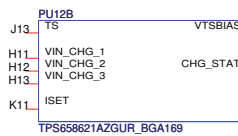
+VDD_AVDD6 =5V
MAX current=0.01A

+VDD_V2V2 =2.2V
MAX current=0.025A

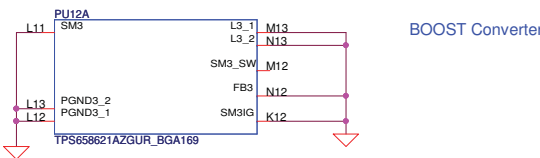
+VDD_VREF1V25 =1.25V
MAX current=0.01A



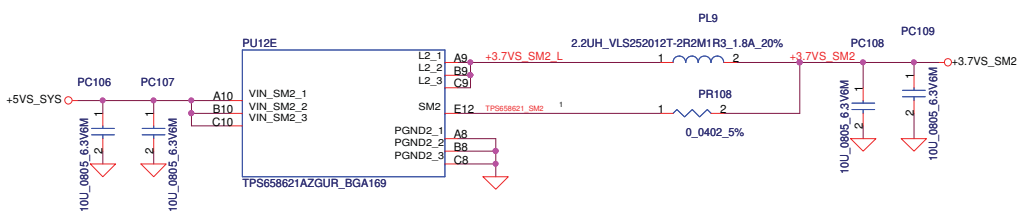
+VDD_SM0=1.2V
MAX current=0.6A



+VDD_SM1=1V
MAX current=1.5A



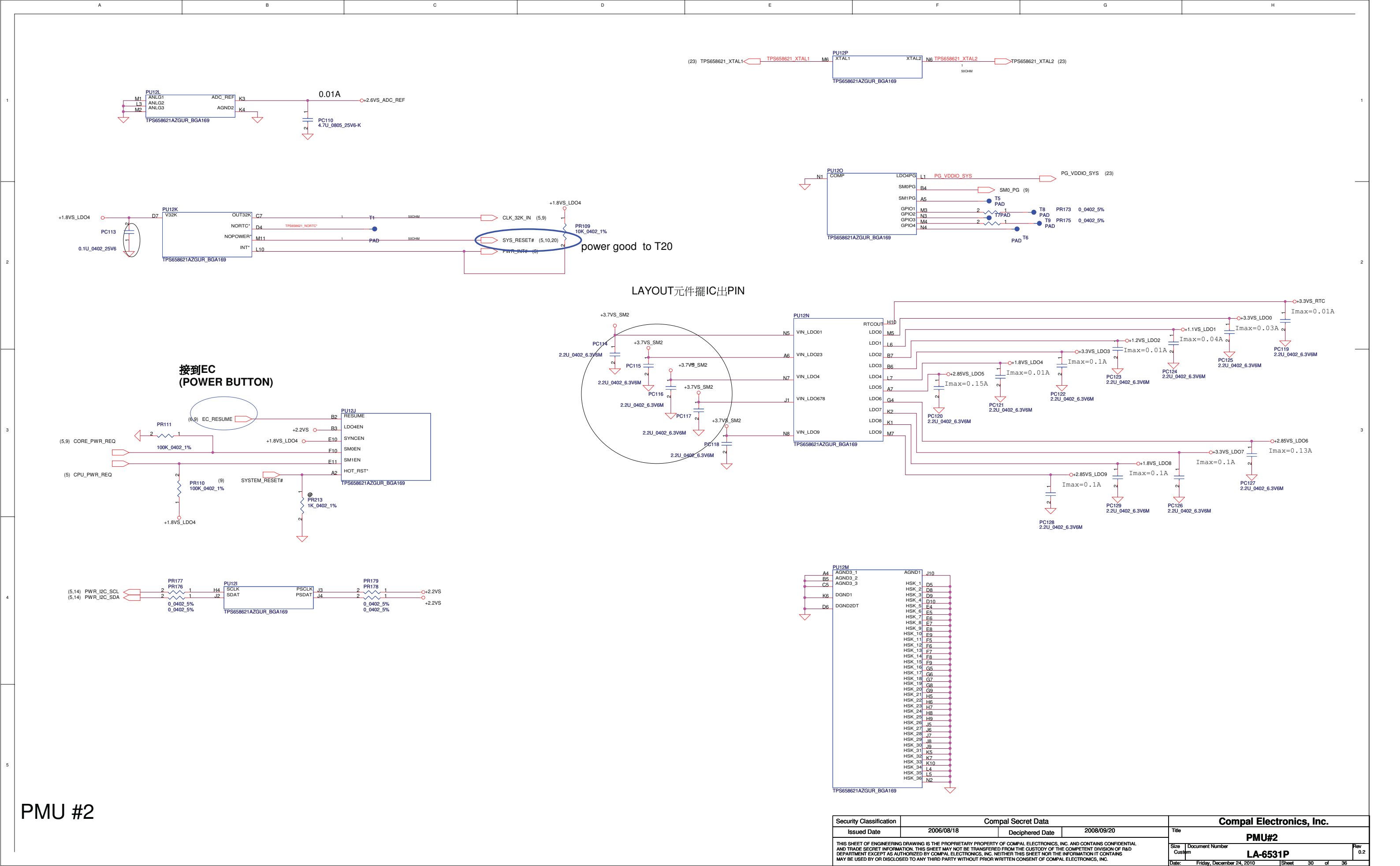
BOOST Converter

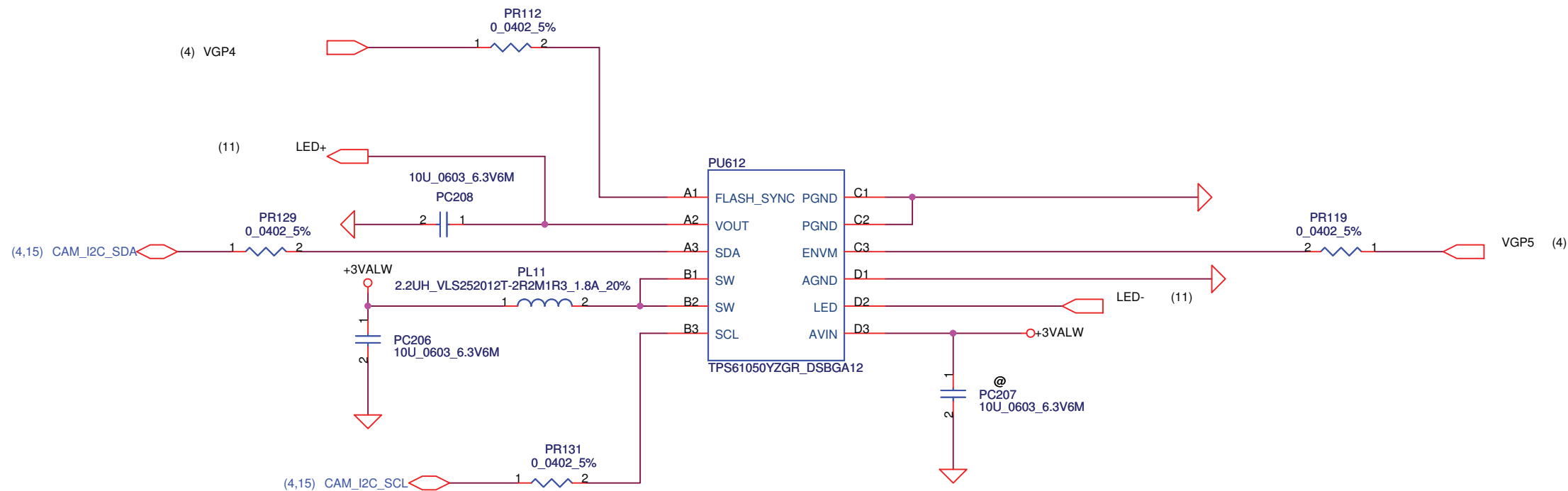


+VDD_SM2=3.7V
MAX current=0.75A

PMU #1

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				Size	Document Number	Rev
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				Date:	Tuesday, December 21, 2010	Sheet 29 of 36

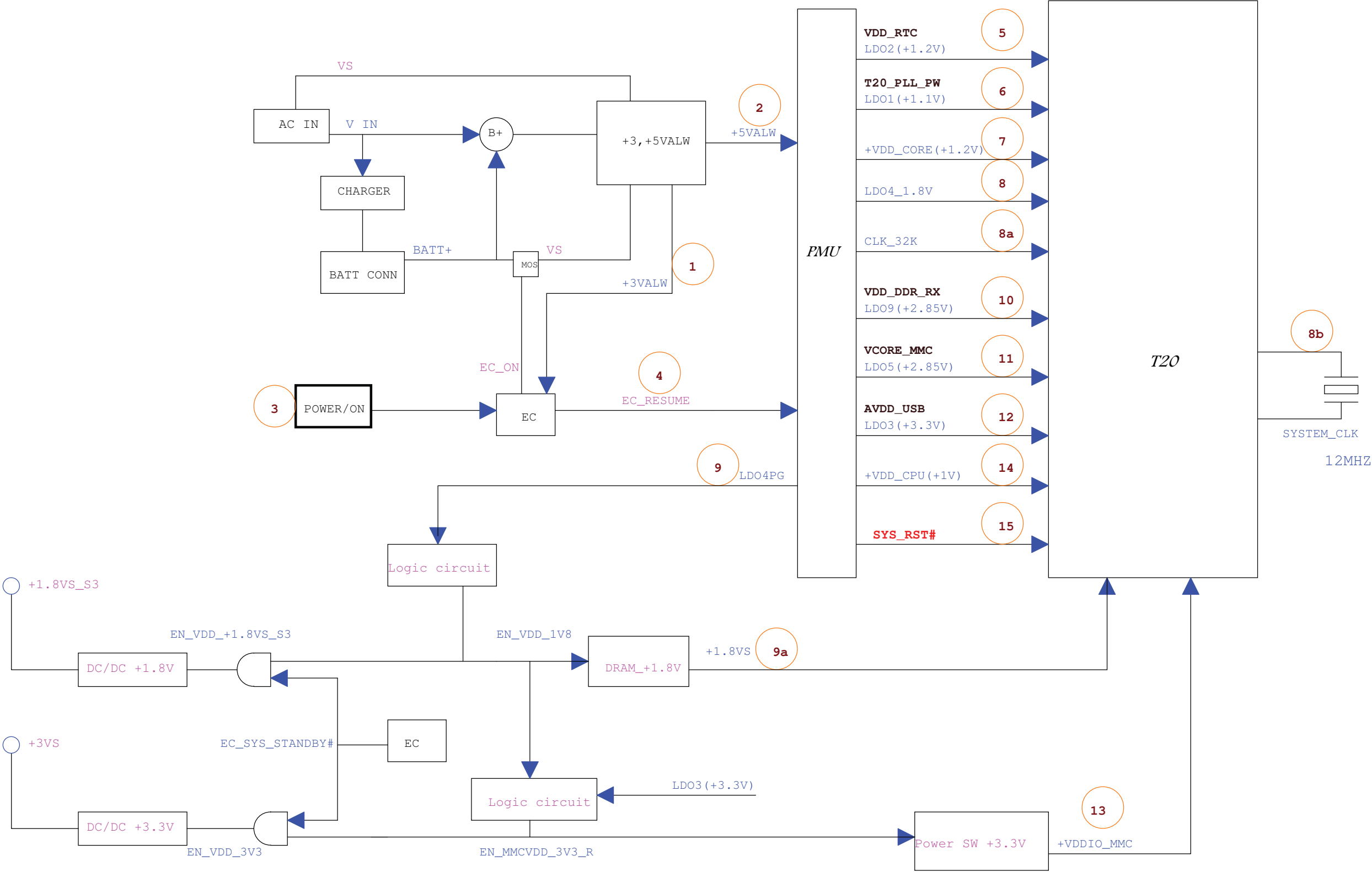




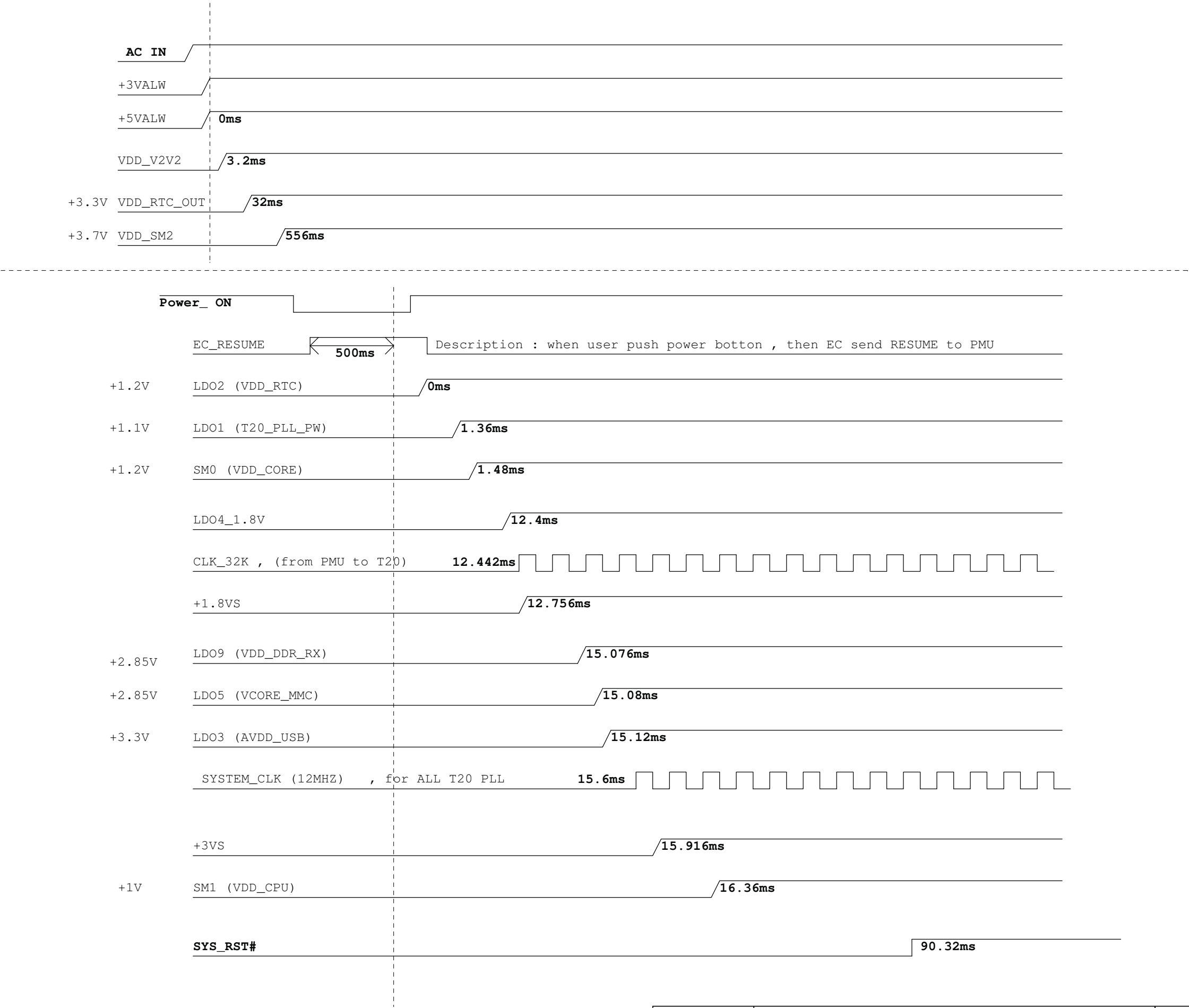
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				Size A3	Document Number LA-6531P	Rev 0.2
Date:		Wednesday, January 05, 2011		Sheet	31	of 36

PBJ20 Power Sequence Flow Chart

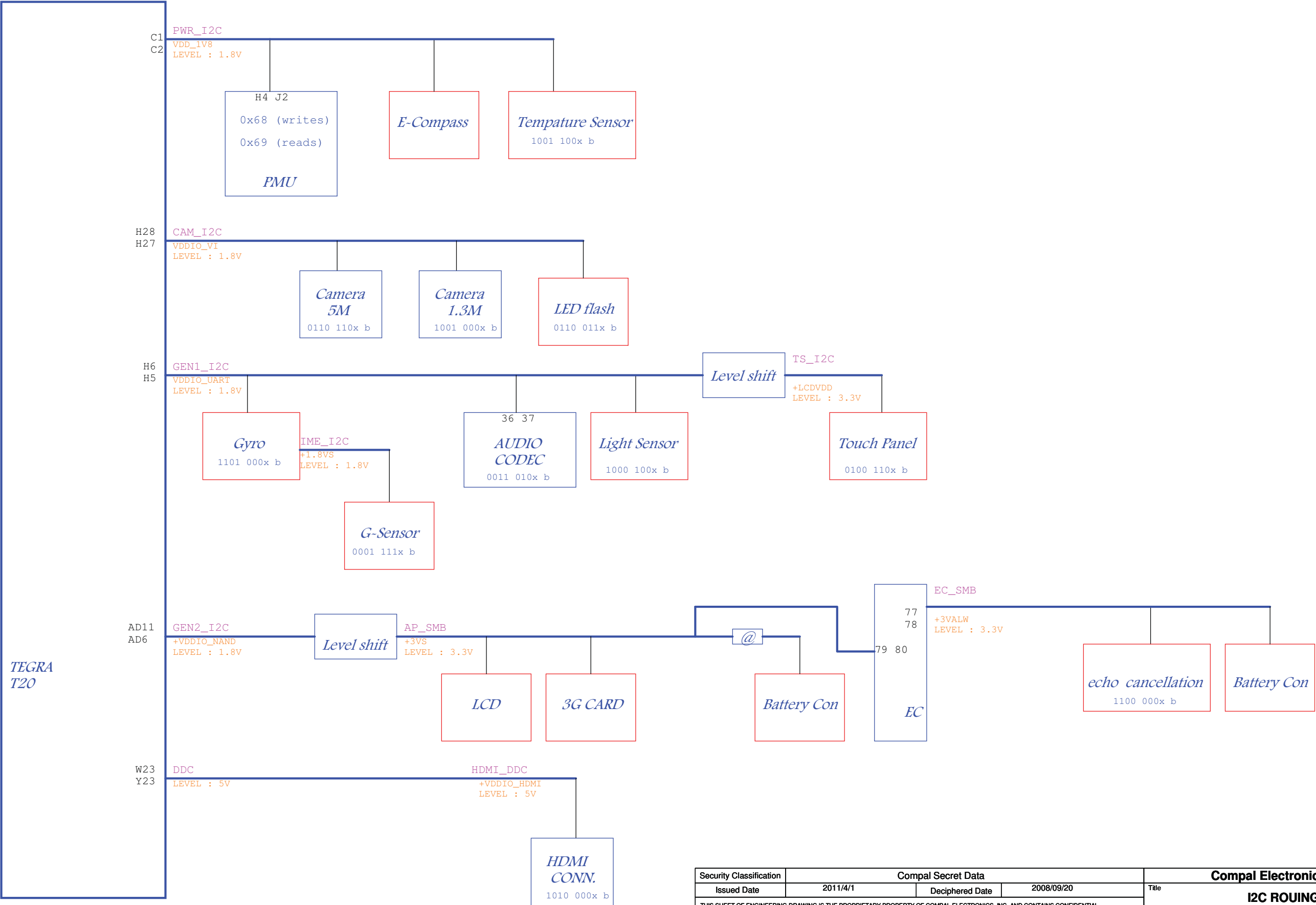


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				Size	Document Number	Rev
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				Size	Document Number	Rev
				Custom	LA-6531P	0.1
				Date:	Saturday, August 07, 2010	Sheet 33 of 36

PBJ20 I2C Routing



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

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1							
2							
3							
4							
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Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1		增加控制CAMERA的GPIO	A		add CAM1_PWDN,CAM2_OE,CAM2_RST#,CAM1_RST#	08/29	DVT
2		修改EC firmware pin define	A		add KSI4,KSI5,KSI6,KSI7	08/29	DVT
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