ZZZ1

PCB DAZ@
DA60010L000
PCB 10F LA-A391P REV0 M/B HDI

S1

FRAME
EC0MV000200

@

S4

FRAME
EC0MV000200
for GLONASS
@

Compal Confidential

Schematics Document

ZSJEV

LA-A391P

2013-03-13

REV:0.1

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2012/11/09	Deciphered Date	2014/11/09	Title	Cover Page

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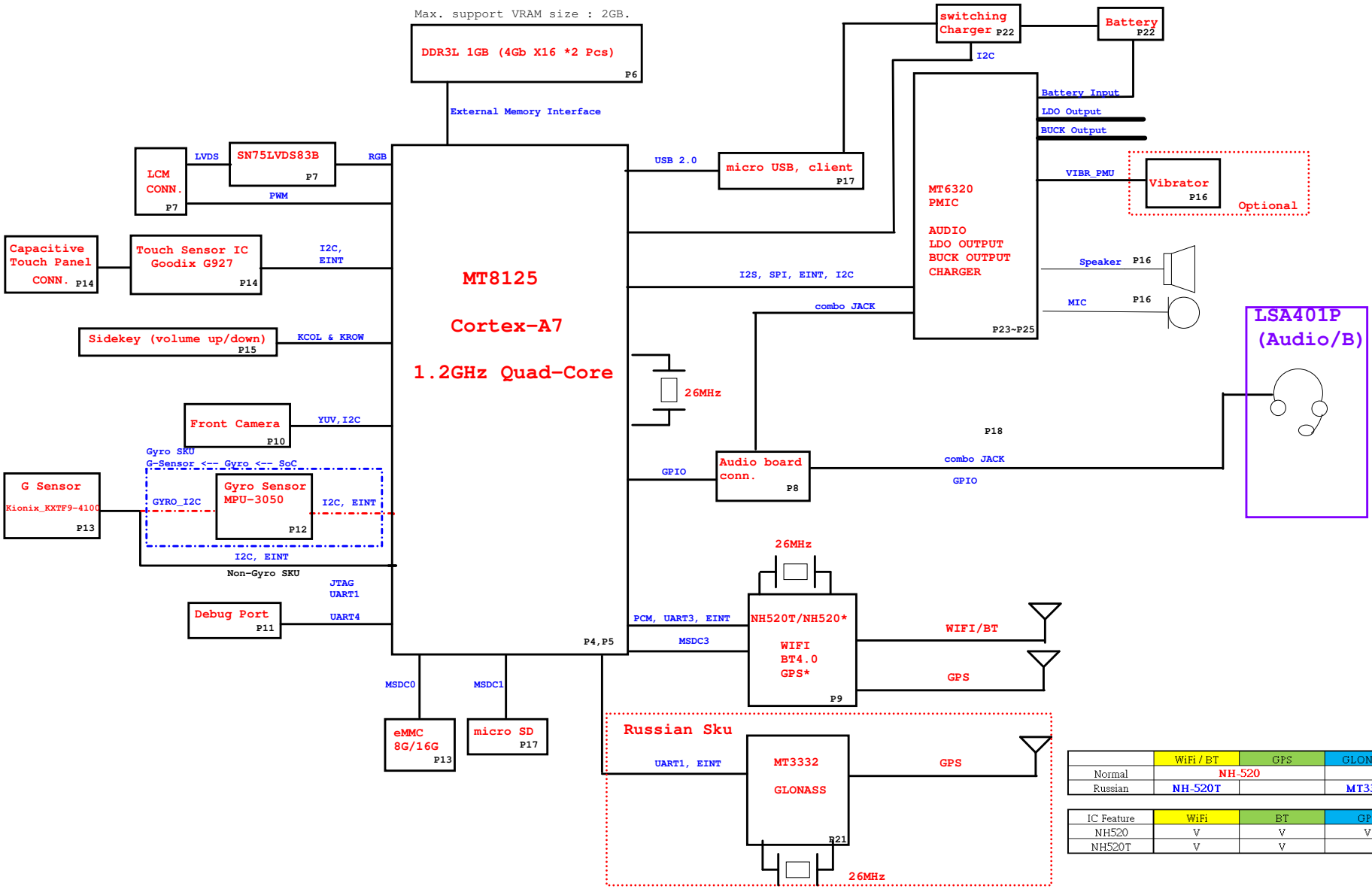
giordano2 WIFI SKU block diagram



	WiFi / BT	GPS	GLONASS
Normal	NH-520		
Russian	NH-520T		MT3332

IC Feature	WiFi	BT	GPS	FM
NH520	V	V	V	V (No support)
NH520T	V	V		V (No support)

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Issued Date	2012/11/03	Deciphered Date 2013/11/03	Title: Block Diagram

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Voltage Rails

MT6320 Power Plane	Function	Power Level	IDLE	Sleep mode
VCORE_PMU	VCORE switching output	0.75 ~ 1.3	ON	Low voltage
VPROC_PMU	VPROC switching output	0.75 ~ 1.3	ON	Low voltage
VTCXO_1_PMU	LDO output for TCXO	2.8V	ON	OFF
VCAMA_PMU	LDO output for camaera analog	2.8V	ON	Gating by SW
VSRAM_PMU	LDO output used for 1.2V SRAM	1.2V	ON	Low voltage
VDD28_6583	LDO output used for 2.8V IO	2.8V	ON	Gating by SW
VGP2_PMU	LDO output for camaera 1.8V	1.8V	ON	Gating by SW
VEMC_3V3_PMU	LDO output for eMMC	3.3V	ON	Gating by SW
VMCH_PMU	LDO output for SD card	3.3V	ON	Gating by SW
VGP5_PMU	LDO output for Touch panel	2.8V	ON	Gating by SW
DDR3VCCIO	LDO output for DDR3L	1.35V	ON	Gating by SW
VDD33_6583	LCD & Bridge power	3.3V	ON	Gating by SW
VDD18_6583	LDO output used for 1.8V IO	1.8V	ON	Gating by SW

I2C address

Device	Address(7 bit)	Address(8bit)	
		Write	Read
Gyro (MPU-3050)	0x68	0xD0	0xD1
G-sensor (KXTIK-1004)	0x0F	0x1E	0x1F
Touch screen (GT927)	0x5D	0xBA	0xBB
Camera (OV7675)	0x21	0x42	0x43
Charge (BQ24196)	0x6B	0xD6	0xD7
G-sensor(STK-8313)			

Main board ID

MB_ID0	MB_ID1	
0	0	EVT
0	1	DVT
1	0	PVT
1	1	MP

BOM structure

Name	Function	
DAZ@	PCB	
EMC@	for EMC request	
NH520@	AW-NH520	
NH520_EMC@	GPS EMC	
GLONASS@	MT3332	

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Compal Electronics, Inc.

Title: Notes List

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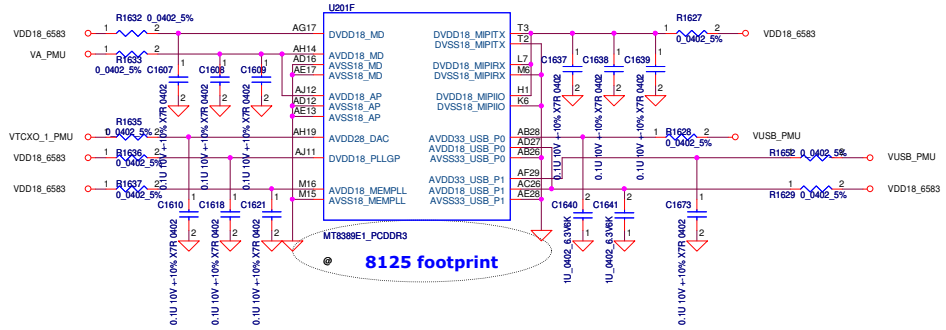
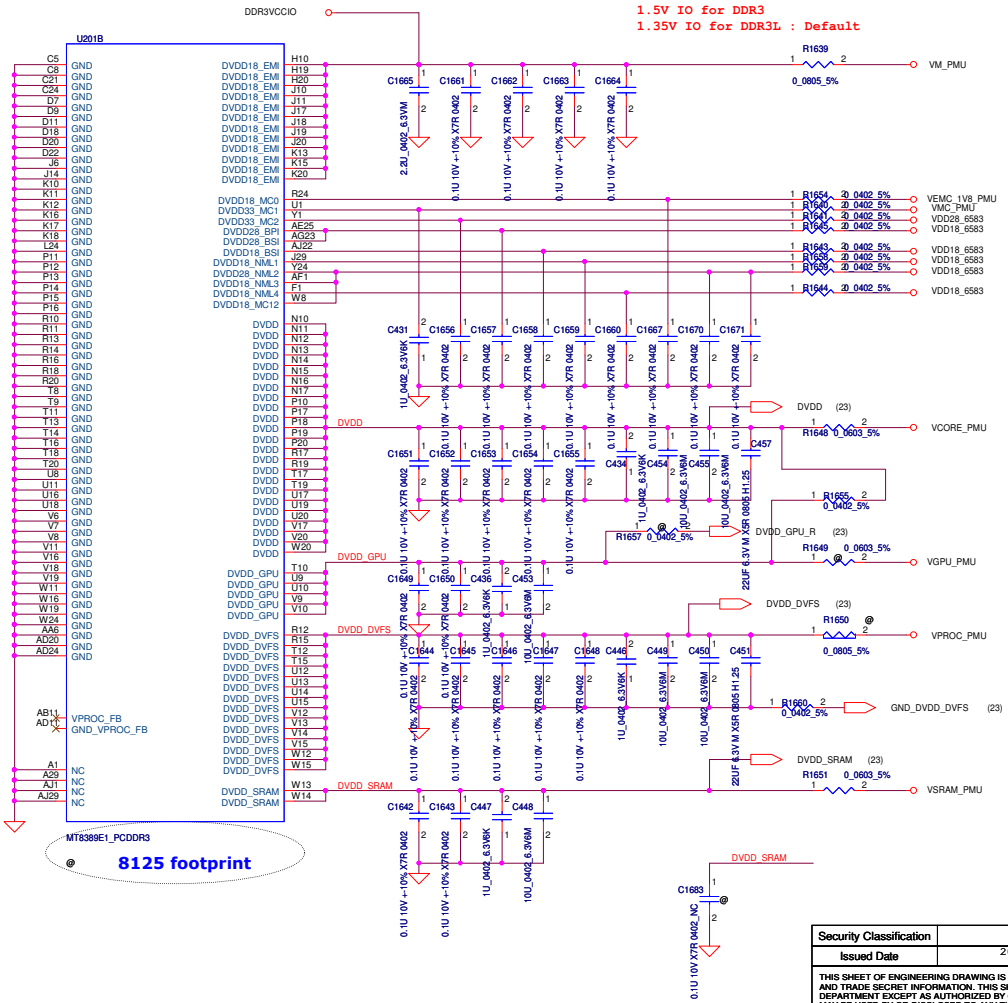
U201

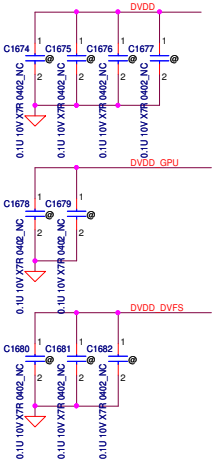
SA00006S500

MT8125K/A 1.2G FCCSP 515P CPU



1.8V IO for DDR
1.2V IO for DDR2
1.5V IO for DDR3
1.35V IO for DDR3L : Default





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Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: MT8377 - Power

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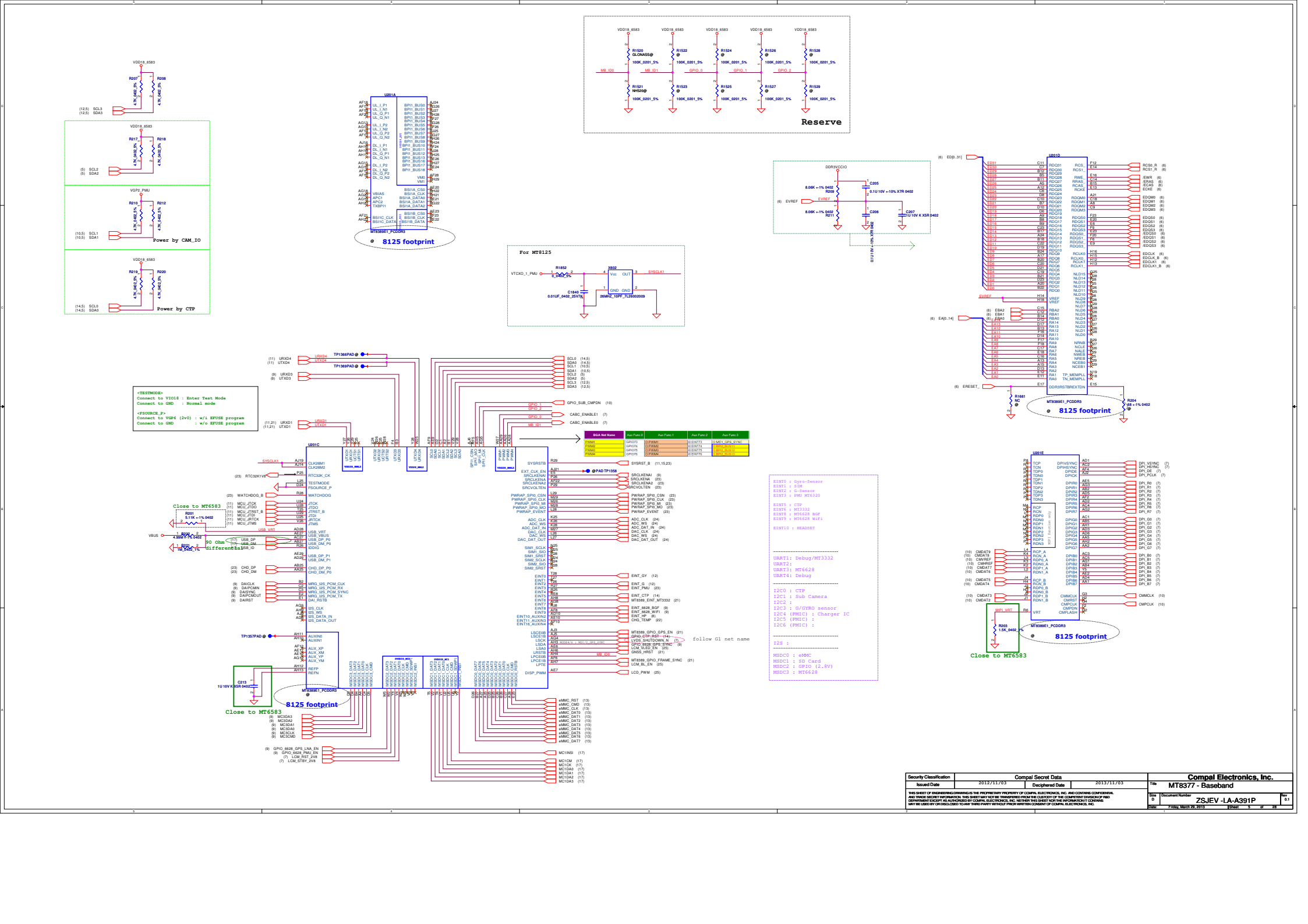
Reserve
8125 footprint
Power by CAM_IO
Power by CTP
For MT8125
Close to MT6583
90 Ohm differential
follow G1 net name
Close to MT6583
8125 footprint
Close to MT6583
8125 footprint
8125 footprint
8125 footprint
<TESTMODE>
Connect to VIO18 : Enter Test Mode
Connect to GND : Normal mode
<FSOURCE_P>
Connect to VGP6 (2v0) : w/i EFUSE program
Connect to GND : w/o EFUSE program
UART1: Debug/MT3332
UART2:
UART3: MT6628
UART4: Debug
I2C0 : CTP
I2C1 : Sub Camera
I2C2 :
I2C3 : G/GYRO sensor
I2C4 (PMIC) : Charger IC
I2C5 (PMIC) :
I2C6 (PMIC) :
I2S :
MSDC0 : eMMC
MSDC1 : SD Card
MSDC2 : GPIO (2.8V)
MSDC3 : MT6628
Security Classification
Compal Secret Data
Issued Date
2012/11/03
Deciphered Date
2013/11/03
Compal Electronics, Inc.
MT8377 - Baseband
Size D
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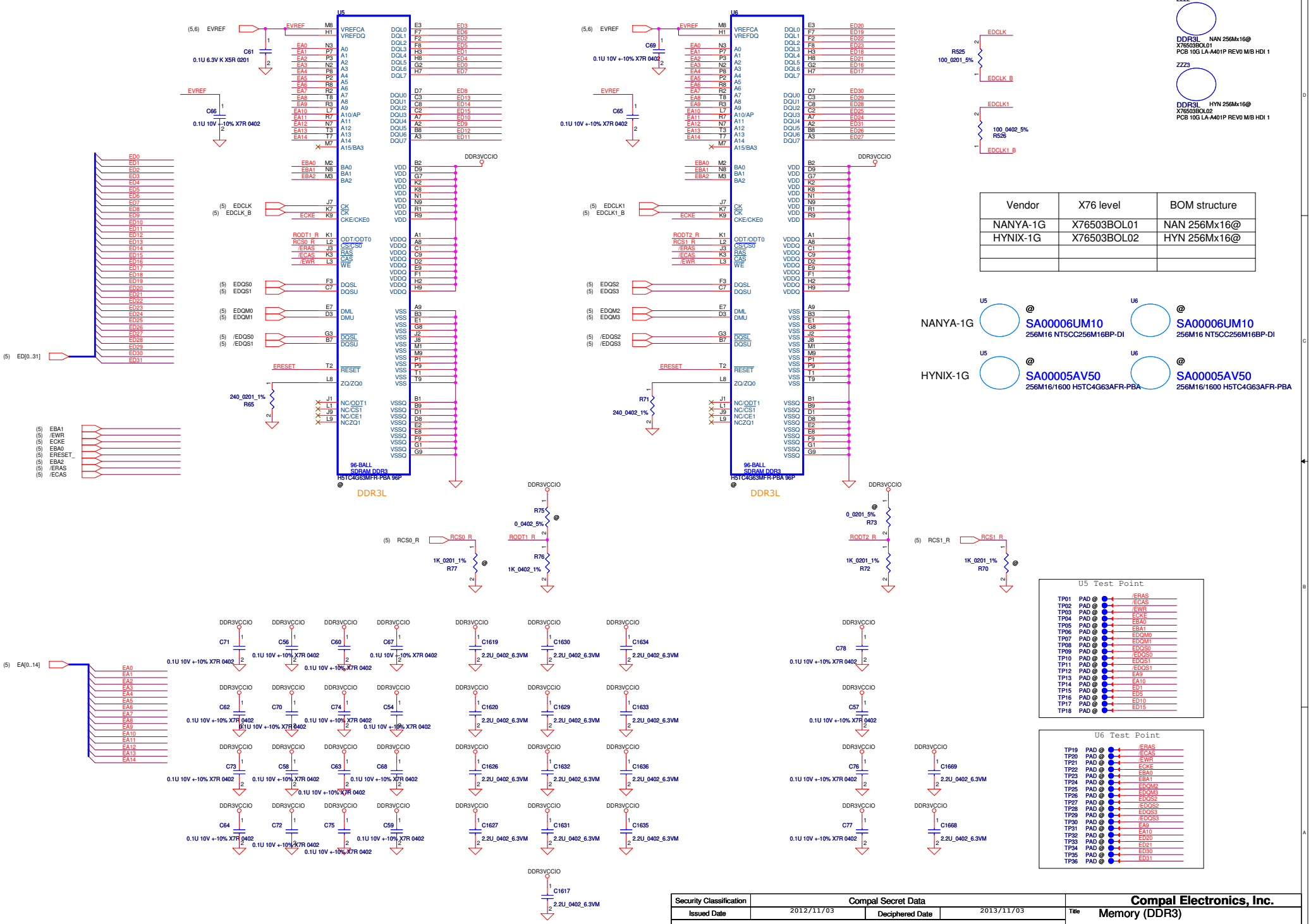

Vendor	X76 level	BOM structure
NANYA-1G	X76503BOL01	NAN 256Mx16@
HYNIX-1G	X76503BOL02	HYN 256Mx16@

	U5	U6
NANYA-1G	@ SA00006UM10 256M16 NT5CC256M16BP-DI	@ SA00006UM10 256M16 NT5CC256M16BP-DI
HYNIX-1G	@ SA00005AV50 256M16/1600 H5TC4G63AFR-PBA	@ SA00005AV50 256M16/1600 H5TC4G63AFR-PBA

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Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title	Memory (DDR3)		
Size C	Document Number ZSJEV -LA-A391P		Rev 0.1
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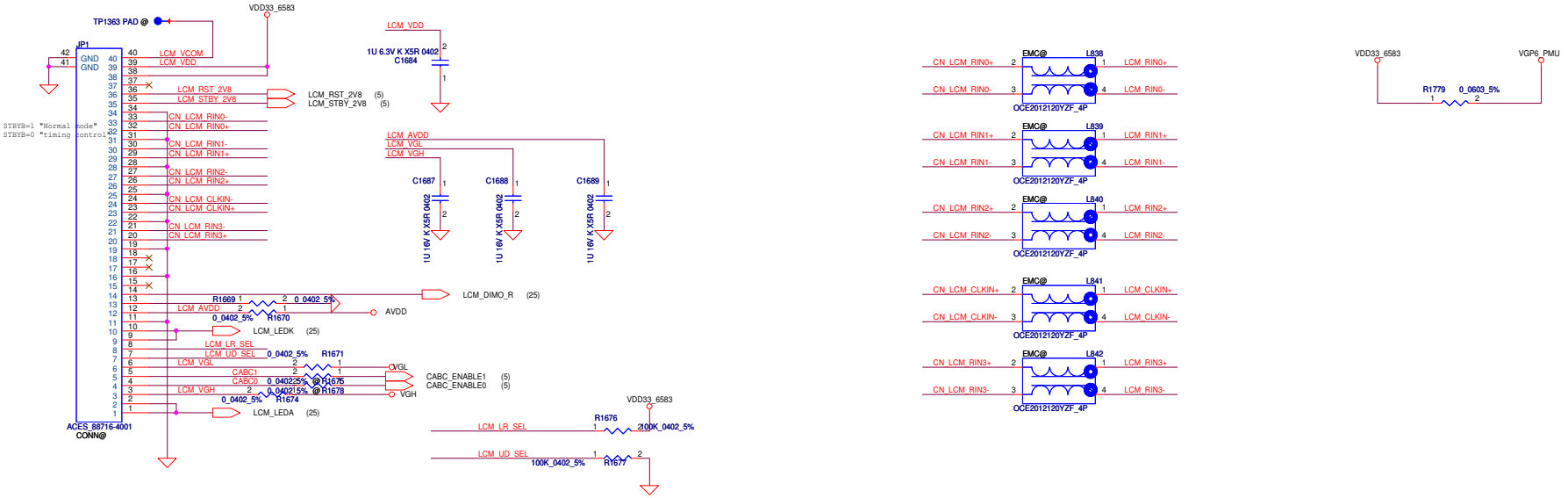
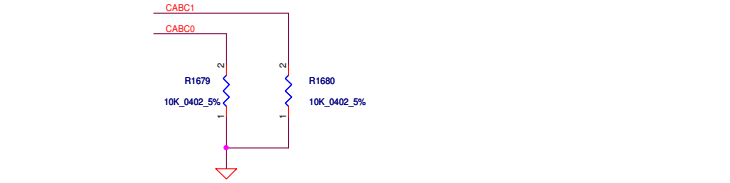
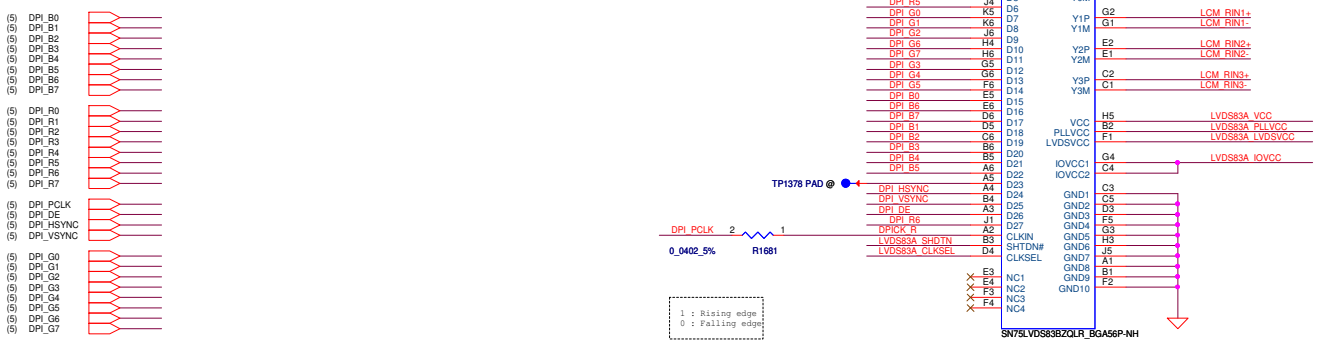
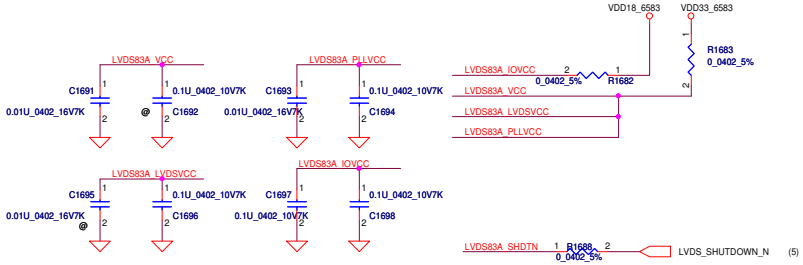




LVDS Bridge





Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Title	LCD		
Size C	Document Number ZSJEV -LA-A391P		Rev 0.1
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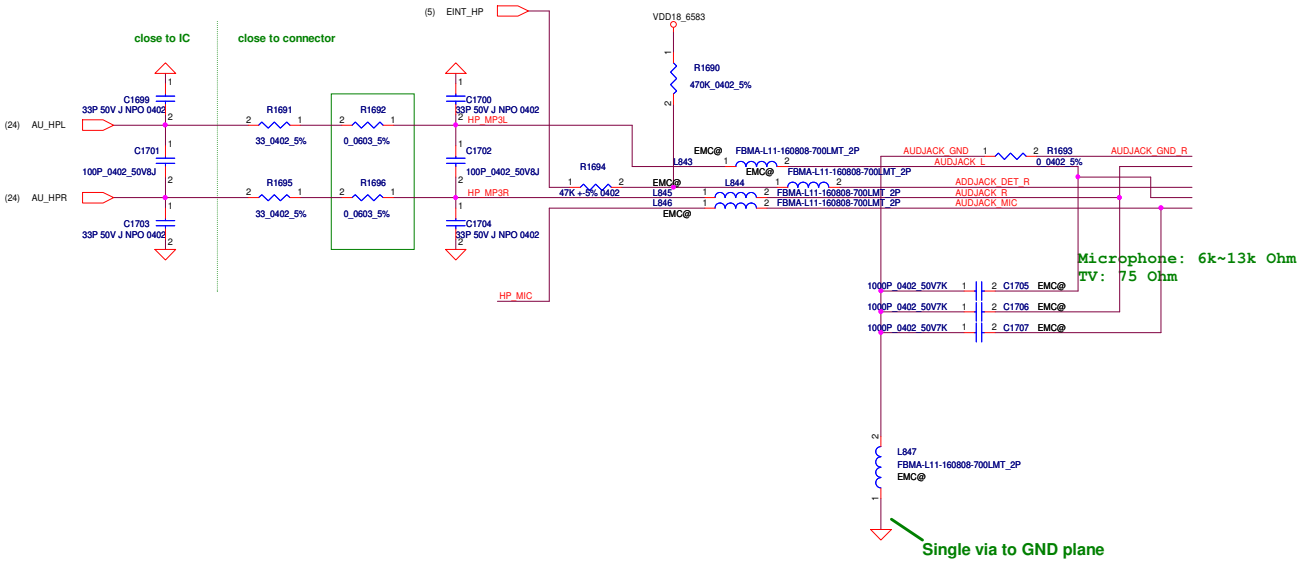
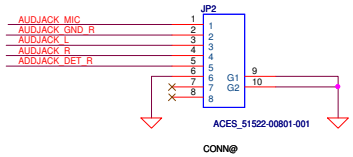
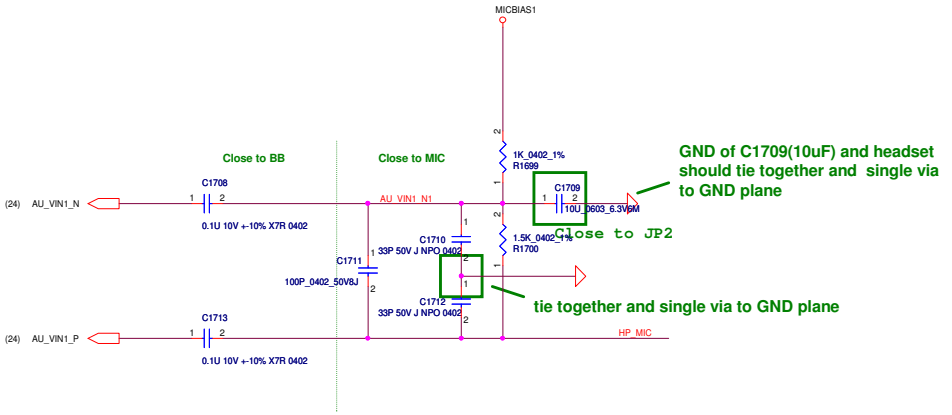
Earphone RECEIVER

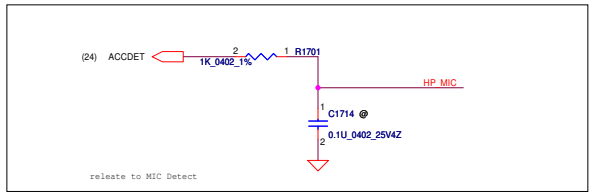


To Audio board



Earphone MICPHONE





Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title	Audio,I/O,Audio board Conn.		
Size C	Document Number ZSJEV -LA-A391P		Rev 0.1
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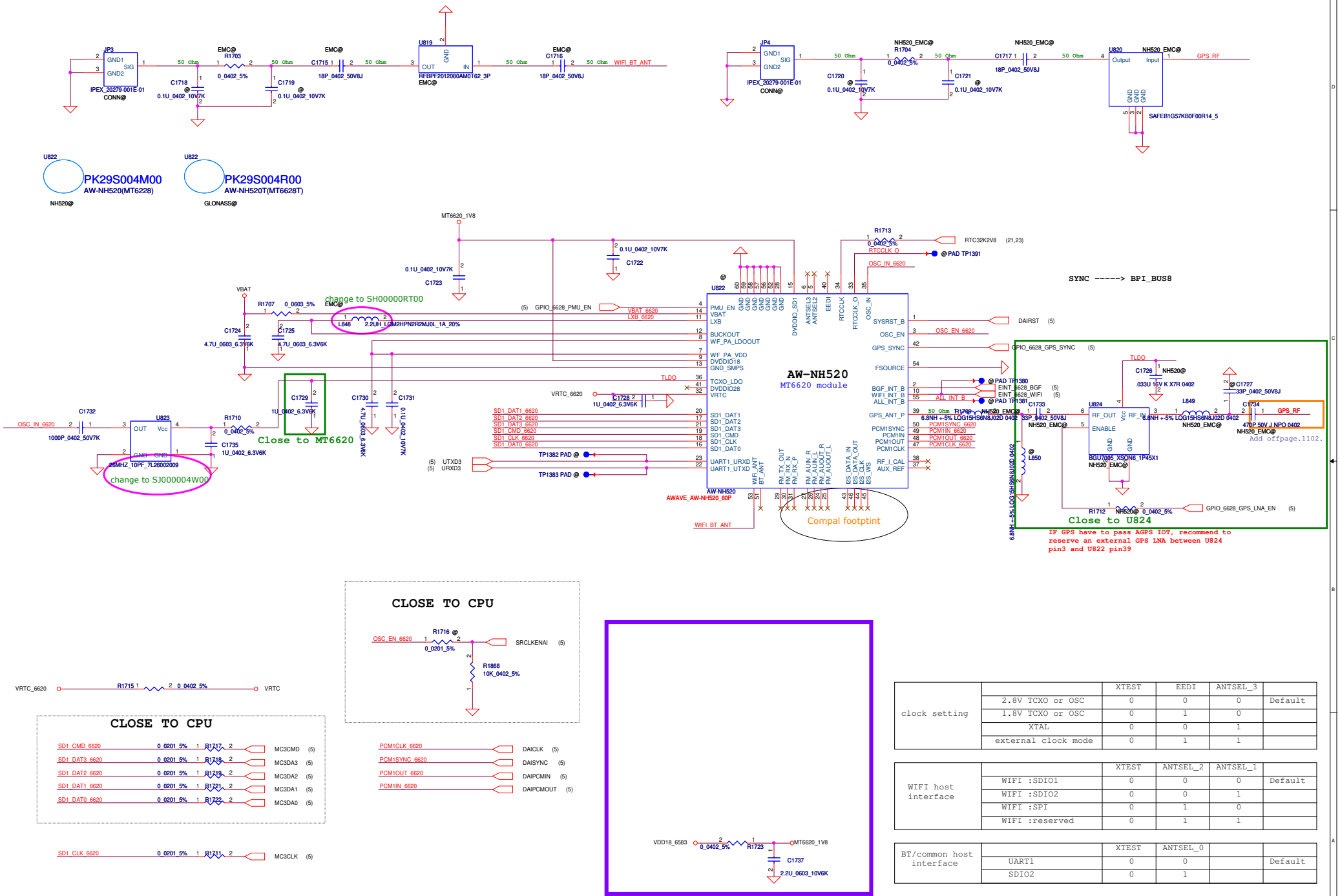

clock setting		XTEST	EEDI	ANTSEL_3	
	2.8V TCXO or OSC	0	0	0	Default
	1.8V TCXO or OSC	0	1	0	
	XTAL	0	0	1	
	external clock mode	0	1	1	

WIFI host interface		XTEST	ANTSEL_2	ANTSEL_1	
	WIFI :SDIO1	0	0	0	Default
	WIFI :SDIO2	0	0	1	
	WIFI :SPI	0	1	0	
	WIFI :reserved	0	1	1	

BT/common host interface		XTEST	ANTSEL_0		
	UART1	0	0		Default
	SDIO2	0	1		

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title	BT, FM, GPS, WiFi (MT6628)		
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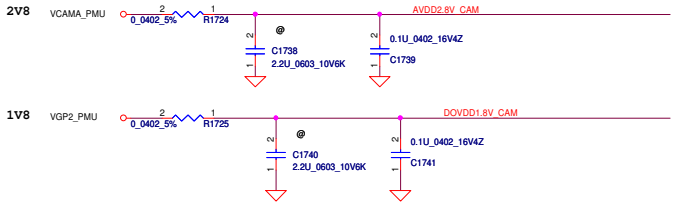
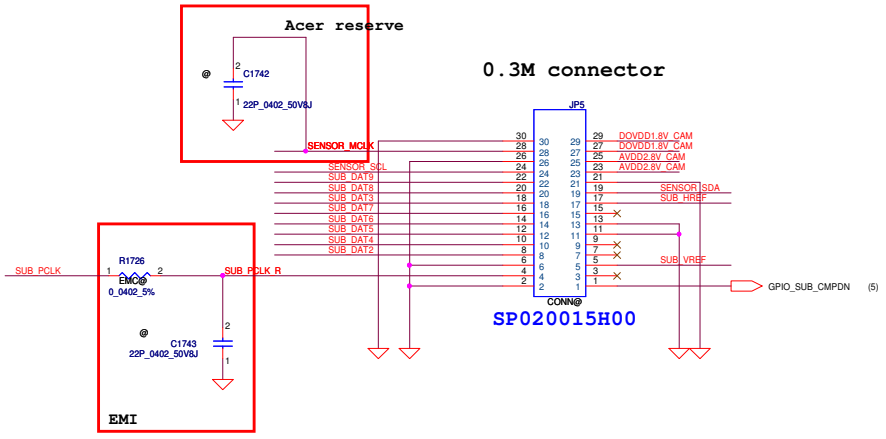
Sub Camera





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Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title	Camera		
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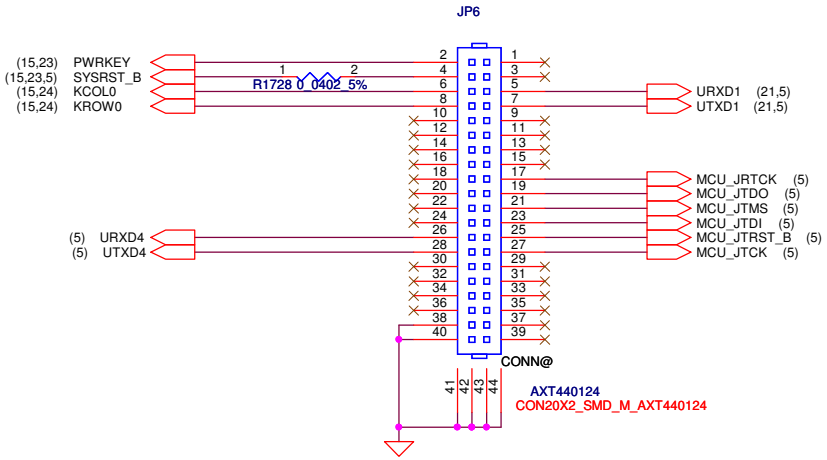
Common Debug



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Issued Date	2012/11/03	Deciphered Date	2013/11/03

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Title	SD Card,Debug,USB	
Size B	Document Number ZSJEV -LA-A391P	Rev 0.1
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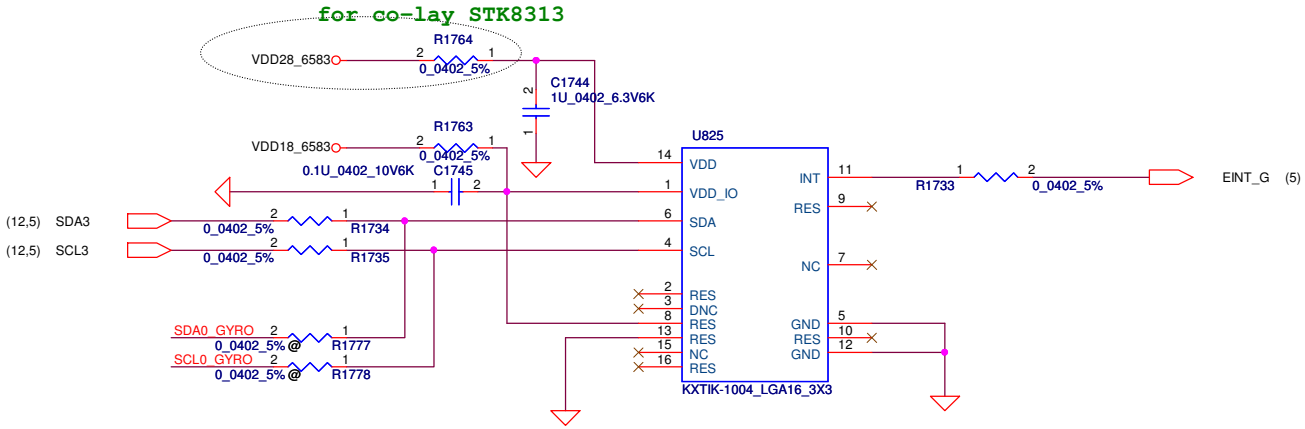
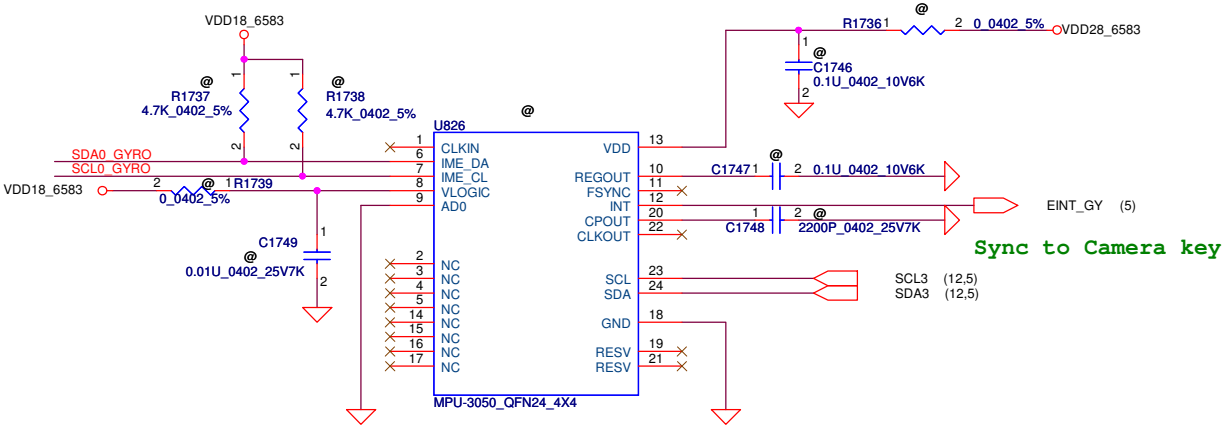
G-Sensor



Gyro Sensor



Sync to Camera key

I2C Address: 0x68 (Write:0xD0, Read:0xD1)

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Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title: Sensors			
Size: B	Document Number: ZSJEV -LA-A391P		Rev: 0.1
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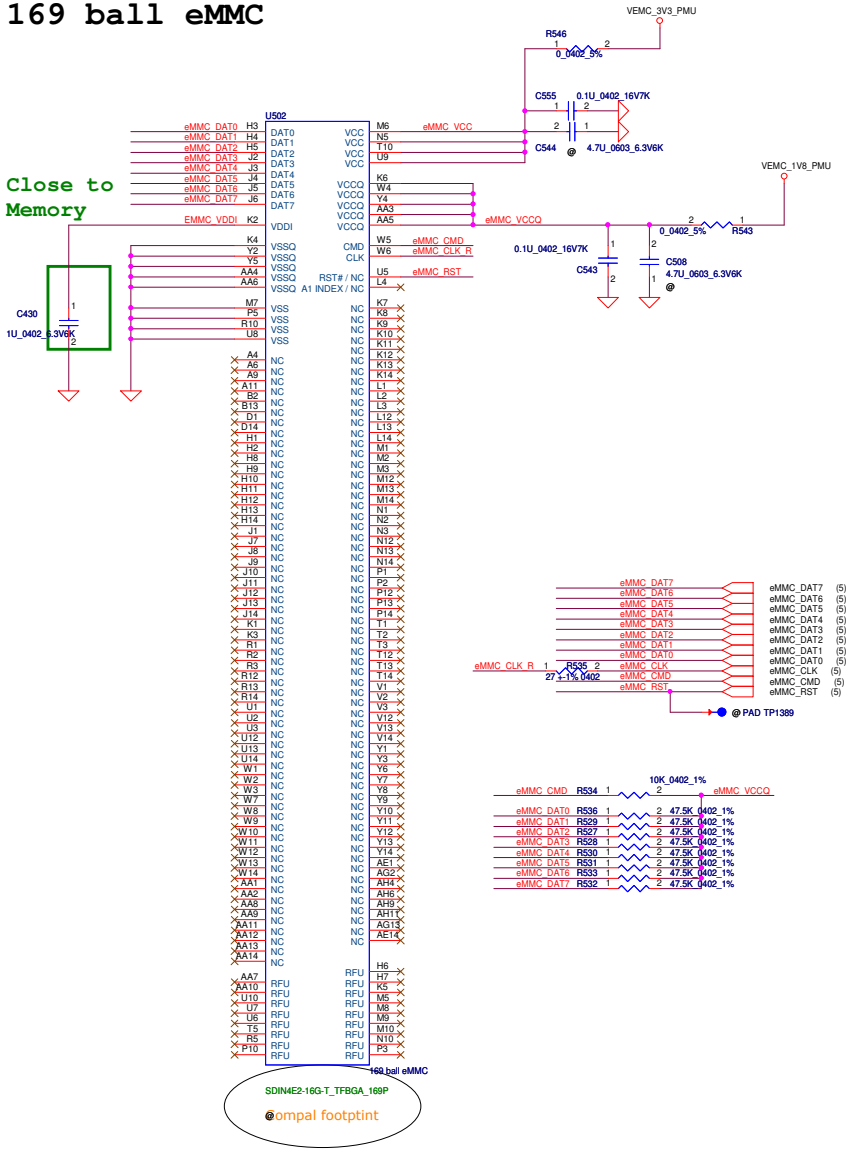
169 ball eMMC

Close to Memory



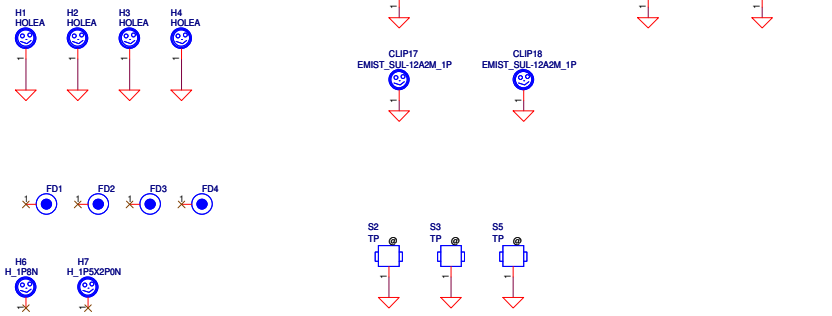
U502 KIN 8GB@ SA00006MF30 Kingston 8G KE4CN3K6A FBGA 169P

U502 KIN 16GB@ SA00006MG30 Kingston 16G KE4CN4K6A FBGA 169P

U502 HYN 8GB@ SA00006VI10 HYNIX 8G H26M42003GMR FBGA 153P

U502 HYN 16GB@ SA00006VJ10 HYNIX 16G H26M52003EQR FBGA 169P

SCREW HOLE



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Issued Date	2012/11/03	Deciphered Date	2013/11/03
Title	eMMC, SCREW HOLE		
Size C	Document Number ZSJEV -LA-A391P		Rev 0.1
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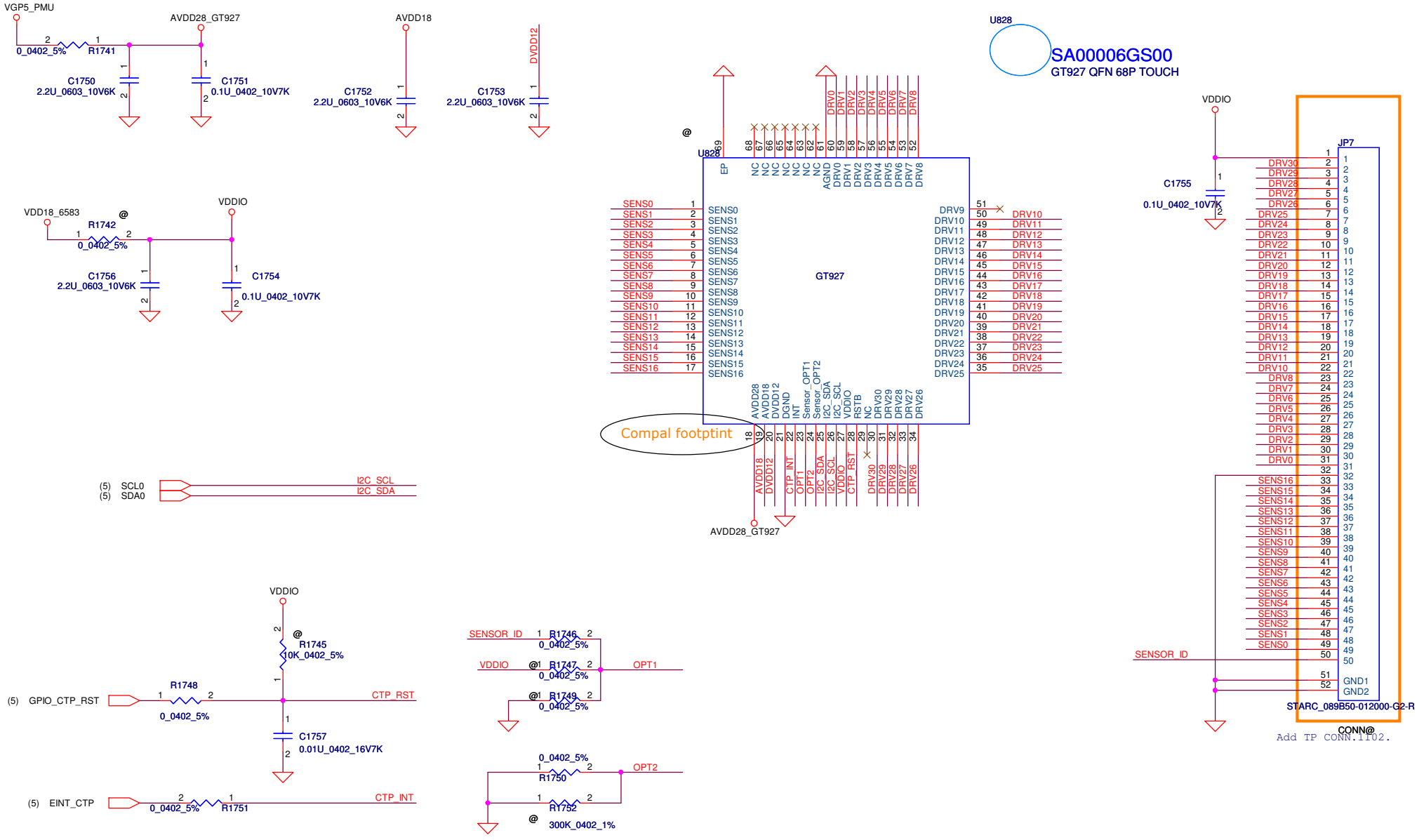

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Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: Touch Panel

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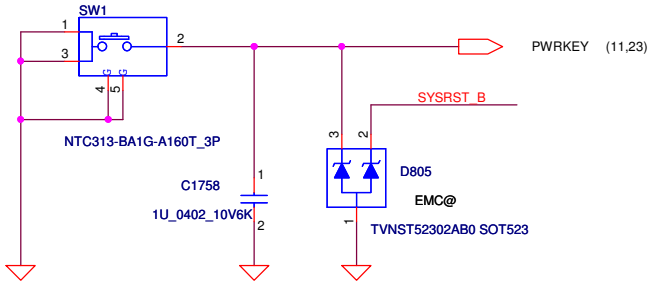
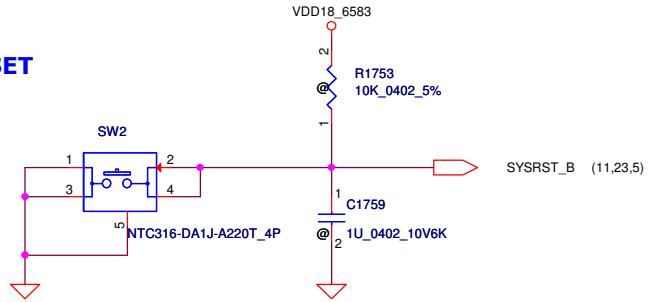
Power-on Button

MTK comment don't pull up R on PWRKEY.1101.

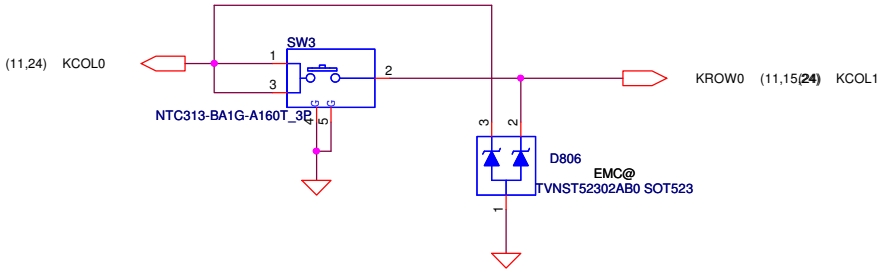


Compal GND MTK GND

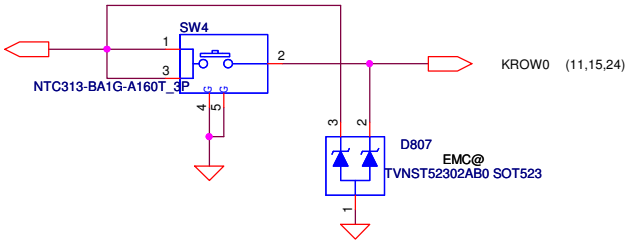
RESET



Volume Up (Download Key)



Volume Down



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Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title	Button		
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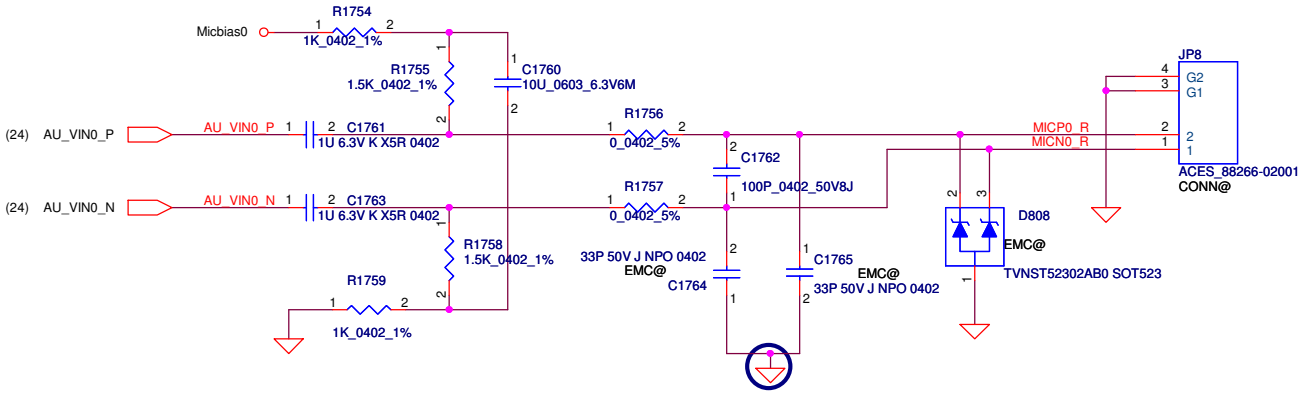
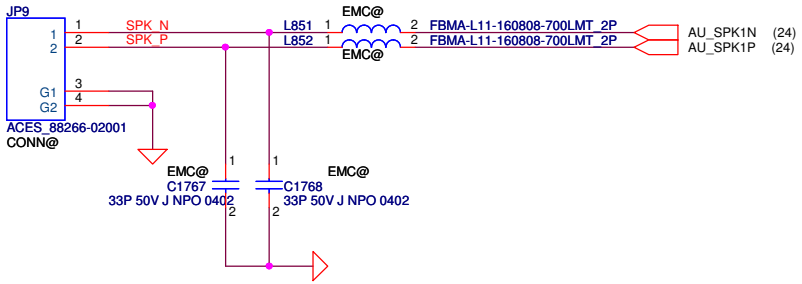
MIC



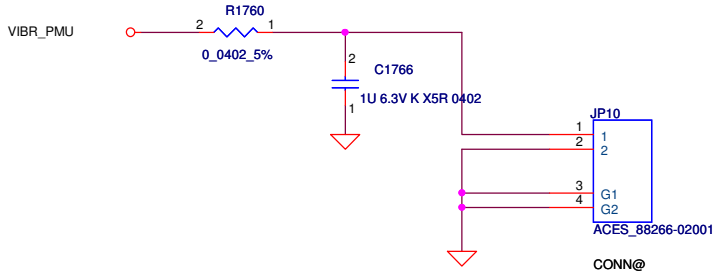
Modify MIC CONN SCH.1102.

Compal GND MTK GND

SPAKER



Vibrator



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Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: Connector(MIC/SPK/HP)

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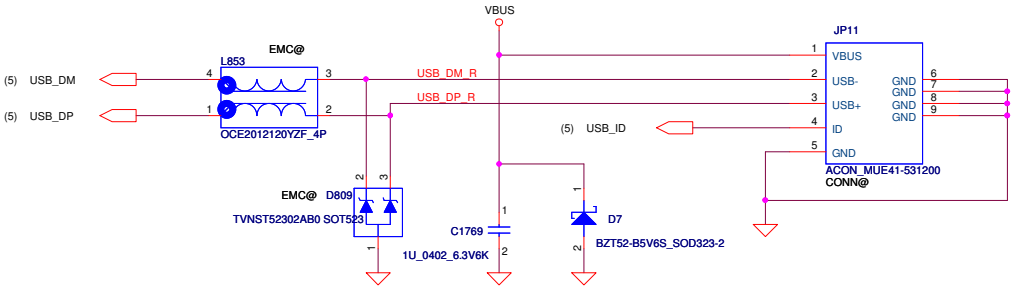
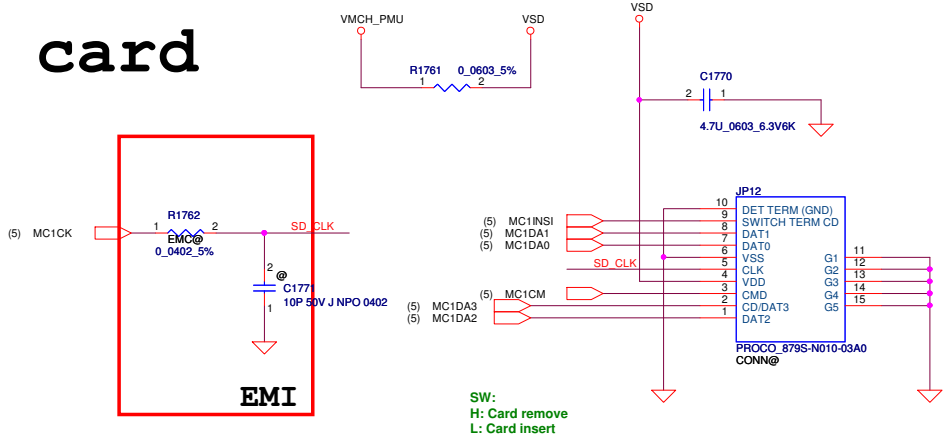
Micro-USB

If mini-A connector insert => CID < 0V => Low
If mini-B connector insert => CID > 1.2V => High

IDPULLUP pin is replaced by 1.2V power source.



SD card



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date 2013/11/03	Title: Connector-2(SD card/G-se)

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Compal GND MTK GND

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Compal Electronics, Inc.

Title: SIM

Size	Document Number	Rev
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Security Classification	Compal Secret Data		
Issued Date	2013/01/30	Deciphered Date	2014/01/30

Compal Electronics, Inc.		
Title	*RF_MT6167_RX_B1B8*	
Size: Custom	Document Number: *ZSJEV -LA-A391P*	Rev: 0.1
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	Compal Electronics, Inc.	
Title	*RF_TX_ASM*	
Size: C	Document Number: *ZSJEV-LA-A391P*	Rev: 0.1
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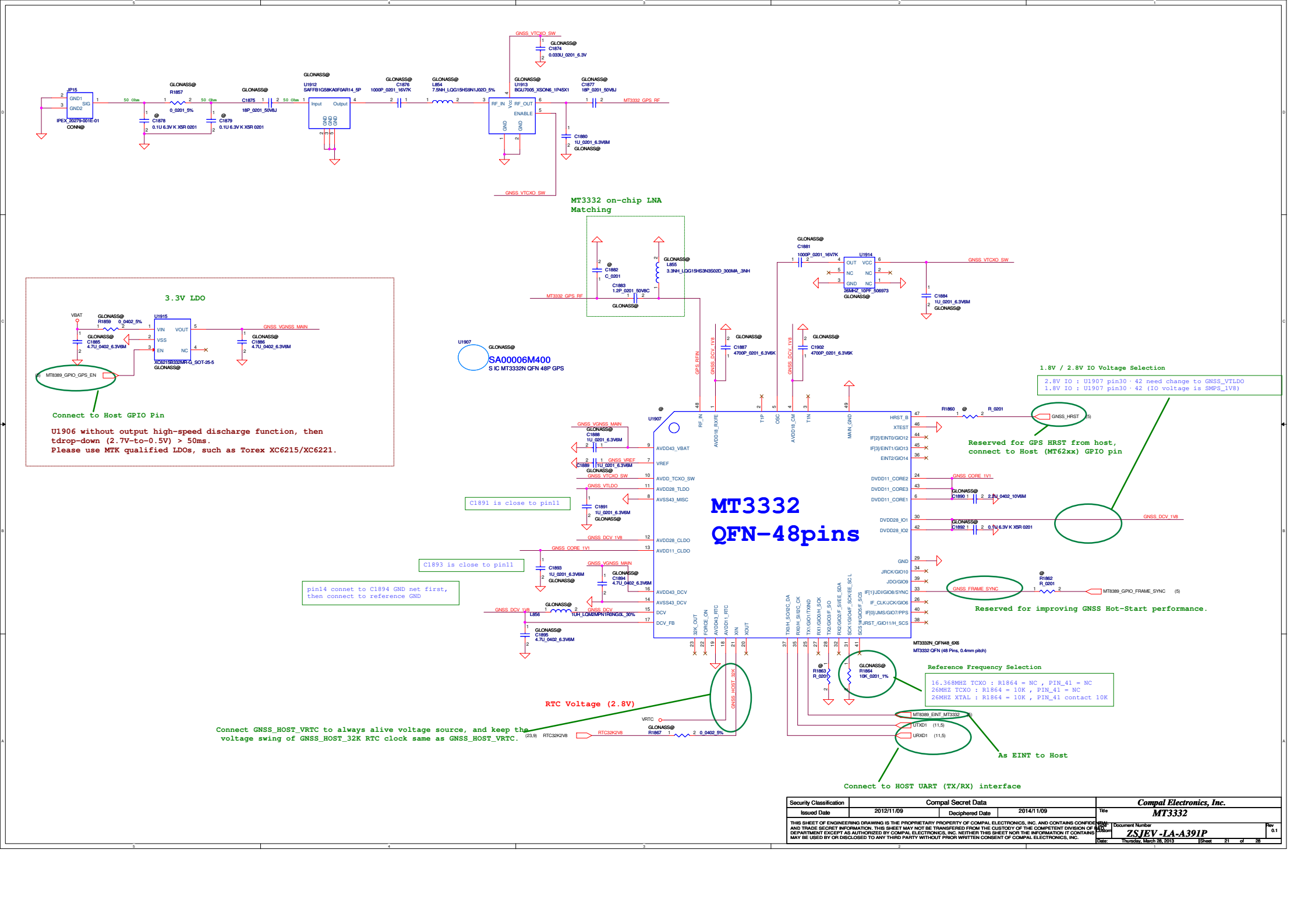

Security Classification	Compal Secret Data		
Issued Date	2012/11/09	Deciphered Date	2014/11/09

Compal Electronics, Inc.			
Title: MT3332			
Size: C	Document Number: ZSJEV-LA-A391P		Rev: 0.1
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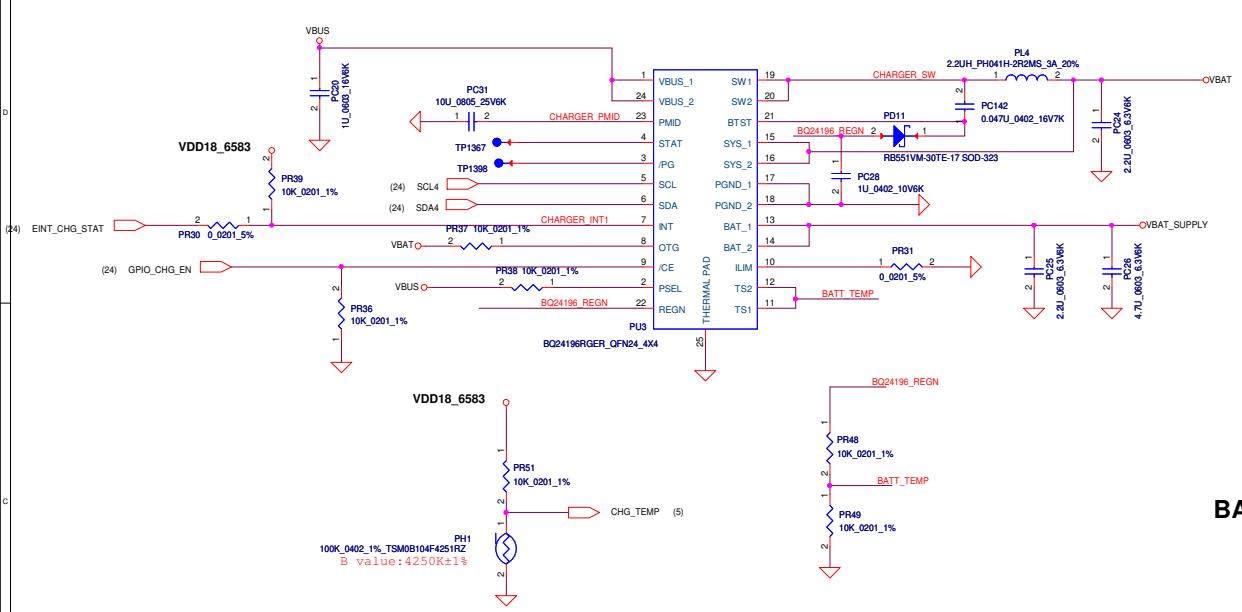
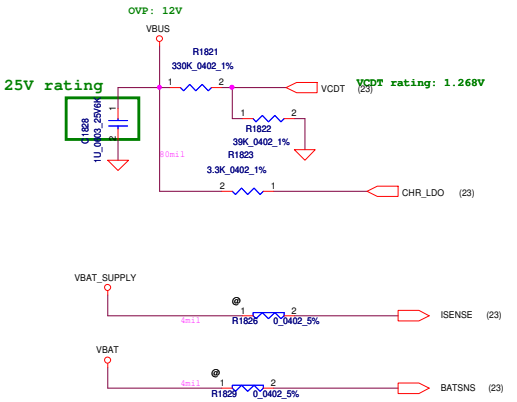
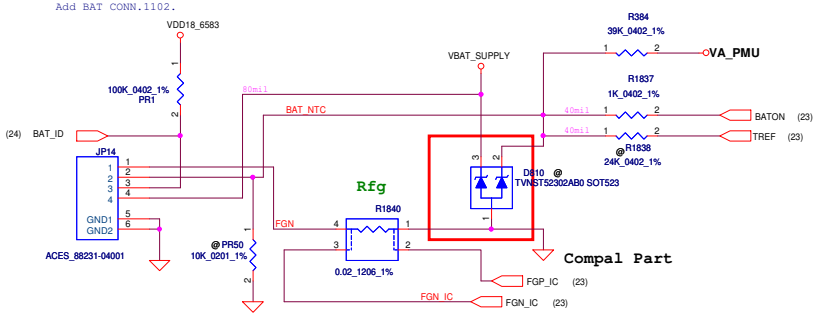
Charger





BATTERY CONNECTOR



Security Classification	Compal Secret Data		
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: Charger

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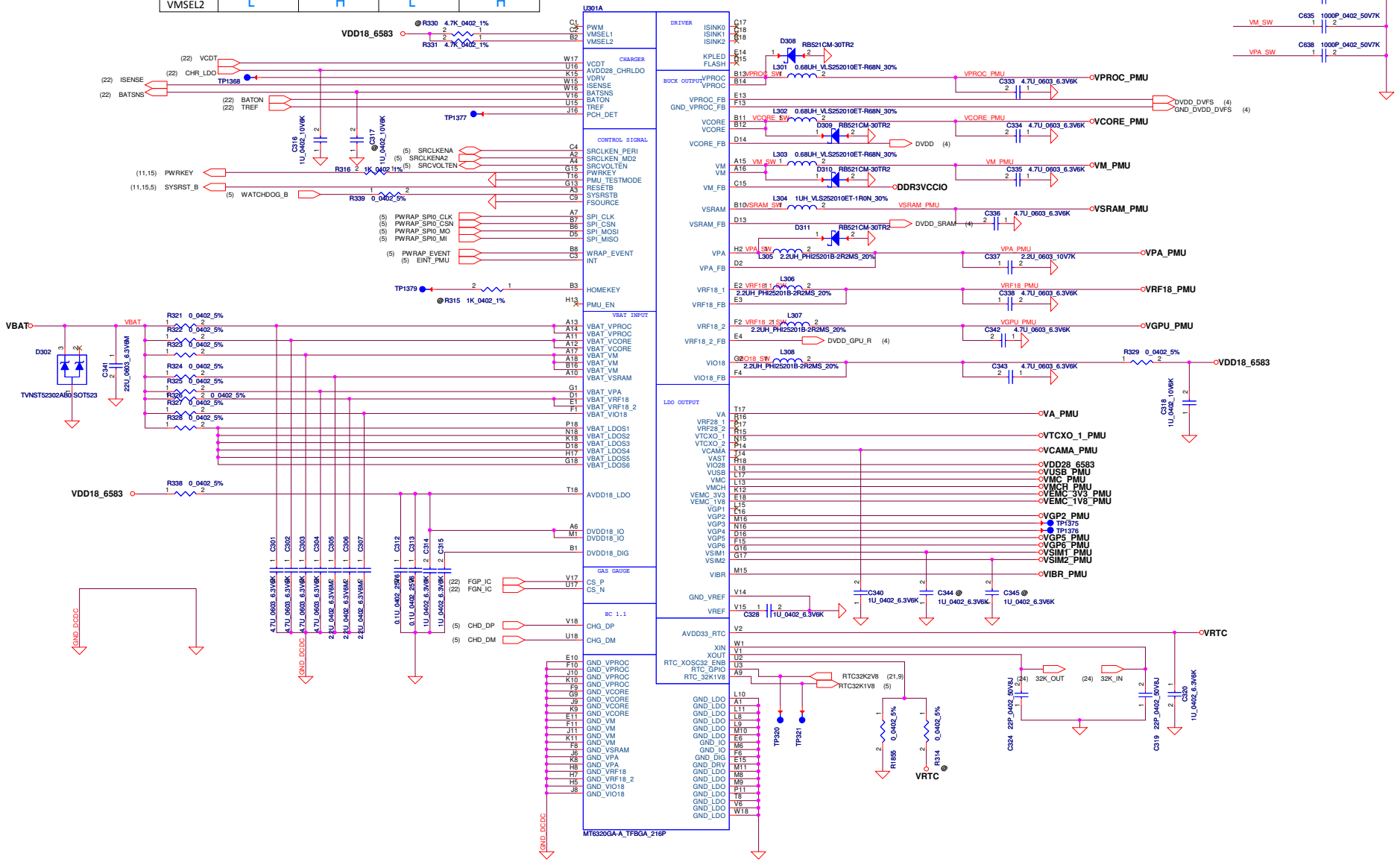
PMIC

	LPDDR2/1.2V	DDR3U/1.25V	DDR3L/1.35V	DDR3/1.5V
VMSEL1	L	L	H	H
VMSEL2	L	H	L	H



Security Classification	Compal Secret Data		
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: MT6329 PMIC

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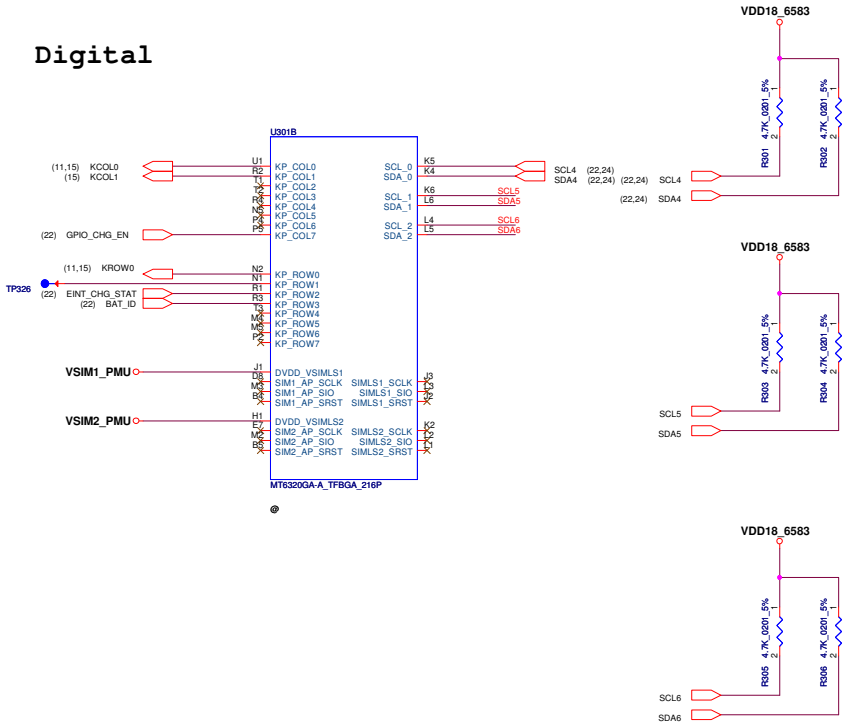
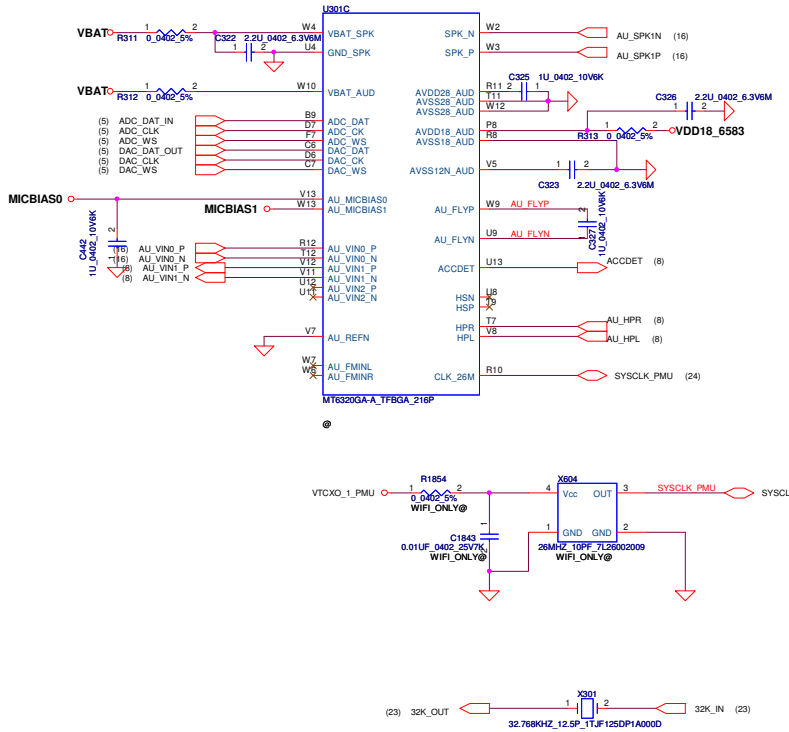
PMIC

Digital



Audio



Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date 2013/11/03	Title MT6329 PMIC

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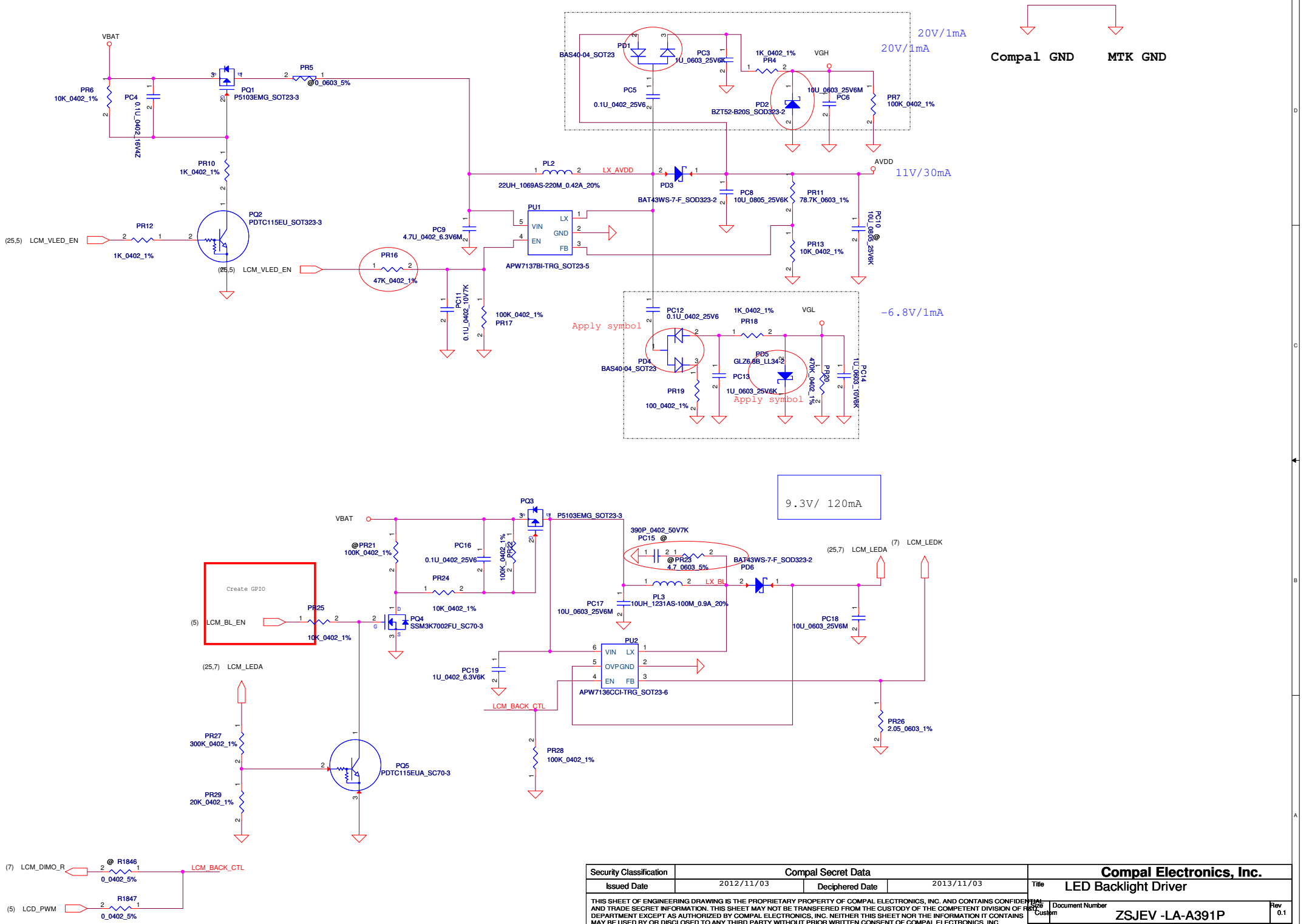

Security Classification	Compal Secret Data		
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: LED Backlight Driver

Size	Document Number	Rev
Custom	ZSJEV -LA-A391P	0.1

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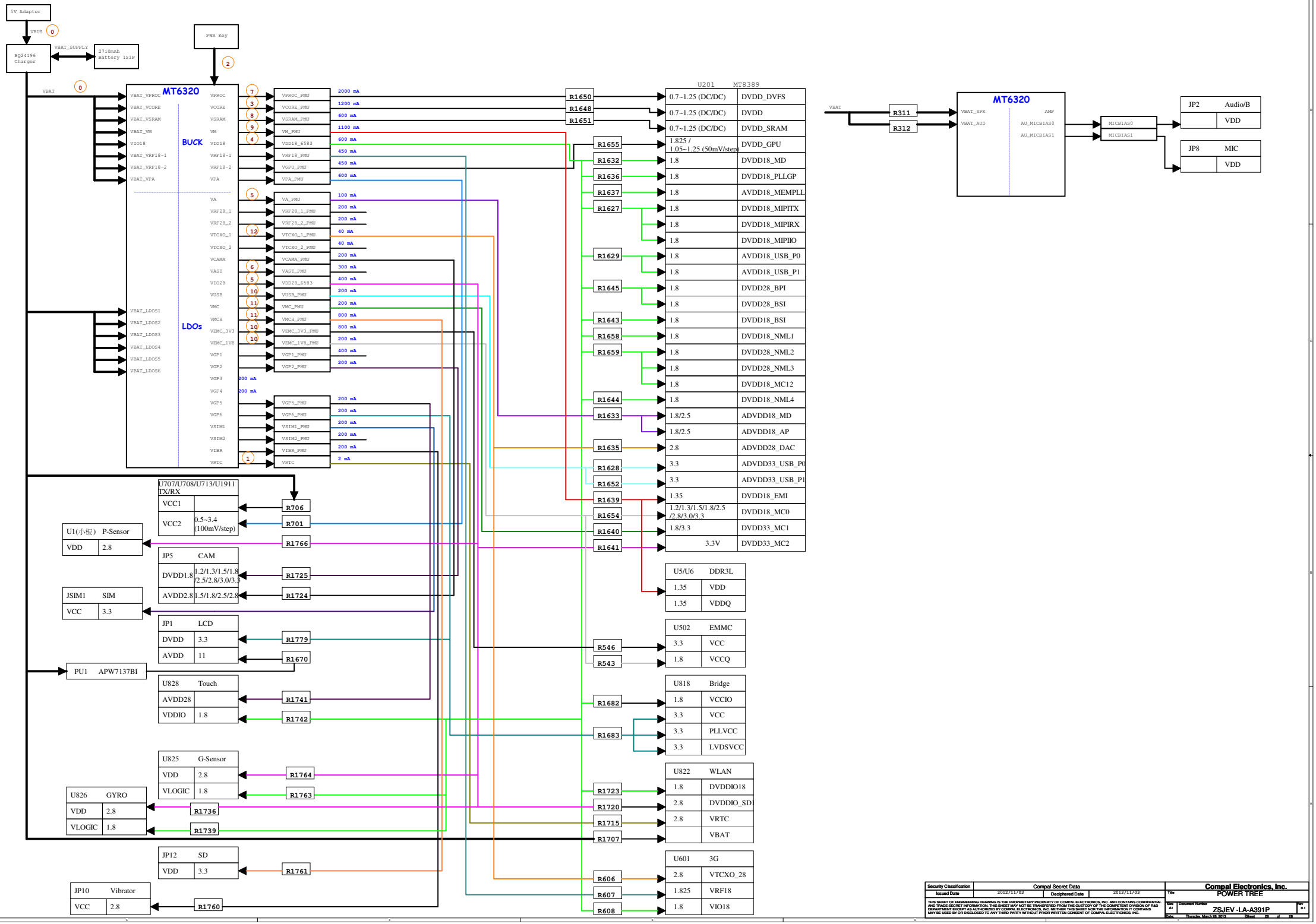

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2012/11/03	Deciphered Date 2013/11/03	Title POWER TREE

Size A1	Document Number ZSJEV -LA-A391P		Rev 0.1
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2013/3/11
Update PD11 , D308 , D309 , D310 , D311 , L301 ,
  L302 , L303 , L304 , L307 , C647 , C646 , C635 ,
  C638 compal P/N
Change to un-pop : PR50 , R1838 , R314 ,R315
Change to pop : R1855

2013/3/22
Add C318
Del R332,R348

2013/3/25
Delete TP324, TP325, TP327, TP328 test point

2013/3/28
Delete net SIM1_SCLK, SIM1_SIO, SIM1_SRST,
SIM1_CLK, SIM1_DATA, SIM1_RST

2013/3/29
R1847 change to 0-ohm

Security Classification	Compal Secret Data		
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: POWER PIR

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Date: Friday, March 29, 2013	Sheet 27 of 28	

2013/3/13
ADD NH520@,NH520_EMC@
modify RAM BOM structure
P01 Add S4 for GLONASS frame
P04. R1639 to 0_R_0805
  R1648,R1650 to 0_R_0603
  Del R1653
P05. Del TP1373,R634,R1765,R1766
 Del U201A no function net
P06. C70,C64,C68 to 0.1uf_0402
P07 R1675,R1678 to @
P08. Del R213, net POUT
 JP2_PIN8 to NC
P09. update U823 symbol
P13. R535 to 27ohm(MTK advice)
P15. R1753,C1759 to @ (MTK advice)

2013/3/22
ADD S4,S5
L838,L839,L840,L841,L842,L853 --> SM070001R00
update EMMC PN.
P05. ADD TP1366,TP1369
 R1520 to GLONASS@, R1521 to NH520@
P10. C1743 to @, R1726 to 0 ohm for EMI reserve
P13. DEL CILP19,CLIP20
P16. C1766,R1760 del @
P17. C1771 to @, R1762 to 0 ohm for EMI reserve
P21.C1887,C1902-->SE00000WN00
  C1880,C1884,C1888,C1889,C1891,C1893-->SE00000UC00
  C1890-->SE00000V600
  R1859 to U1915 PIN1

2013/3/26
P06. R72,R73,R65,R70,R525,R77 to 0201 size

2013/3/26A
P06. C61 to 0201 size

2013/3/28
P15. SW1,3,4 co-layout SN100008300

2013/3/29
P04. R1650 change to short pad
P05. del net: SIM1_SCLK, SIM1_SIO, SIM1_SRST, EINT_A

2013/ 4/ 1
P15. del co-layout switch button(SW5,6,7)

Security Classification	Compal Secret Data		
Issued Date	2012/11/03	Deciphered Date	2013/11/03

Compal Electronics, Inc.

Title: HW PIR

Size: Custom	Document Number: ZSJEV -LA-A391P		Rev: 0.1
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