```
Cover sheet
   BLOCK DIAGRAM
   SMBUS & IRQ ROUTING
    POWER ON SEQUENCE
    POWER Block
06
    POWER BUDGET
   POWER SEQUENCE
    CLOCK GEN
    CPU1
10
    CPU2
    NB1
    NB2
12
    NB3
13
    NB4
    NB5
15
    NB6
16
   DDR2_SODIMMO
17
   DDR2_TEMINATION
   LCD CON
19
    CRT
20
    ICH7M1
   ICH7N2
23
   ICH7M3
    ICH7M4
    USB PORT
26
    HDD
    MINICARD
    MODEM CON
    LAN
30
    RICHO 1394
    RICHO CARDBUS
   ALC260 CODEC
   AUDIO PA@JACK
   RTC POWER
34
   KBC 1
36
    CPU FAN
37
    ACIN
   PWR_Charger
   PWR_System
    PWR DDR2
    PWR VCCP&VCC GMCH
   PWR VCore
   S3_S4_CNTR&Discharge
   System_PWRGD
45
    ME
    PCMCIA
    KBC CON
    DAUGHTER BOARD
                               TPM
    BAT CON
                               BULETOOTH
```

INTEL LCBN Platform S101

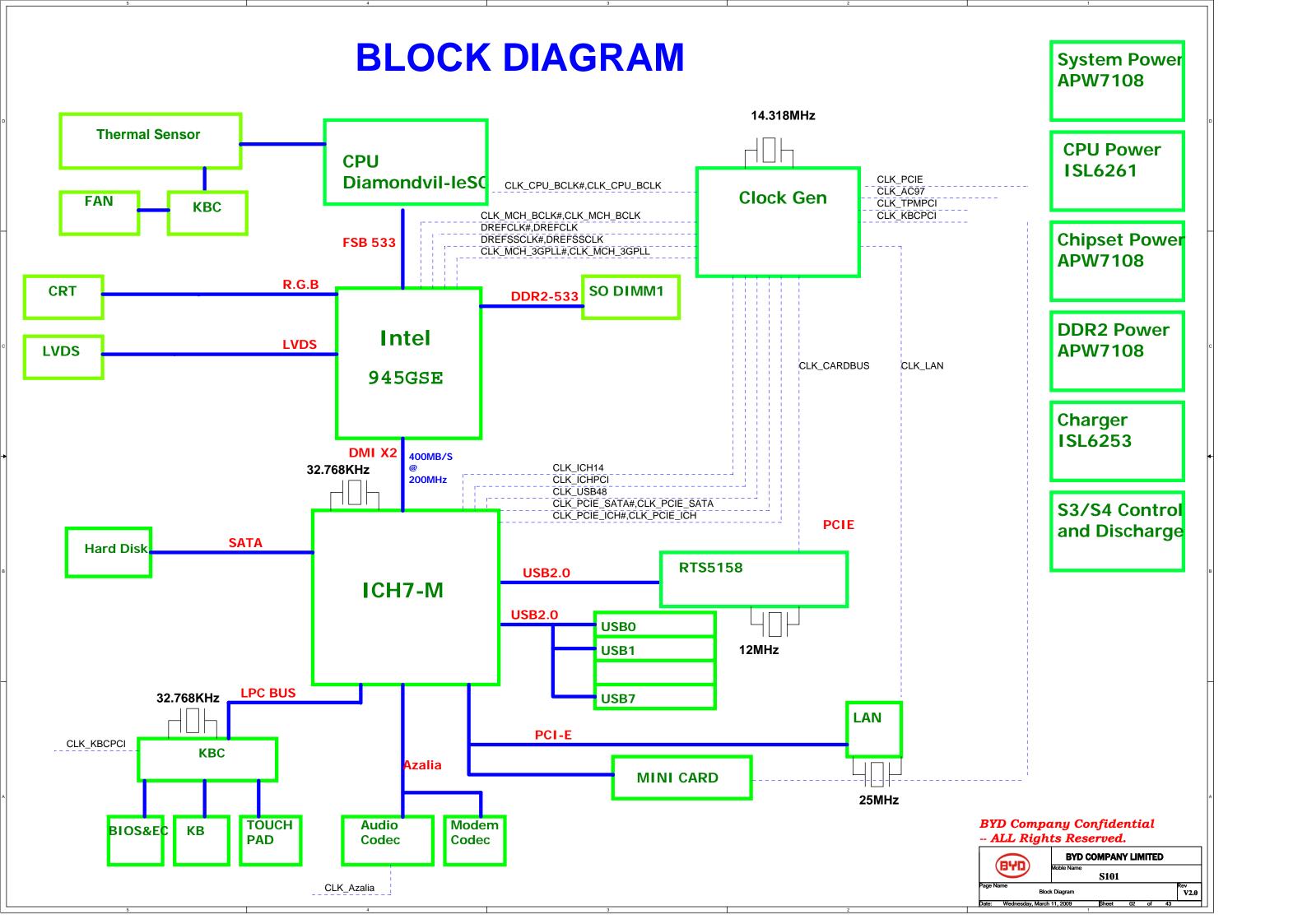
Version: 2.0

Drawing by : Matto huang

Notes:

Part Value Prefix: "POIP=NA" means nopop Net Value postfix: "#" means Low Active

	BYD COMPANY LIMITED					
	Moble Name S101					
Page Name Cove	er sheet Rev	72.0				
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PCI Device:

REQ0: X REQ1: PCMICIA REQ2: LAN REQ3: X

PIRQA#:RTL8100CL/8110SBL PIRQB#: NC PIRQC#: MINI PCI PIRQD#: MINI PCI (Function0) PIRQE#: R5C841 (Function0) PIRQF#: R5C841 PIRQG#: R5C841 PIRQH#: Internal USB

AD18:LAN AD22:MINIPCI AD25:R5C841

SMBUS ADDRESS:

Device:	Address	Hex	BUS
Clock Gen	1101001x	D2/D3	SMB_ICH_S2
SODIMM0	1010000x	A0	SMB_ICH_S2
SODIMM1	1010010x	A4	SMB_ICH_S2
Smart Battery			SMB_BS

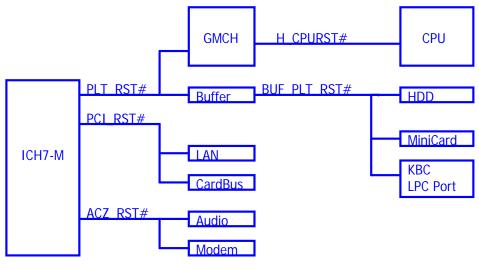
Notes:

First address is for a write command and second is for a read command

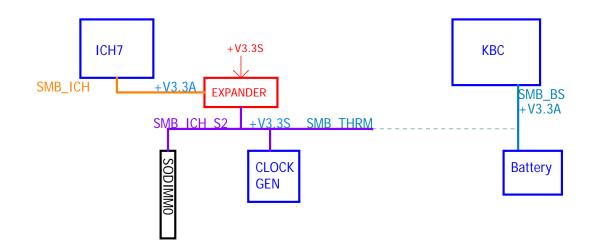
Buses labbeled SMB_ICH_xx come out of ICH, Via an I2C expander.

The rest come out of EC

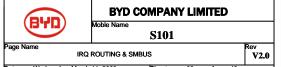
RESET TOPOLOGY



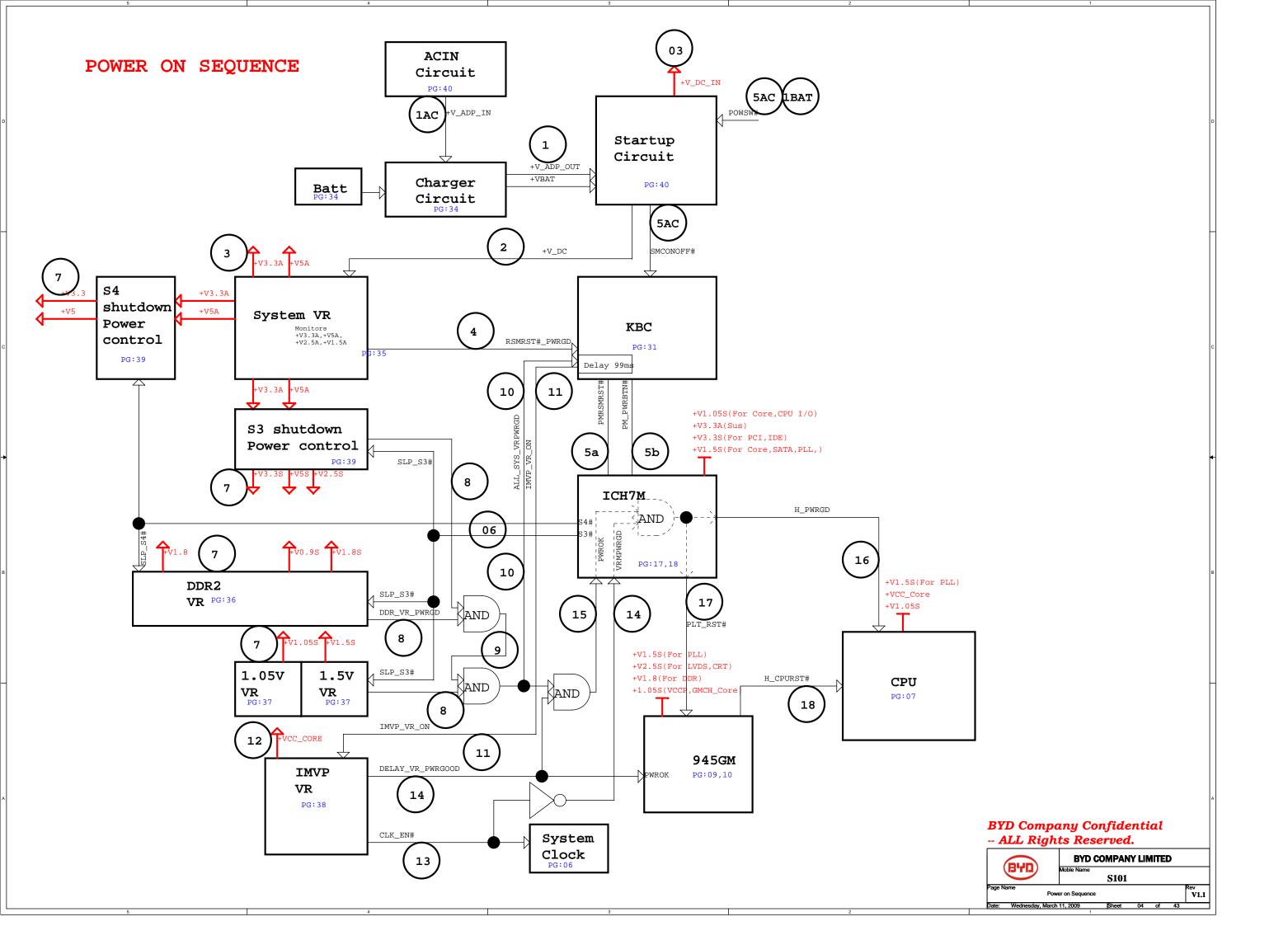
SMBUS TOPOLOGY



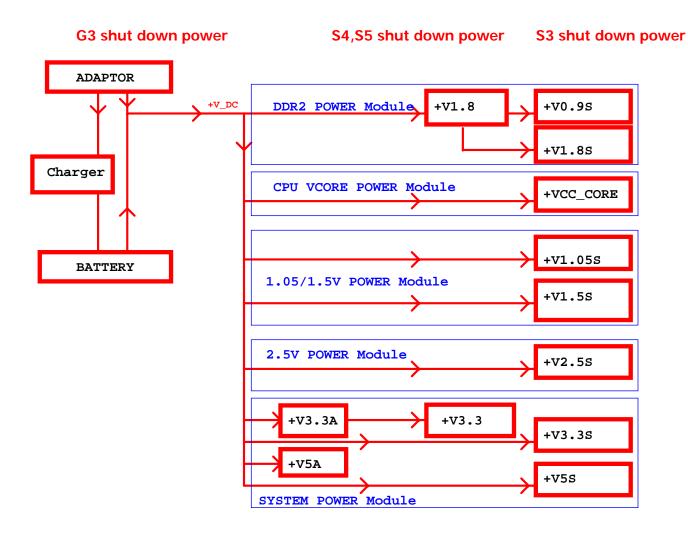
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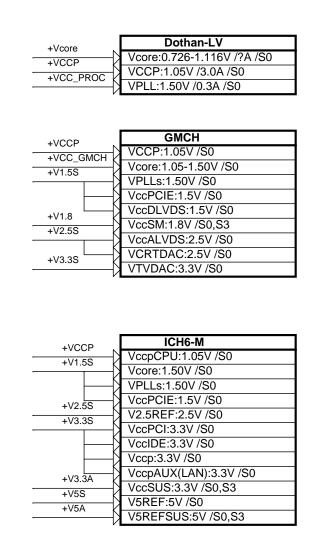


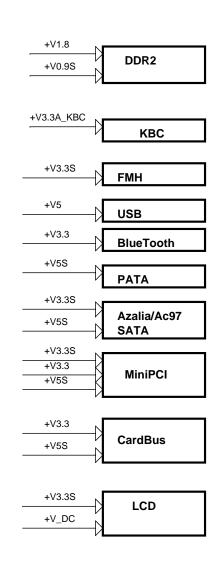
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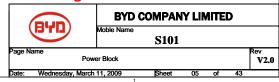


POWER Delivery Architectural Block Diagram







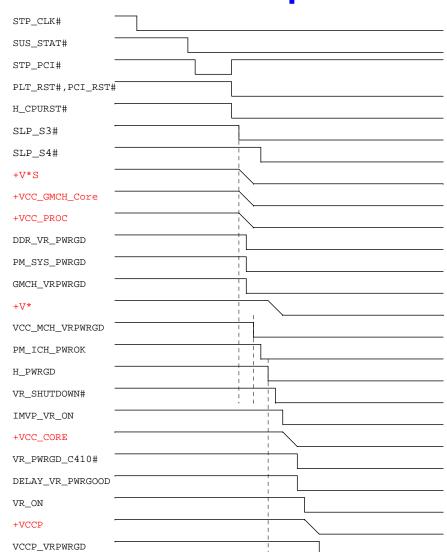


POWER RAIL	DESTINATION	VOLTAGE	SO CURRENT
VCORE_CPU	Banias	0.7-1.708V	32A
VCCP	Banias	0.9-1.105V	2.5A
	ICH4M MontaraGM		0.72A
1.8VDDM	Banias (PLL)	1.8V	0.3A
	MontaraGM(PLL)		0.099A
1.2VDDM		1.2V	1.89A
	(CORE, HUB, DDRDDL)		(1.4A, 0.09A, 0.4A)
1.5VDDM	MontaraGM	1.5V	0.23A
	(LVDS, DAC, DVO)		(0.07A, 0.07A, 0.09A)
	ICH4M (CORE)		0.5A
2.5VDDS	MontaraGM	2.5V	2.12A
	(DDR, LVDSIO)		(2.07A, 0.05A)
	DDR RAM		1.046A(Idle) 1.692A (Run 3DMark)
	R5C551		0.13A
1.8VDDS	82541EI		0.22A
1.25VDDM	DDR RAM	1.25V	0.0769A
1.5VDDS	ICH4M (LAN)	1.5V	0.0155A
1.2VDDS	82541EI	1.2V	0.47A
1.5VDDA	ICH4M (SUS)	1.5V	0.0675A
3VDDM	ICH4M (IO)	3.3V	0.528A
	R5C551		0.13A
	MiniPCI		
	FWH BIOS		
	LPC KBC		0.0308A (Idle)
	AC97 CODEC		0.0461A (Idle)
	CLK GEN		0.36A
	LVDS		0.246A
3VDDS	ICH4M (LAN)	3.3V	0.0092A
	R5C551		
	MiniPCI		
	82540EM		0.15A
	PCMCIA VCCA		
3VDDA	ICH4M (SUS)	3.3V	0.165A
5VDDM	AMP2020		0.0615A (Idle) 0.338A (Run)
	CDROM		0.0461A (Idle) 0.677~0.8A(Run)
	HDD		0.0461A (Idle) 0.492A (Run)
	INT KB/ INT MS		(1411)
	INVERTER		0.0615A (Idle) 0.569A (Run)
5VDDS	PCMCIA VCCA		(1122)
	FCMCIA VCCA		
5VDDA	ICH4M		10UA
	USB		
PMU3V	PMU08		0.0615A
PMU5V	ASIC_B0		0.0615A

PUD	BYD COMPANY LIMITED	
13713	Moble Name S101	
Page Name PWF	R_Budget	Rev V2.0
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Power On Sequence POWSW# PS_LATCH# DCIN +V3.3A_KBC +V*A RSMRST#_PWRGD PMRSMRST# Need confirm the power sequency PM_PWRBTN# and PMRSMRST# PM_PWRBTN# SLP_S3# +V*S +VCC_GMCH_Core +VCC_PROC SLP_S4# DDR_VR_PWRGD PM_SYS_PWRGD GMCH_VRPWRGD VCC_MCH_VRPWRGD VR_ON VCCP_VRPWRGD VID[5:0] VR_SHUTDOWN# IMVP_VR_ON +VCC_CORE VR_PWRGD_C410 VRM_PWRGD DELAY_VR_PWRGOOD PM_ICH_PWROK PLT_RST#,PCI_RST# H_PWRGD H_CPURST# Intel request: **CPU Power on Sequence** Vccp VID[5:0] BCLK VccA(+VCC_PROC) Vcore H_PWRGD H_CPURST#

Power Down Sequence





H_PWRGD

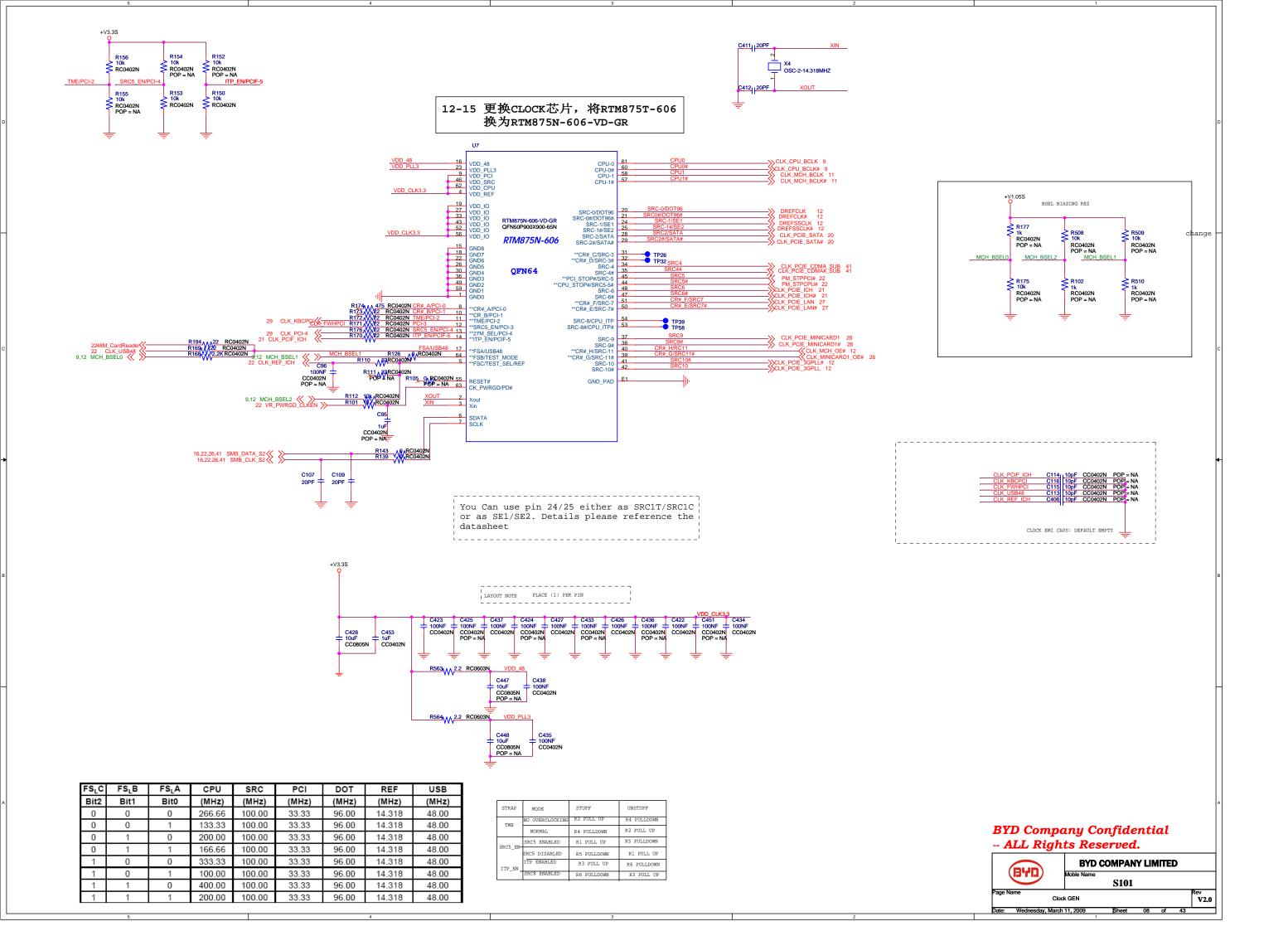
Vcore

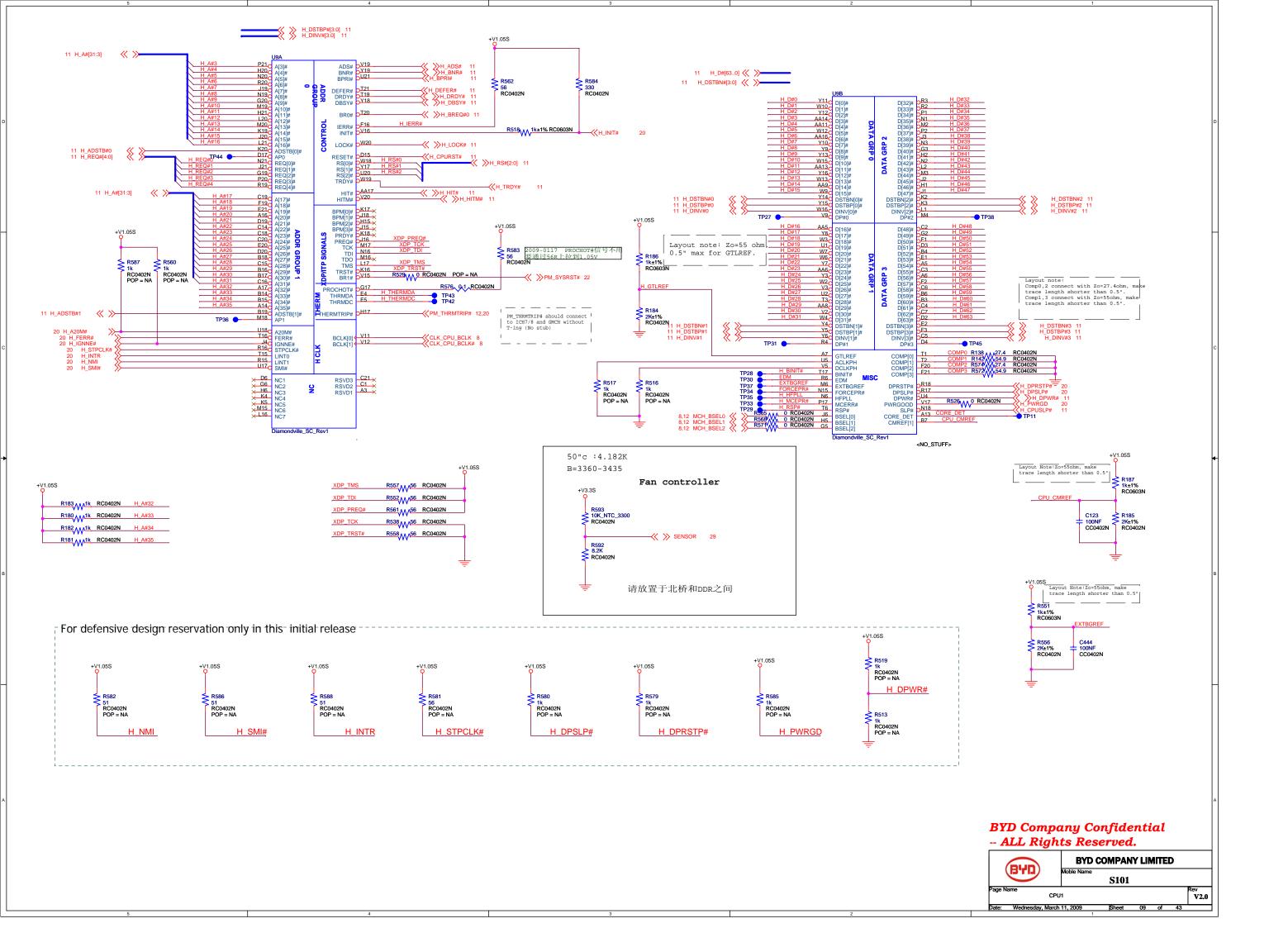
Vccp

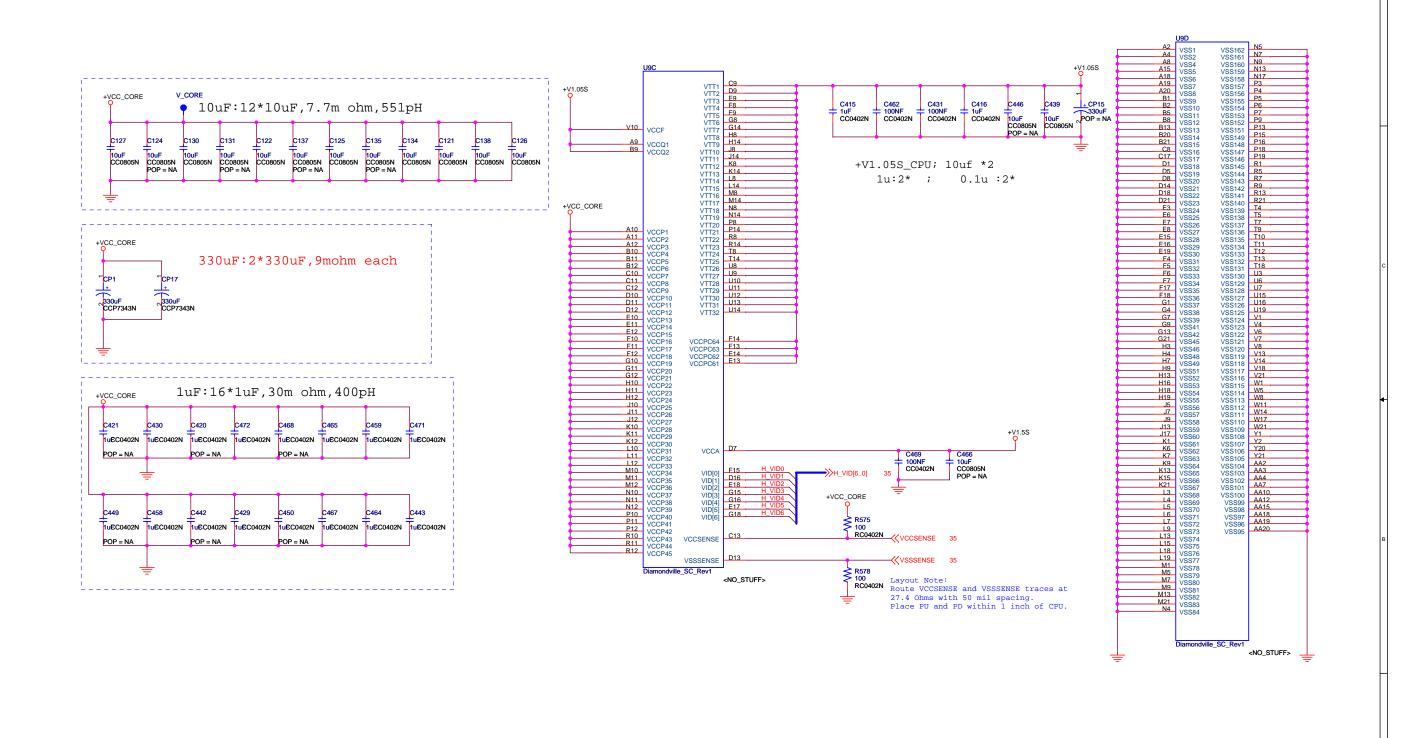
VccA(+VCC_PROC)

VID[5:0]

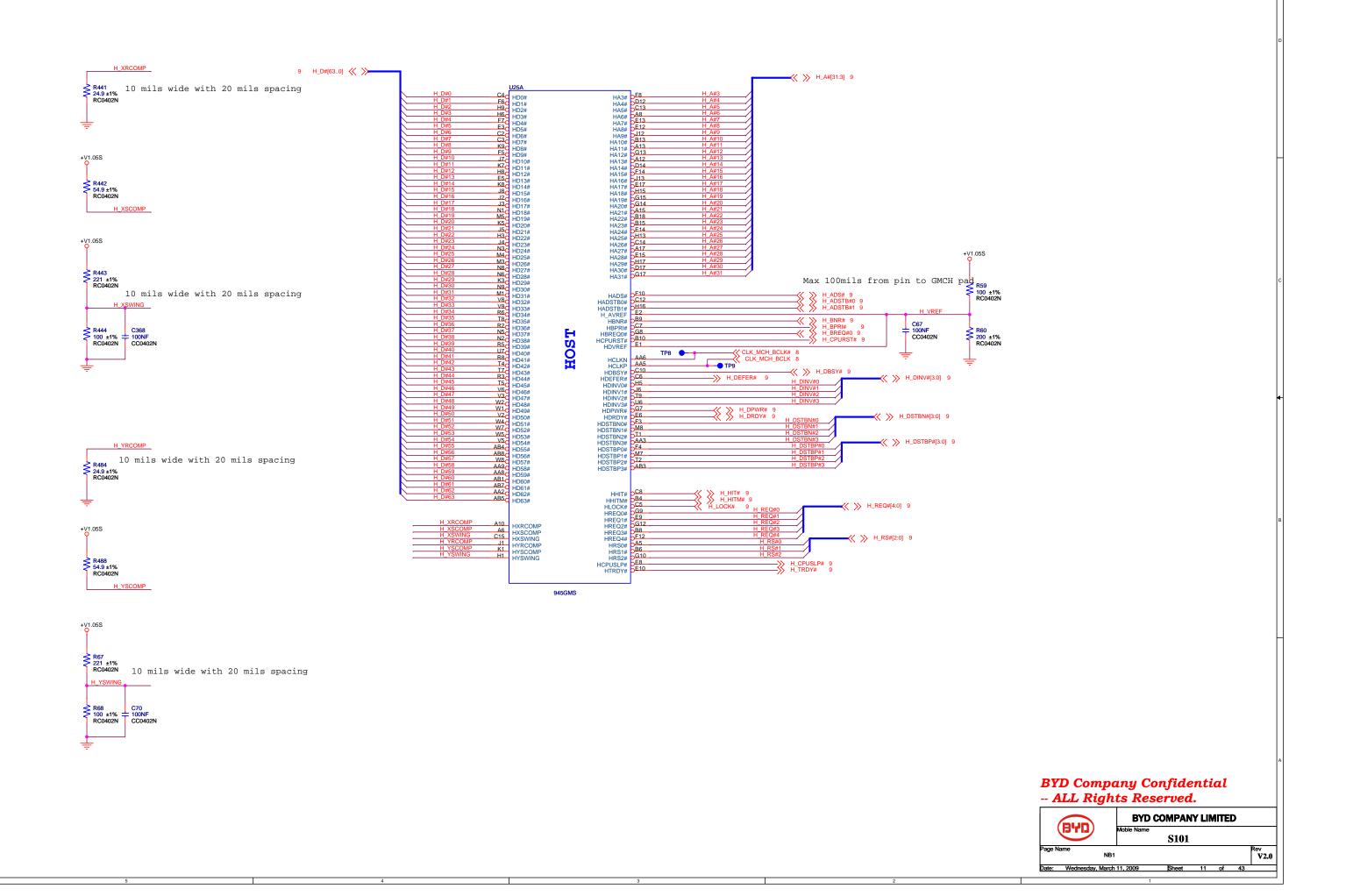


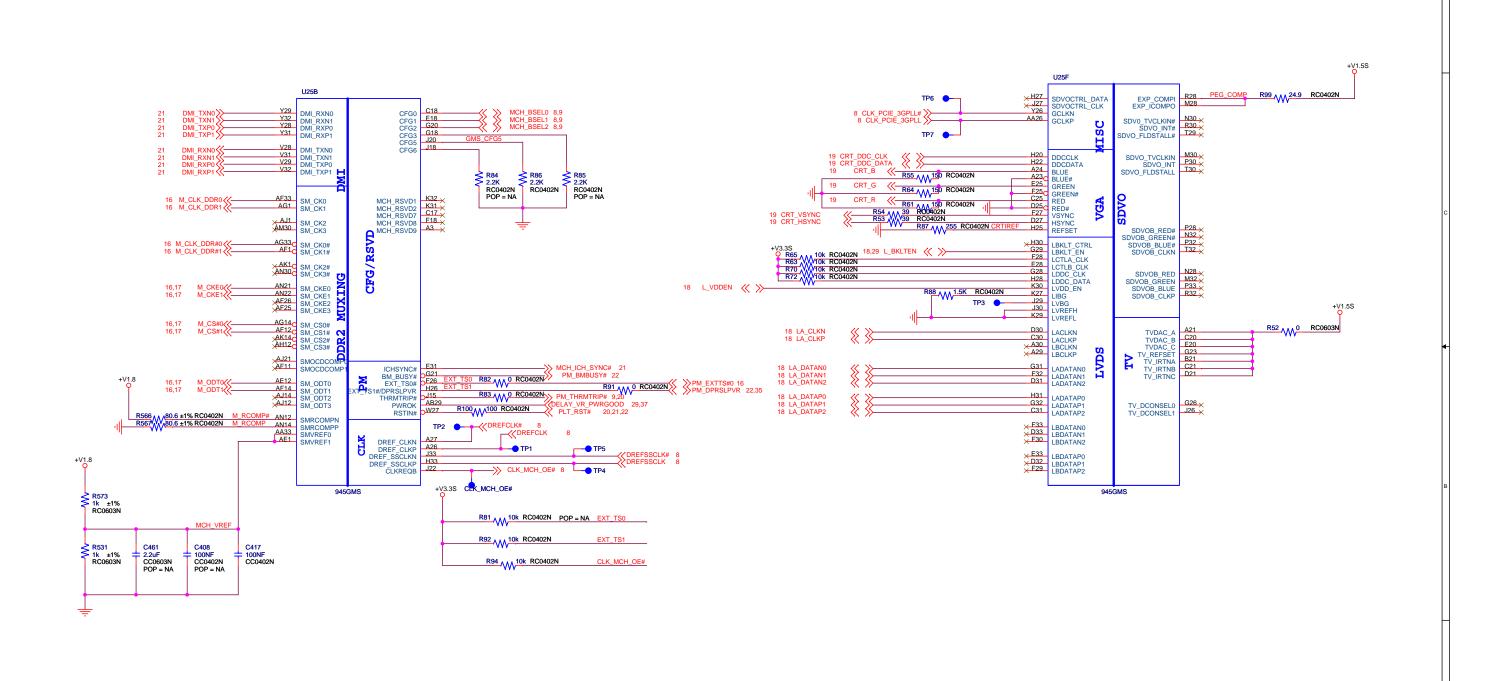




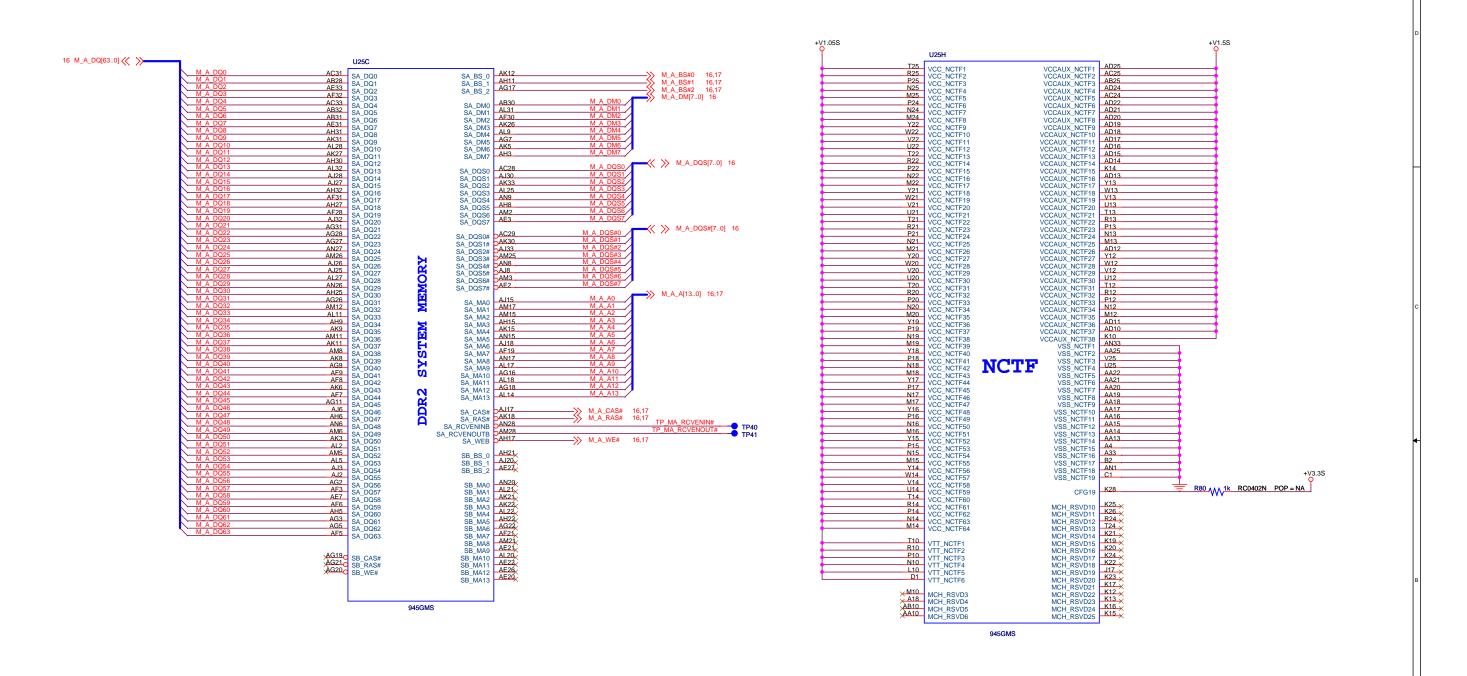


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(B-11)	Moble Name	S101					
Page Name CPU	2					Rev V2.0	
Date: Wednesday, March	11, 2009	Sheet	10	of	43		
		•					

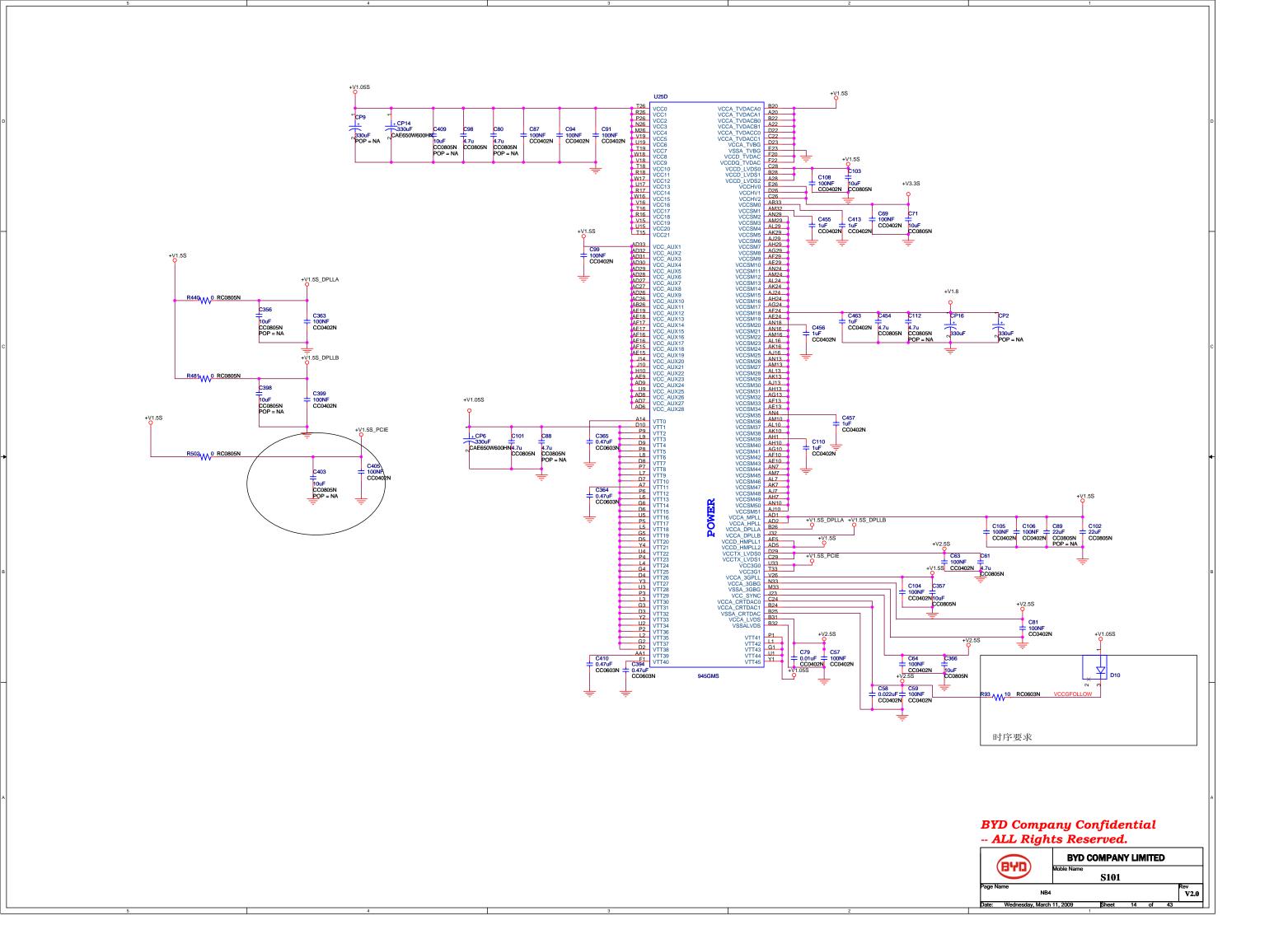


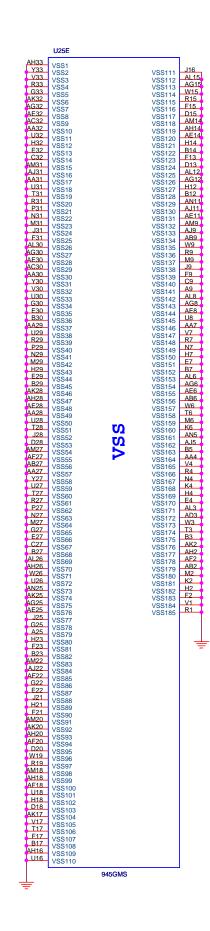


0101				
S101				
				Rev V2.0
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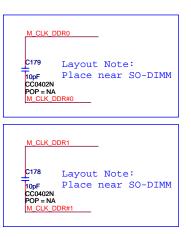
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Date: Wednesday, March	11, 2009	Sheet	13	of	43	

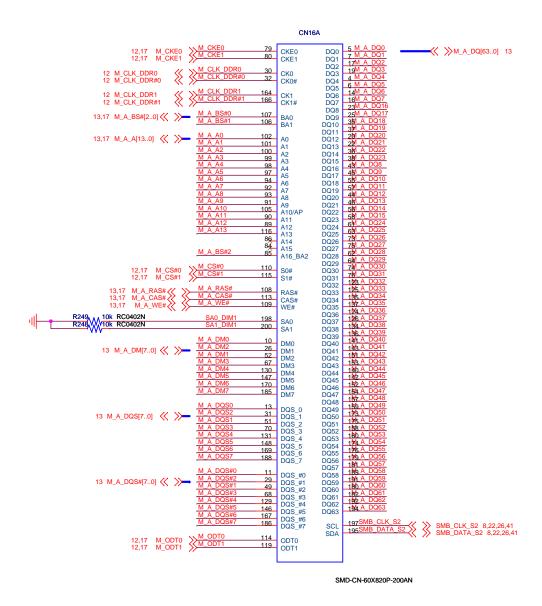


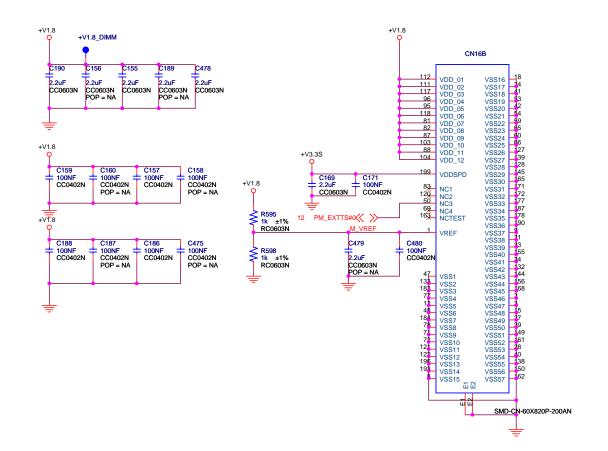


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Page Name NB5		5101				Rev V2.0
Date: Wednesday, March	11, 2009	Sheet	15	of	43	1

DDR2 SODIMMO

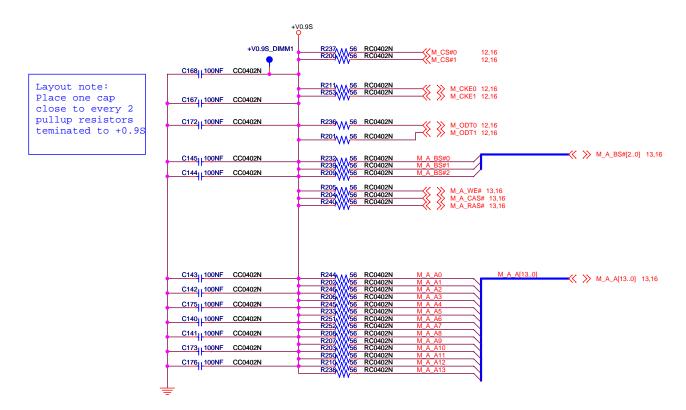






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Page Name DDF	2_SODIMM0					Rev V2.0
Date: Wednesday, March	11, 2009	Sheet	16	of	43	

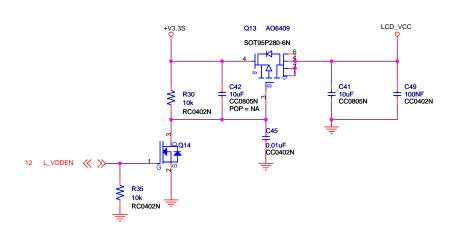
DDR2 Termination

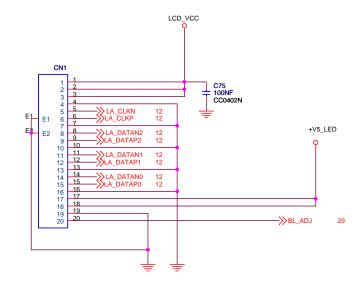


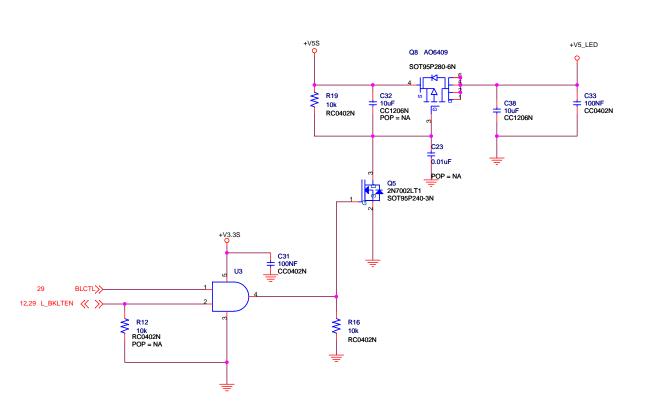
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13713	Moble Name	S101				
Page Name DDR2_Termination				Rev V2.0		
Date: Wednesday, March	11, 2009	Sheet	17	of	43	

IPEX 30PIN CON" cable LCD CON" 2 VCC 3 VCC 4 GND 5 GND 6 GND 7 GND 8 Rin0-2 VCC 3 VCC 9 Rin0+ 4 GND 10 GND 11 Rin1-5 ClkIN-12 Rin1+ 6 Clkin+ 13 GND 7 GND 14 Rin2-8 Rin2-9 Rin2+ 15 Rin2+ 10 GND 16 GND 17 ClkIN-11 Rin1 12 Rin1 18 ClkIN+ 19 GND 13 GND 14 Rip 20 NC 21 NC 15 Rip 0+ 16 GND 22 GND 23 Vled 17 Vled 18 Vled 24 Vled 25 GND 19 GND 20 ADJ 26 GND 27 NC 28 NC 29 ADJ 30 NC

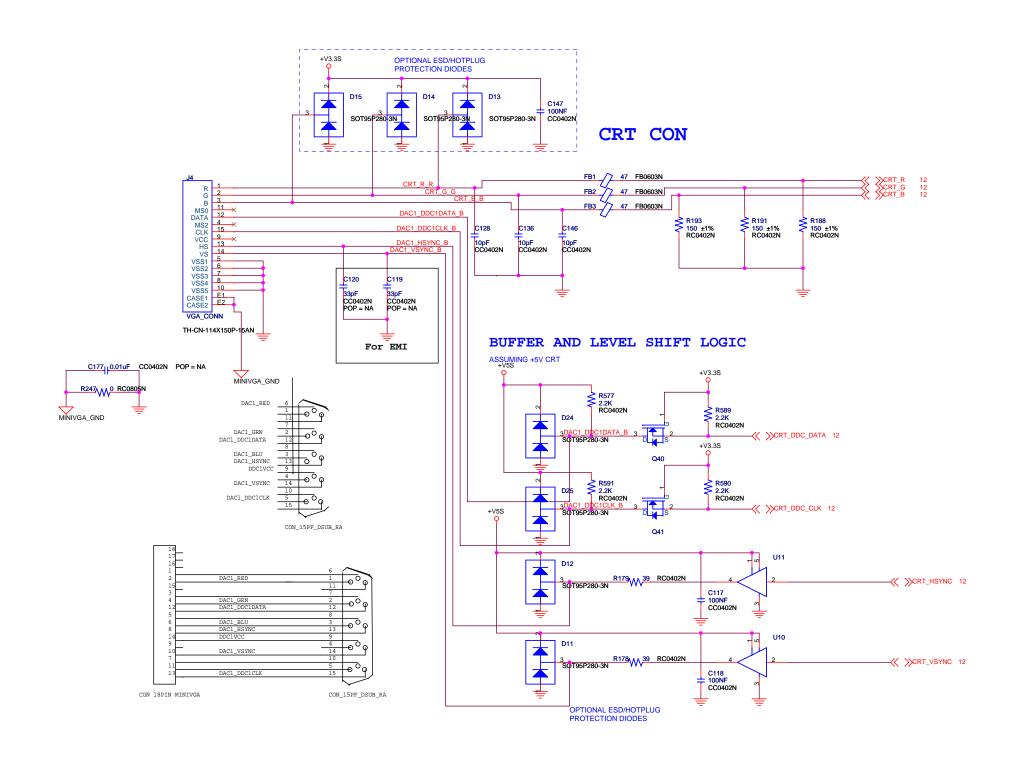
LVDS Connector



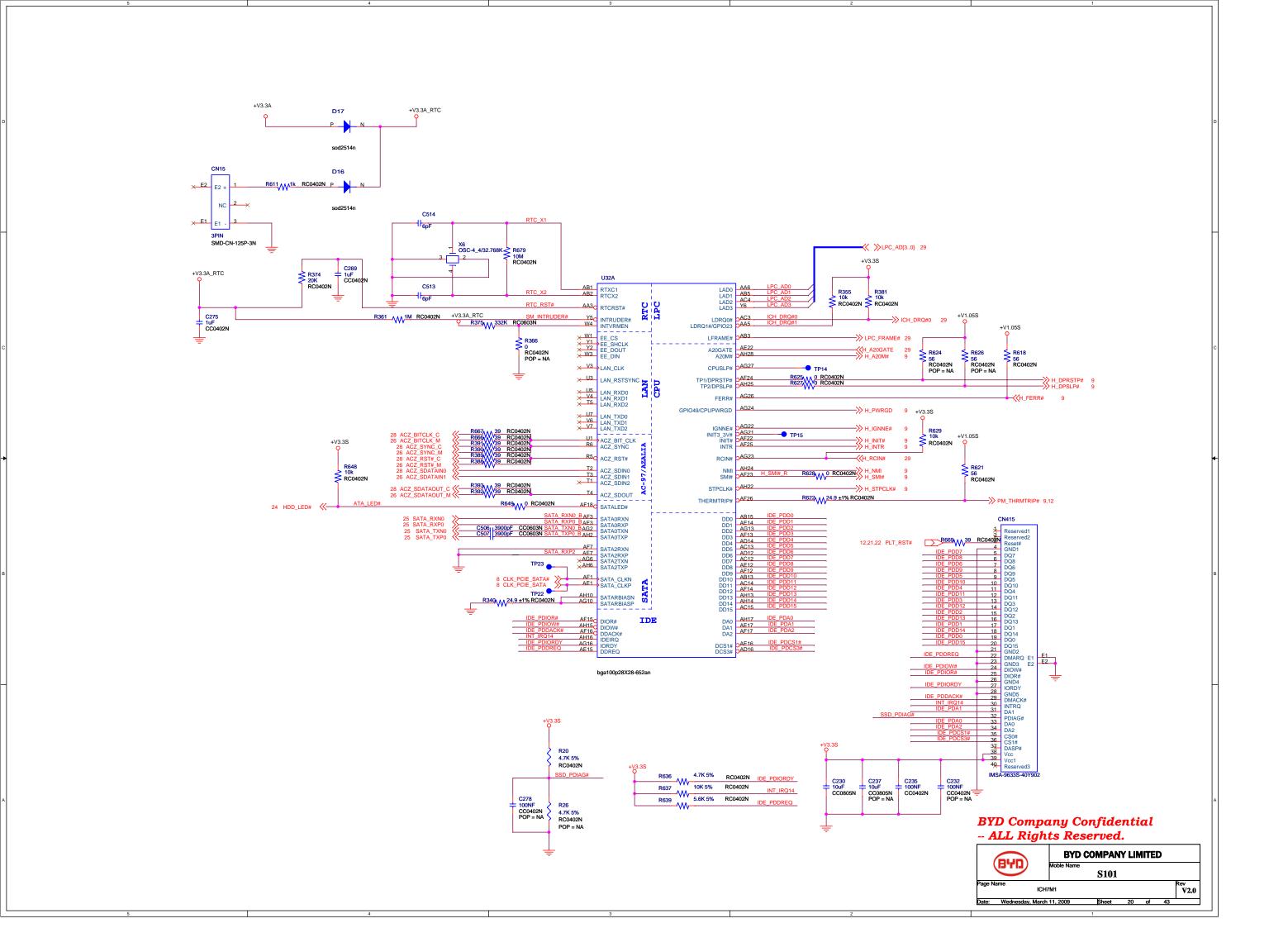


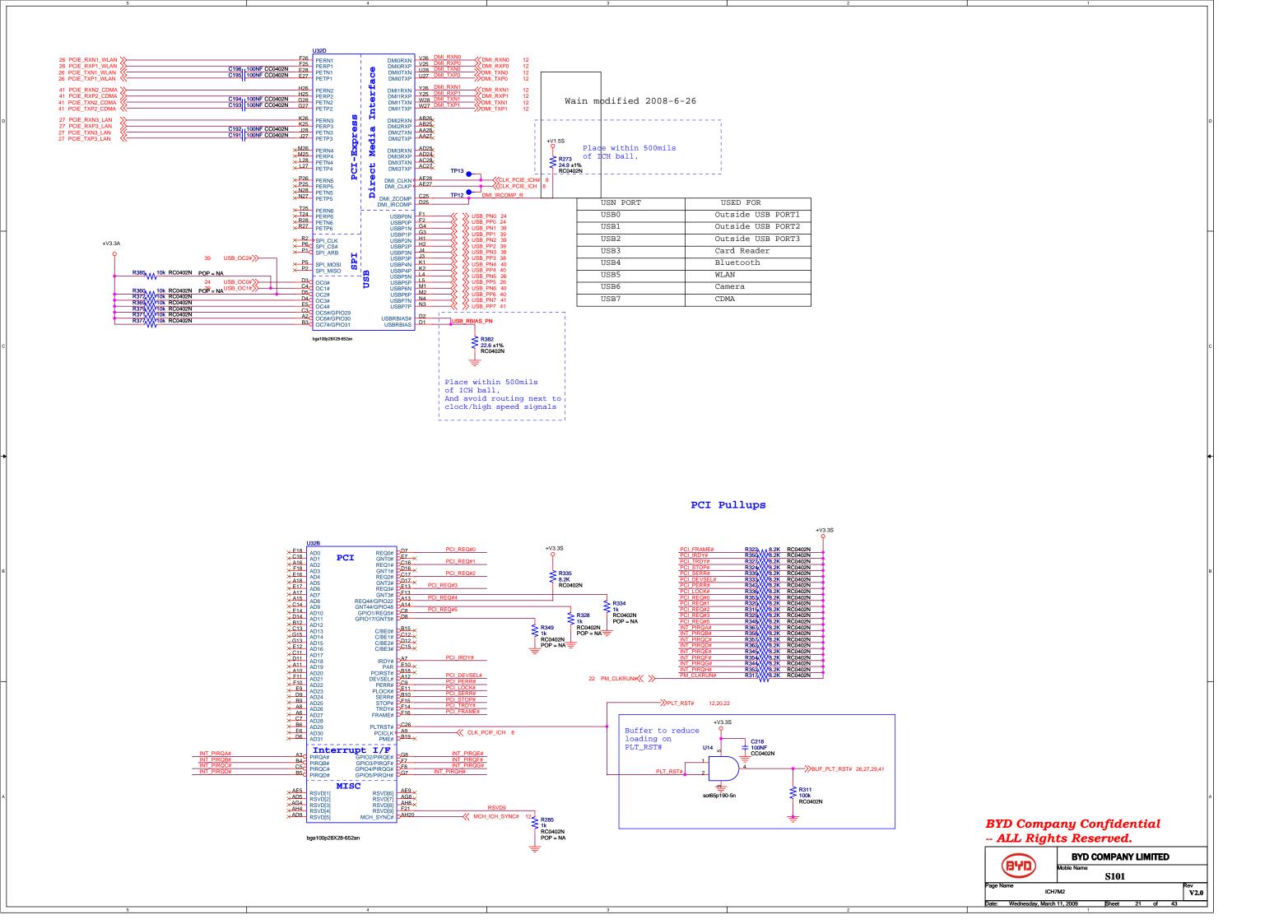


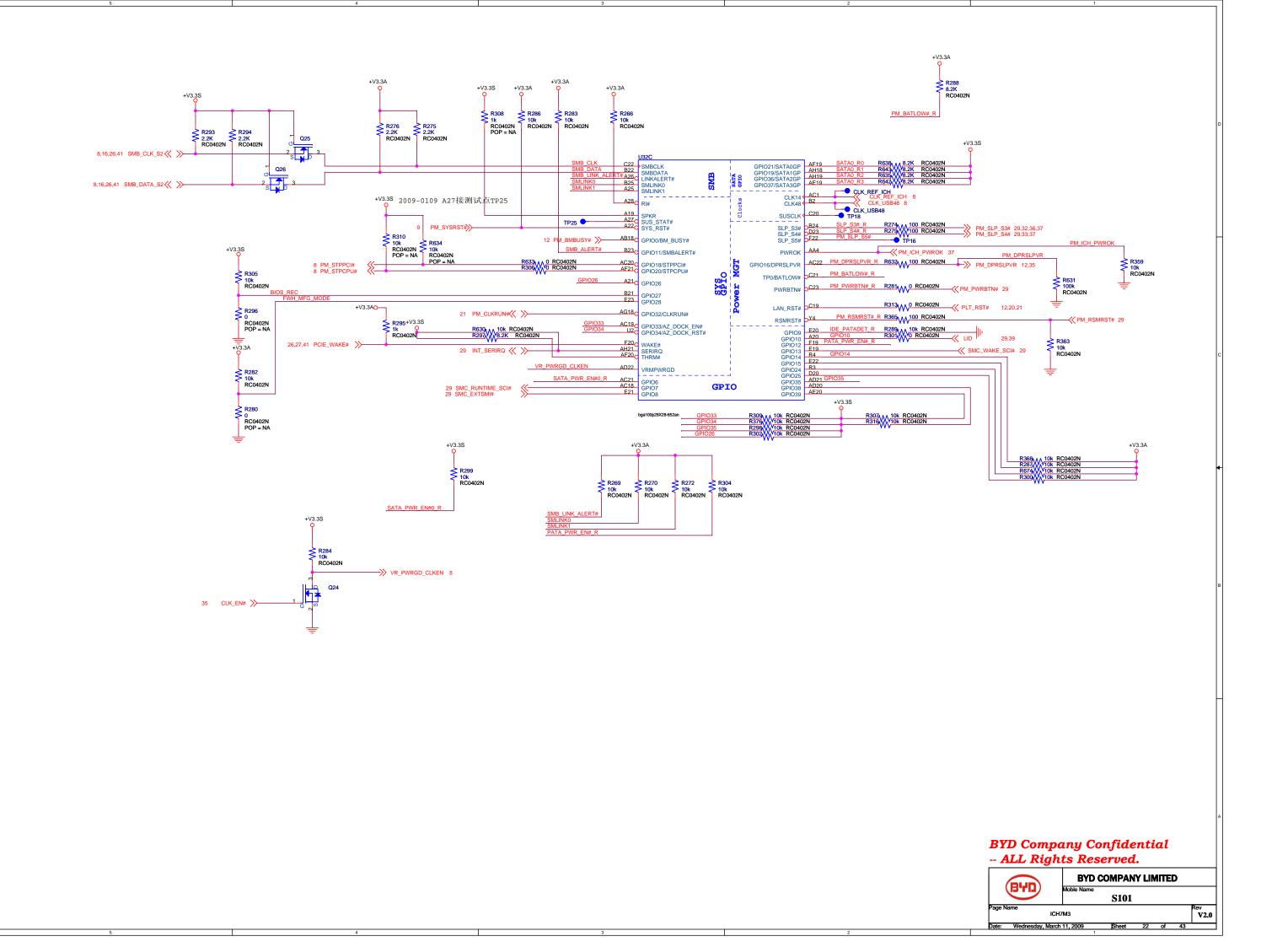
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(341)	Moble Name \$101					
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Date: Wednesday, March	11, 2009 Sheet 18 of 43					

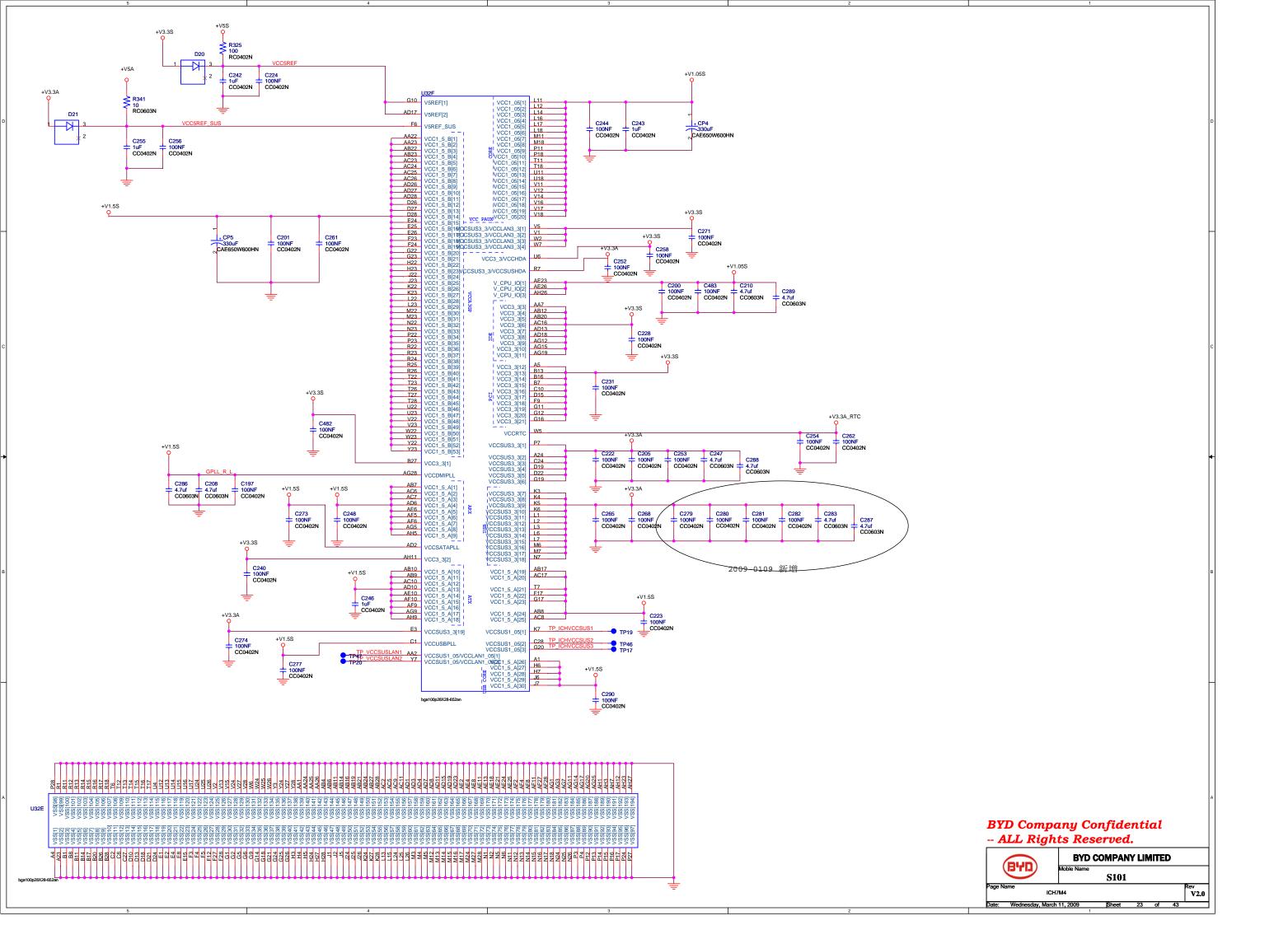


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Date: Wednesday, March	11, 2009	Sheet	19	of	43		

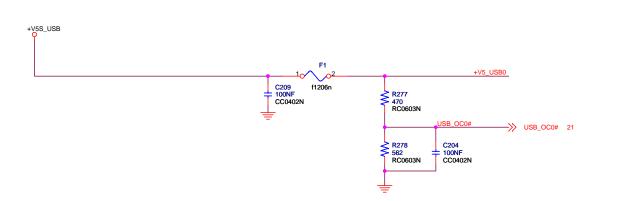


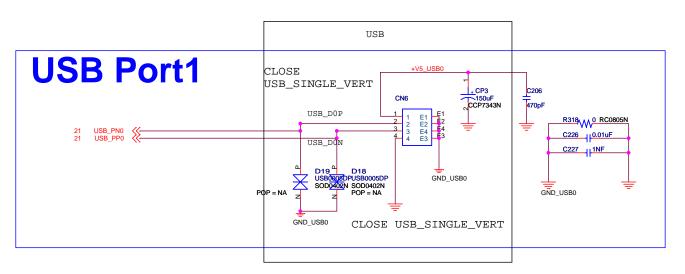




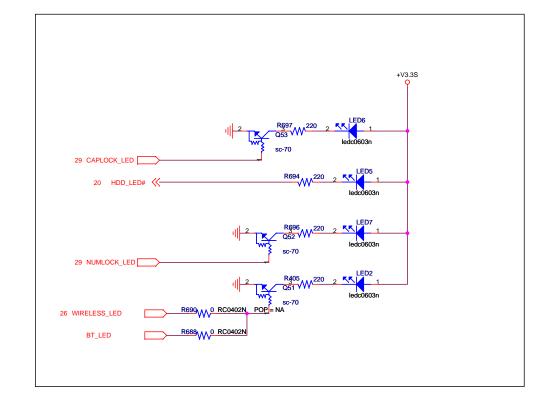


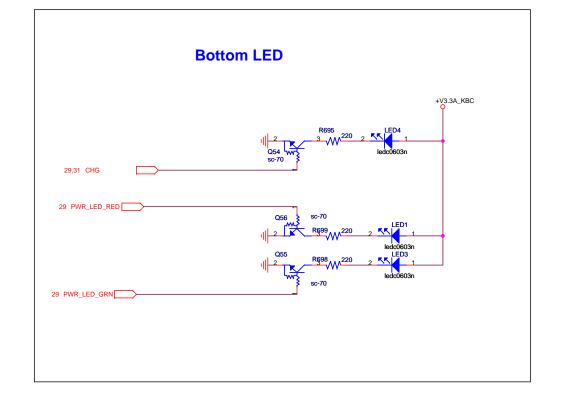
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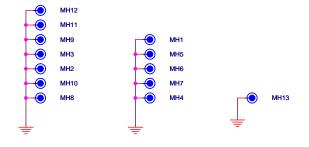


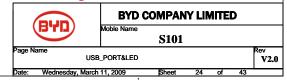


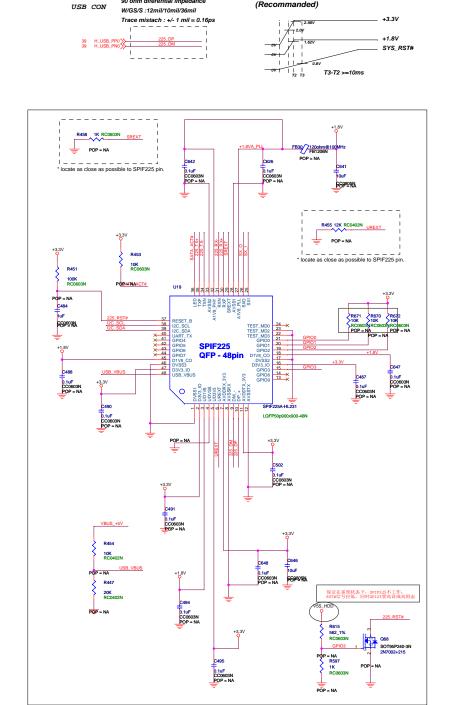
LED



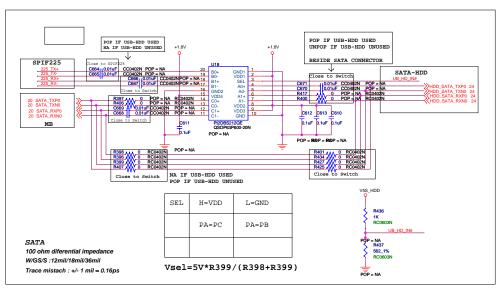


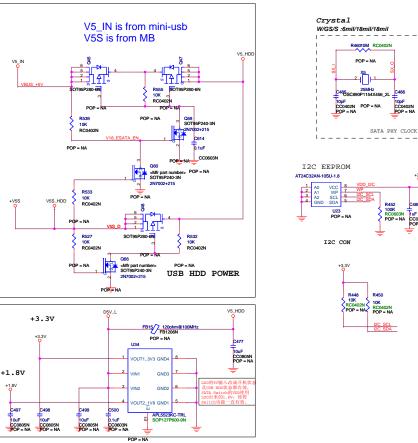


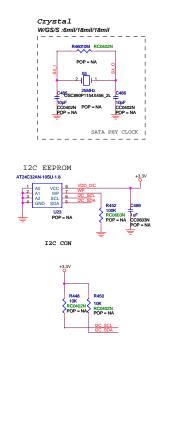




Timing Waveforn in power on status







12-16 增加USB HDD相关元器件



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C198 3900pF CC0603N S5 C199 3900pF CC0603N S6

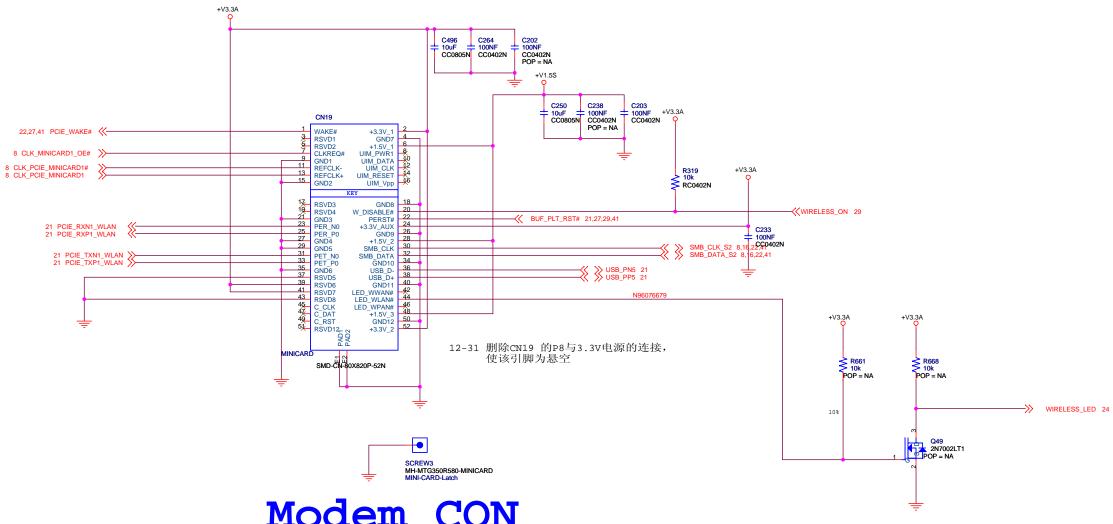
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+ CP18 330uF CAE650W

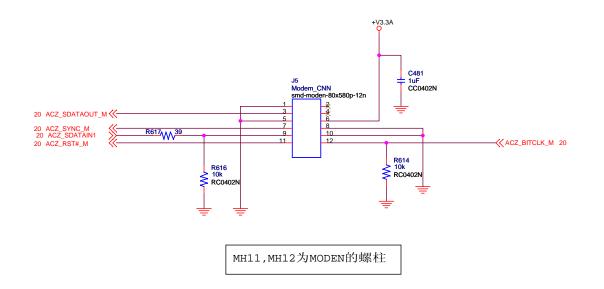
× P11

SATA_CONN TH-CN-127P-22CN

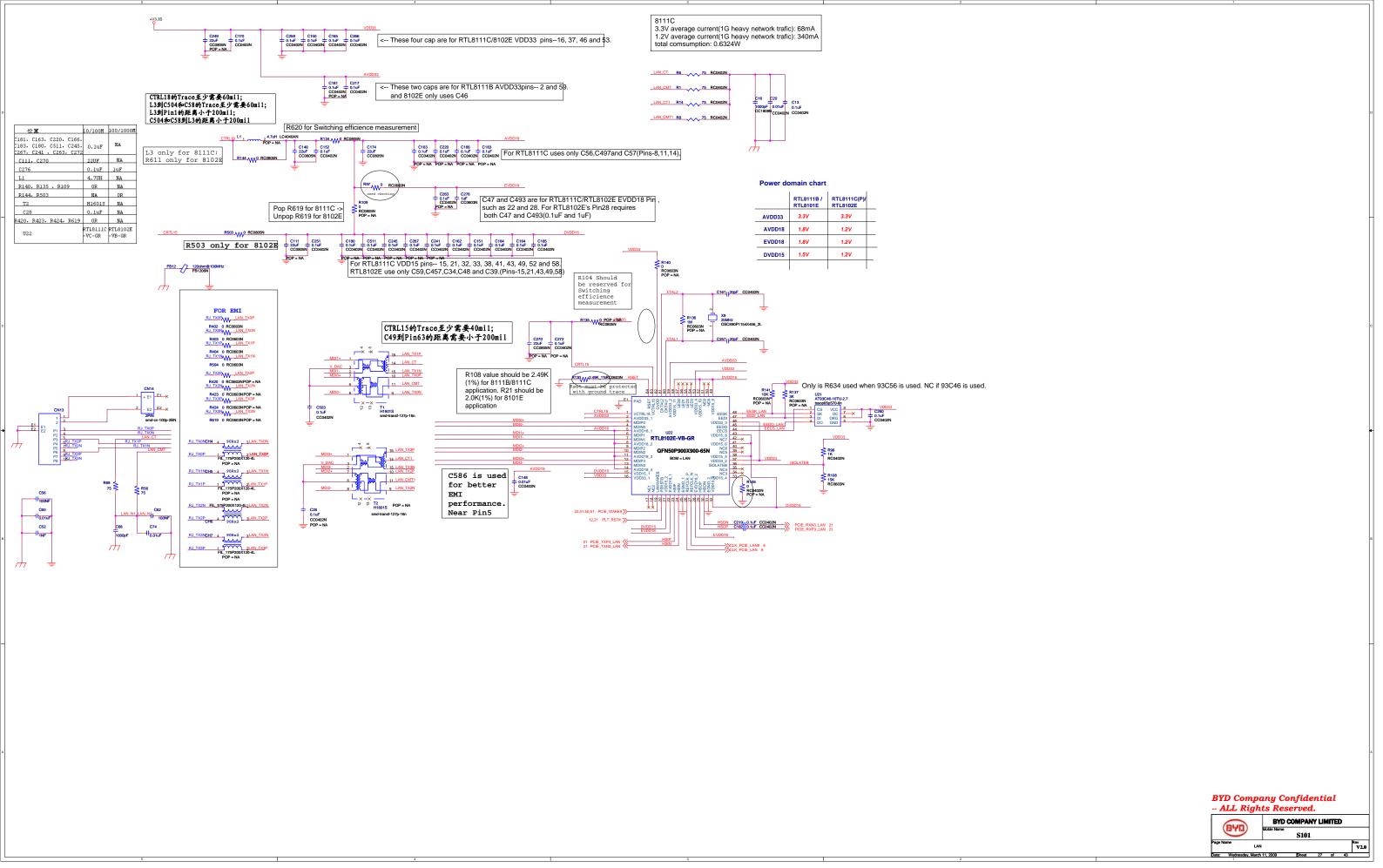
Minicard

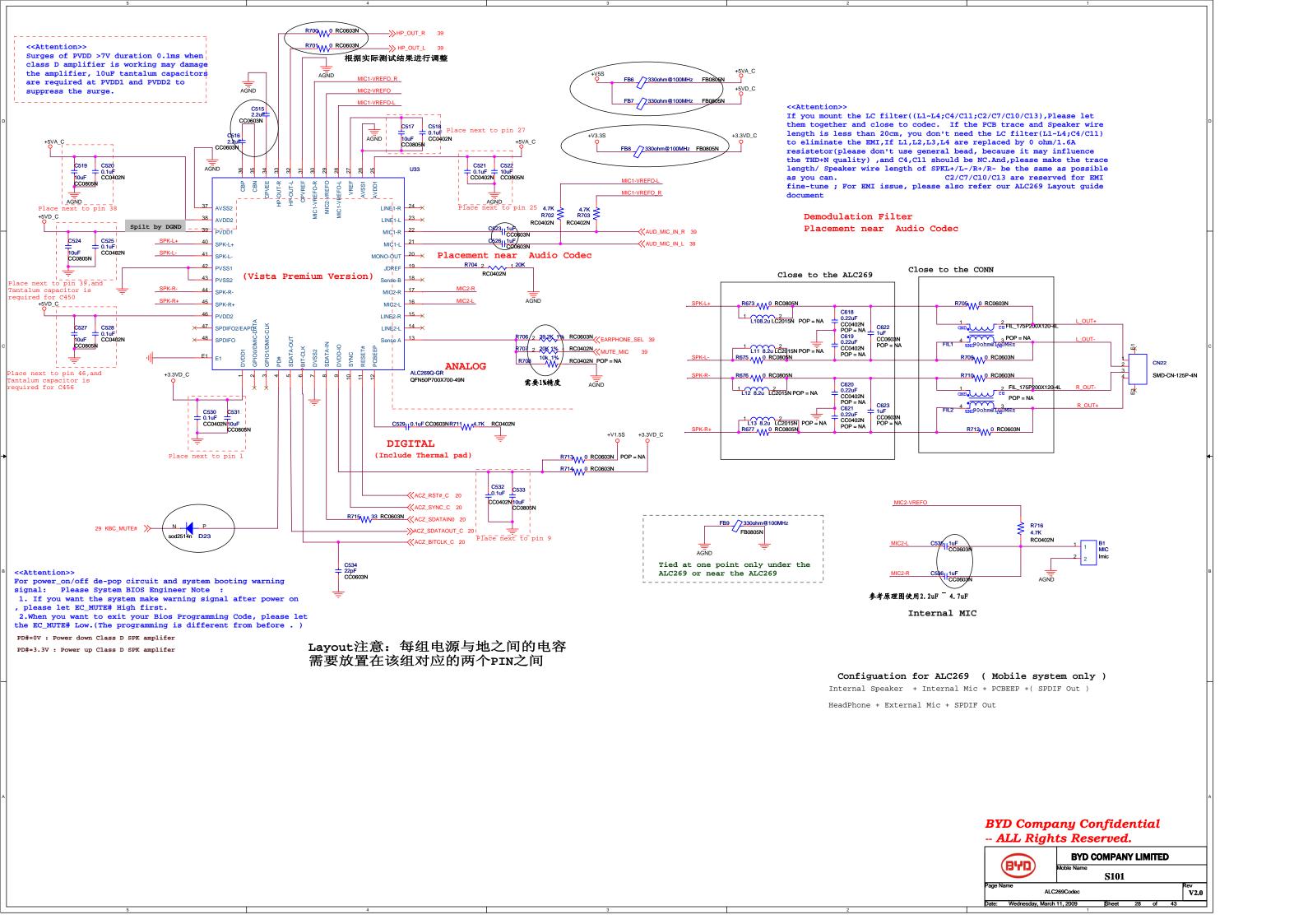


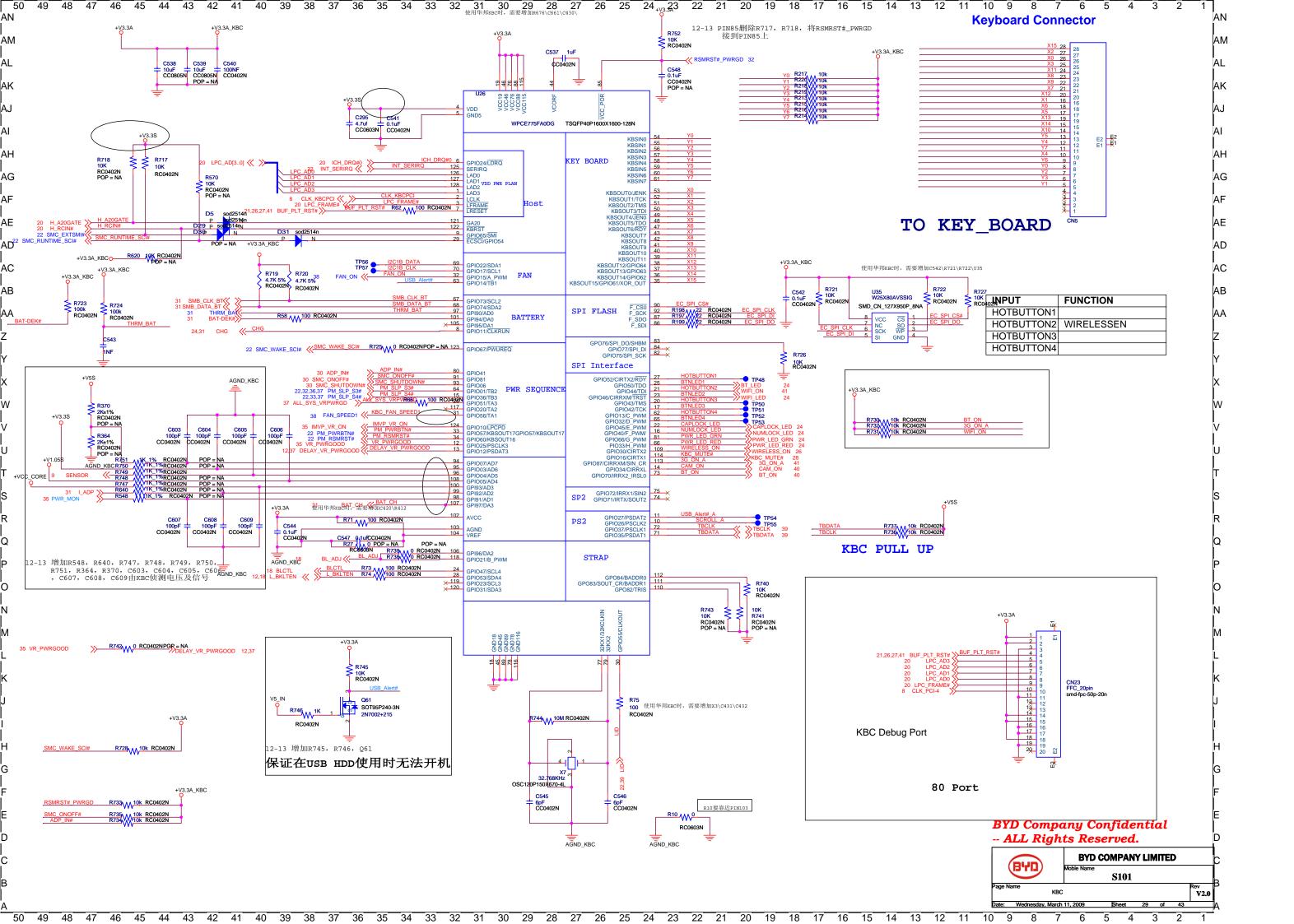
Modem CON

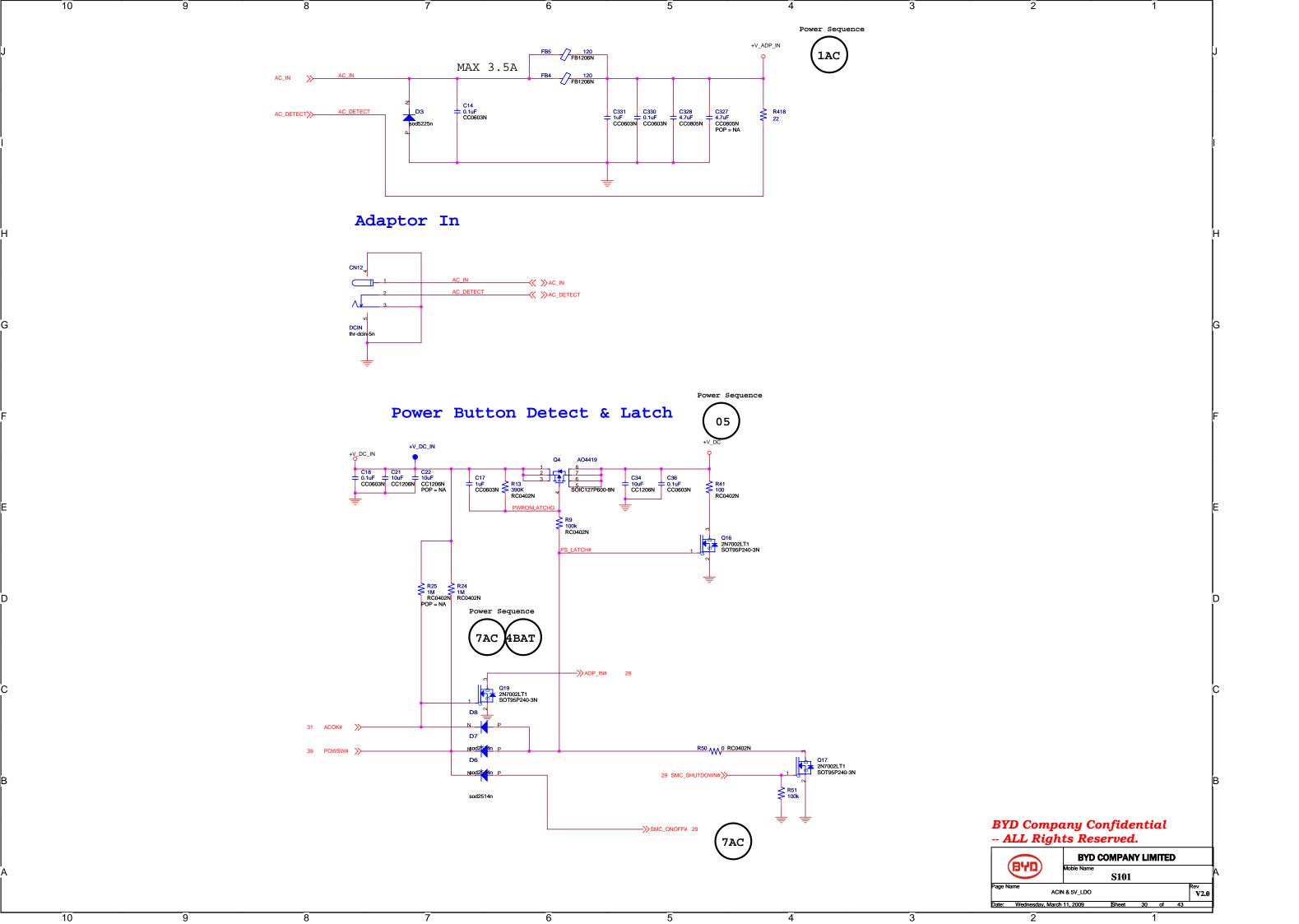


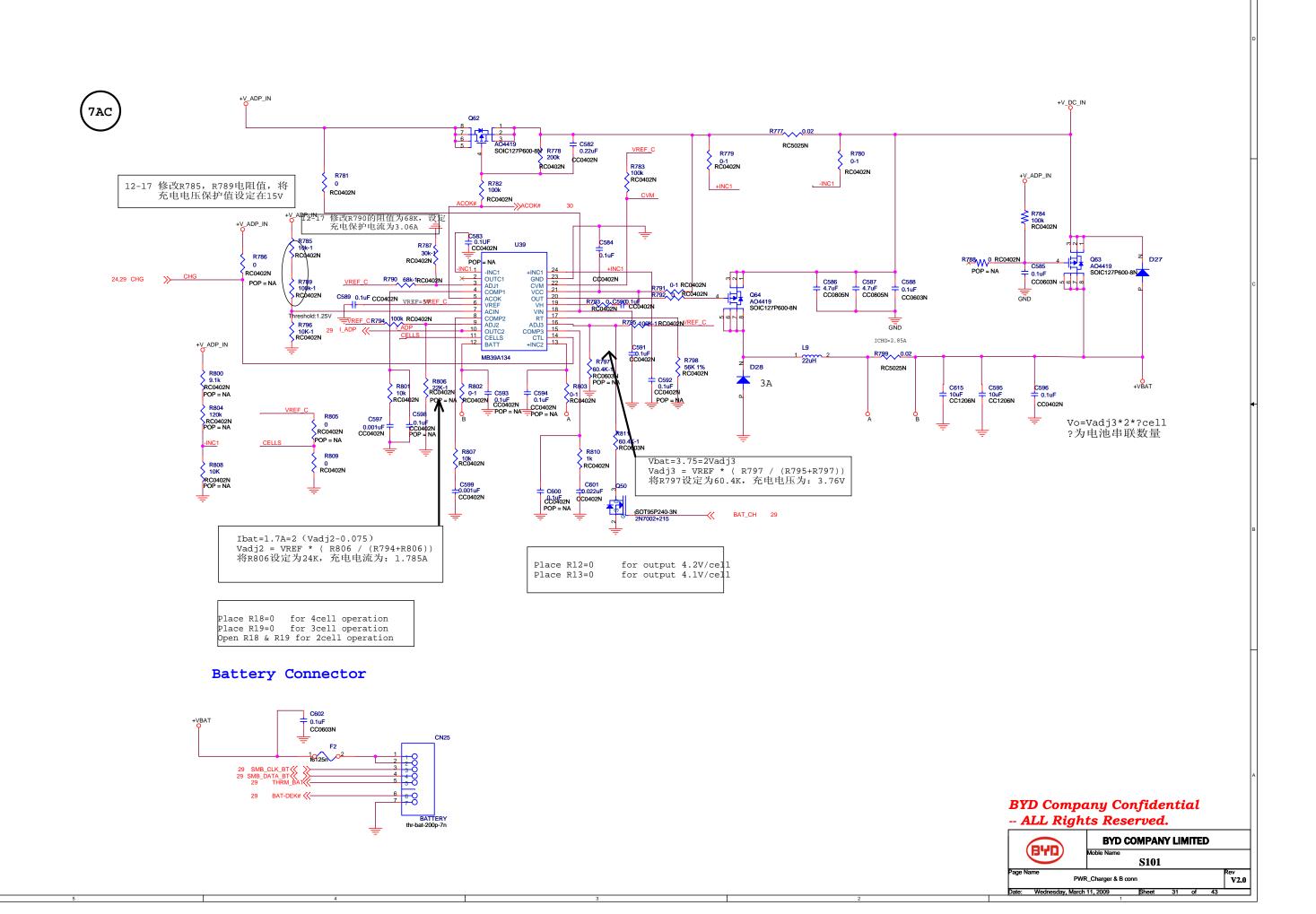
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	(3113)	Moble Name	S101				
ľ	Page Name Mini	Card-WLAN&	Modem				Rev V2.
	Date: Wednesday, March	11, 2009	Sheet	26	of	43	

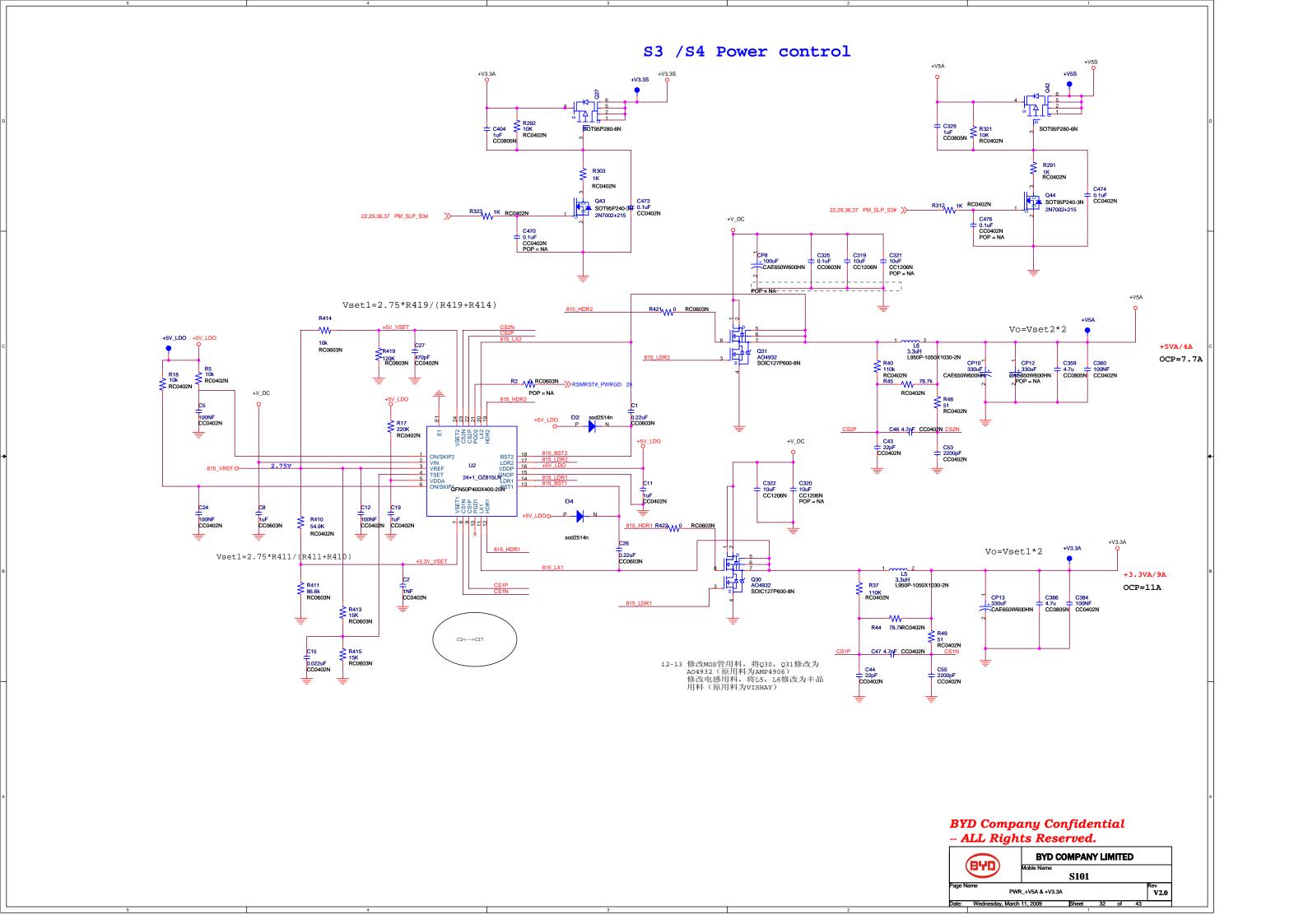


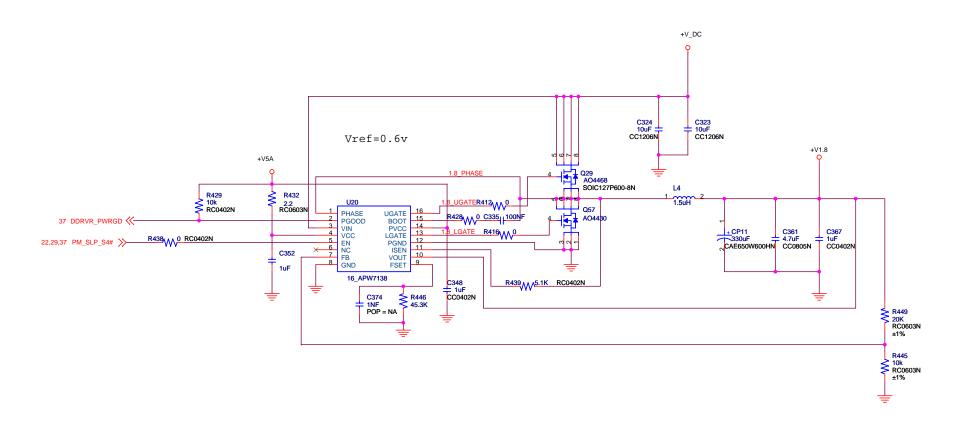










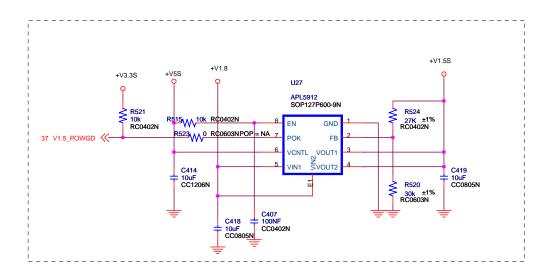


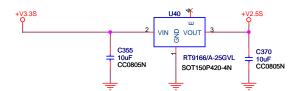
V4.0	+V0.9S		+V3.3S
+V1.8 R189		U12 VIN VCNTL4 GND VCNTL3	8 7
10k ±1% RC0603N	C129 =	VREF VCNTL2 VOUT VCNTL1	C154 C153
R190 10k ±1% C133 RC0603N 100NF C00402N	CC0402N C132		

Vset	VDDQ	VTT&VTTREF	NOTE
GND	2.5	VDDQ/2	DDR
VDDA	1.8	VDDQ/2	DDR2
0.5-2.75	Vset	VDDQ/2	Adjustable

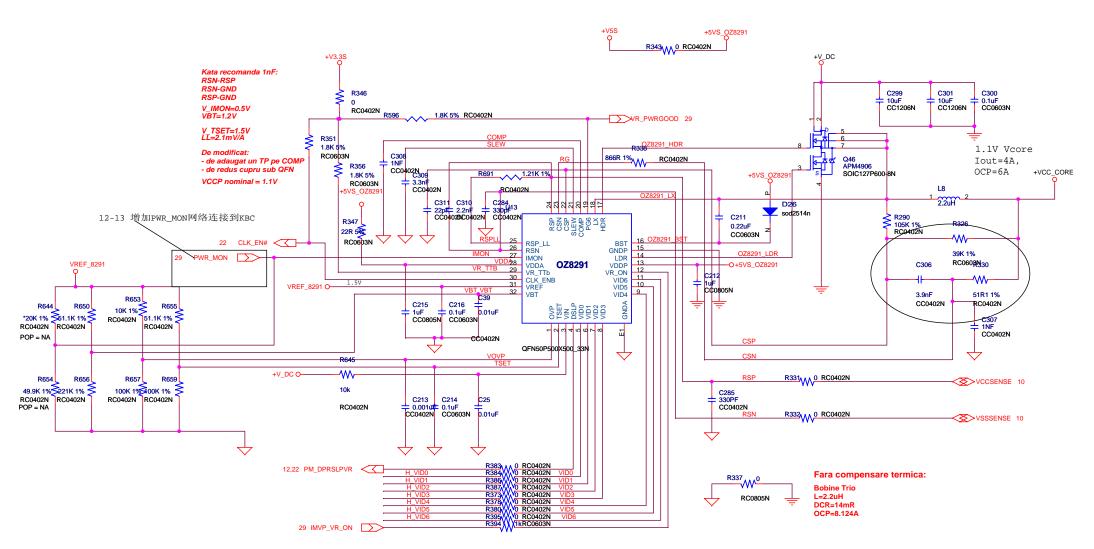
Vset=Vref*R4/(R3+R4)

	BYD CO	MPAN	/ LIN	AITE	D	
	Moble Name	S101				
Page Name PWR	_+V1.8 & +V1.05S	3				Rev V2.0
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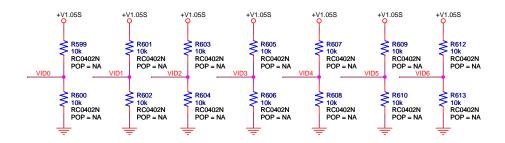


DUD	BYD COMPANY LIMITED							
ВЧП	Moble Name	5101						
Page Name PWF	R_+V1.5S & +V2.5S					Rev V2.0		
Date: Wednesday, March	11, 2009	heet	34	of	43			
	1							

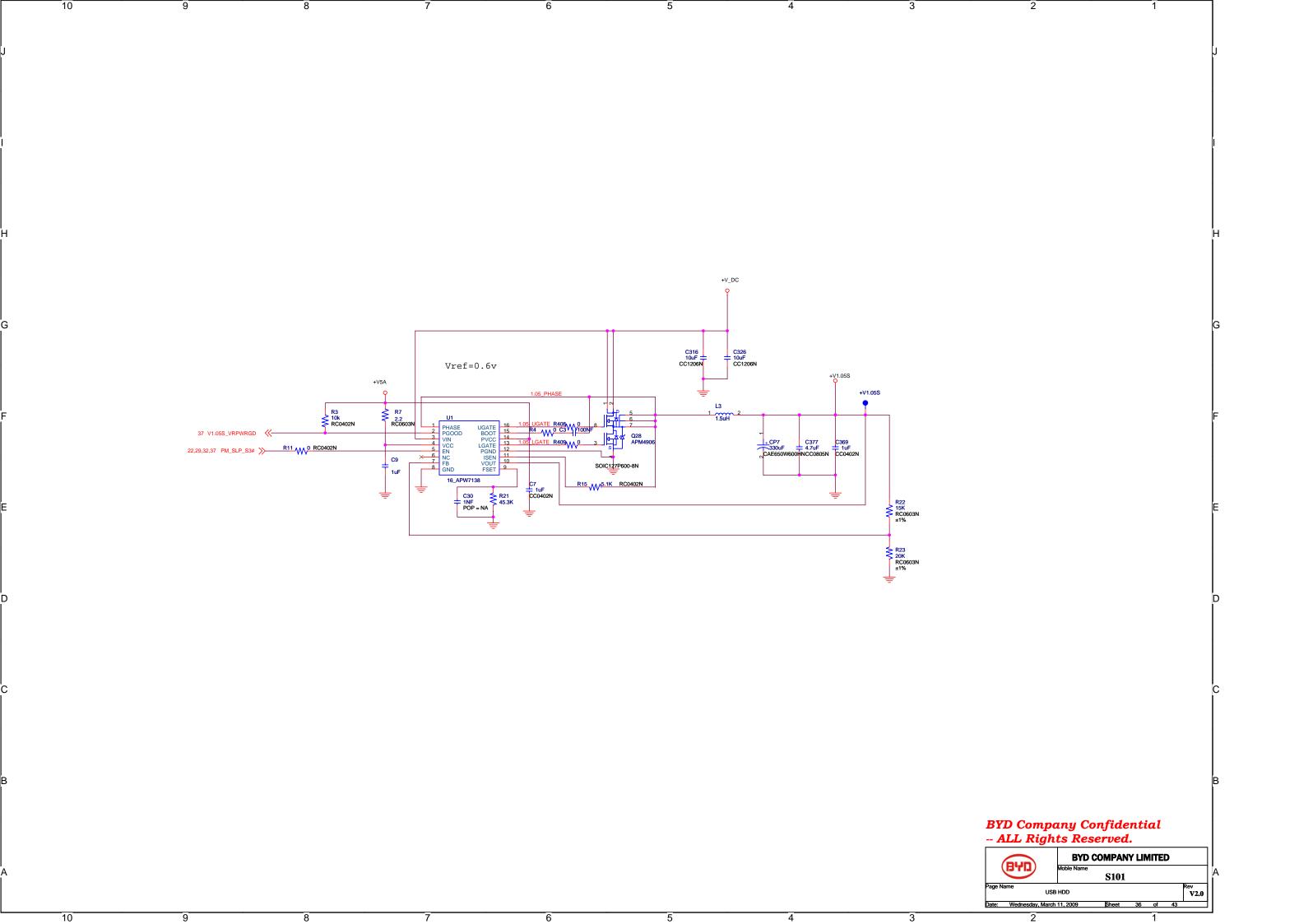


Vtset=1.0V, f=300~400KHz

10 H_VID[6..0] <<

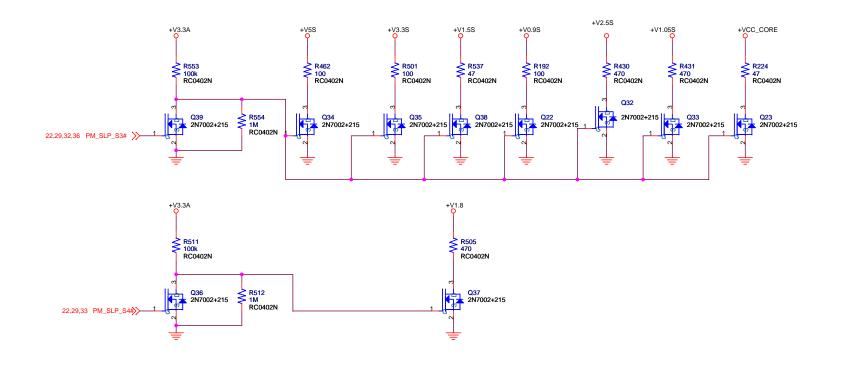


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Page Name V_C0	ORE					Rev V2.0
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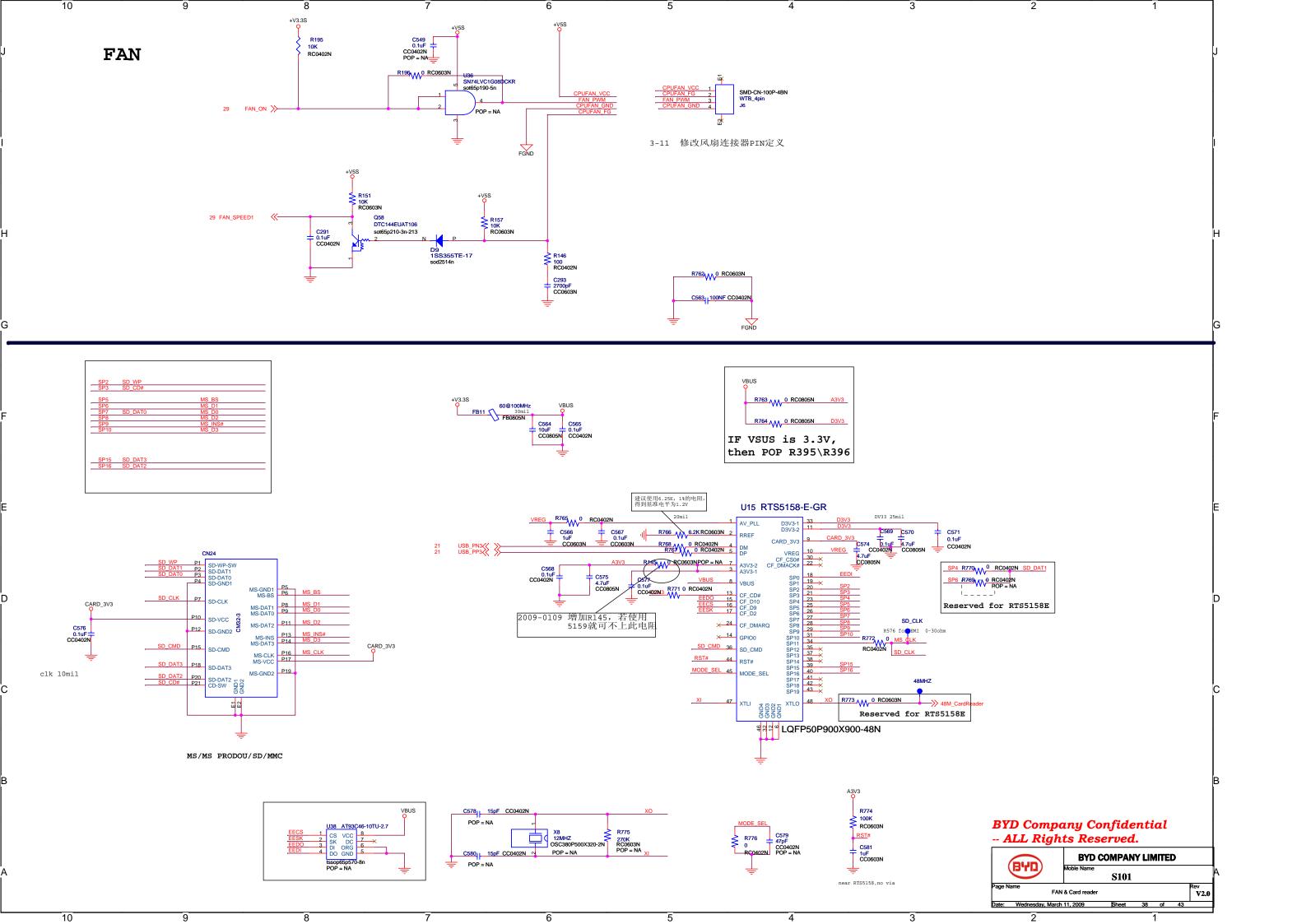


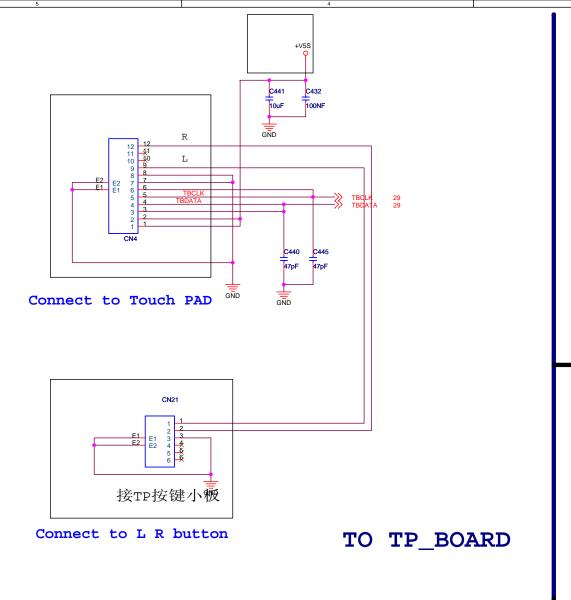
Power Good So Derve pweed So VI.OSS VERVINGD SO VI.OSS VERVINGD

Power Discharge Circuit

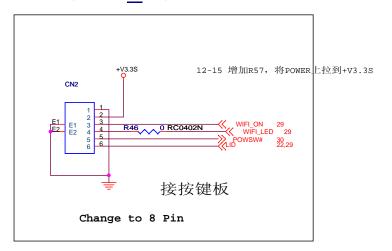


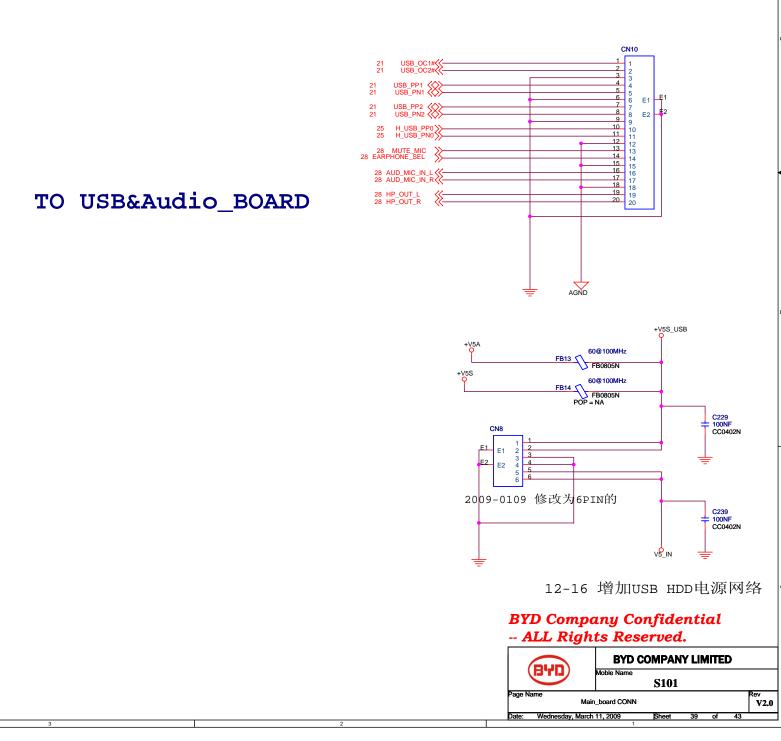
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(1)		Wiobie Name	S101					
Page Name	S3_5	S4_CNTR&Dis	scharge				Rev V2	
Date: Wed	Inesday, March	11, 2009	Sheet	37	of	43		

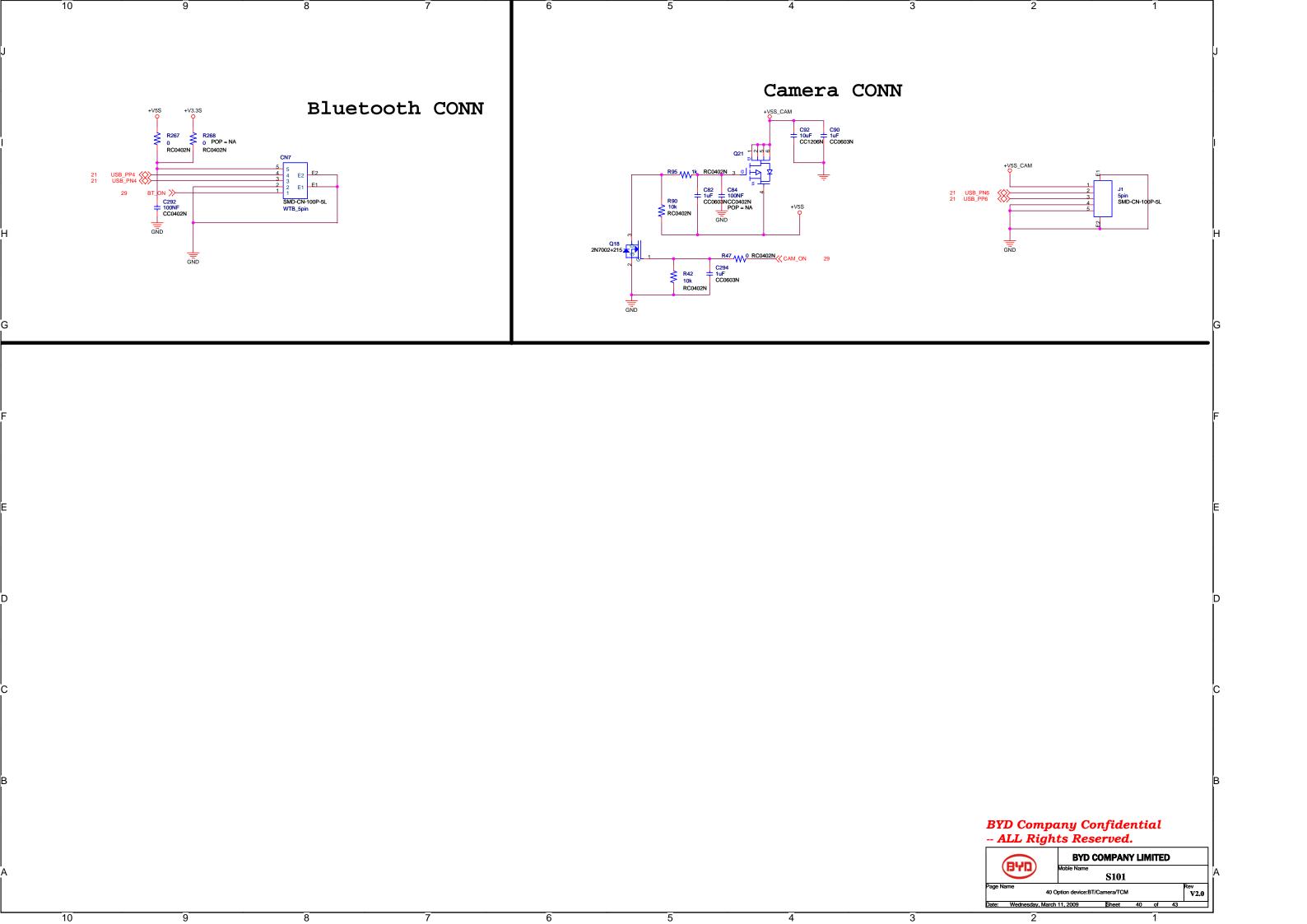




TO SW_BOARD







Detail about what have been changed Item Page 删除了USB-HDD电路,ICH的SATA直接连接到HDD。SMC-ONOFF#直接连到KBC(USB_SMC_ONOFF#) 42:43 STXN0#等改成SATA_TXN0#等 25 2 USB_SMC_ONOFF#改为SMC_ONOFF# 29 3 1.8V输出MOS改成双MOS, 4468,4430 4 33 CardReader增加电源控制电路。 5 38 LAN 处E2PROM改成SOP8封装(4110 0400 0006) 6 KeyBoard连接器10Pin, 13Pin对换网络点 39 7 APL7138更改封装成: SOP63P600-16N 33:34 V-Core改成ISL6266 9 增加共模电感,减小网卡的EMI辐射! 10 11 12 13 14 15 16

12-09 删除P20连接PATA连接器CN415的分页连接符 删除P25的PATA连接器CN416的分页连接符,并将网络名前加"M_"与P20的网络名区分开将P25的PATA连接器周边的"GND"修改为"M-GND"将U7的PIN6的网络名设定为CLK_TPM,即CN23的pin10连接到U7的pin6SENSOR NAH_CPURST#NAUB_HD_IN=WIRELESS_ONRSMRST#_PWRGD?????PM_SUS_STAT#?????

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