

SOCKET 479
Dothan
479 uFCPGA
PAGE 2,3,4

HOST BUS

NORTH BRIDGE
RC410MB
PAGE 5,6,7,8,9

A-LINK

SOUTH BRIDGE
SB450
PAGE 15,16,17

LPC BUS

K/B CONTROLLER
KB3910
PAGE 18

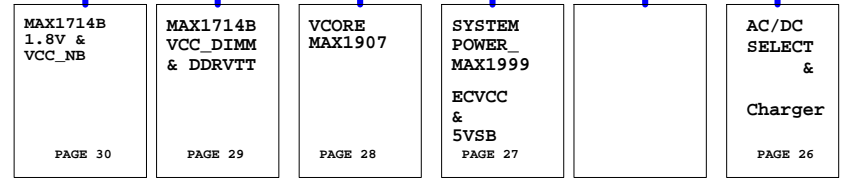
SMART FAN
PAGE 18

TOUCH PAD & INTERNAL K/B
PAGE 18

BIOS ROM
PAGE 16

SCREWHOLE HISTORY
PAGE 32

SYS POWER



CLK GENERATOR
ICS 951413
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POWER SEQUENCE
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LCD DISPLAY
PAGE 13

CRT OUT TV OUT
PAGE 12

DDR2 DRAM
PAGE 10,11

DDR2 DRAM
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MDC
PAGE 25

AC97_LINK

HDD
ATA66/100/133
PAGE 24

ODD
DVD/Combo/DVD Duel
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AC97 CODEC & AMPLIFIER
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USB2.0 x4
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CARDREADER
PAGE 22

10/100/1000 LAN
RTL8110S
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PCI BUS

MINI PCI I
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MINI PCI II
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TV Card
INT_PIRQ- P_AD22
INT_PIRQ-

WLAN 802.11 a/b/g
INT_PIRQ- P_AD19
INT_PIRQ- P_AD18

SELECTOR MOS & AUX POWER GENERATOR
PAGE 29

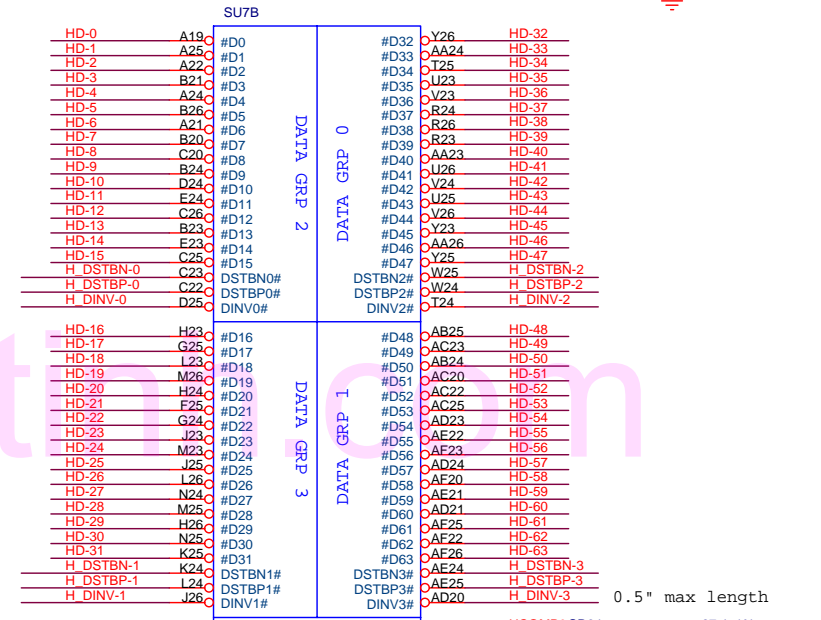
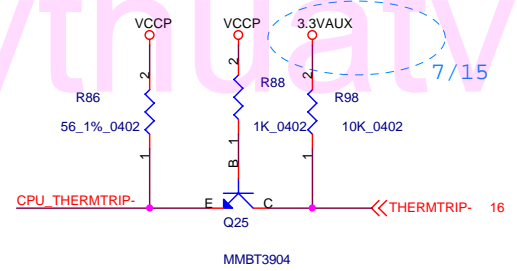
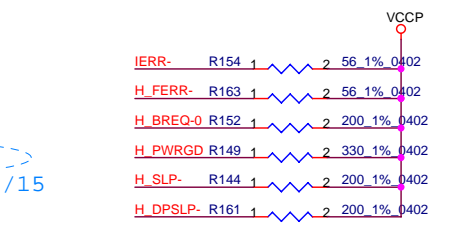
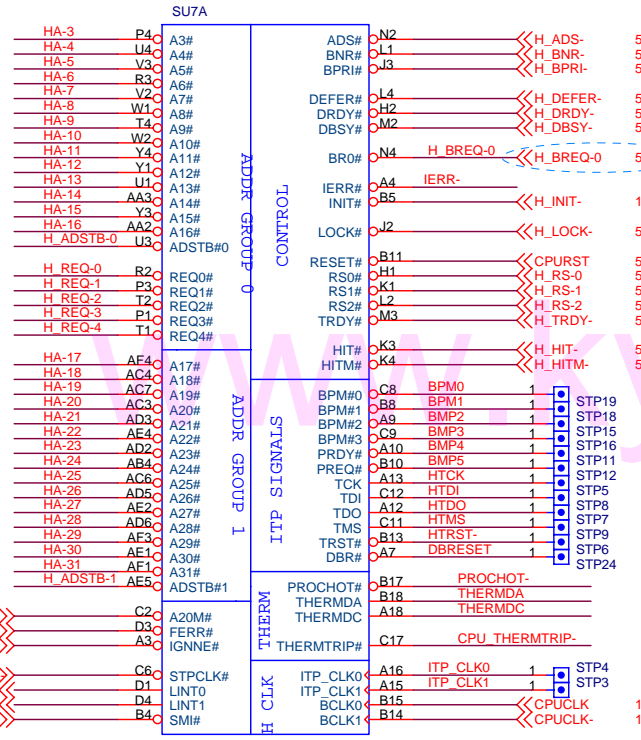
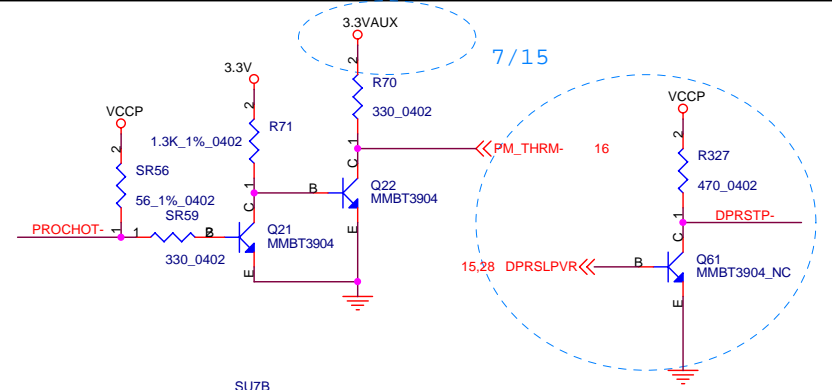
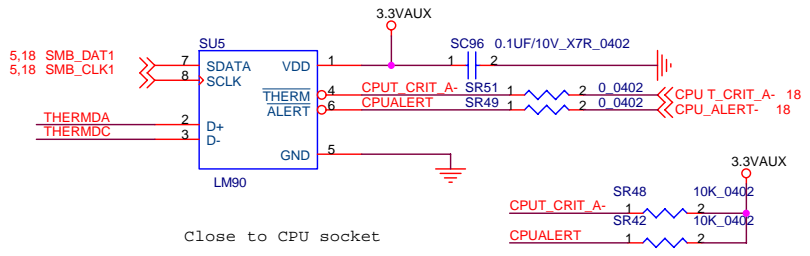
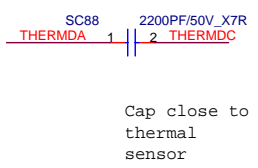
	SOURCE	PULL HIGH	NAME	WHERE TO USE
1	SB	3.3V	SMB_DAT2 SMB_CLK2	Clock , DDR
2	KBC P.16	ECVCC	SMB_DAT3 SMB_CLK3	For Battery
3	KBC P.16	ECVCC	SMB_DAT1 SMB_CLK1	For CPU_LM90, NB_LM90
4	N/B	3.3V	LVD8_CLK LVD8_DATA	For Panel SSID
5	N/B	3.3V	DAC_SCL DAC_DAT	For CRT
6				

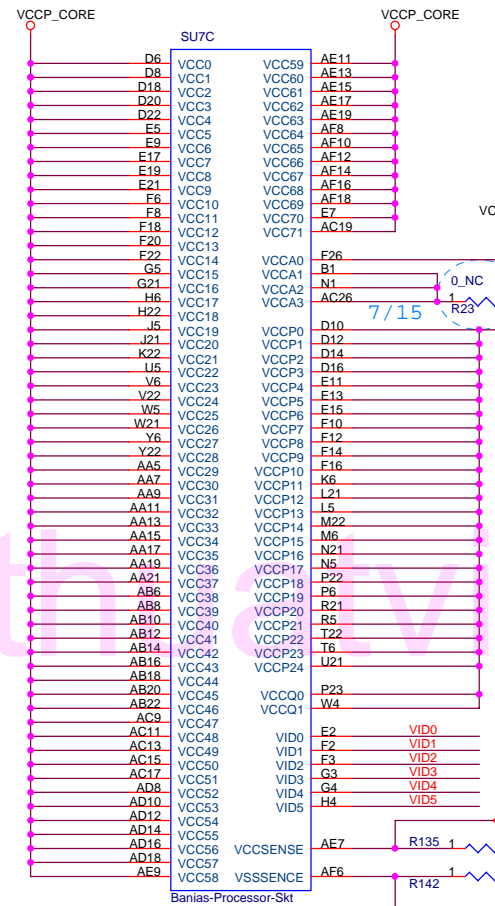
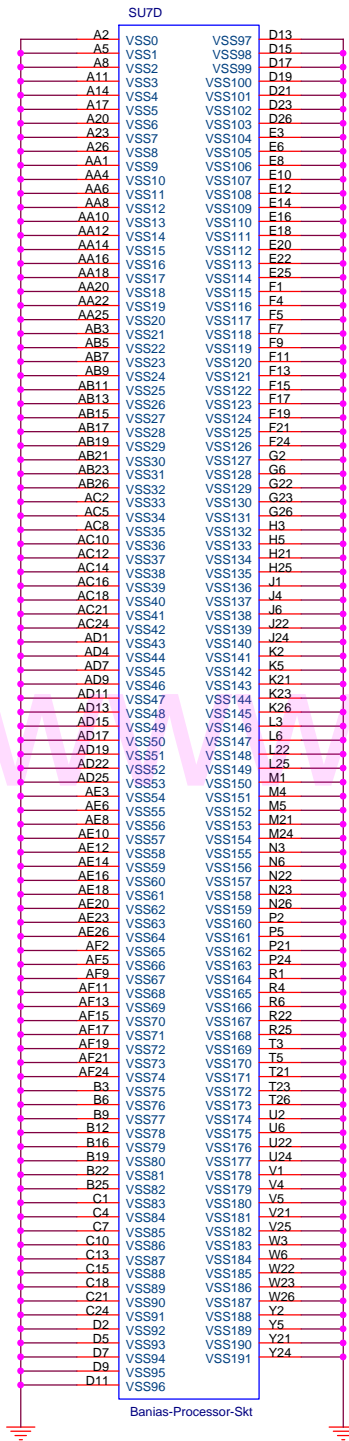
ICH-6	P_IRQ0- P_GNT0-	RTL8100B
P.13	P_REQ1- P_GNT1-	For Mini PCI (TV)
	P_REQ2- P_GNT2-	For Mini PCI (W/L)

ICH-6	A	RTL8100B
P.13	B	MiniPCI (TV)
	C	
	D	MiniPCI (W/L)
	E	
	F	
	G	
	H	

PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
REV	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
DATE	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005
PAGE	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
REV	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
DATE	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005	9/29/2005

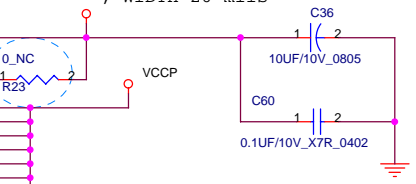
P/N: 15-F67-012000



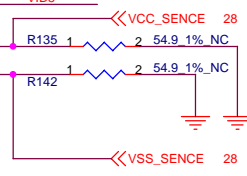


VCCP_CORE_27A

0.1uf and 10uf of a pair capacitors, WIDTH 20 mils



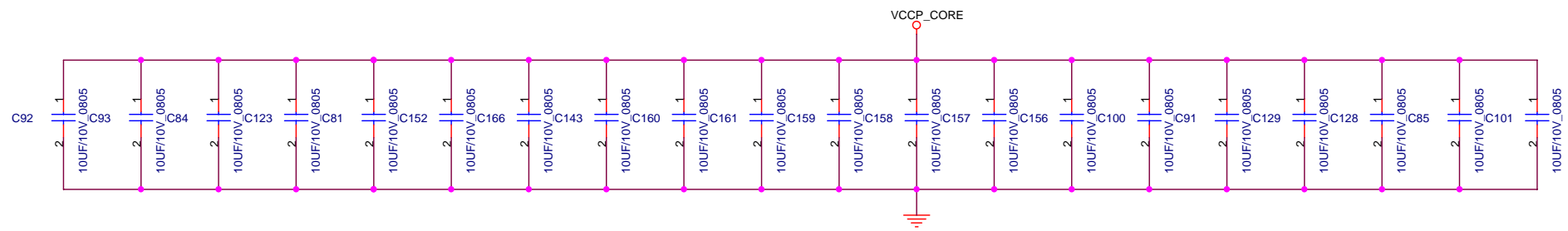
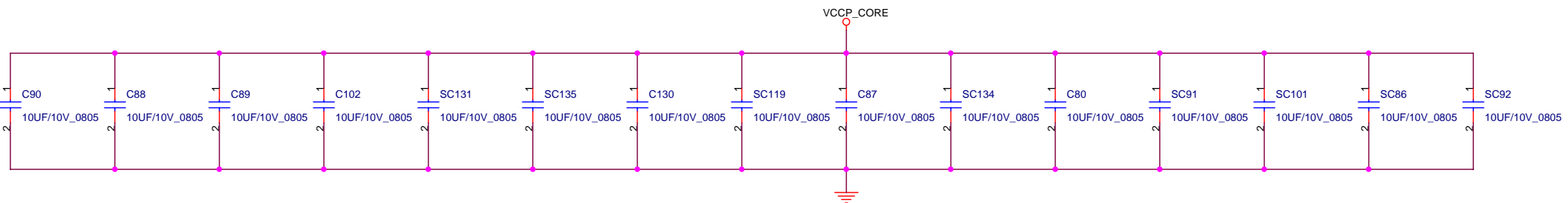
- VID0
- VID1
- VID2
- VID3
- VID4
- VID5



R135, R142, Close to CPU

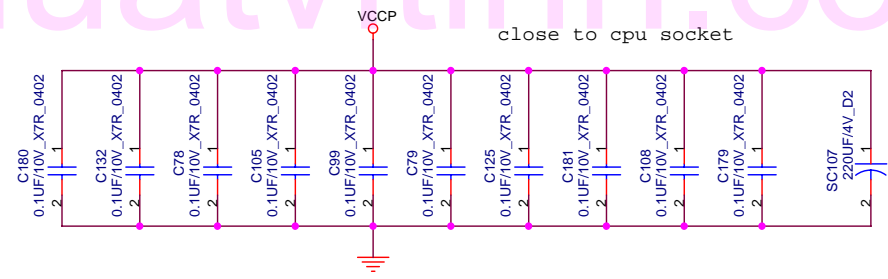
VID[0..5] <<< VID[0..5]

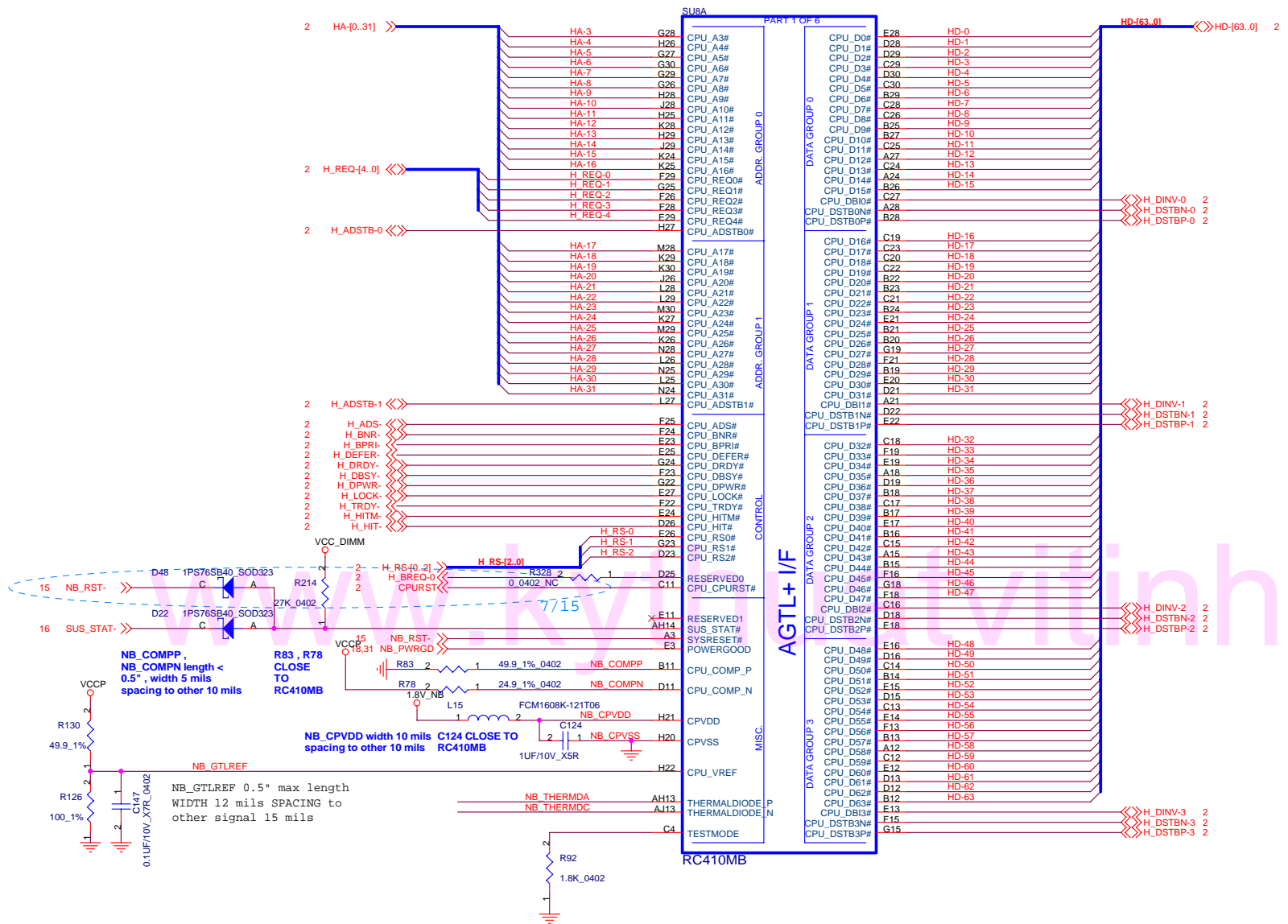
Title		
G332 CPU POWER		
Size	Document Number	Rev
	G332-1-4-01	2.0
Date:	Thursday, September 29, 2005	Sheet 3 of 32



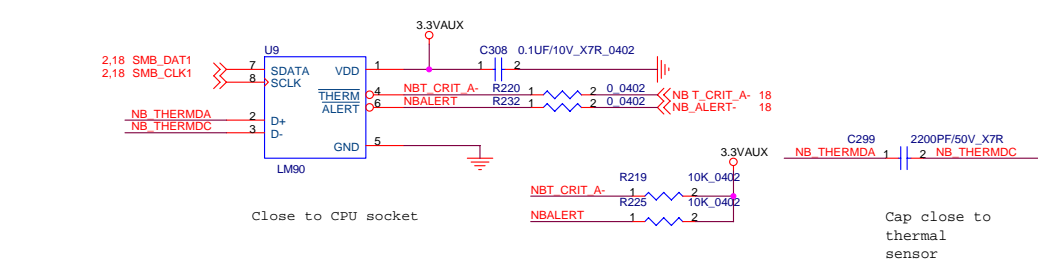
IMVP4 VID TABLE

VID[5..0]	Voltage	VID[5..0]	Voltage
000000	1.708V	100000	1.196V
000001	1.692V	100001	1.180V
000010	1.676V	100010	1.164V
000011	1.660V	100011	1.148V
000100	1.644V	100100	1.132V
000101	1.628V	100101	1.116V
000110	1.612V	100110	1.100V
000111	1.596V	100111	1.084V
001000	1.580V	101000	1.068V
001001	1.564V	101001	1.052V
001010	1.548V	101010	1.036V
001011	1.532V	101011	1.020V
001100	1.516V	101100	1.004V
001101	1.500V	101101	0.988V
001110	1.484V	101110	0.972V
001111	1.468V	101111	0.956V
010000	1.452V	110000	0.940V
010001	1.436V	110001	0.924V
010010	1.420V	110010	0.908V
010011	1.404V	110011	0.892V
010100	1.388V	110100	0.876V
010101	1.372V	110101	0.860V
010110	1.356V	110110	0.844V
010111	1.340V	110111	0.828V
011000	1.324V	111000	0.812V
011001	1.308V	111001	0.796V
011010	1.292V	111010	0.780V
011011	1.276V	111011	0.764V
011100	1.260V	111100	0.748V
011101	1.244V	111101	0.732V
011110	1.228V	111110	0.716V
011111	1.212V	111111	0.700V

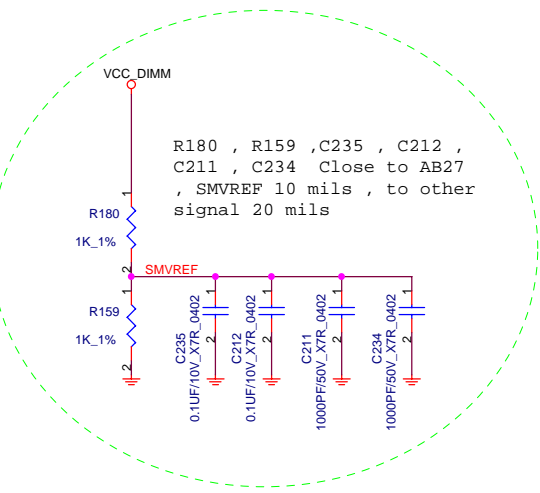
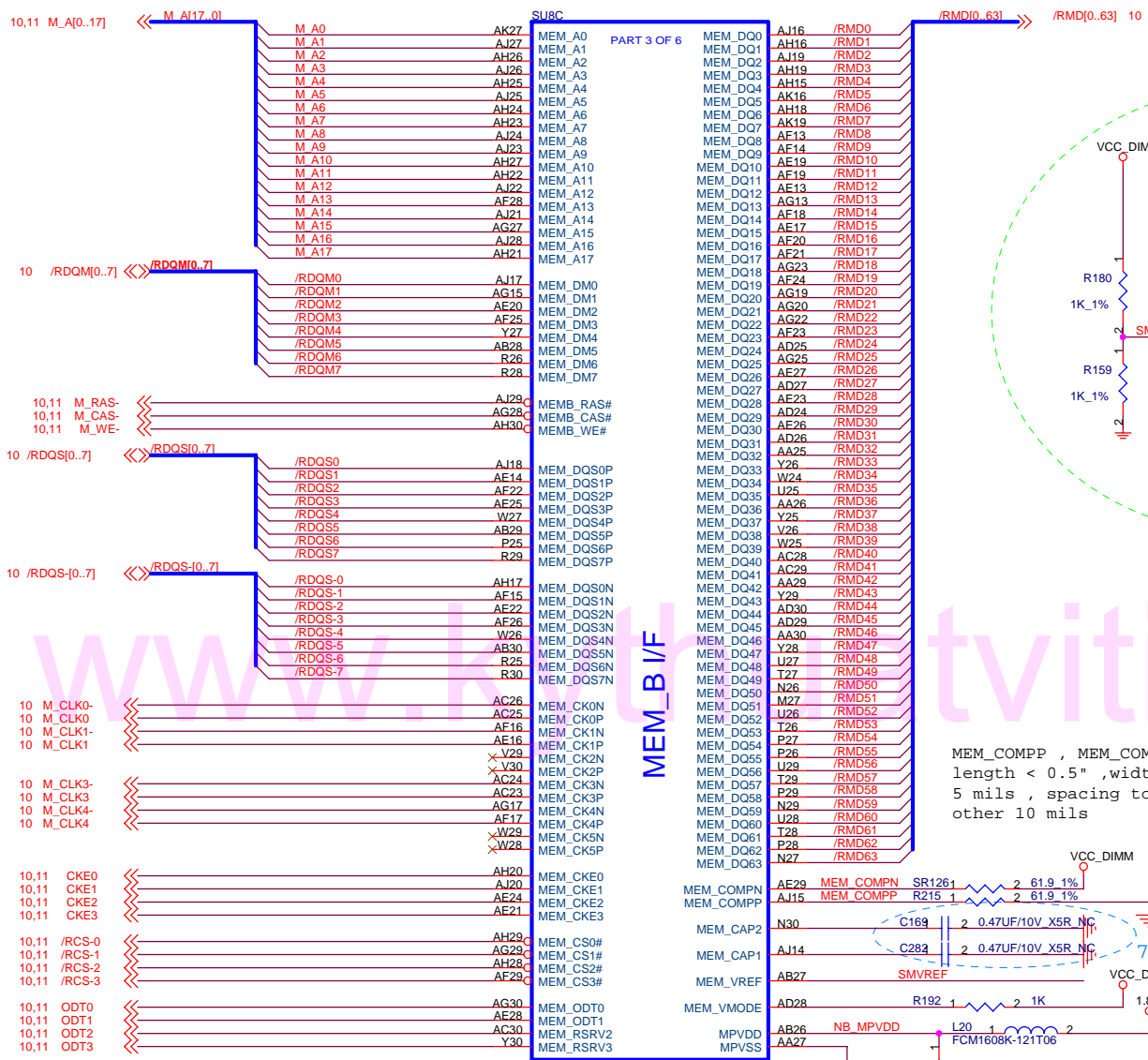




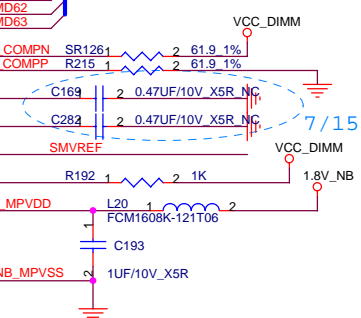
AGTL+ I/F



Title		
G332 NB_CPU I/O		
Size	Document Number	Rev
	G332-1-4-01	2.0
Date:	Thursday, September 29, 2005	Sheet 5 of 32

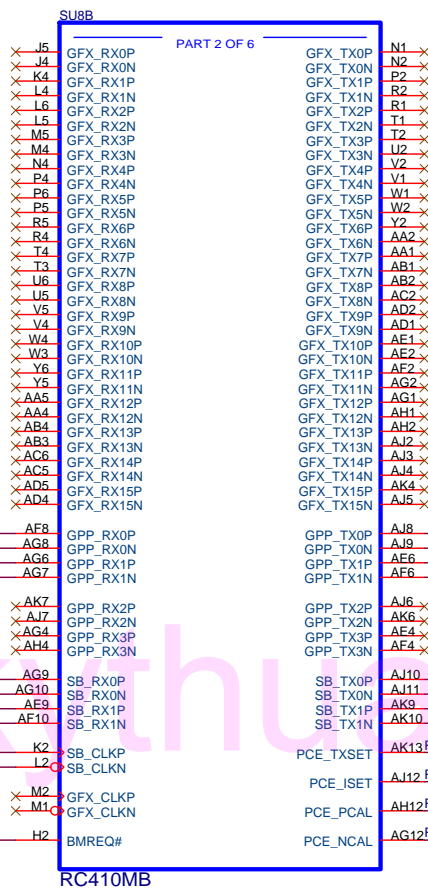


MEM_COMPP , MEM_COMPN length < 0.5" , width 5 mils , spacing to other 10 mils

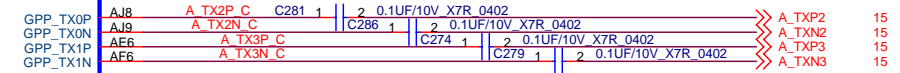


C193 close to AB26 , NB_MPVD width 10 mils , to other 10 mils , NB_MPVSS need to connect to GND plane immediately through a dedicated VIA

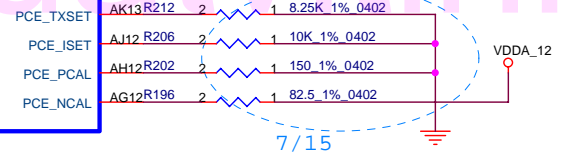
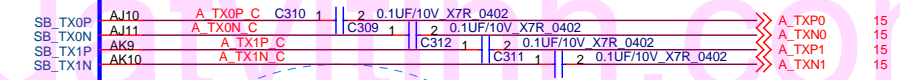
Title		
G332 NB_MEM_I/O		
Size	Document Number	Rev
	G332-1-4-01	2.0
Date:	Thursday, September 29, 2005	Sheet 6 of 32



A_LINK 請遵照layout rule中,A_LINK的走線



A_LINK 請遵照layout rule中,A_LINK的走線



RC410MB

Title		
G332 NB_SB_LINK		
Size	Document Number	Rev
	G332-1-4-01	2.0
Date:	Thursday, September 29, 2005	Sheet 7 of 32

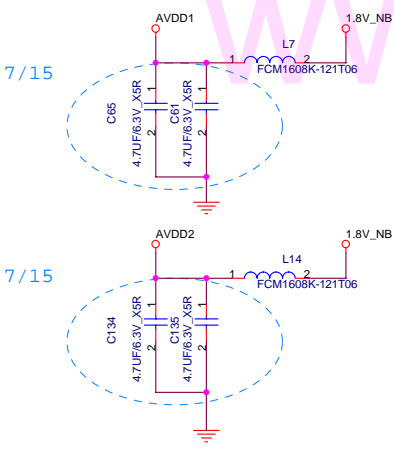
C127 NB_VDDR3 width 10 mils , spacing to other signals 10 mils

C63 close to C9 NB_AVDD width 10 mils , spacing to other signals 10 mils

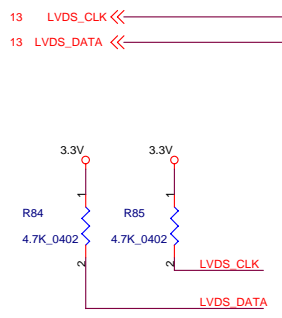
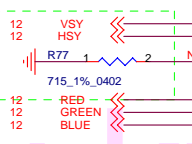
C70 close to D8 1.8V_NB width 10 mils , spacing to other signals 10 mils

C69 close to B8 AVDD1 width 10 mils , spacing to other signals 10 mils

C136 close to H10 AVDD2 width 10 mils , spacing to other signals 10 mils

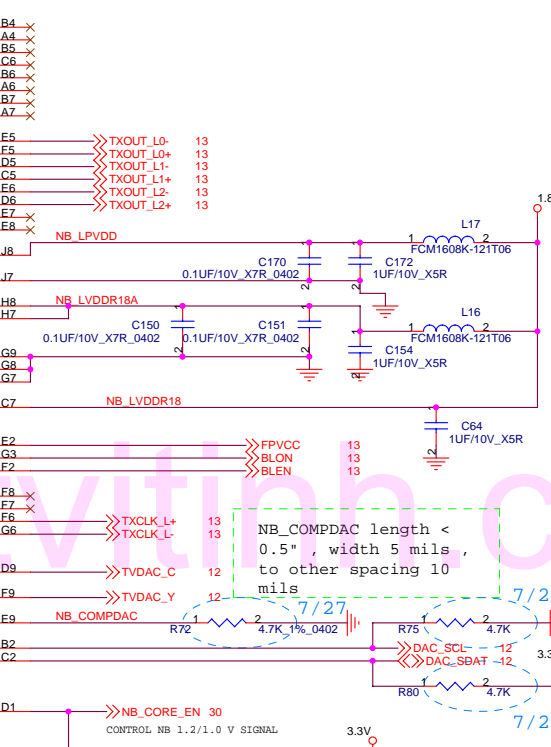
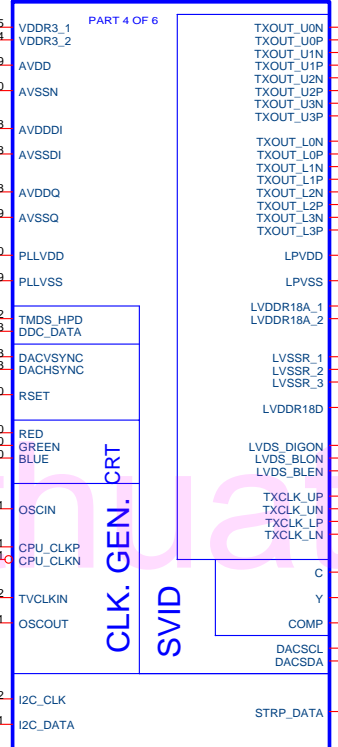


NB_RSETDAC length < 0.5" , width 5 mils , to other spacing 10 mils

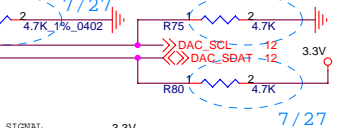


CLK. GEN. CRT
SVID

RC410MB

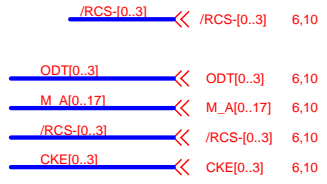
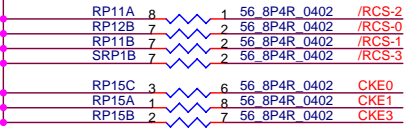
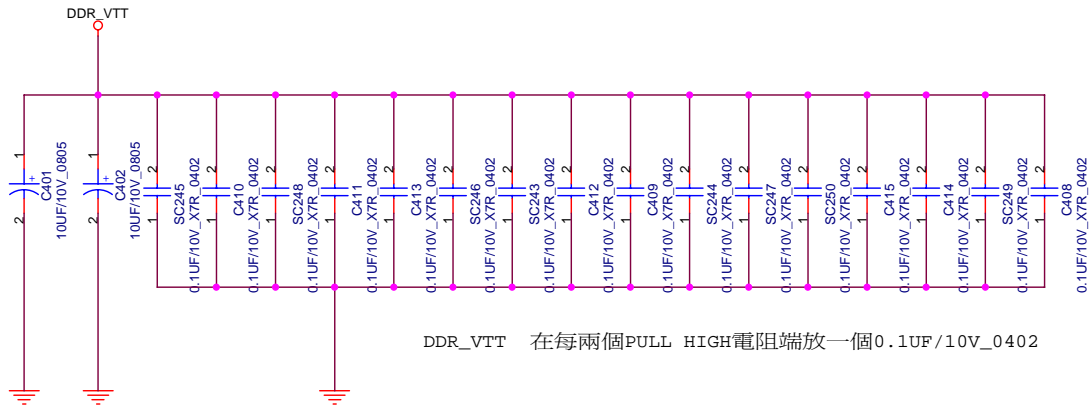
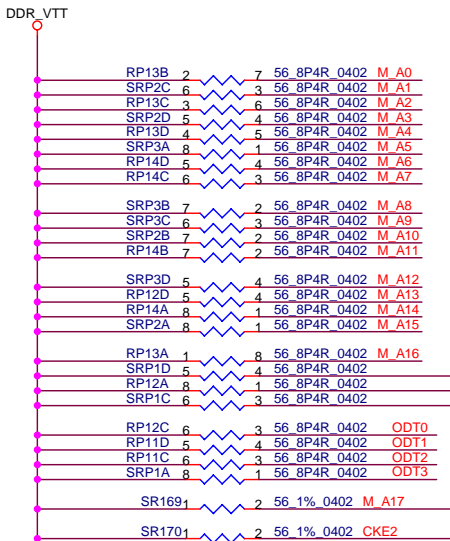


NB_COMPDAC length < 0.5" , width 5 mils , to other spacing 10 mils

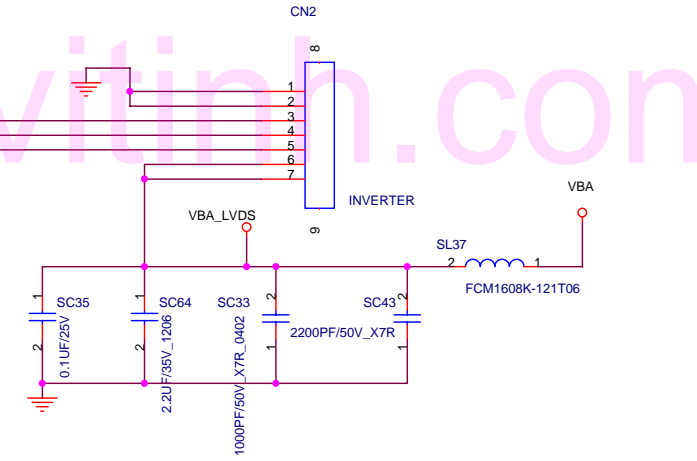
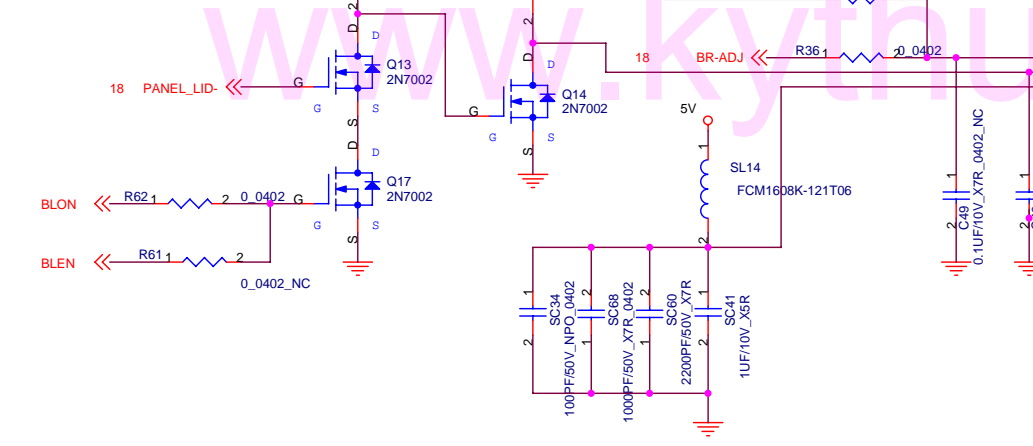
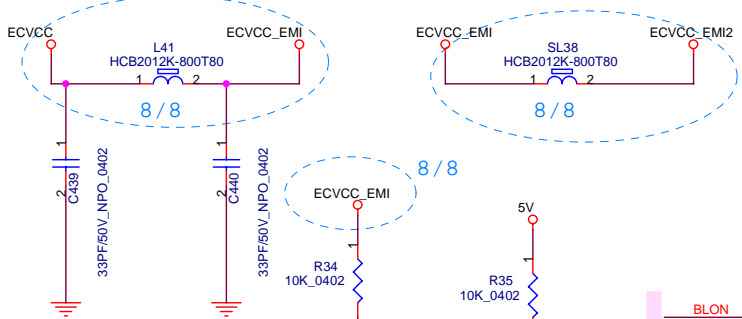
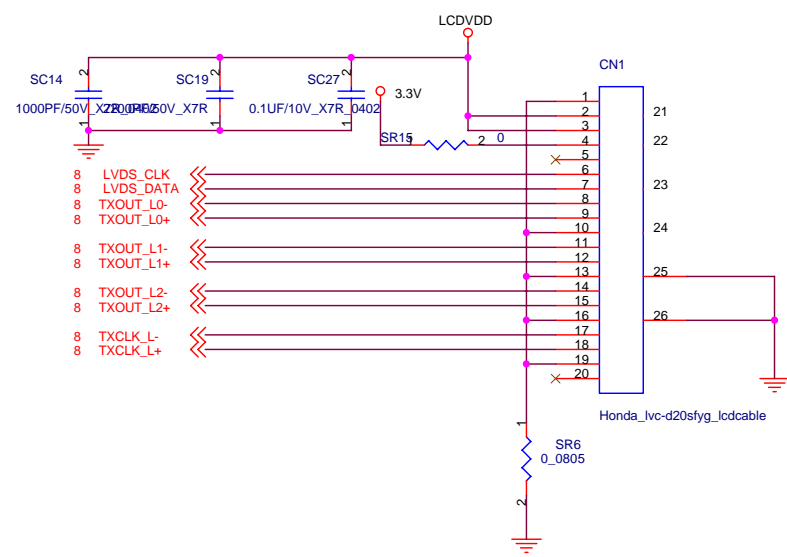
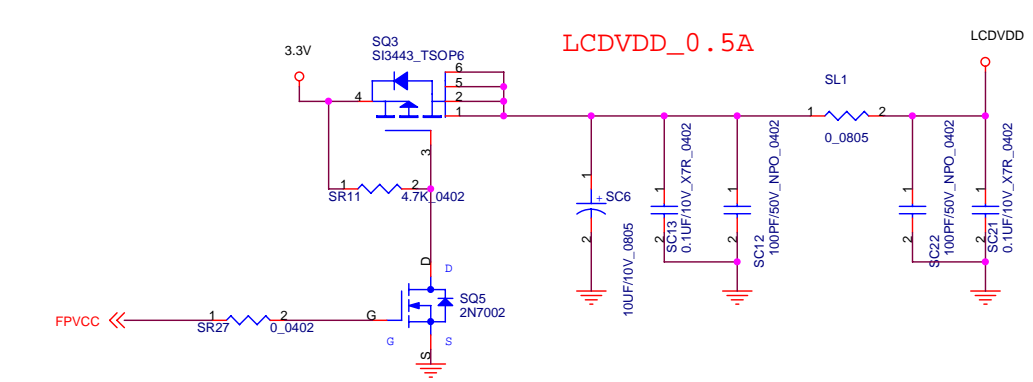


C170 close to J8 NB_LPVD width 10 mils , spacing to other signals 10 mils

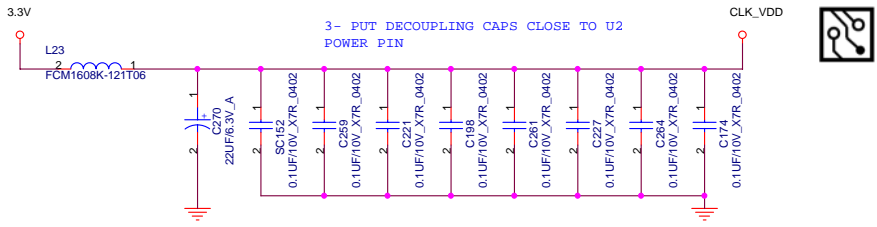
C150, C151 close to H7, H8 NB_LVDDR18A width 10 mils , spacing to other signals 10 mils



Title		
G332 DDR_VTT CAP		
Size	Document Number	Rev
	G332-1-4-01	2.0
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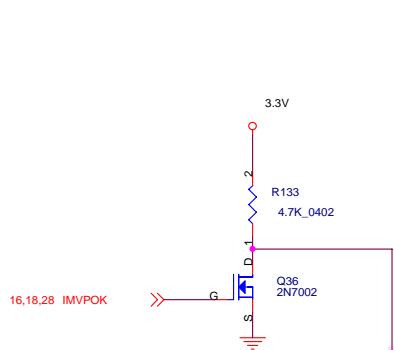


Title		
G332 LVDS CONN.		
Size	Document Number	Rev
	G332-1-4-01	2.0
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C246 close to U2.39, CLK_VDDA wide 10 mils, to other signal 10 mils

2- ROUTE ALL CPUCLK/- , NBCLK/- AND ALINKCLK/- , NBSRCCLK/- , SBSRCCLK/- AS DIFFERENT PAIR RULE



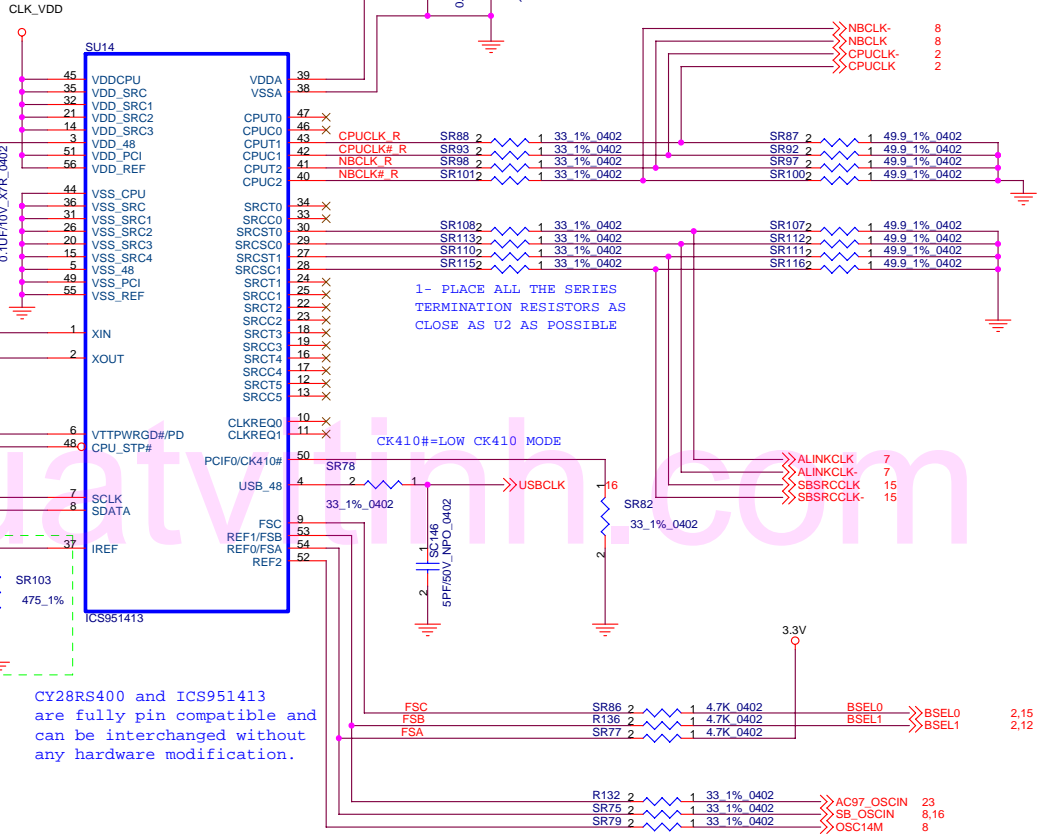
16,18,28 IMVPOK

15,28 CPU_STP-

10,16 SMB_CLK2, 10,16 SMB_DAT2

SR103 close to U2.37 < 0.5"

CY28RS400 and ICS951413 are fully pin compatible and can be interchanged without any hardware modification.



1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE AS U2 AS POSSIBLE

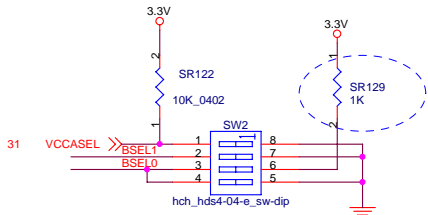
CK410#=LOW CK410 MODE

ALINKCLK 7, ALINKCLK- 7, SBSRCCLK 15, SBSRCCLK- 15

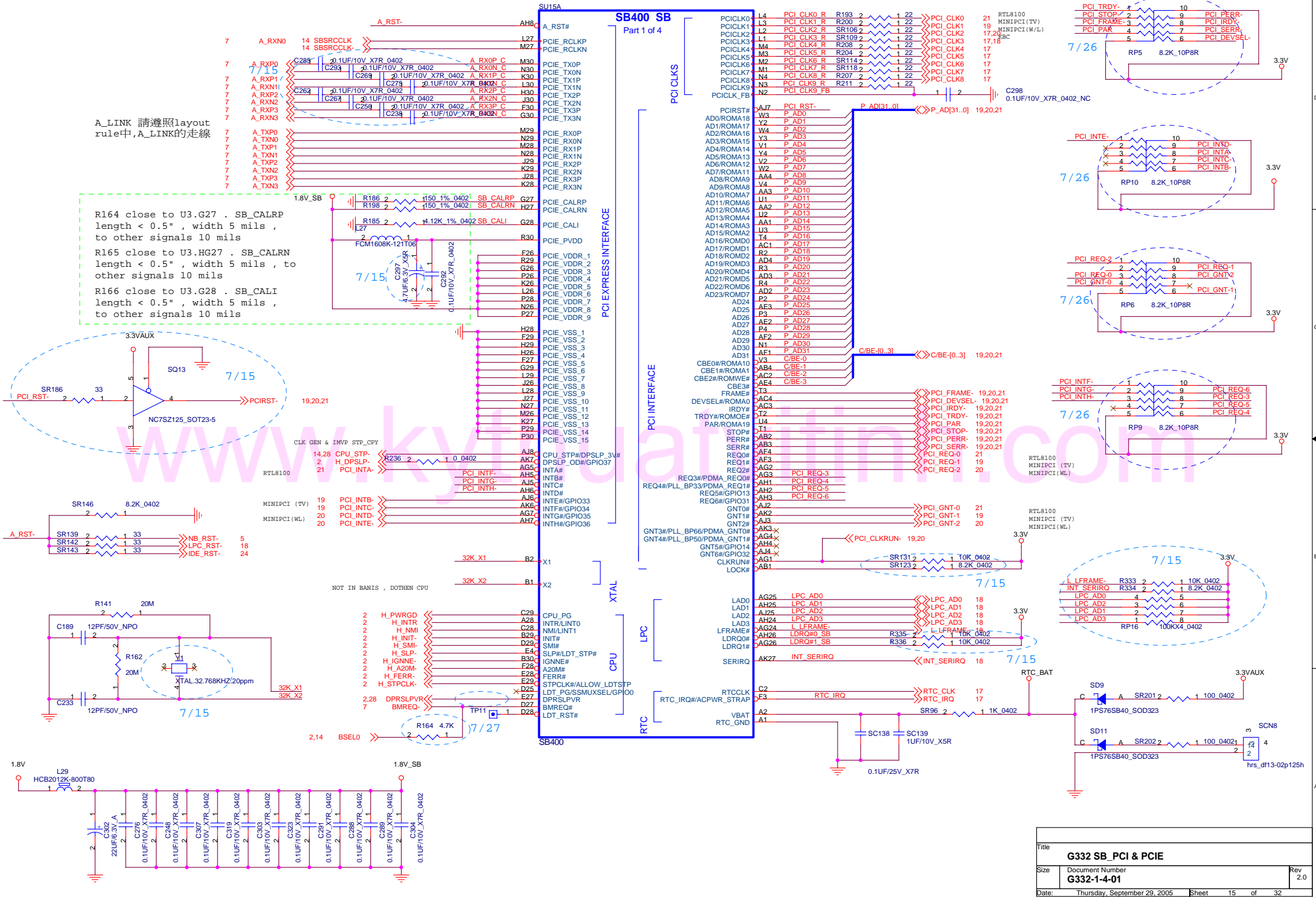
BSEL0 2.15, BSEL1 2.12

AC97_OSCIN 23, SB_OSCIN 8.16, OSC14M 8

FSC	FSB	FSA	FSB
1	0	1	100
0	0	1	133

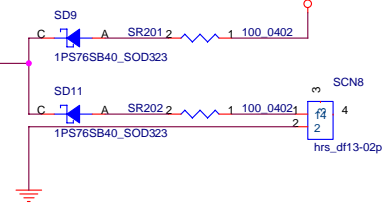
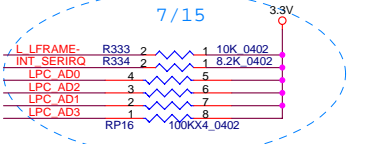
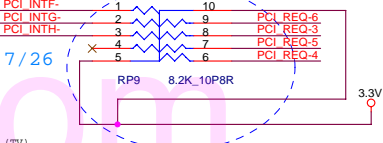
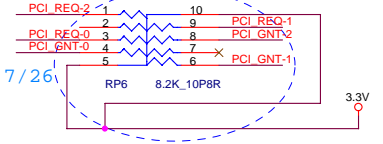
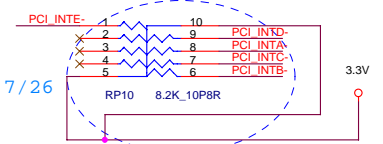
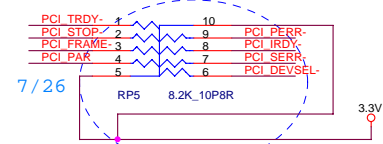
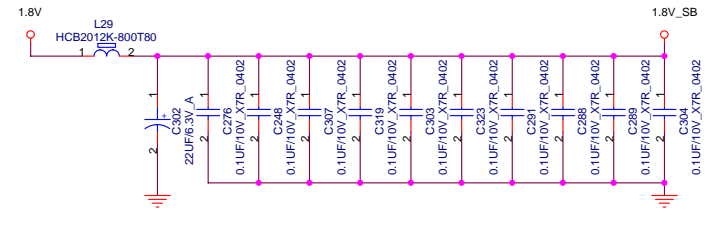
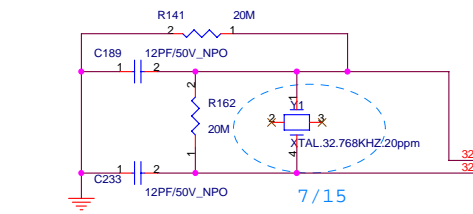
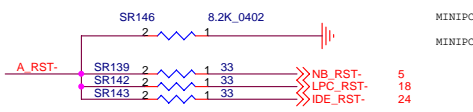
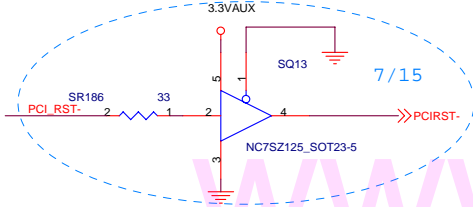


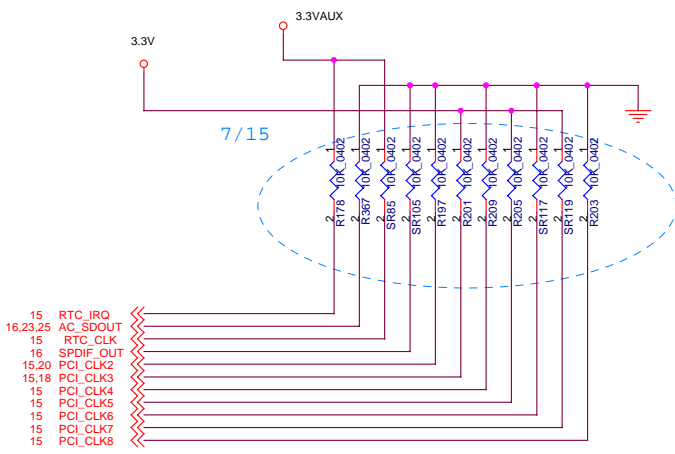
SB400 SB
Part 1 of 4



A_LINK 請遵照layout rule中,A_LINK的走線

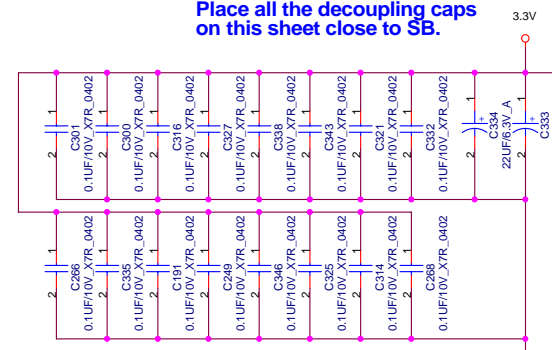
R164 close to U3.G27 . SB_CALRP length < 0.5" , width 5 mils , to other signals 10 mils
 R165 close to U3.HG27 . SB_CALRN length < 0.5" , width 5 mils , to other signals 10 mils
 R166 close to U3.G28 . SB_CALI length < 0.5" , width 5 mils , to other signals 10 mils



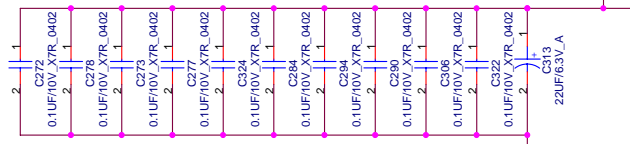


- 15 RTC_IRQ
- 16,23,25 AC_SDOUT
- 15 RTC_CLK
- 16 SPDIF_OUT
- 15,20 PCI_CLK2
- 15,18 PCI_CLK3
- 15 PCI_CLK4
- 15 PCI_CLK5
- 15 PCI_CLK6
- 15 PCI_CLK7
- 15 PCI_CLK8

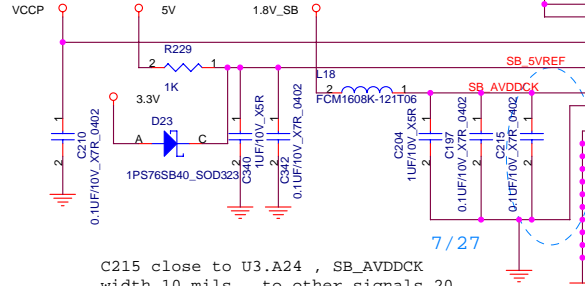
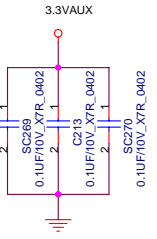
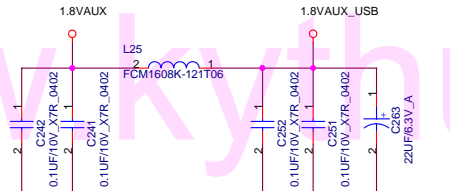
Place all the decoupling caps on this sheet close to SB.



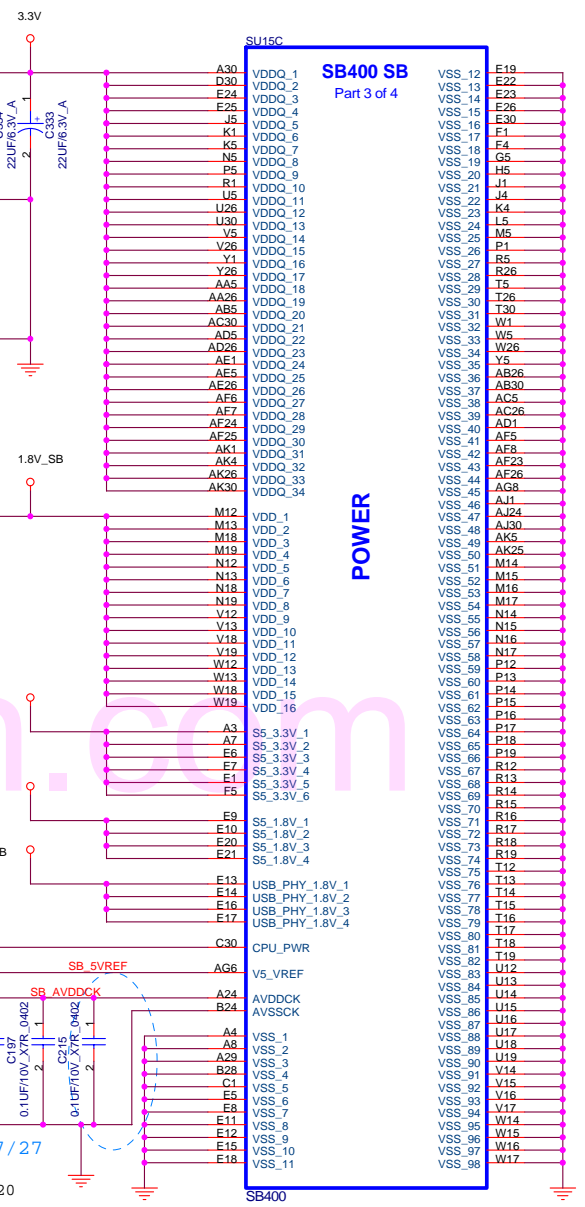
Place all the decoupling caps on this sheet close to SB.

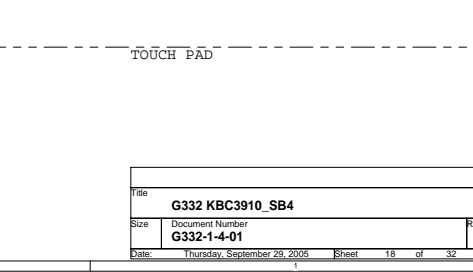
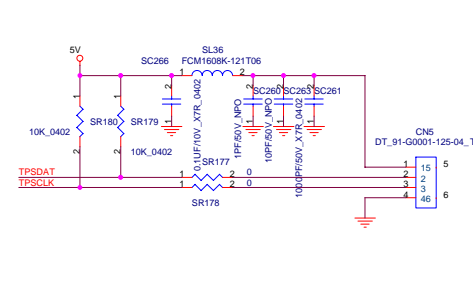
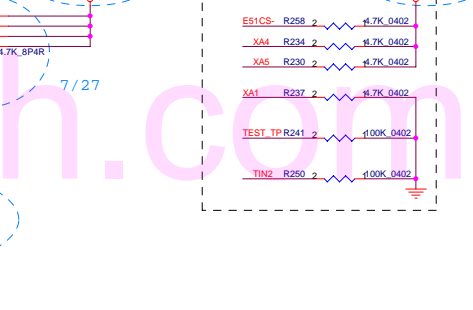
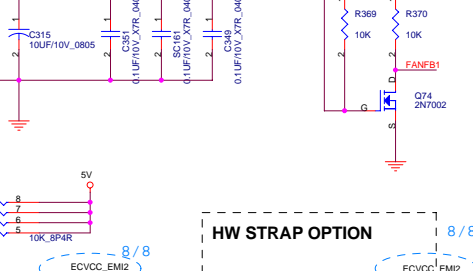
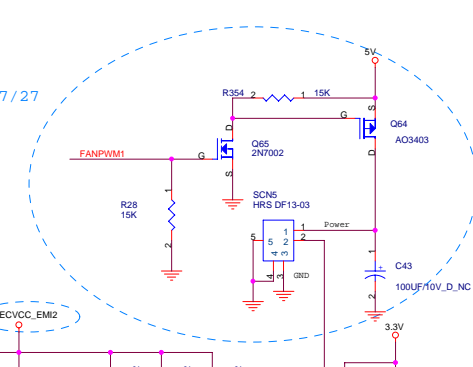
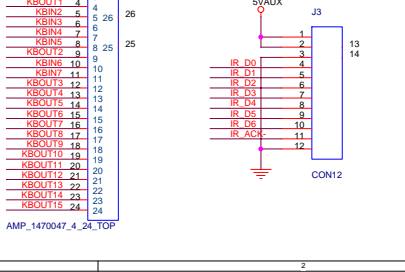
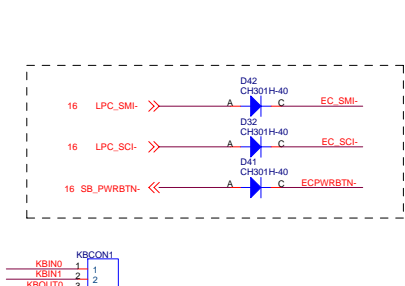
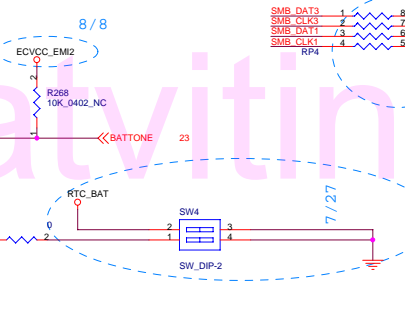
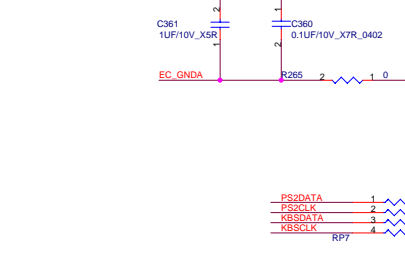
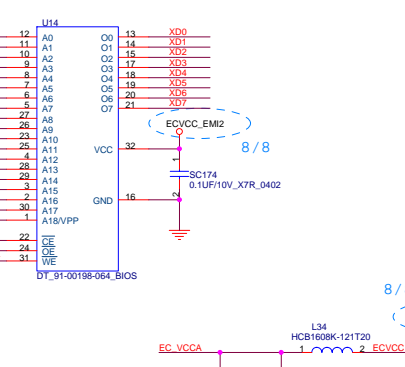
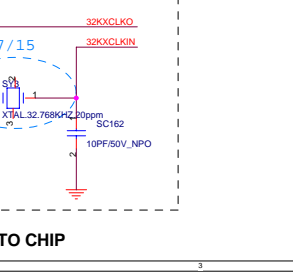
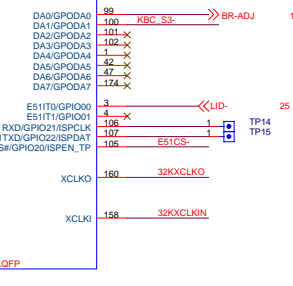
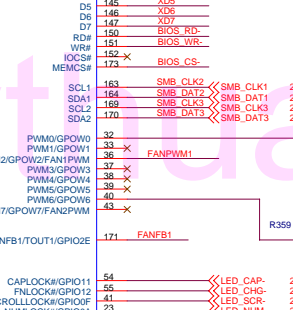
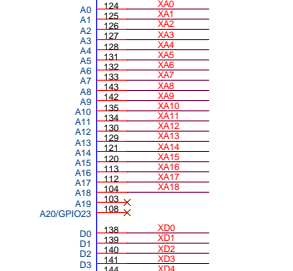
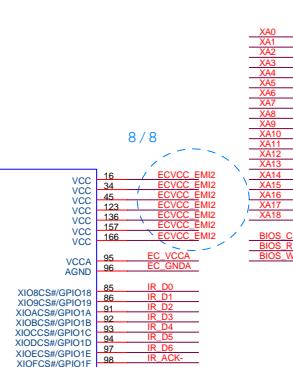
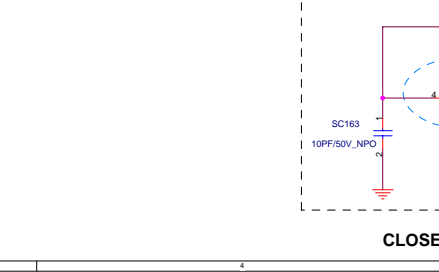
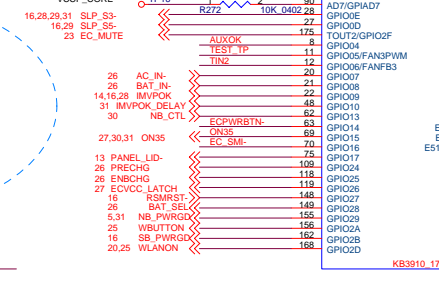
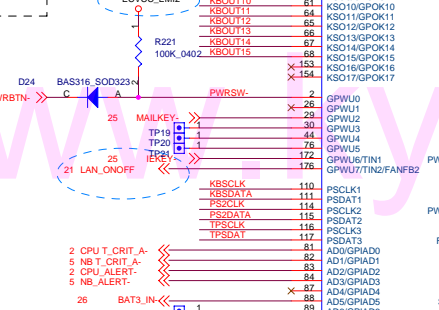
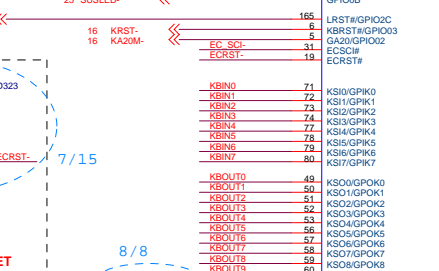
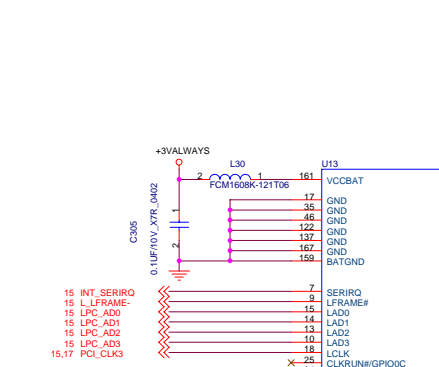
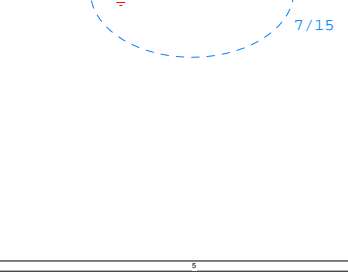
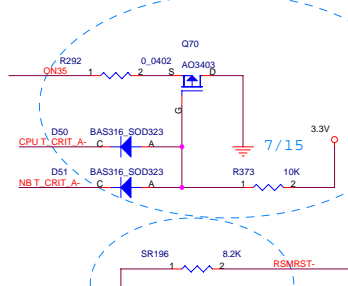
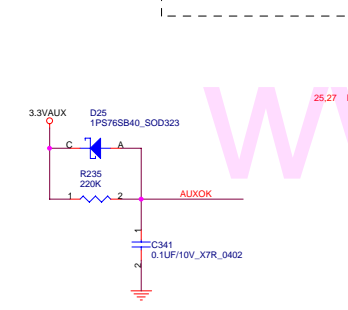
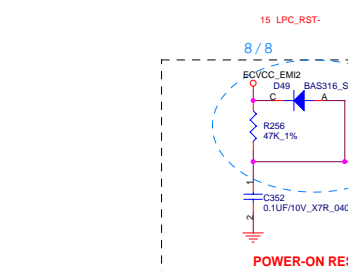
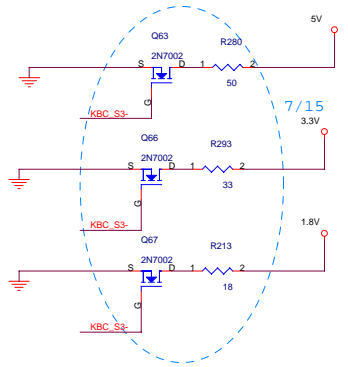


- C96 , C213 , C185 close U3 3.3VAUX pin
- C241 , C242 close to U3.E9 , U3.E10 , U3.E20 , U3.E21 , 1.8VAUX to U3 trace width 20 mils , to other signals 20 mils
- C251 , C252 close to U3.E13 , U3.E14 , U3.E16 , U3.E17 , 1.8VAUX_USB to U3 trace width 20 mils , to other signals 20 mils



- C215 close to U3.A24 , SB_AVDDCK width 10 mils , to other signals 20 mils
- C342 close to U3.AG6 , SB_5VREF width 10 mils , to other signals 20 mils
- C210 close to U3.C30 , VCCP to SB width 10 mils , to other signals 20 mils



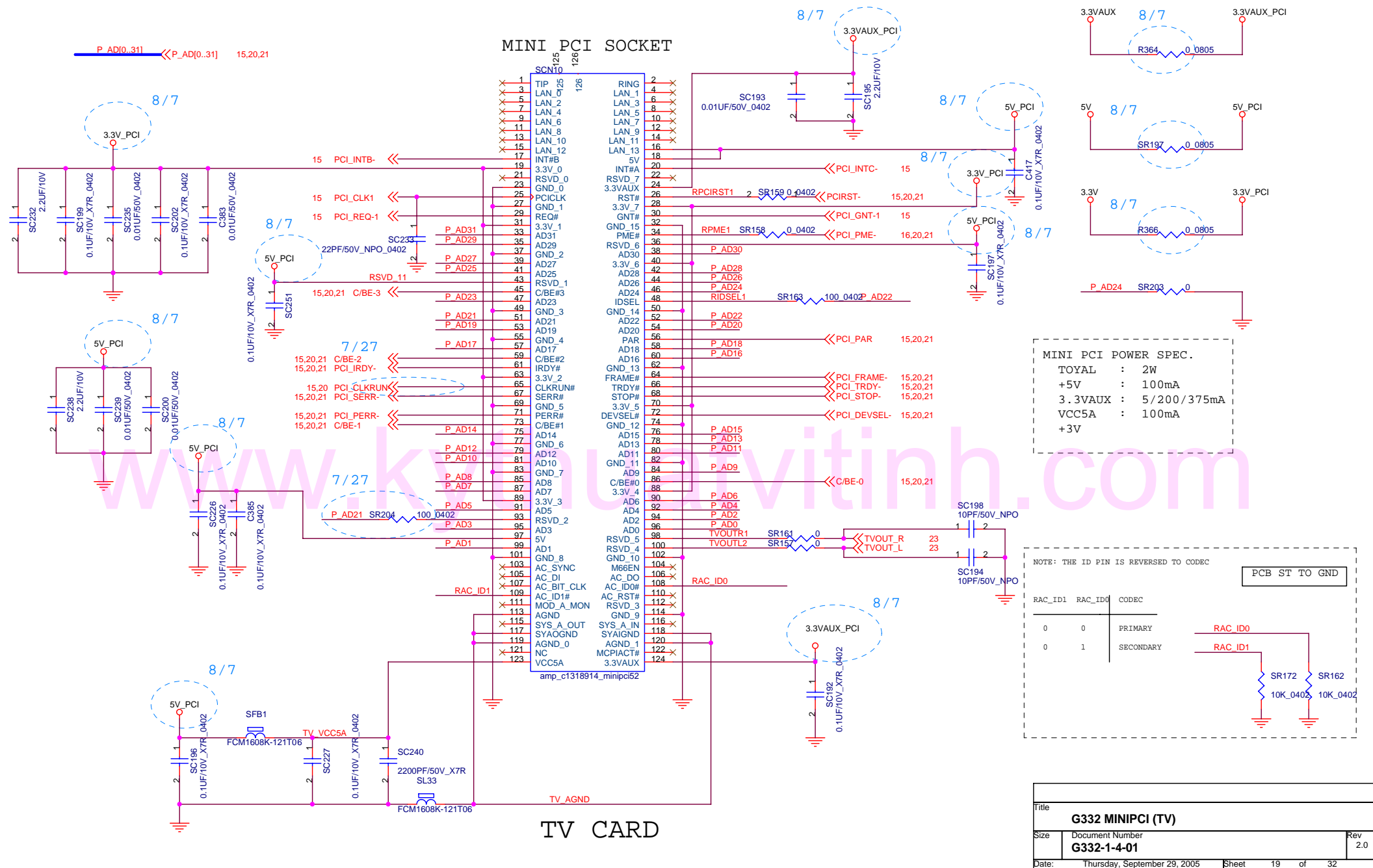


CLOSE TO CHIP

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MINI PCI SOCKET 1

MINI PCI SOCKET



MINI PCI POWER SPEC.
 TOYAL : 2W
 +5V : 100mA
 3.3VAUX : 5/200/375mA
 VCC5A : 100mA
 +3V

NOTE: THE ID PIN IS REVERSED TO CODEC

RAC_ID1	RAC_ID0	CODEC
0	0	PRIMARY
0	1	SECONDARY

PCB ST TO GND

TV CARD

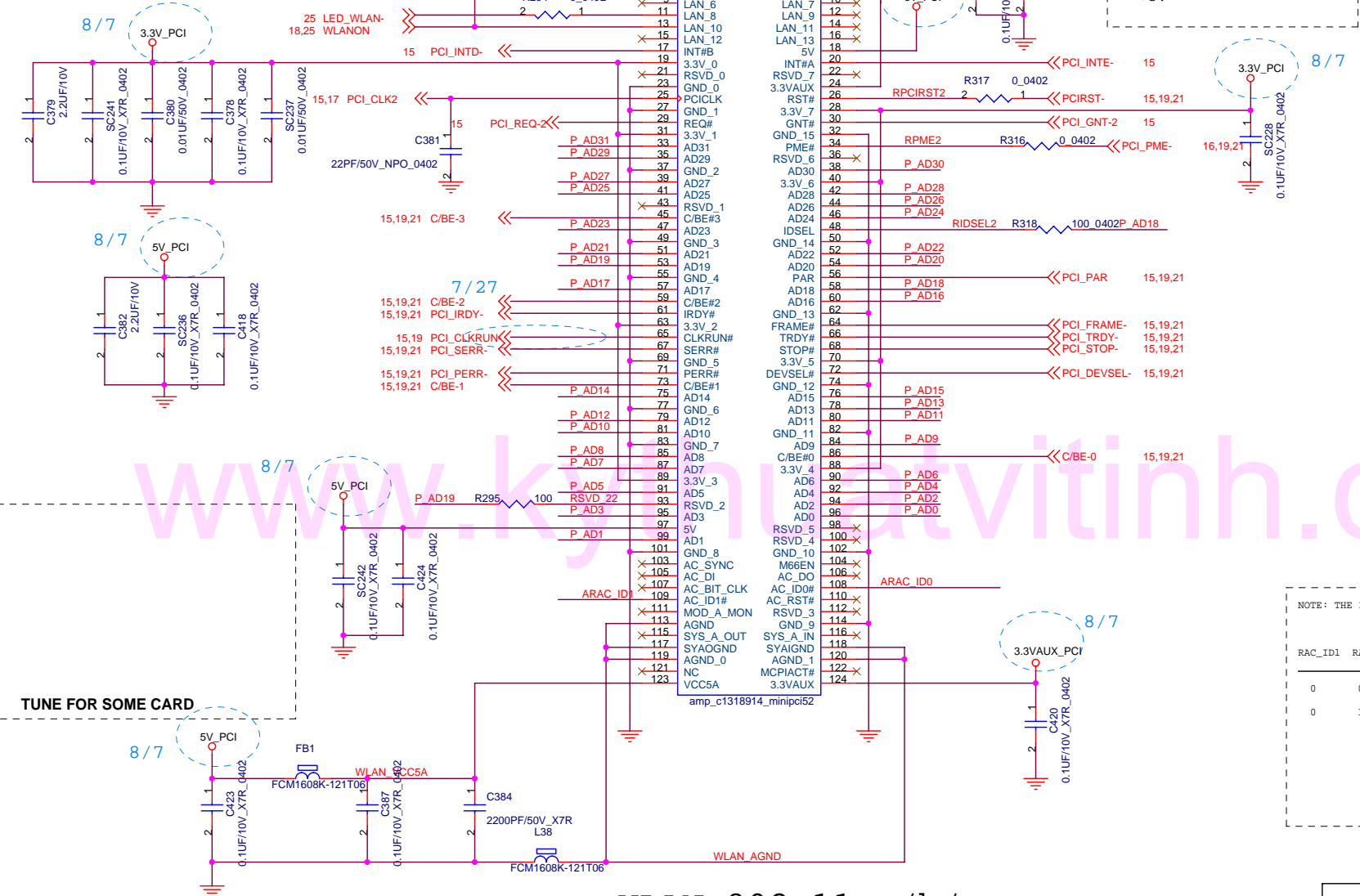
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G332 MINIPCI (TV)		
Size	Document Number	Rev
	G332-1-4-01	2.0
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CLOSE TO MINI PCI

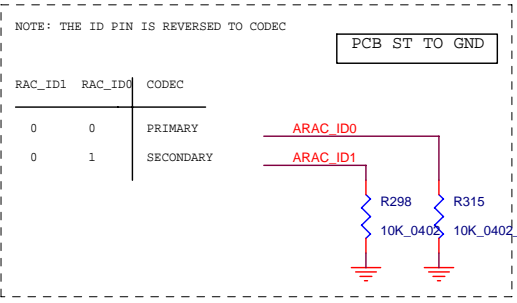
MINI PCI SOCKET 2
MINI PCI SOCKET

MINI PCI POWER SPEC.

TOYAL	: 2W
+5V	: 100mA
3.3VAUX	: 5/200/375mA
VCC5A	: 100mA
+3V	

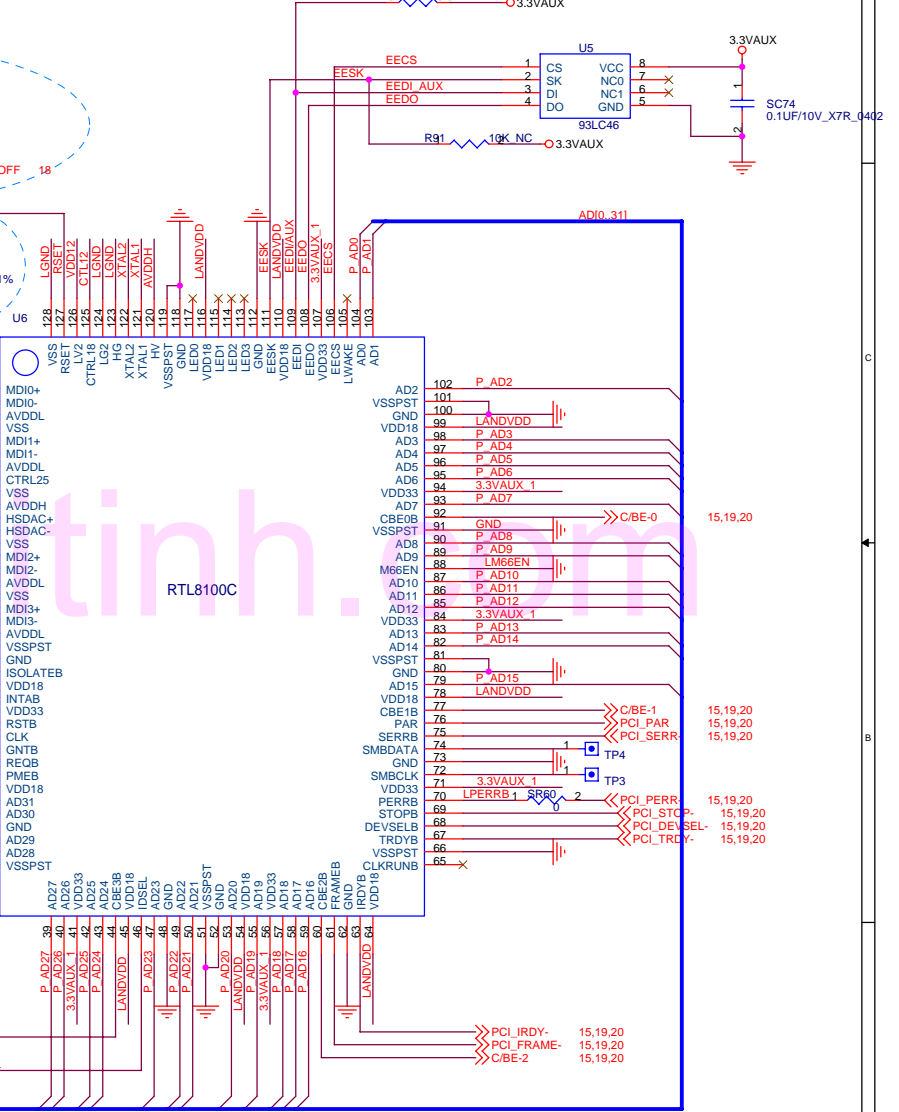
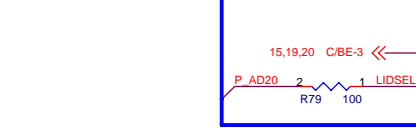
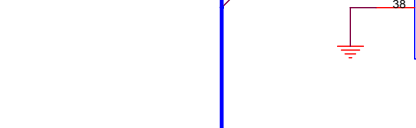
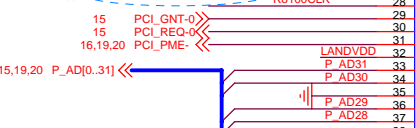
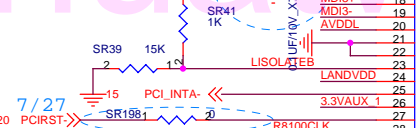
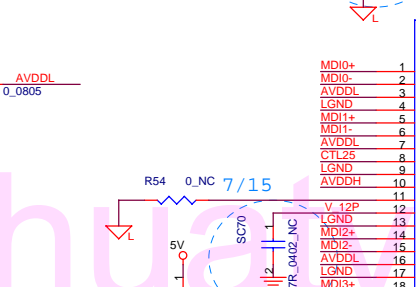
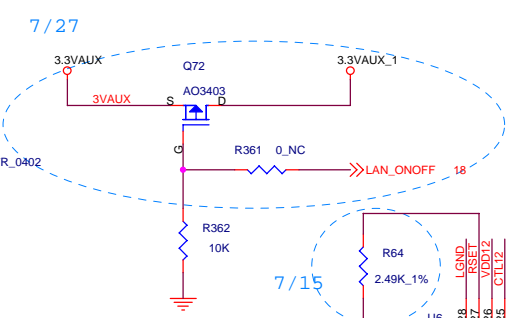
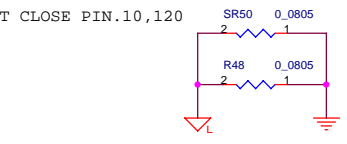
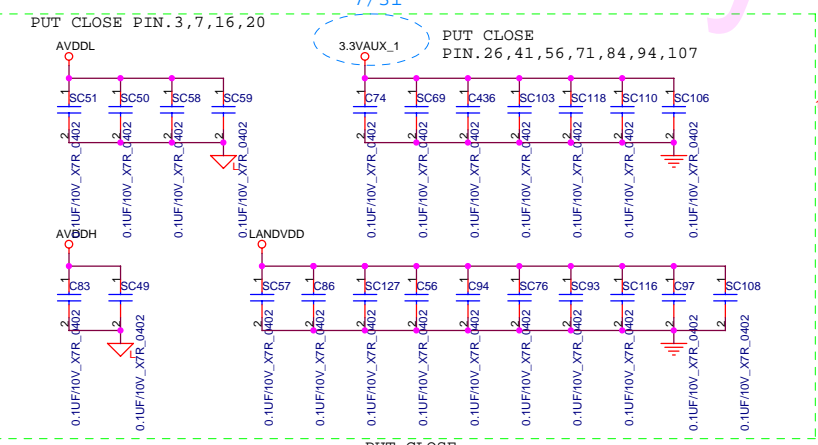
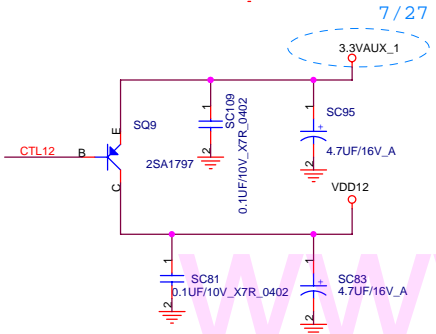
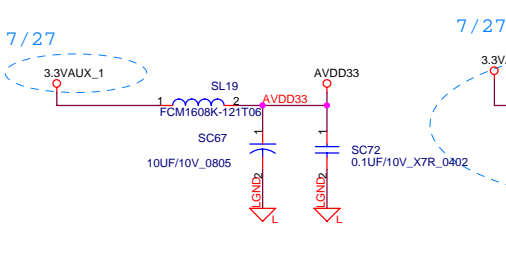
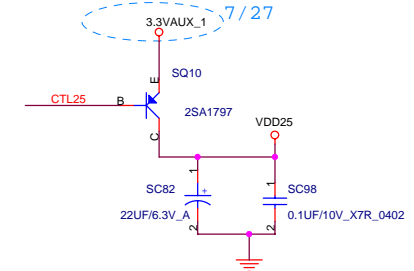
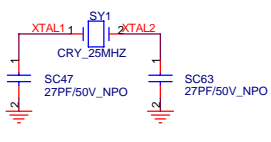
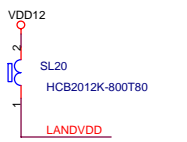
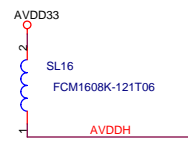
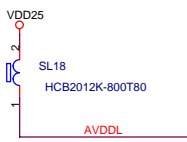
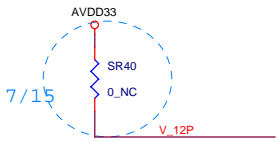


TUNE FOR SOME CARD



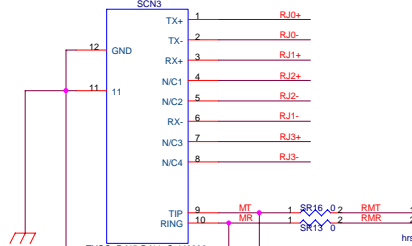
WLAN 802.11 a/b/g

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G332 MINIPCI (W/L)		
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Title		
G332 RTL8100C		
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	G332-1-4-01	2.0
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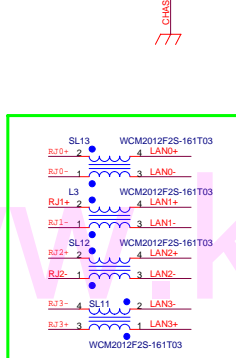
RJ-45 & RJ-11 CONN.



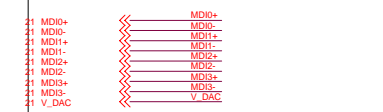
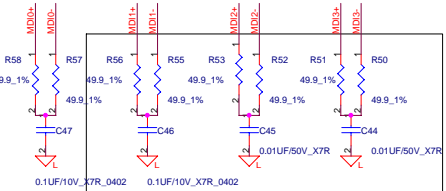
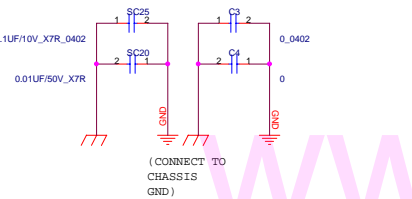
PHONE LINE IN CONN.



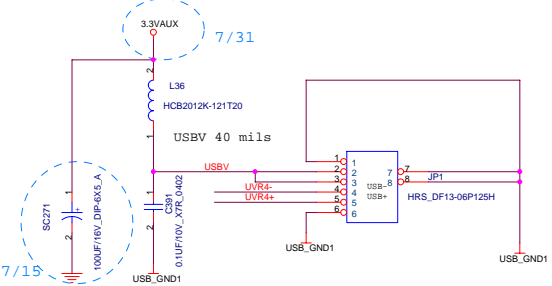
CO-LAYOUT



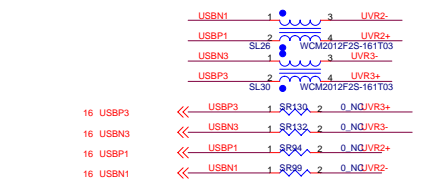
Isolate 2.54mm



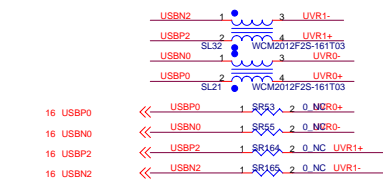
CARD READER CONN.



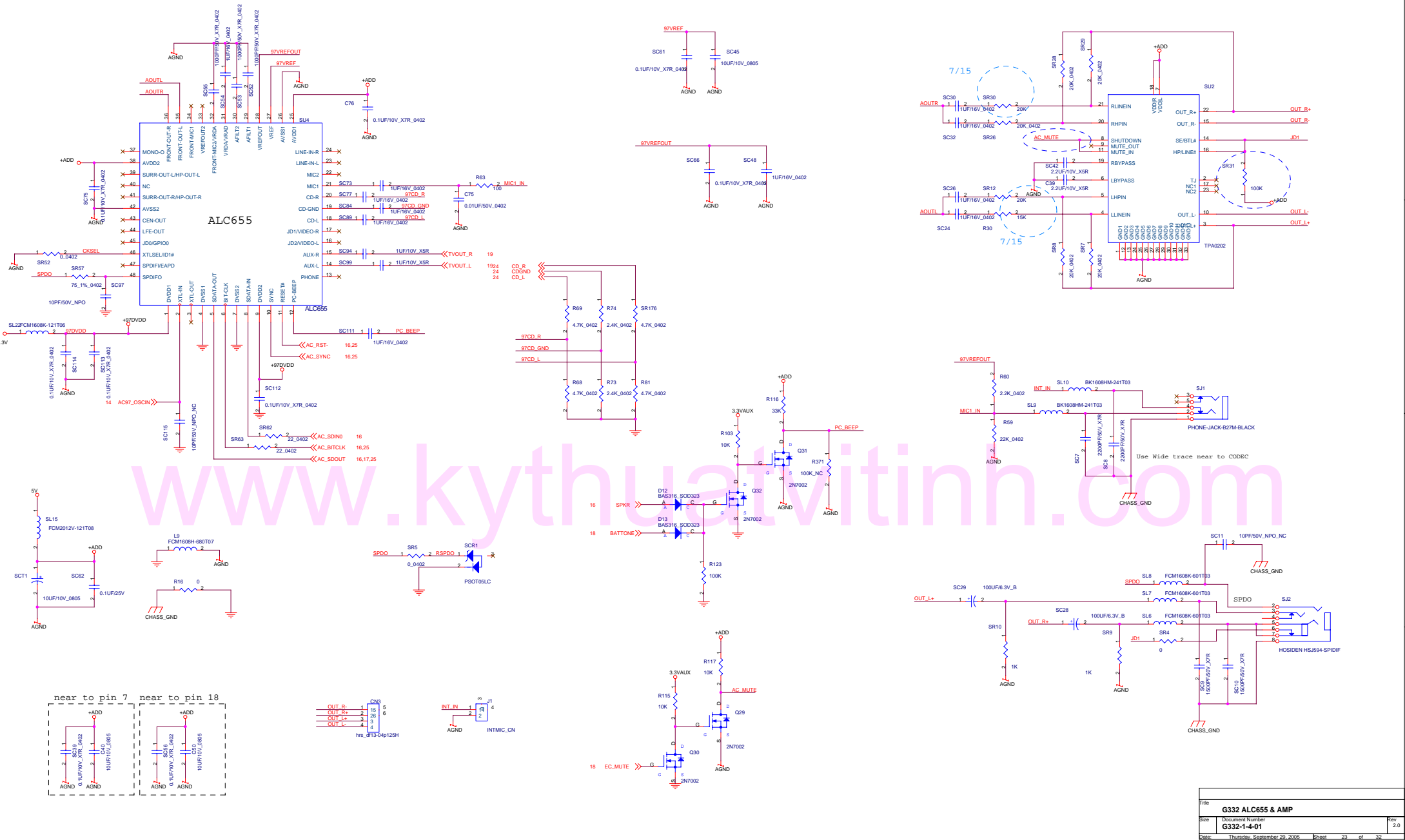
CO-LAYOUT



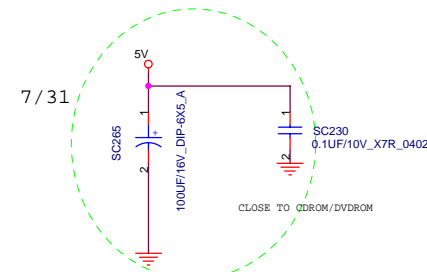
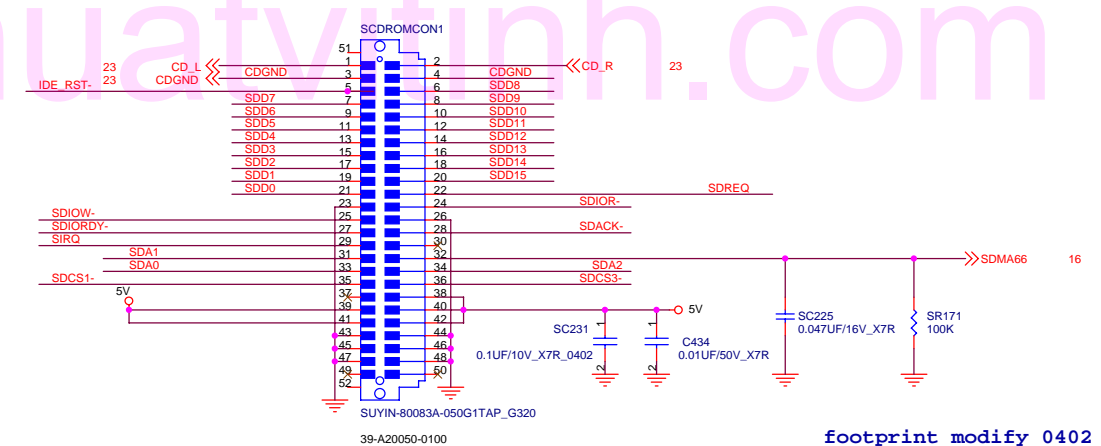
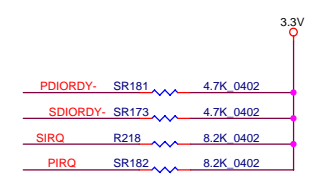
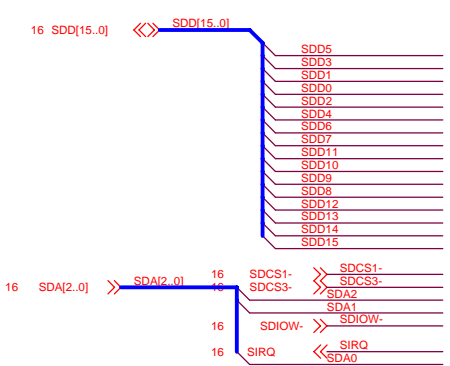
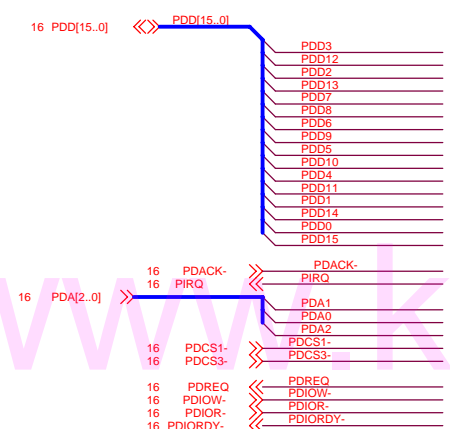
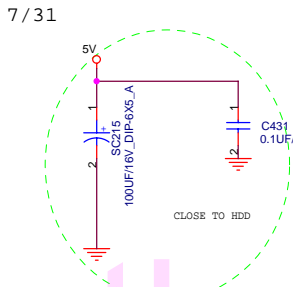
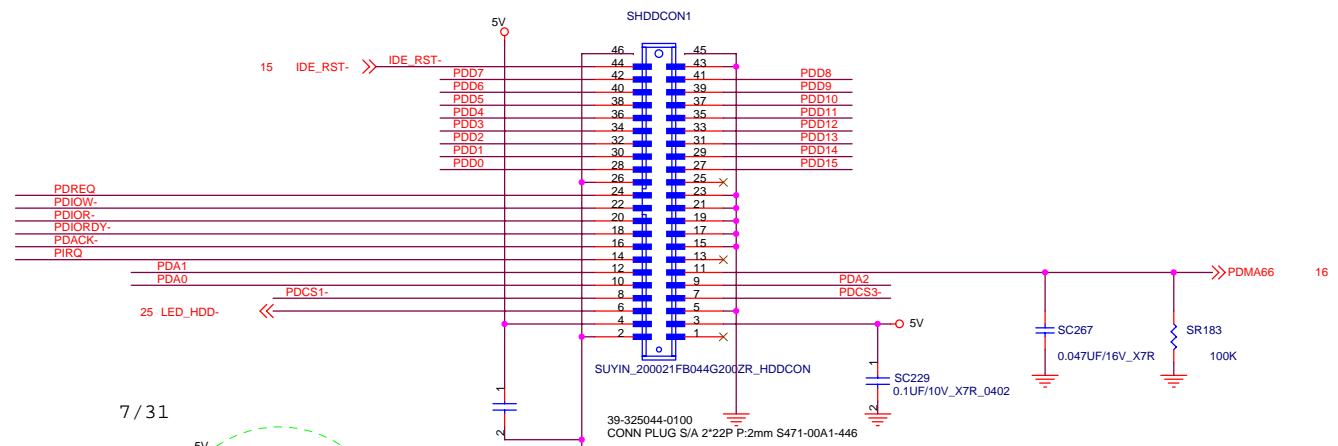
CO-LAYOUT



Title		
G332 RJ45 & RJ11 & USB		
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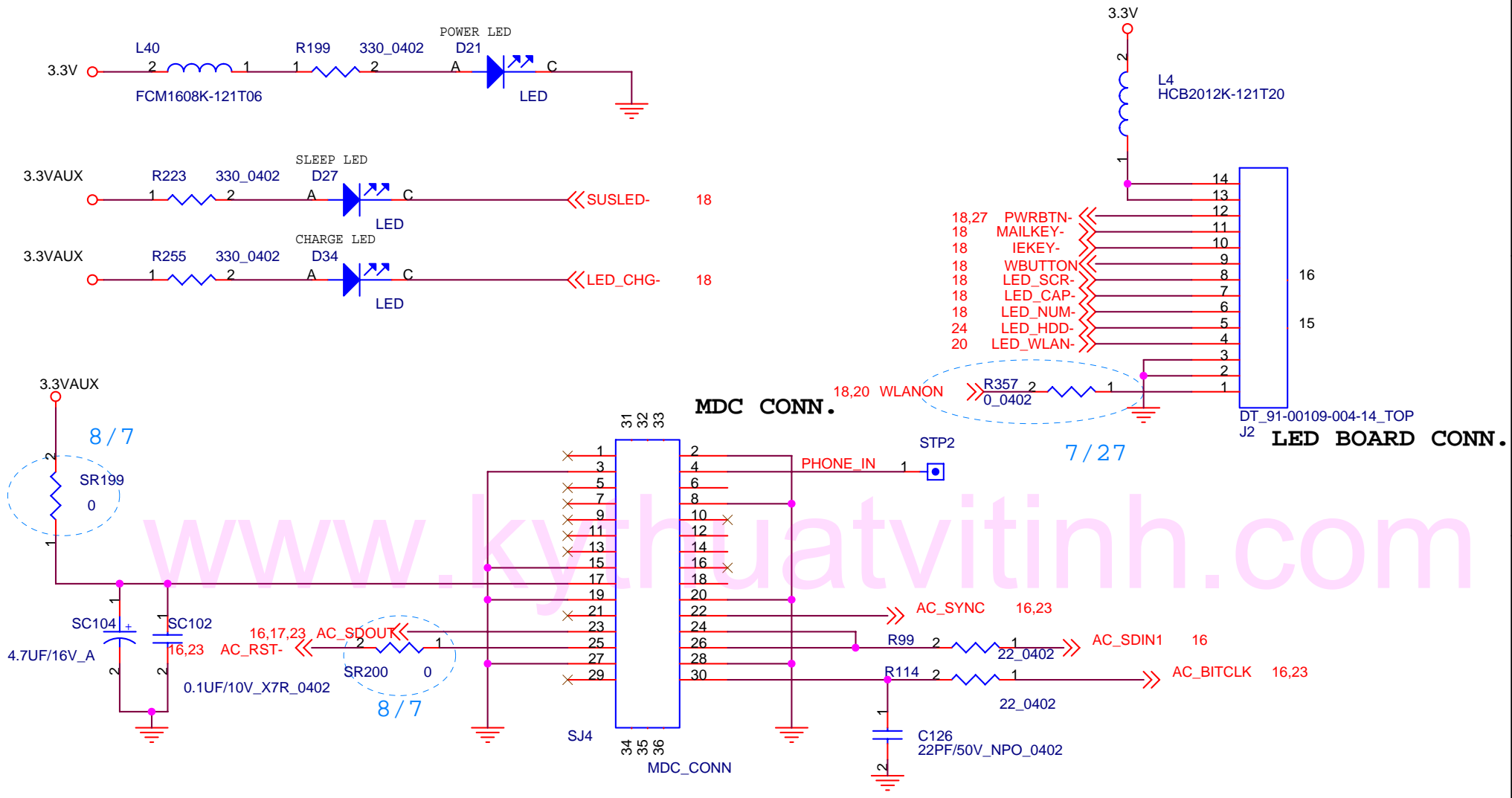


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Size:	Docuwin Number
	G332-1-4-01
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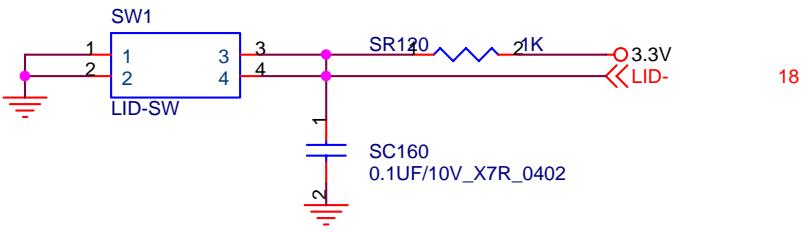


footprint modify 0402

Title		
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Size	Document Number	Rev
	G332-1-4-01	2.0
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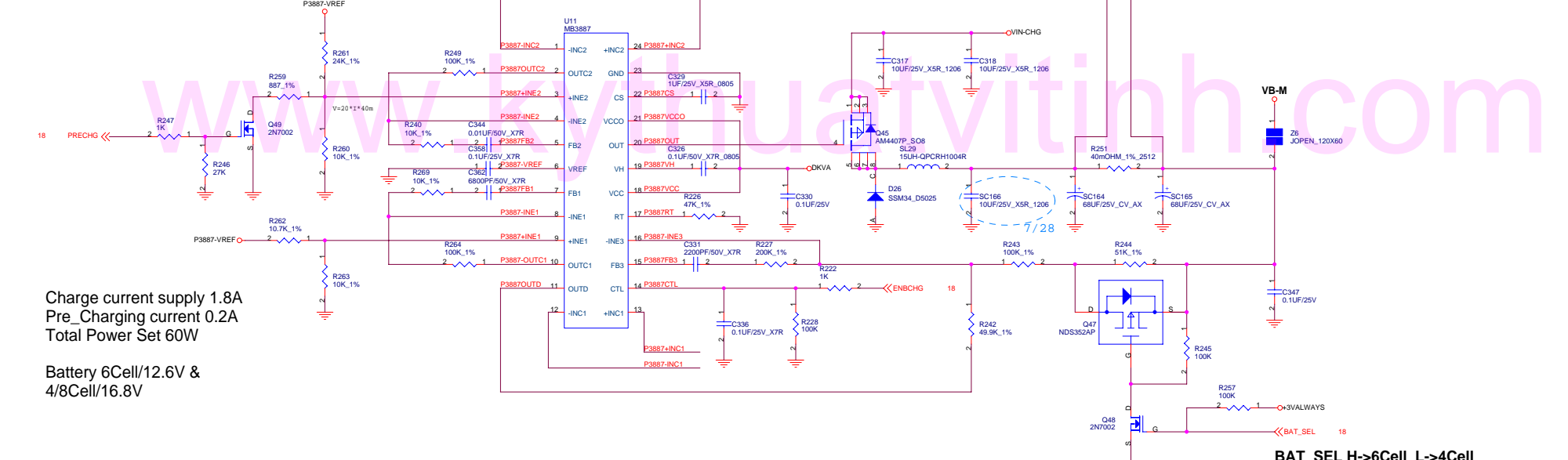
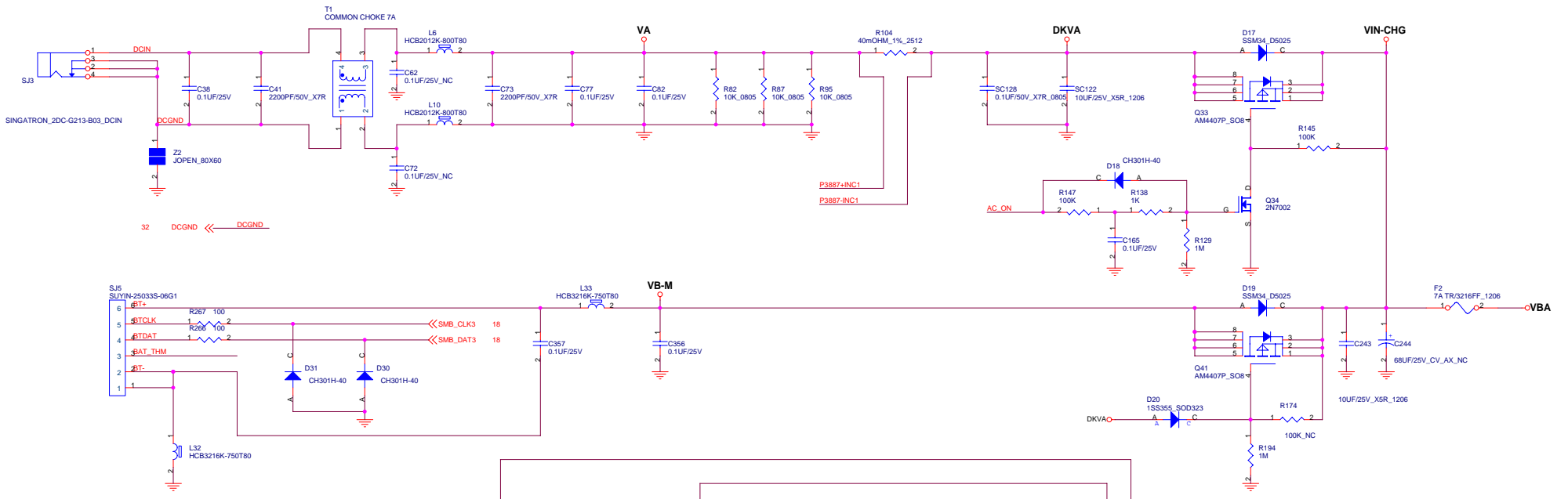


pin 1 & 4 to press



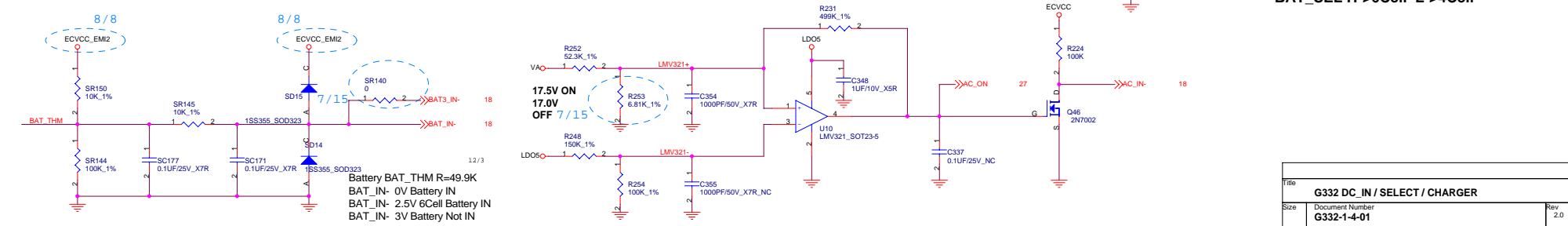
Title		
G332 LED & LID & MDC		
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Charge current supply 1.8A
 Pre_Charging current 0.2A
 Total Power Set 60W

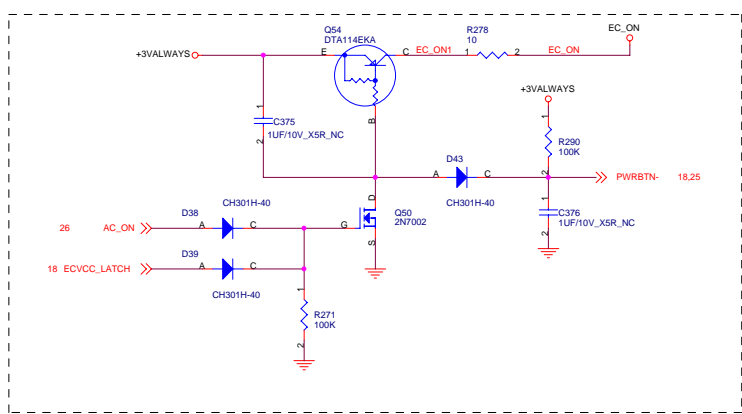
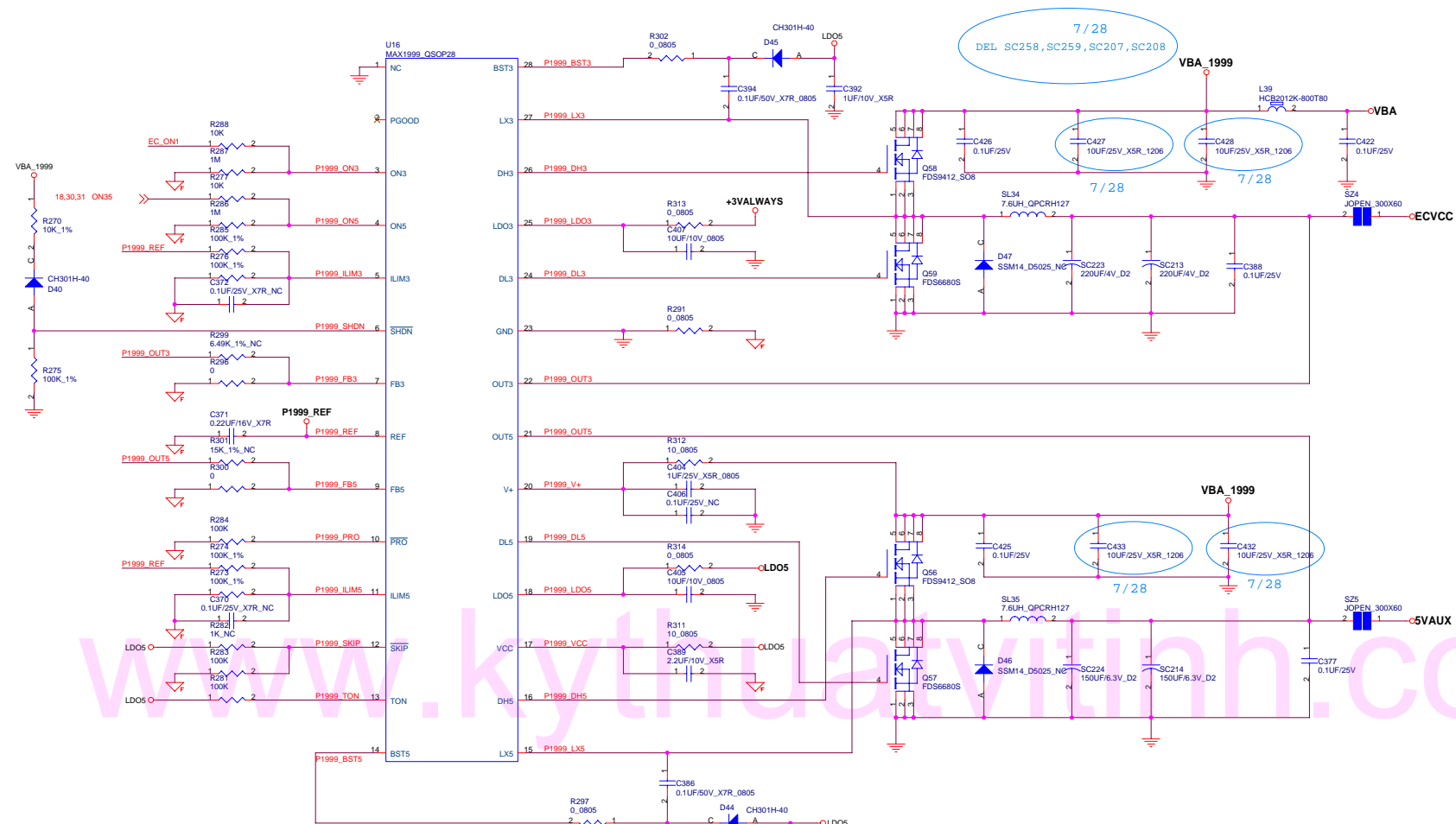
Battery 6Cell/12.6V &
 4/8Cell/16.8V



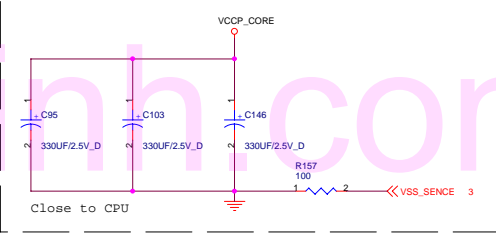
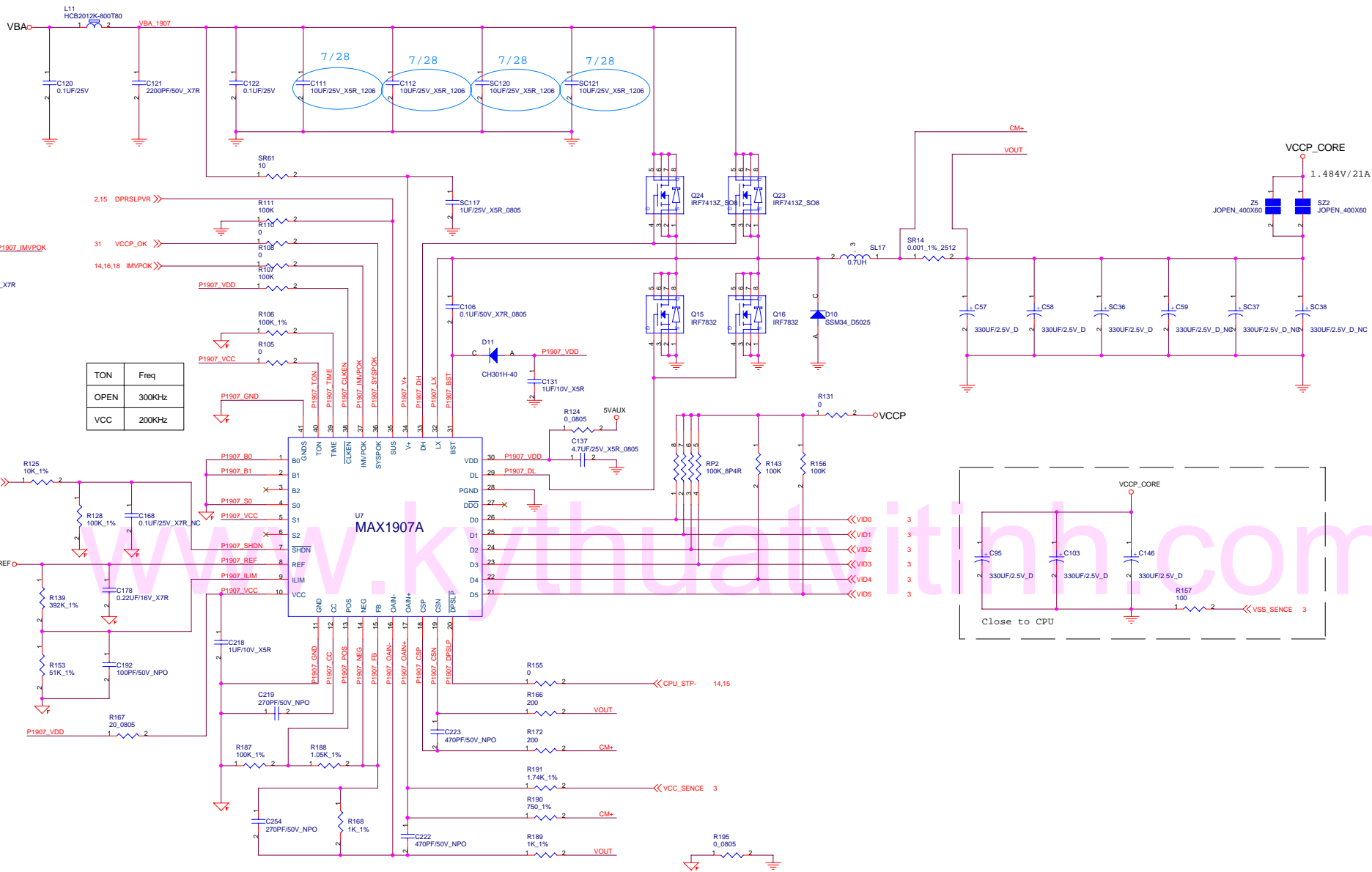
Battery BAT_THM R=49.9K
 BAT_IN- 0V Battery IN
 BAT_IN- 2.5V 6Cell Battery IN
 BAT_IN- 3V Battery Not IN

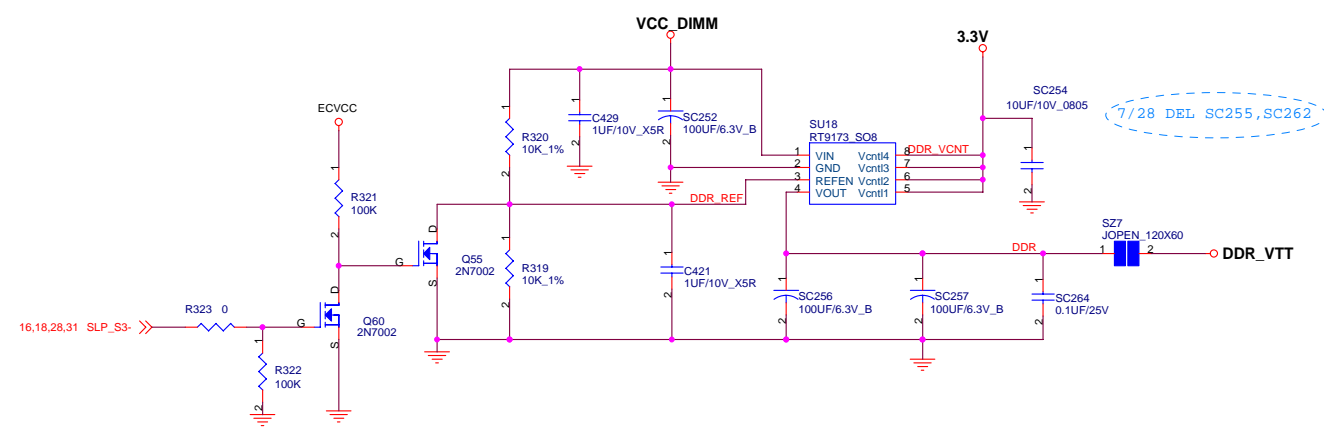
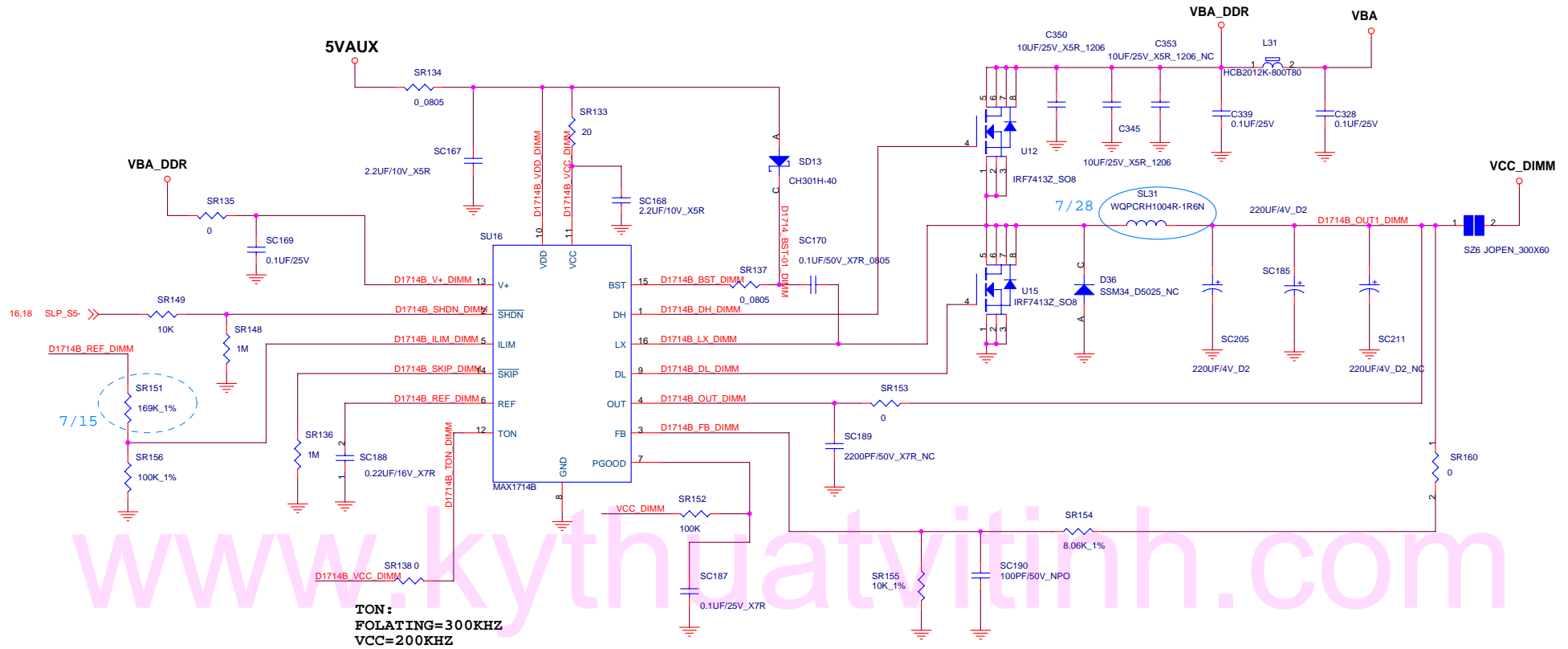
BAT_SEL H->6Cell L->4Cell

Title		
G332 DC_IN / SELECT / CHARGER		
Size	Document Number	Rev
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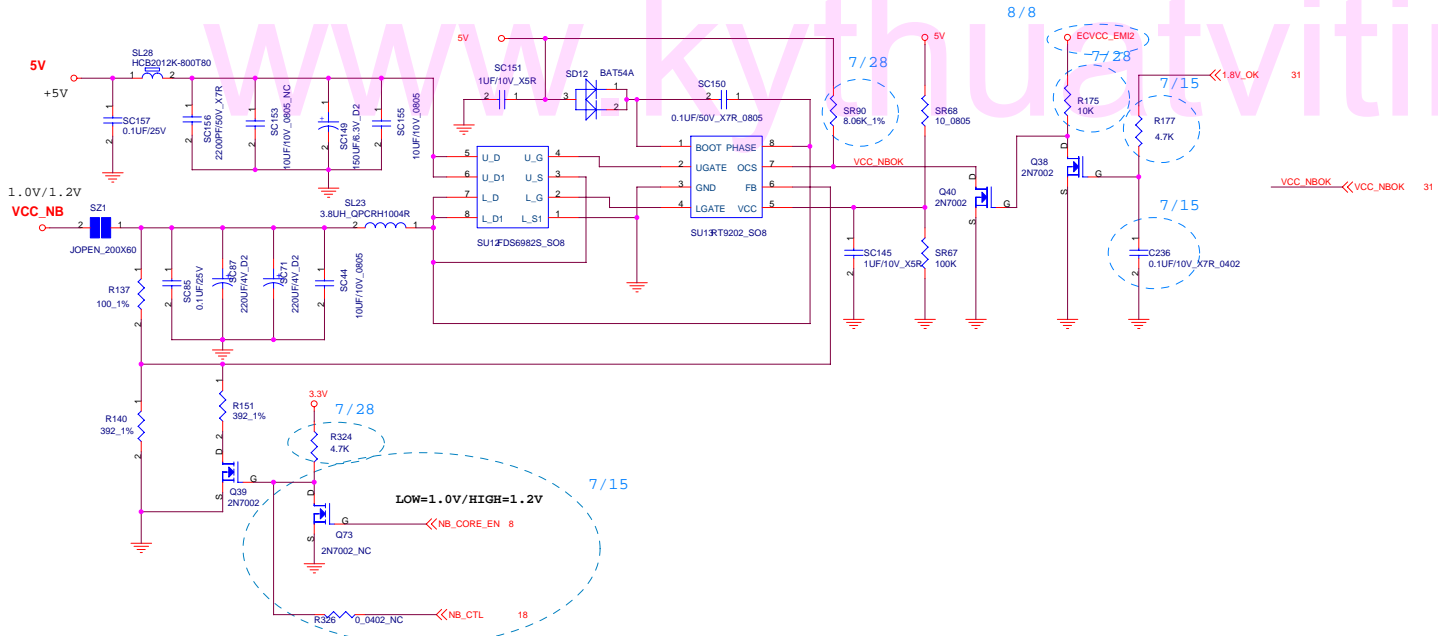
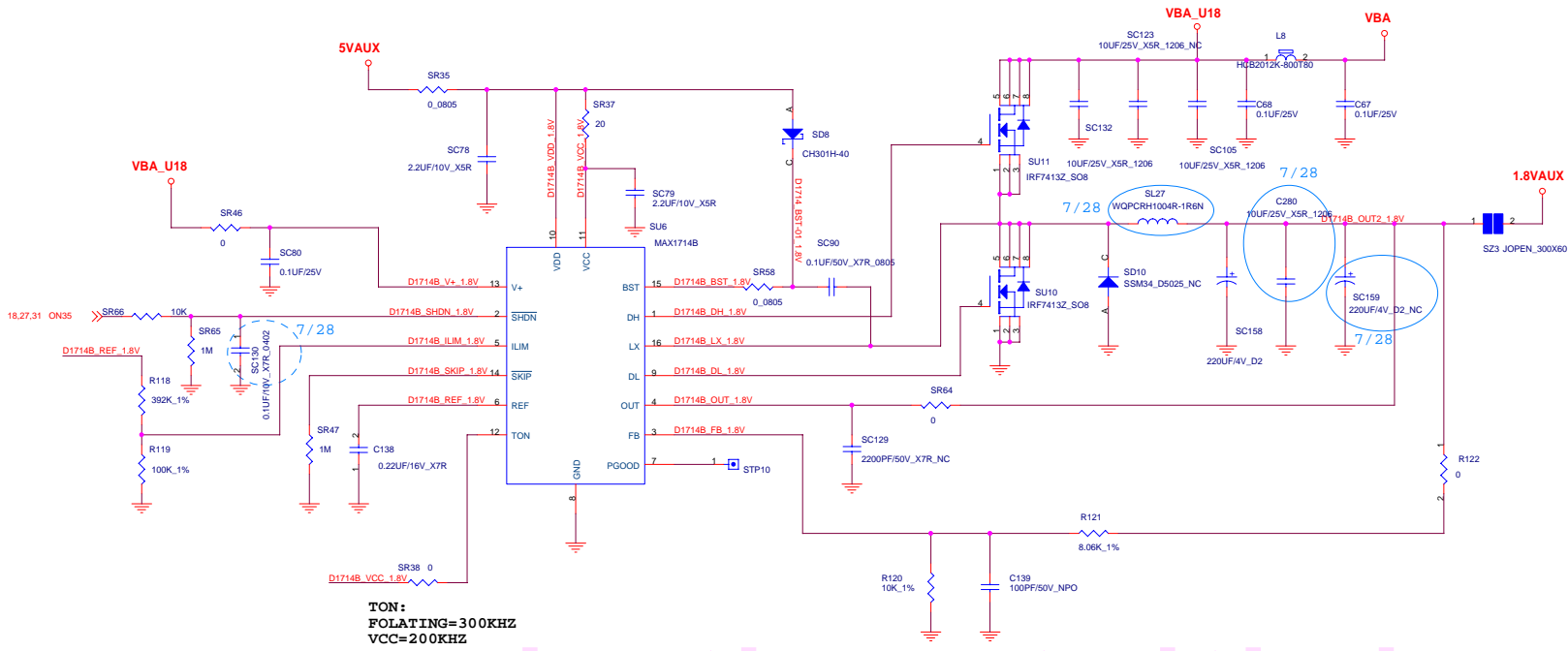


Title		
G332 MAX1999 ECVCV/5VAUX		
Size	Document Number	Rev
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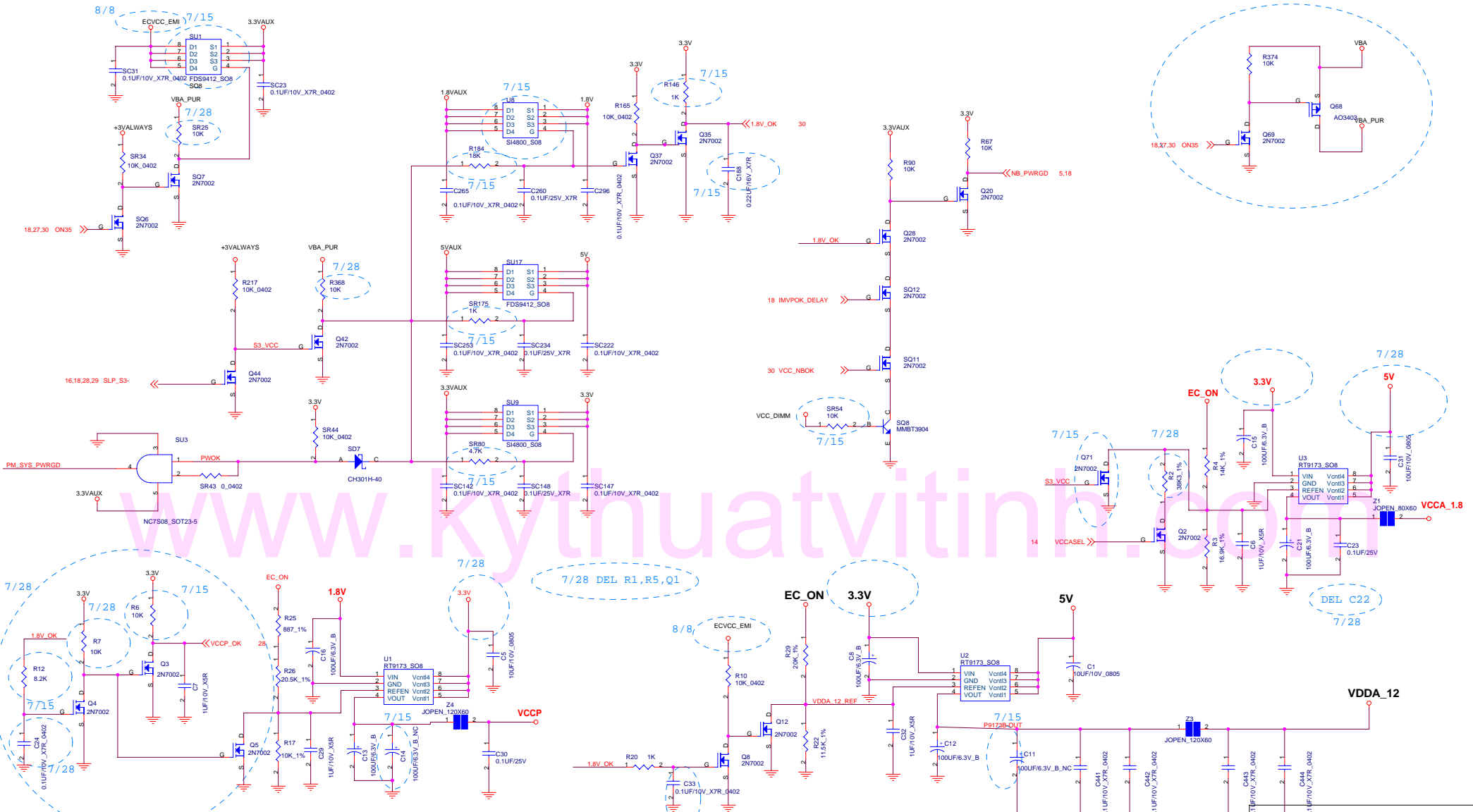




Title		
G332 MAX1714B DIMM / DDR		
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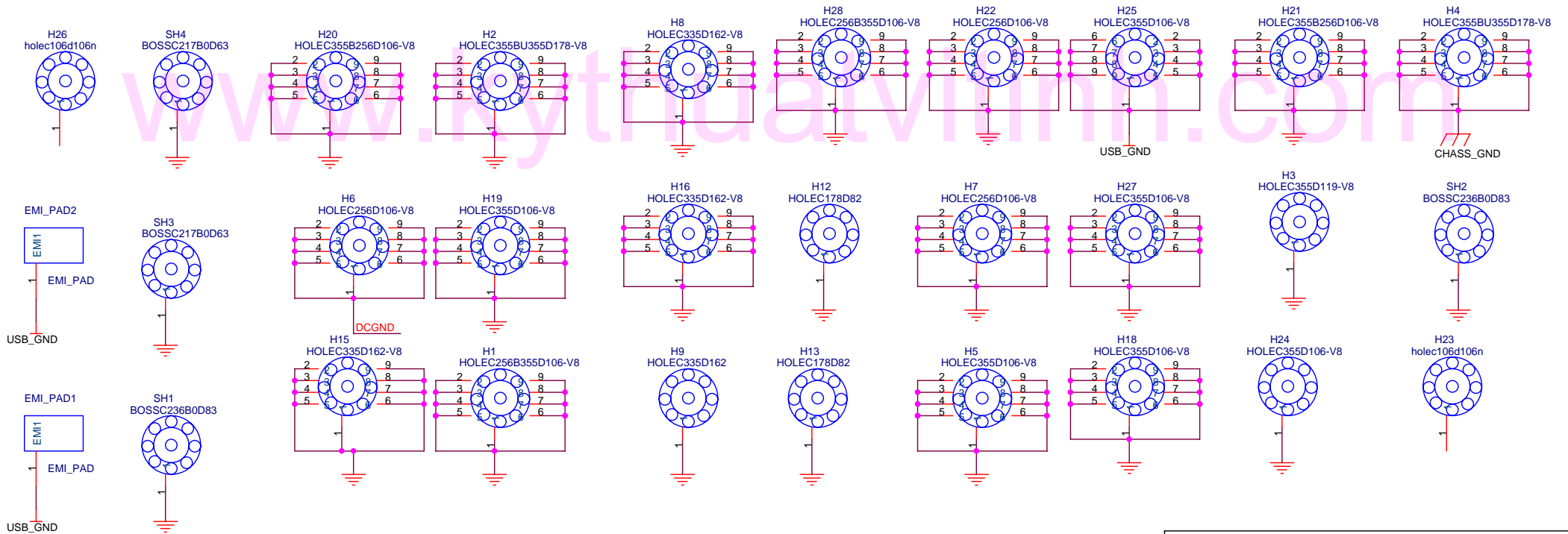
File		
G332 VCC18 / NB_CORE		
Size	Document Number	Rev
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332 HISTORY

- A.0 RELEASE CIRCUIT SCH.
- B.0 RELEASE CIRCUIT SCH.
- 1.0 RELEASE CIRCUIT SCH.
- 2.0 RELEASE CIRCUIT SCH.



26 DCGND ←← DCGND

Title		
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