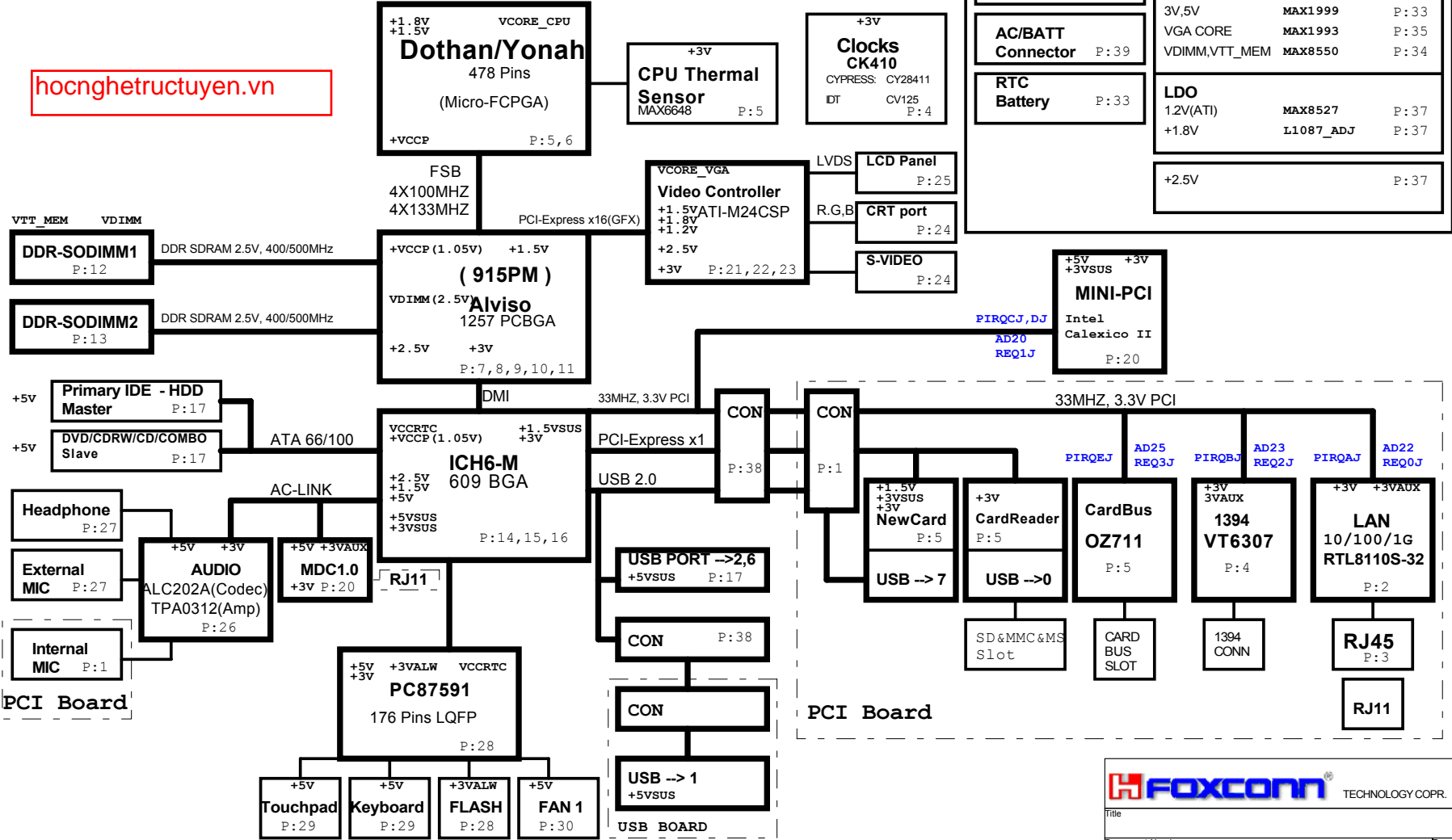


S04 BLOCK DIAGRAM Dothan(Yonah)/Alviso

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DC/DC & Charger

CPU VR MAX1987 P:31	Switching +VCCP,1.5V MAX1715 P:36 3V,5V MAX1999 P:33 VGA CORE MAX1993 P:35 VDIMM,VTT_MEM MAX8550 P:34
AC/BATT Connector P:39	LDO 1.2V(ATI) MAX8527 P:37 +1.8V L1087_ADJ P:37
RTC Battery P:33	+2.5V P:37



PCI Board

33MHZ, 3.3V PCI

CON P:1	CON P:1	CON P:1	CON P:1	CON P:1	CON P:1
PIRQCJ, DJ	AD20 REQ1J	PIRQJ	AD25 REQ3J	PIRQBJ	AD23 REQ2J
PIRQAJ	AD22 REQ0J	PIRQAJ	AD22 REQ0J	PIRQAJ	AD22 REQ0J

Components on PCI Board:

- NewCard:** +1.5V, +3VSUS, +3V (P:5)
- CardReader:** +3V (P:5)
- CardBus OZ711:** (P:5)
- 1394 VT6307:** +3V, +3VAUX (P:4)
- LAN 10/100/1G RTL8110S-32:** +3V, +3VAUX (P:2)
- SD&MMC&MS Slot**
- CARD BUS SLOT**
- 1394 CONN**
- RJ45 P:3**
- RJ11**

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Power & Ground

Label	Pg#	S0	S3	S4	S5	Control Signal
MBATA+ MBATA+ 39		Y	Y	Y	Y	9V-12.6V,3X2 cells
VIN VIN 25,31,33,34,35,36,39		Y	Y	Y	Y	20V-9V
VCCRTC VCCRTC 14,16,28,33		Y	Y	Y	Y	3V
+3VALW +3VALW 19,25,28,29,33,39		Y	Y	Y	Y	3VAUXEN
+5VALW +5VALW 32,33		Y	Y	Y	Y	3VAUXEN
-3VAUX -3VAUX 20,33,38		Y	Y	Y		3VAUXEN
+1.5VSUS +1.5VSUS 16,36,37		Y	Y			SUSD
VDIMM VDIMM 7,9,10,12,13,34,37		Y	Y			SUSON
+3VSUS +3VSUS 15,16,19,20,32,33,34,35		Y	Y			SUSD
+5VSUS +5VSUS 16,17,32,33,36,38		Y	Y			SUSD
+1.5V +1.5V 6,10,11,15,16,23,32,36,37,38		Y				MAIND
+1.8V +1.8V 6,22,23,32,37		Y				+3V
VCORE_VGA VCORE_VGA 23,35		Y				MAIND
VMEM_VGA VMEM_VGA 22,23		Y				+1.8V
+3V +3V 4,5,10,12,13,14,15,16,17,18,19,20,21,23,24,25,26,28,29,30,31,32,33,35,37,38		Y				MAIND
+5V +5V 16,17,20,24,25,26,27,28,29,30,31,32,33,38		Y				MAIND
+5VA +5VA 26		Y				+5V
+5VAA +5VAA 26,27		Y				+5V
+5V_FAN +5V_FAN 30		Y				VFAN,+5V
M_VREF M_VREF 7,12,13,34		Y				MAINON
VCORE_CPU VCORE_CPU 6,31		Y				VRON
+VCCP +VCCP 4,5,6,7,9,10,14,16,36		Y				VRON
+1.2V +1.2V 23,37		Y				MAIND
+2.5V +2.5V 7,8,10,11,16,23,32,37		Y				MAIND
-5VAUX -5VAUX 33,34,35,36,38		Y	Y	Y		3VAUXEN
VTT_MEM VTT_MEM 12,13,34		Y				MAINON
MOSVCC MOSVCC 32,33		Y	Y	Y		5VAUX
MOSVCC_RUN MOSVCC_RUN 25,30,32,33,38		Y				MAINON
GND ALL PAGES						
AUDGND AUDGND 26,27,38						

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PWR_LED STATUS

	S0	S1&S3	S4&S5
PWR_LED	ON	Blinking	OFF

LAN LED STATUS

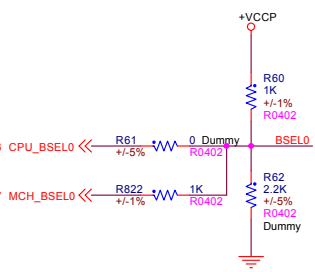
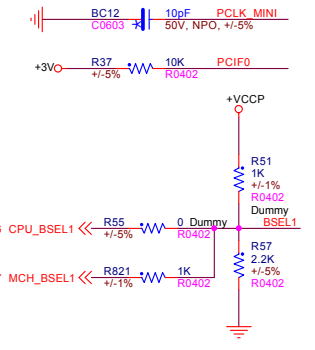
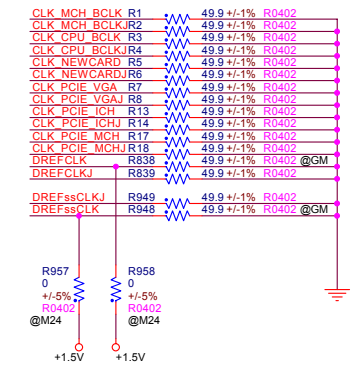
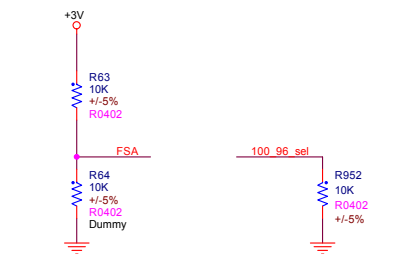
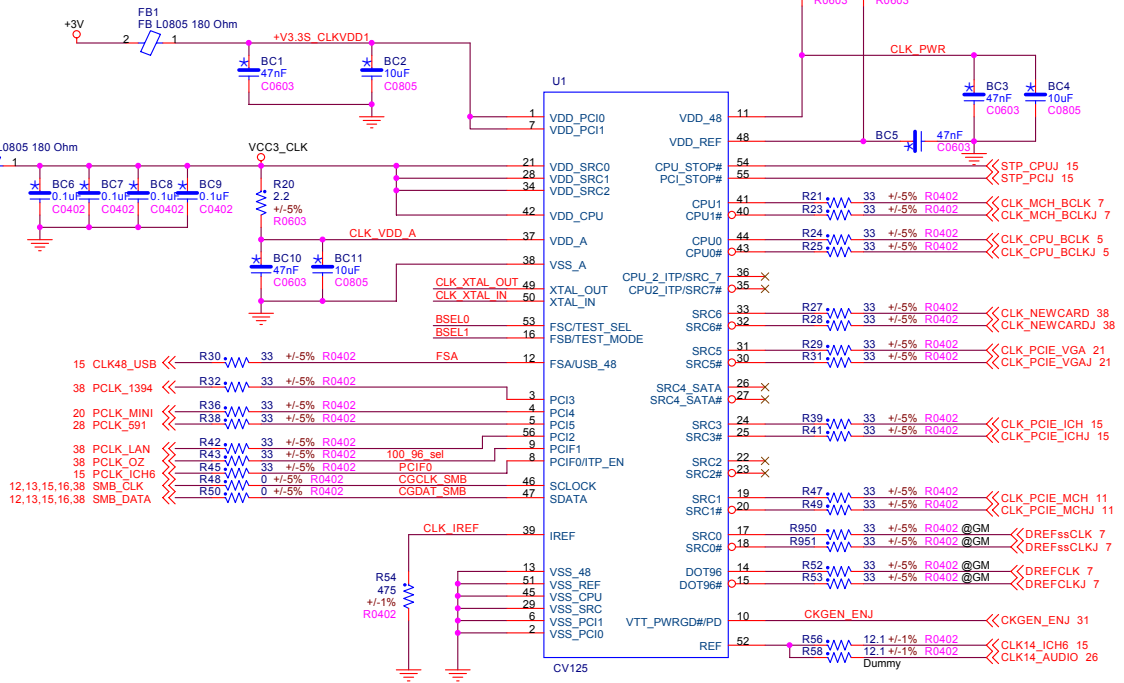
	Green	Amber	Yellow
10M/100M	Blinking	OFF	ON
1000M	Blinking	Blinking	ON

WAKE UP EVENT

WAKE UP EVENT	FROM ACPI STATE	COMMENTS
POWER BUTTON	S1,S3,*S4,S5	Default set all support by BIOS
RTC ALARM	S5	Default set all support by BIOS
LAN (PCI LAN)	S1,S3,*S4	*S4 support set by BIOS,or not support
USB	S1,S3	S3 set by BIOS,or not support
TOUCH PAD/INTERNAL KB	S1,S3	Default support
MODEM WAKEUP	S3	Default support
1394		not support
WIRELESS LAN		not support

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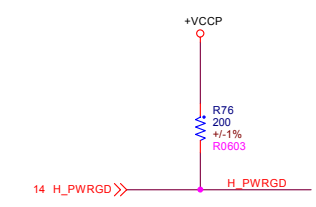
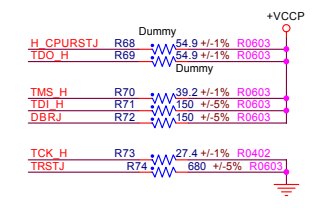
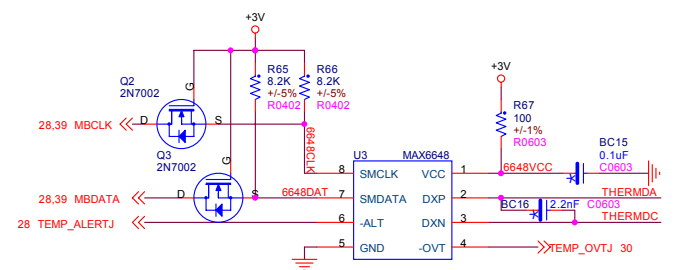
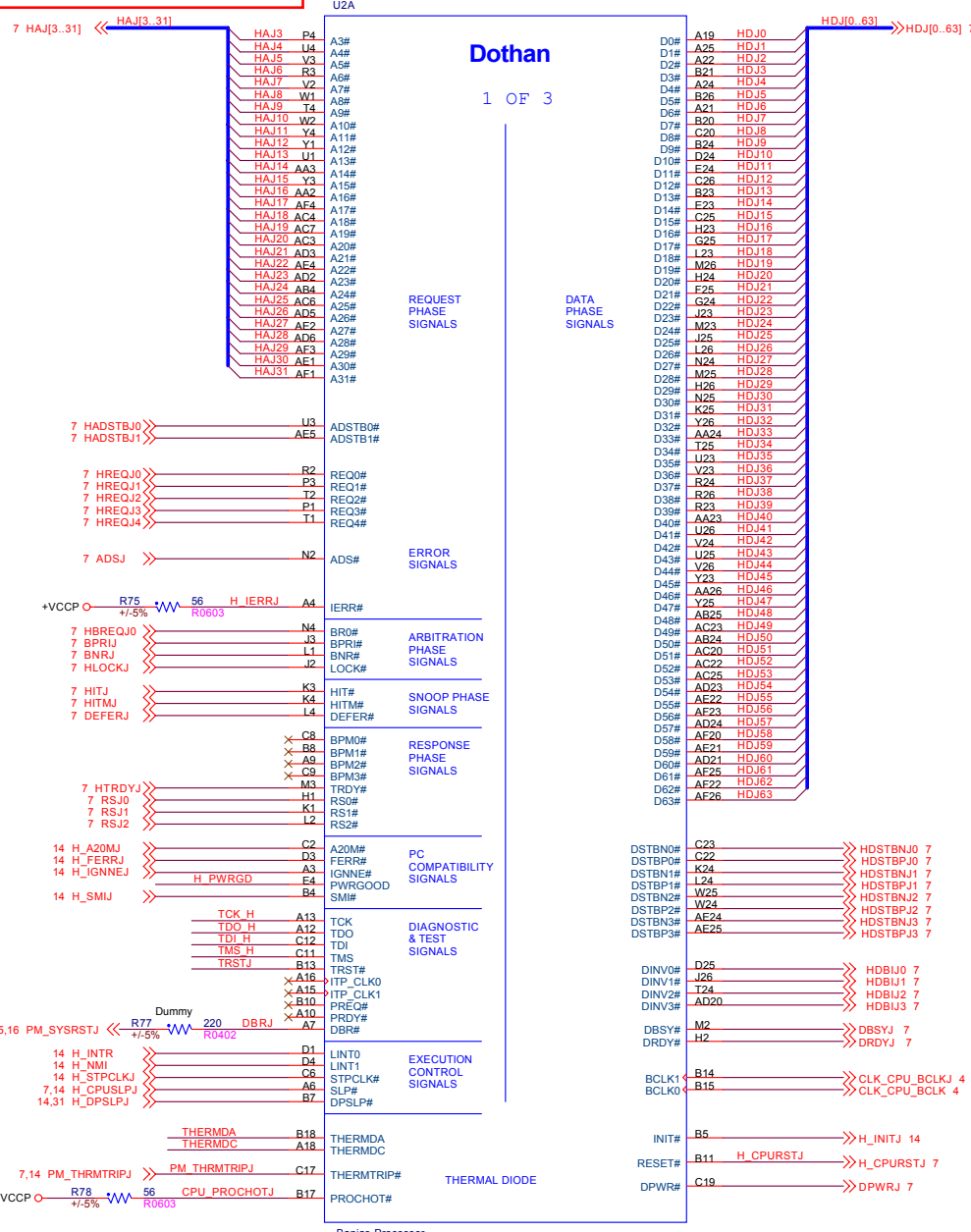
Title: Clock Generator

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POWER, GROUND, RESERVED SIGNALS

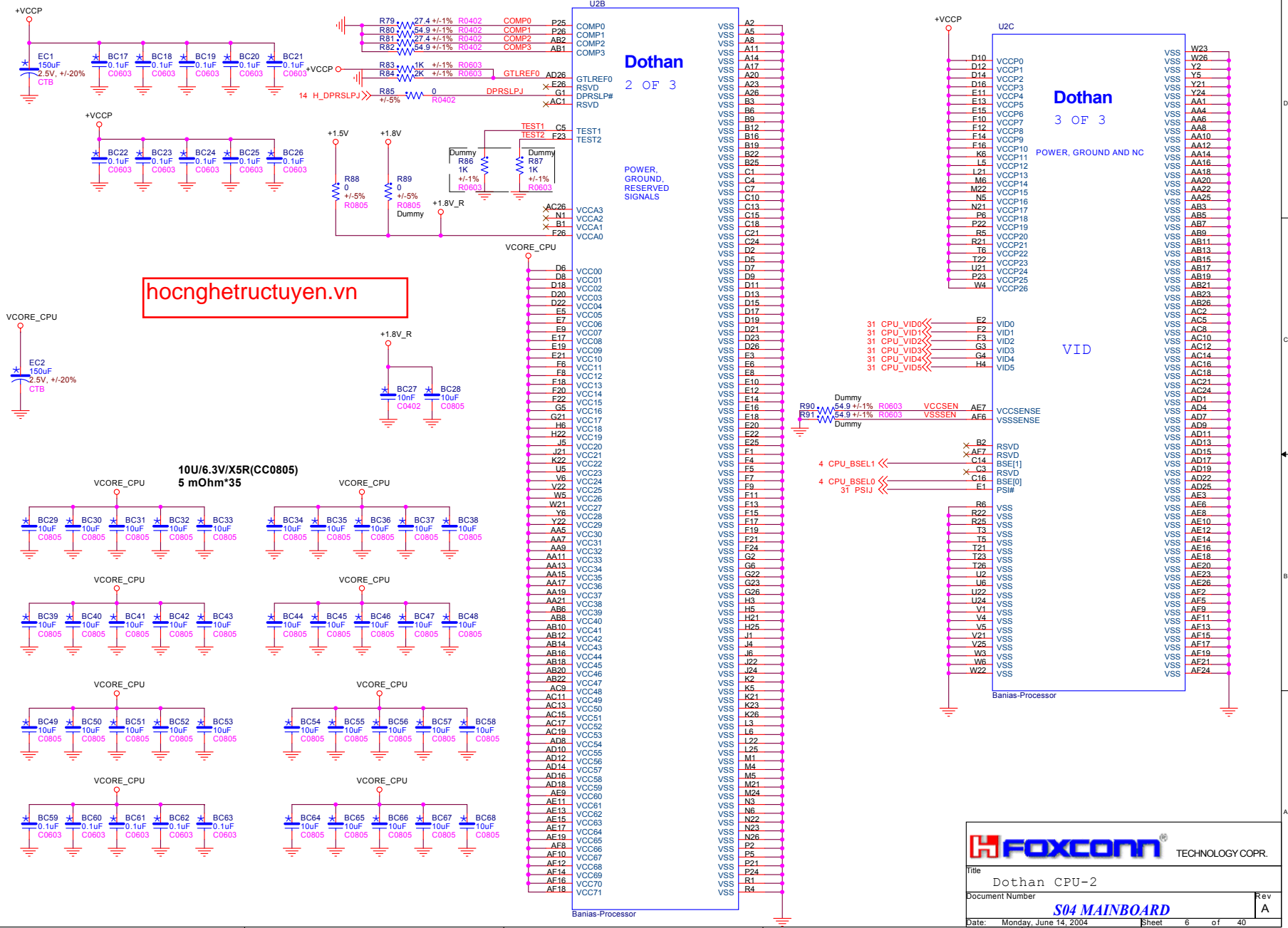
Dothan 3 OF 3

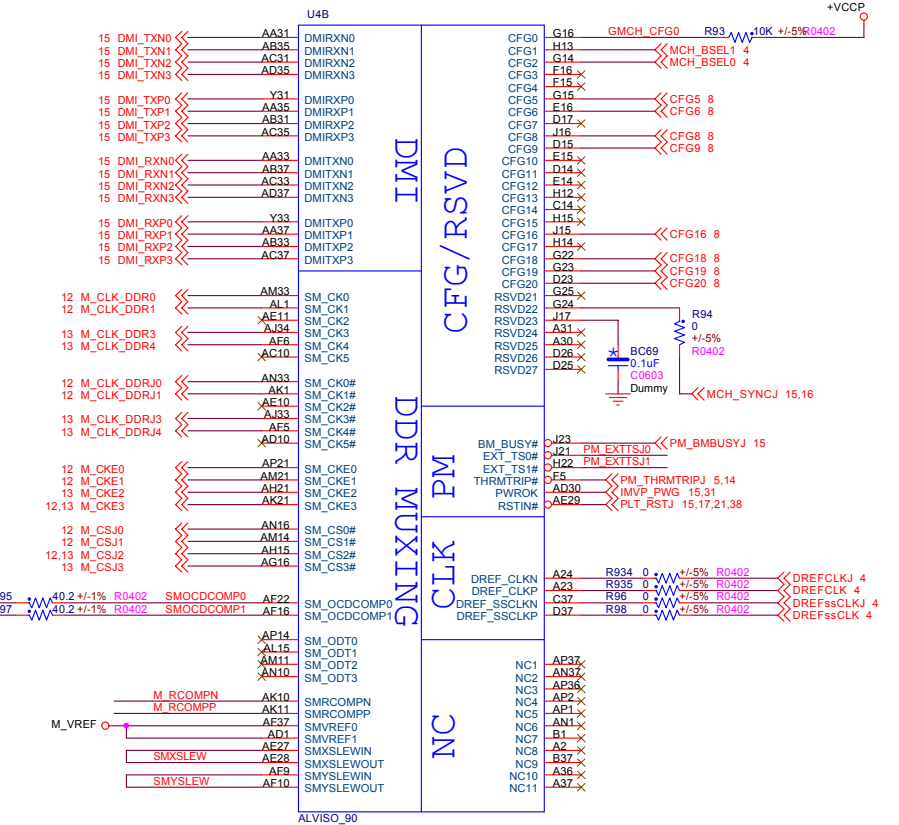
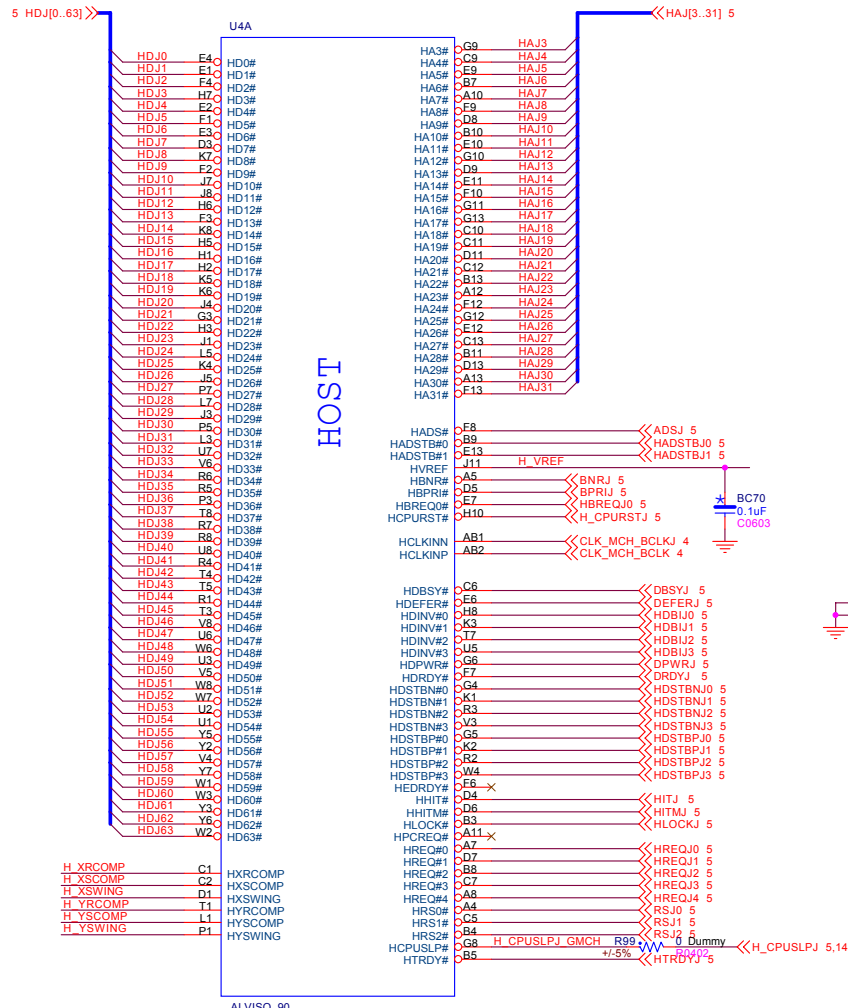
POWER, GROUND AND NC

VID

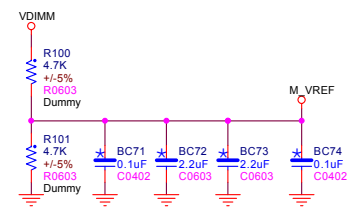
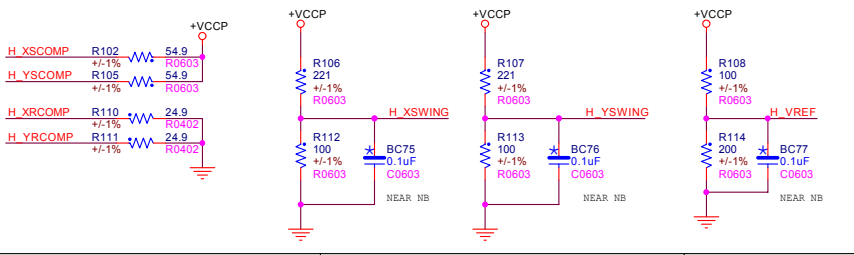
Banias-Processor

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12 R_M_A_DQ[0..63] <<

- R M A D00 AG35
- R M A D01 AH35
- R M A D02 AL35
- R M A D03 AL37
- R M A D04 AH36
- R M A D05 AJ35
- R M A D06 AK37
- R M A D07 AL34
- R M A D08 AM36
- R M A D09 AN35
- R M A D10 AP32
- R M A D11 AM31
- R M A D12 AM34
- R M A D13 AM35
- R M A D14 AL32
- R M A D15 AM32
- R M A D16 AN31
- R M A D17 AP31
- R M A D18 AN28
- R M A D19 AP28
- R M A D20 AL30
- R M A D21 AM30
- R M A D22 AM28
- R M A D23 AL29
- R M A D24 AP27
- R M A D25 AM27
- R M A D26 AM23
- R M A D27 AM22
- R M A D28 AL23
- R M A D29 AM24
- R M A D30 AN22
- R M A D31 AP22
- R M A D32 AM19
- R M A D33 AL19
- R M A D34 AL16
- R M A D35 AP17
- R M A D36 AP11
- R M A D37 AP10
- R M A D38 AL17
- R M A D39 AM17
- R M A D40 AN15
- R M A D41 AN15
- R M A D42 AN3
- R M A D43 AP3
- R M A D44 AP6
- R M A D45 AM6
- R M A D46 AL4
- R M A D47 AM3
- R M A D48 AK2
- R M A D49 AK3
- R M A D50 AG2
- R M A D51 AG1
- R M A D52 AL3
- R M A D53 AM2
- R M A D54 AH3
- R M A D55 AG3
- R M A D56 AF3
- R M A D57 AE3
- R M A D58 AD6
- R M A D59 AC4
- R M A D60 AE2
- R M A D61 AF1
- R M A D62 AD4
- R M A D63 AD5

DDR SYSTEM MEMORY A

- SA_BS0# AK15
- SA_BS1# AK16
- SA_BS2# AL2k
- SA_DM0 AJ37 R M A DM0
- SA_DM1 AP35 R M A DM1
- SA_DM2 AL29 R M A DM2
- SA_DM3 AP24 R M A DM3
- SA_DM4 AP9 R M A DM4
- SA_DM5 AP4 R M A DM5
- SA_DM6 AJ2 R M A DM6
- SA_DM7 AD3 R M A DM7
- SA_DQS0 AK36 R M A DQS0
- SA_DQS1 AP33 R M A DQS1
- SA_DQS2 AN29 R M A DQS2
- SA_DQS3 AP23 R M A DQS3
- SA_DQS4 AM8 R M A DQS4
- SA_DQS5 AM4 R M A DQS5
- SA_DQS6 AJ1 R M A DQS6
- SA_DQS7 AE5 R M A DQS7
- SA_DQS0# AK35
- SA_DQS1# AP34
- SA_DQS2# AN30
- SA_DQS3# AN23
- SA_DQS4# AN8
- SA_DQS5# AM5
- SA_DQS6# AH1
- SA_DQS7# AE4
- SA_MA0 AL17 M A A0
- SA_MA1 AP17 M A A1
- SA_MA2 AP18 M A A2
- SA_MA3 AM17 M A A3
- SA_MA4 AN18 M A A4
- SA_MA5 AM18 M A A5
- SA_MA6 AL19 M A A6
- SA_MA7 AP20 M A A7
- SA_MA8 AM19 M A A8
- SA_MA9 AL20 M A A9
- SA_MA10 AM16 M A A10
- SA_MA11 AN20 M A A11
- SA_MA12 AM20 M A A12
- SA_MA13 AM15 M A A13
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- SA_RAS# AP16
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- RCVENOUT# OAE28
- SA_WE# OAP15

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<<R_M_A_DQS[0..7] 12

<<M_A_A[0..13] 12

<<M_A_CASJ 12,13

<<M_A_RASJ 12,13

<<M_A_WEJ 12

U4D

- AE31 SBDQ0
- AE32 SBDQ1
- AG32 SBDQ2
- AG36 SBDQ3
- AE34 SBDQ4
- AE33 SBDQ5
- AE31 SBDQ6
- AE30 SBDQ7
- AH33 SBDQ8
- AH32 SBDQ9
- AK31 SBDQ10
- AG34 SBDQ11
- AG33 SBDQ12
- AH31 SBDQ13
- AJ31 SBDQ14
- AK30 SBDQ15
- AJ30 SBDQ16
- SBDQ17
- AH29 SBDQ18
- AH28 SBDQ19
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- AH30 SBDQ21
- AH27 SBDQ22
- AG28 SBDQ23
- AE24 SBDQ24
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- AJ22 SBDQ26
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- AH24 SBDQ28
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- AG22 SBDQ30
- AJ21 SBDQ31
- AG10 SBDQ32
- AG8 SBDQ33
- AG8 SBDQ34
- AH10 SBDQ35
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- AH10 SBDQ37
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- AK9 SBDQ39
- AJ7 SBDQ40
- AK6 SBDQ41
- AJ4 SBDQ42
- AH5 SBDQ43
- AK8 SBDQ44
- AJ8 SBDQ45
- AJ5 SBDQ46
- AK4 SBDQ47
- AG5 SBDQ48
- AG4 SBDQ49
- AD8 SBDQ50
- AD9 SBDQ51
- AH4 SBDQ52
- AG6 SBDQ53
- AE8 SBDQ54
- AD7 SBDQ55
- AK5 SBDQ56
- AB8 SBDQ57
- AB6 SBDQ58
- AA8 SBDQ59
- AC8 SBDQ60
- AC7 SBDQ61
- AA4 SBDQ62
- AA5 SBDQ63
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- SB_BS1# AG17
- SB_BS2# AG21
- SB_DM0 AK34
- SB_DM1 AK27
- SB_DM2 AK24
- SB_DM3 AK19
- SB_DM4 AK5
- SB_DM5 AE7
- SB_DM6 AB7
- SB_DM7
- SB_DQS0 AF34
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- SB_DQS2 AJ25
- SB_DQS3 AK23
- SB_DQS4 AM10
- SB_DQS5 AH8
- SB_DQS6 AF8
- SB_DQS7 AB4
- SB_DQS0# AF35
- SB_DQS1# AK33
- SB_DQS2# AK28
- SB_DQS3# AJ2
- SB_DQS4# AH7
- SB_DQS5# AF7
- SB_DQS6# AB5
- SB_DQS7#
- SB_MA0 AH17 M B A0
- SB_MA1 AK17 M B A1
- SB_MA2 AH18 M B A2
- SB_MA3 AJ18 M B A3
- SB_MA4 AK18 M B A4
- SB_MA5 AK19 M B A5
- SB_MA6 AH19 M B A7
- SB_MA7 AJ20 M B A8
- SB_MA8 AH20 M B A9
- SB_MA9 AJ16 M B A10
- SB_MA10 AG18 M B A11
- SB_MA11 AG20 M B A12
- SB_MA12 AG15 M B A13
- SB_CAS# AH14
- SB_RAS# AK14
- SB_RCVENIN# AE15
- SB_RCVENOUT# AE14
- SB_WE# AH16

DDR SYSTEM MEMORY B

<<M_B_BSJ0 13

<<M_B_BSJ1 13

<<M_B_A[0..13] 13

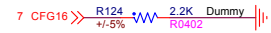
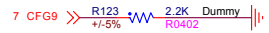
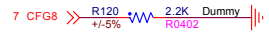
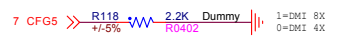
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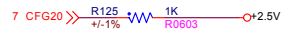
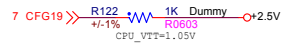
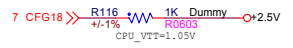
<<M_B_WEJ 13

ALVISO_90

CFG[3..17] internal pullup



CFG[18..20] internal pulldown



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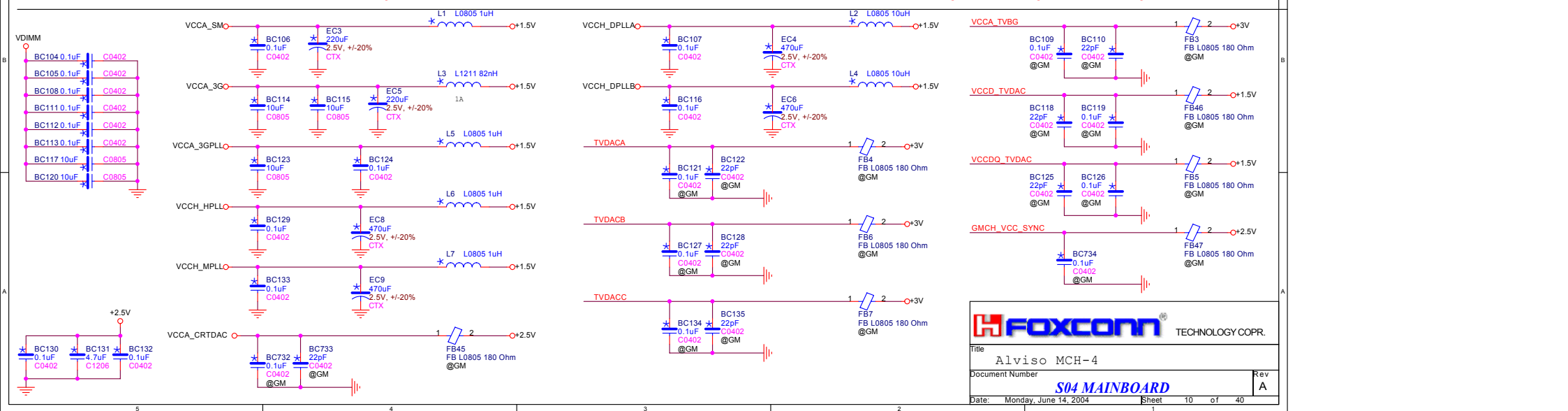
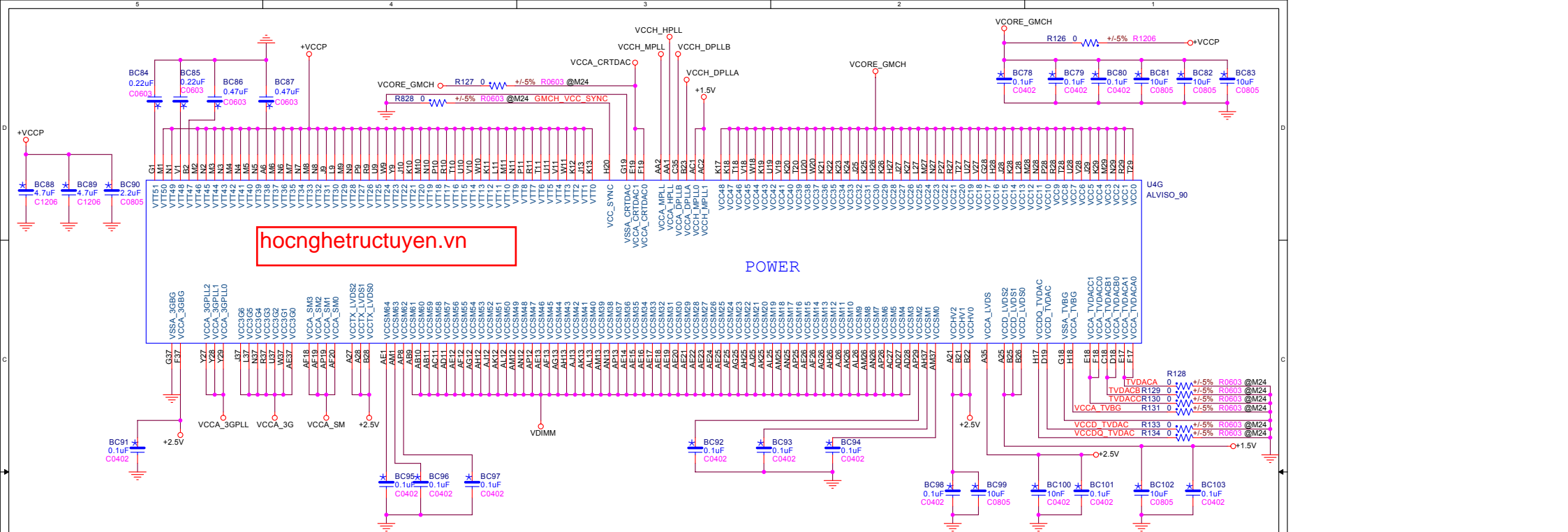
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		C36	VSS264
		D26	VSS263
		E26	VSS262
		F26	VSS261
		G26	VSS260
		H26	VSS259
		J26	VSS258
		K26	VSS257
		L26	VSS256
		M26	VSS255
		N26	VSS254
		P26	VSS253
		Q26	VSS252
		R26	VSS251
		S26	VSS250
		T26	VSS249
		U26	VSS248
		V26	VSS247
		W26	VSS246
		X26	VSS245
		Y26	VSS244
		Z26	VSS243
		AA26	VSS242
		AB26	VSS241
		AC26	VSS240
		AD26	VSS239
		AE26	VSS238
		AF26	VSS237
		AG26	VSS236
		AH26	VSS235
		AI26	VSS234
		AJ26	VSS233
		AK26	VSS232
		AL26	VSS231
		AM26	VSS230
		AN26	VSS229
		AO26	VSS228
		AP26	VSS227
		AQ26	VSS226
		AR26	VSS225
		AS26	VSS224
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		AU26	VSS222
		AV26	VSS221
		AW26	VSS220
		AX26	VSS219
		AY26	VSS218
		AZ26	VSS217
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		BC26	VSS214
		BD26	VSS213
		BE26	VSS212
		BF26	VSS211
		BG26	VSS210
		BH26	VSS209
		BI26	VSS208
		BJ26	VSS207
		BK26	VSS206
		BL26	VSS205
		BM26	VSS204
		BN26	VSS203
		BO26	VSS202
		BP26	VSS201
		BQ26	VSS200
		BR26	VSS199
		BS26	VSS198
		BT26	VSS197
		BU26	VSS196
		BV26	VSS195
		BW26	VSS194
		BX26	VSS193
		BY26	VSS192
		BZ26	VSS191
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		CB26	VSS189
		CC26	VSS188
		CD26	VSS187
		CE26	VSS186
		CF26	VSS185
		CG26	VSS184
		CH26	VSS183
		CI26	VSS182
		CJ26	VSS181
		CK26	VSS180
		CL26	VSS179
		CM26	VSS178
		CN26	VSS177
		CO26	VSS176
		CP26	VSS175
		CQ26	VSS174
		CR26	VSS173
		CS26	VSS172
		CT26	VSS171
		CU26	VSS170
		CV26	VSS169
		CW26	VSS168
		CX26	VSS167
		CY26	VSS166
		CZ26	VSS165
		DA26	VSS164
		DB26	VSS163
		DC26	VSS162
		DD26	VSS161
		DE26	VSS160
		DF26	VSS159
		DG26	VSS158
		DH26	VSS157
		DI26	VSS156
		DJ26	VSS155
		DK26	VSS154
		DL26	VSS153
		DM26	VSS152
		DN26	VSS151
		DO26	VSS150
		DP26	VSS149
		DQ26	VSS148
		DR26	VSS147
		DS26	VSS146
		DT26	VSS145
		DU26	VSS144
		DV26	VSS143
		DW26	VSS142
		DX26	VSS141
		DY26	VSS140
		DZ26	VSS139
		EA26	VSS138
		EB26	VSS137
		EC26	VSS136
		ED26	VSS135
		EE26	VSS134
		EF26	VSS133
		EG26	VSS132
		EH26	VSS131
		EI26	VSS130

L12	VTT_NCTF16	Y14	VSS_NCTF56
	VTT_NCTF17	Y12	VSS_NCTF66
	VTT_NCTF18	AA12	VSS_NCTF67
	VTT_NCTF19	AA13	VSS_NCTF68
	VTT_NCTF20	AA14	VSS_NCTF69
	VTT_NCTF21	AA15	VSS_NCTF70
	VTT_NCTF22	AA16	VSS_NCTF71
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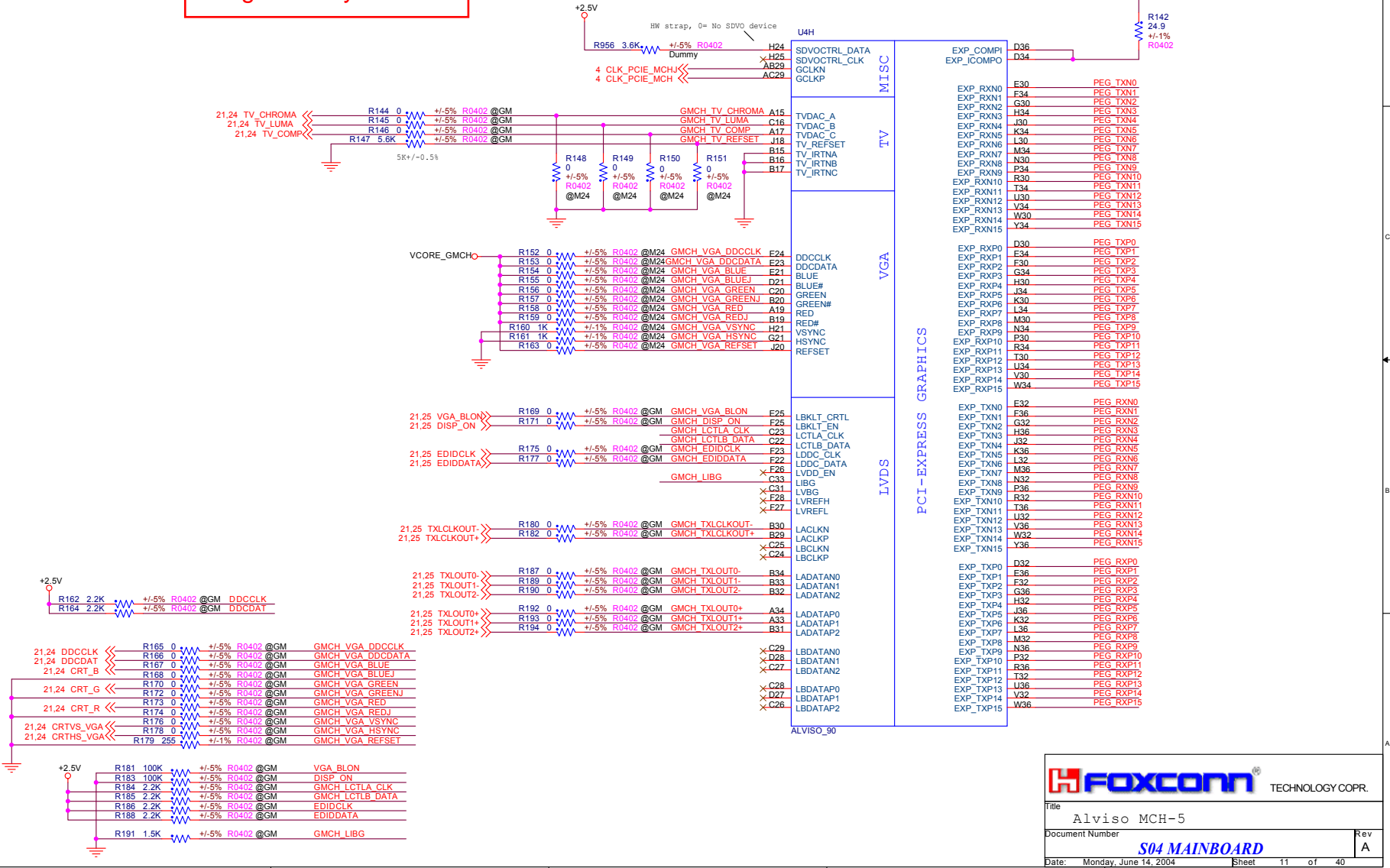
U4F ALVISO_90

VCORE_GMCH



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Document Number S04 MAINBOARD	
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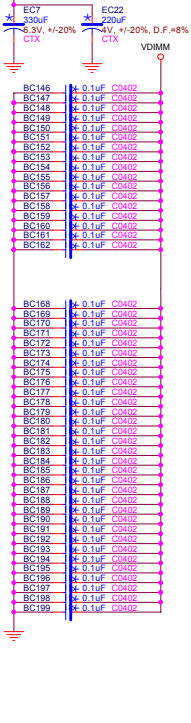
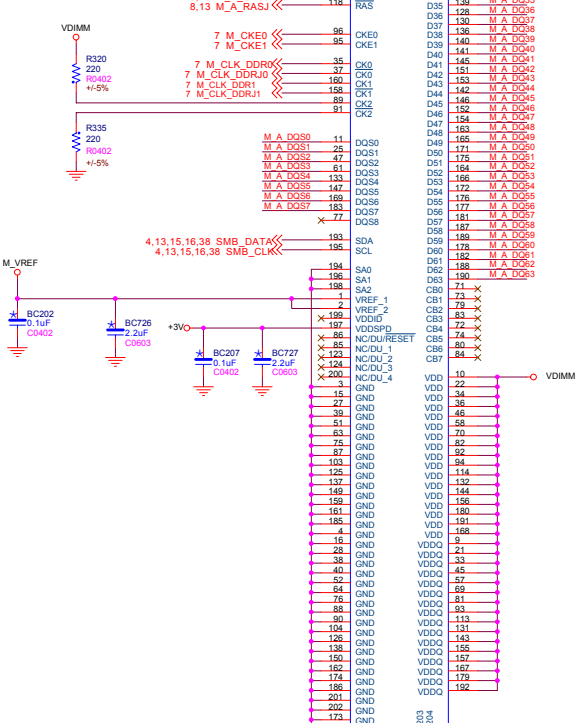
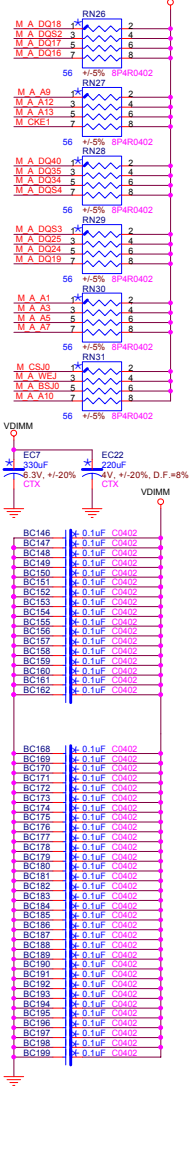
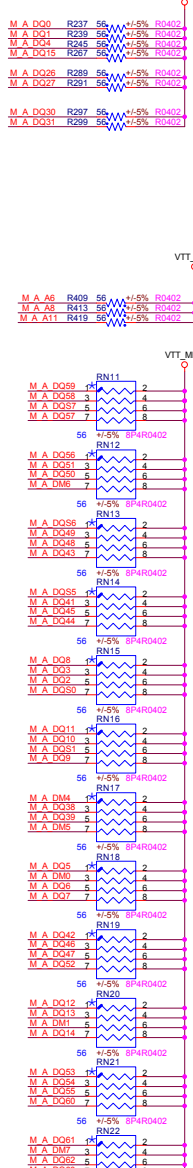
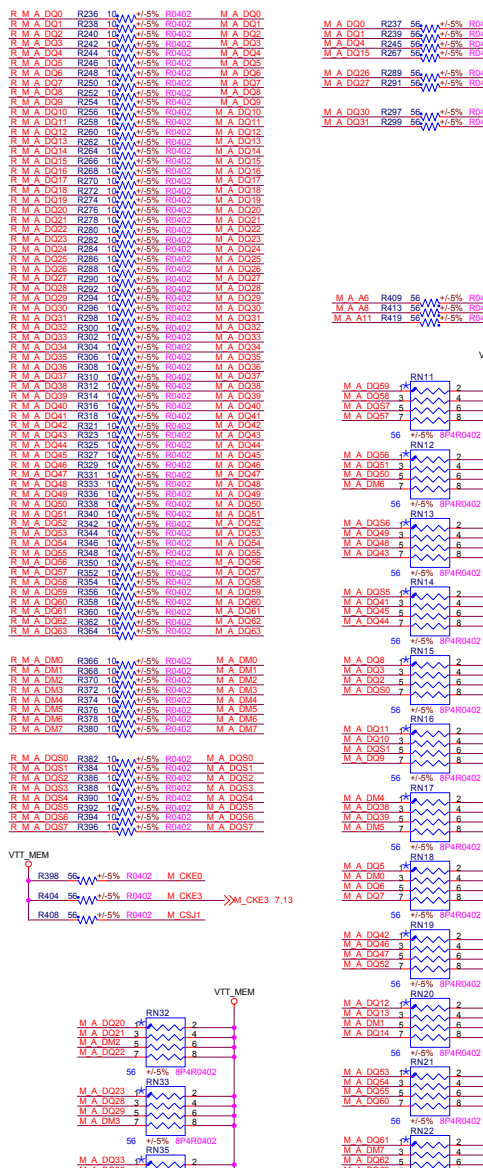
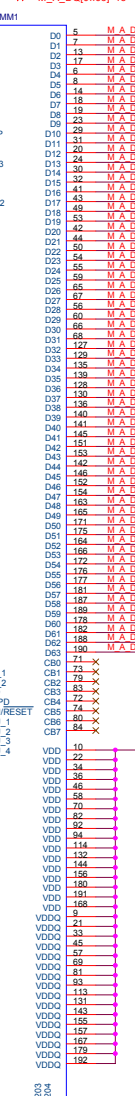
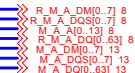
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M_B_A4	108	A4	D4	6	M_A_D04
M_B_A5	107	A5	D5	8	M_A_D05
M_B_A6	106	A6	D6	14	M_A_D06
M_B_A7	105	A7	D7	18	M_A_D07
M_B_A8	102	A8	D8	19	M_A_D08
M_B_A9	101	A9	D9	23	M_A_D09
M_B_A10	115	A10/AP	D10	29	M_A_D010
M_B_A11	100	A11	D11	31	M_A_D011
M_B_A12	99	A12	D12	20	M_A_D012
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			D58	187	M_A_D058
			D59	189	M_A_D059
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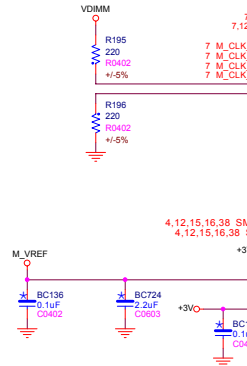
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8 M_B_BSJ1	116	BA1			
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	122	CS0			
	122	RST			
7 M_CSJ2	121				
7 M_CSJ3	122				
M_A_DM0	12	DM0			
M_A_DM1	26	DM1			
M_A_DM2	45	DM2			
M_A_DM3	49	DM3			
M_A_DM4	134	DM4			
M_A_DM5	148	DM5			
M_A_DM6	170	DM6			
M_A_DM7	184	DM7			
	173	DM8			

8 M_B_WEI	119	WE			
8 M_B_CASJ	120	CAS			
8 M_B_RASJ	118	RAS			
	96	CKE0			
	95	CKE1			
7 M_CLK_DDR3	35	CK0			
7 M_CLK_DDR3J	37	CK0			
7 M_CLK_DDR4	190	CK1			
7 M_CLK_DDR4J	158	CK1			
	89	CK2			
	91	CK2			

M_A_DQ00	11	DQ00			
M_A_DQ01	29	DQ01			
M_A_DQ02	47	DQ02			
M_A_DQ03	81	DQ03			
M_A_DQ04	133	DQ04			
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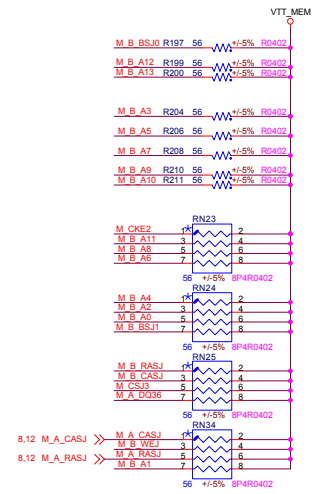
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2	VREF_2				
199	VDDIO				
197	VDDSPD				
86	NCIDU_RESET				
85	NCIDU_1				
123	NCIDU_2				
124	NCIDU_3				
200	NCIDU_4				
3	GND				
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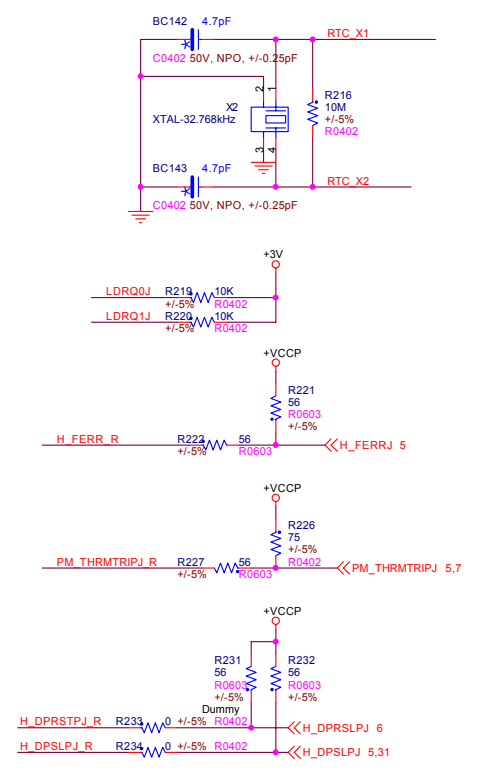
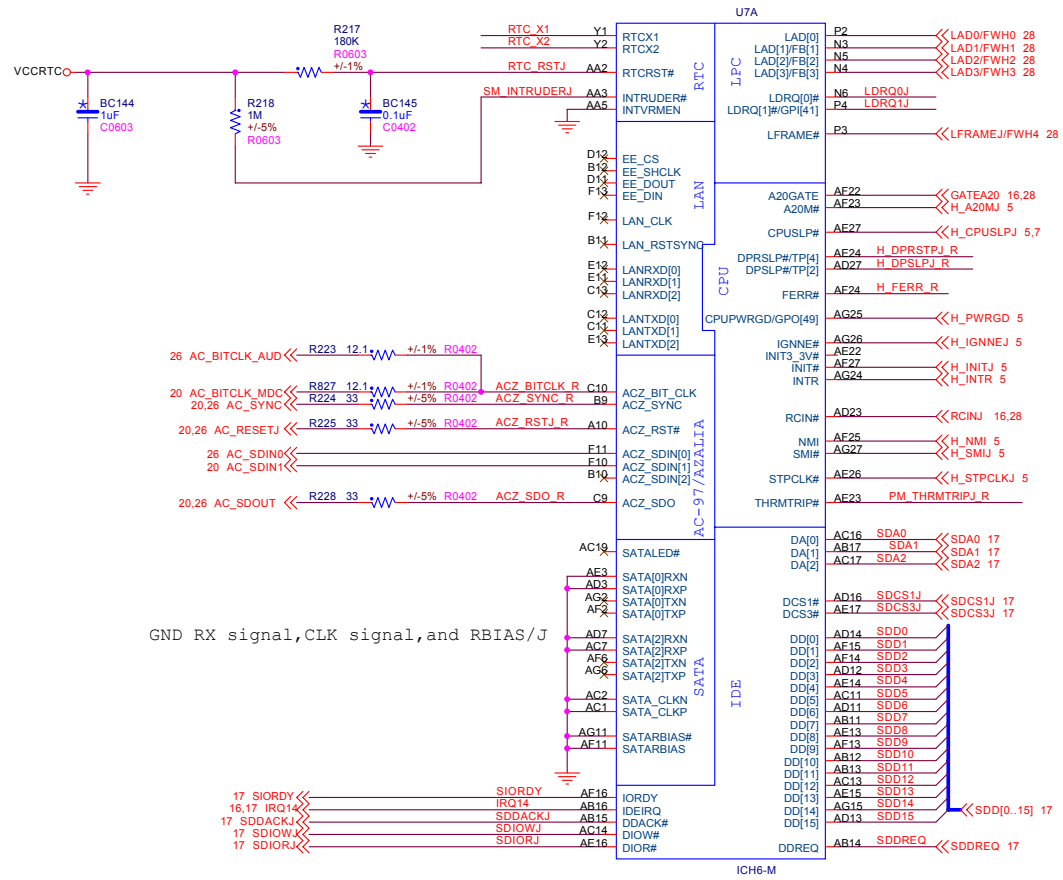
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Del SATA CONN POWER & CAPS

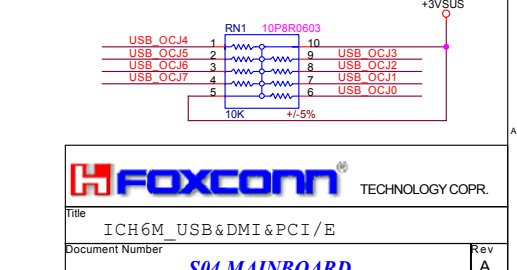
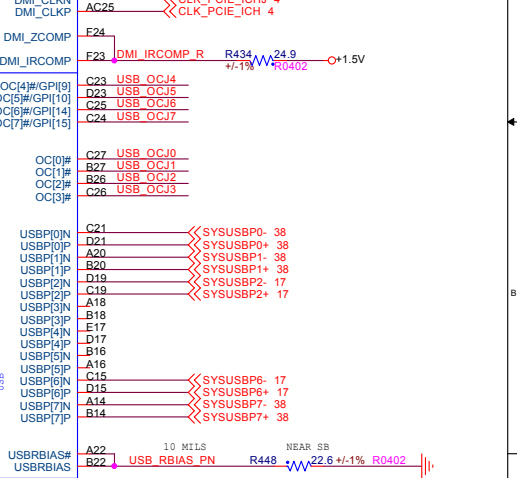
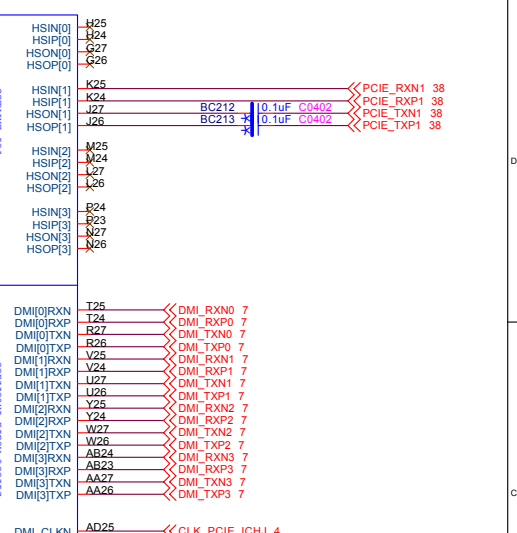
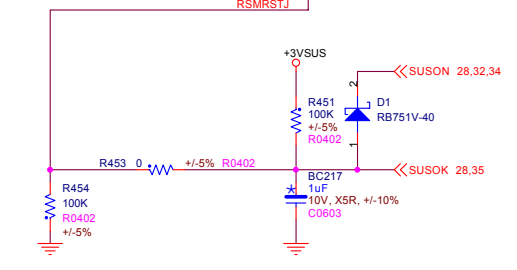
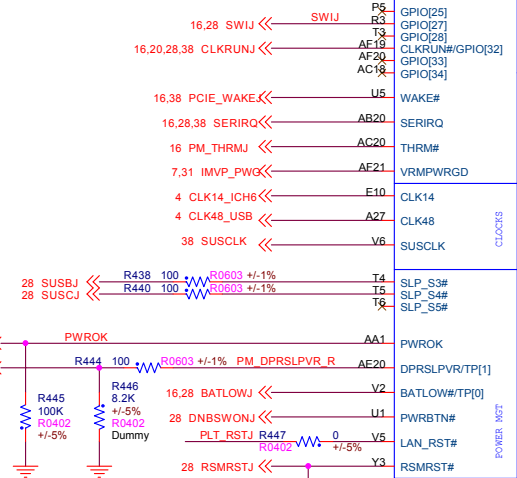
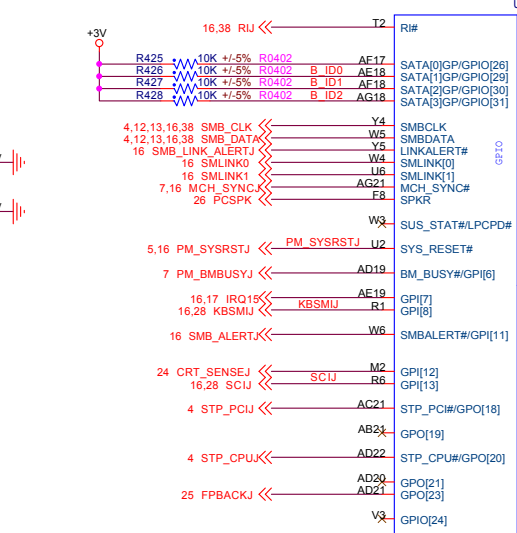
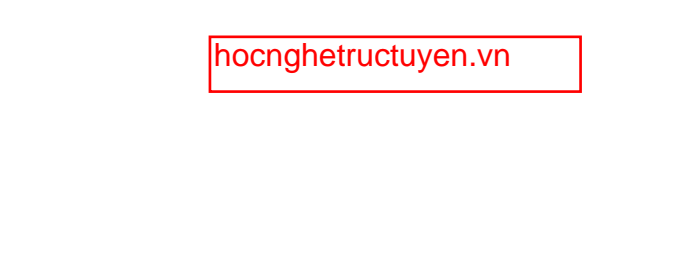
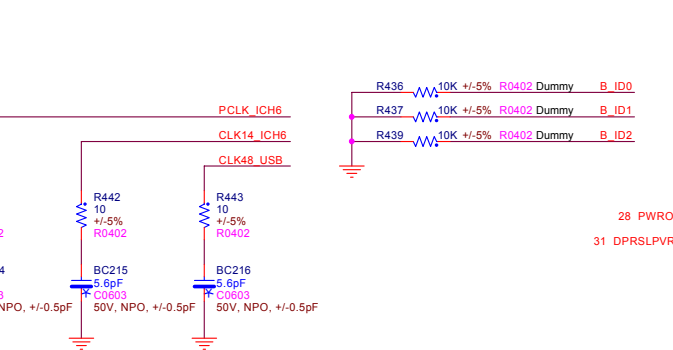
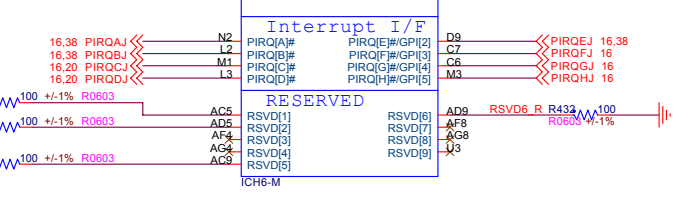
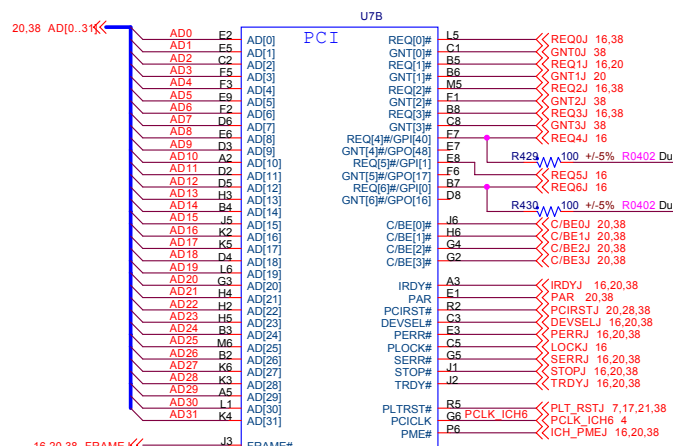
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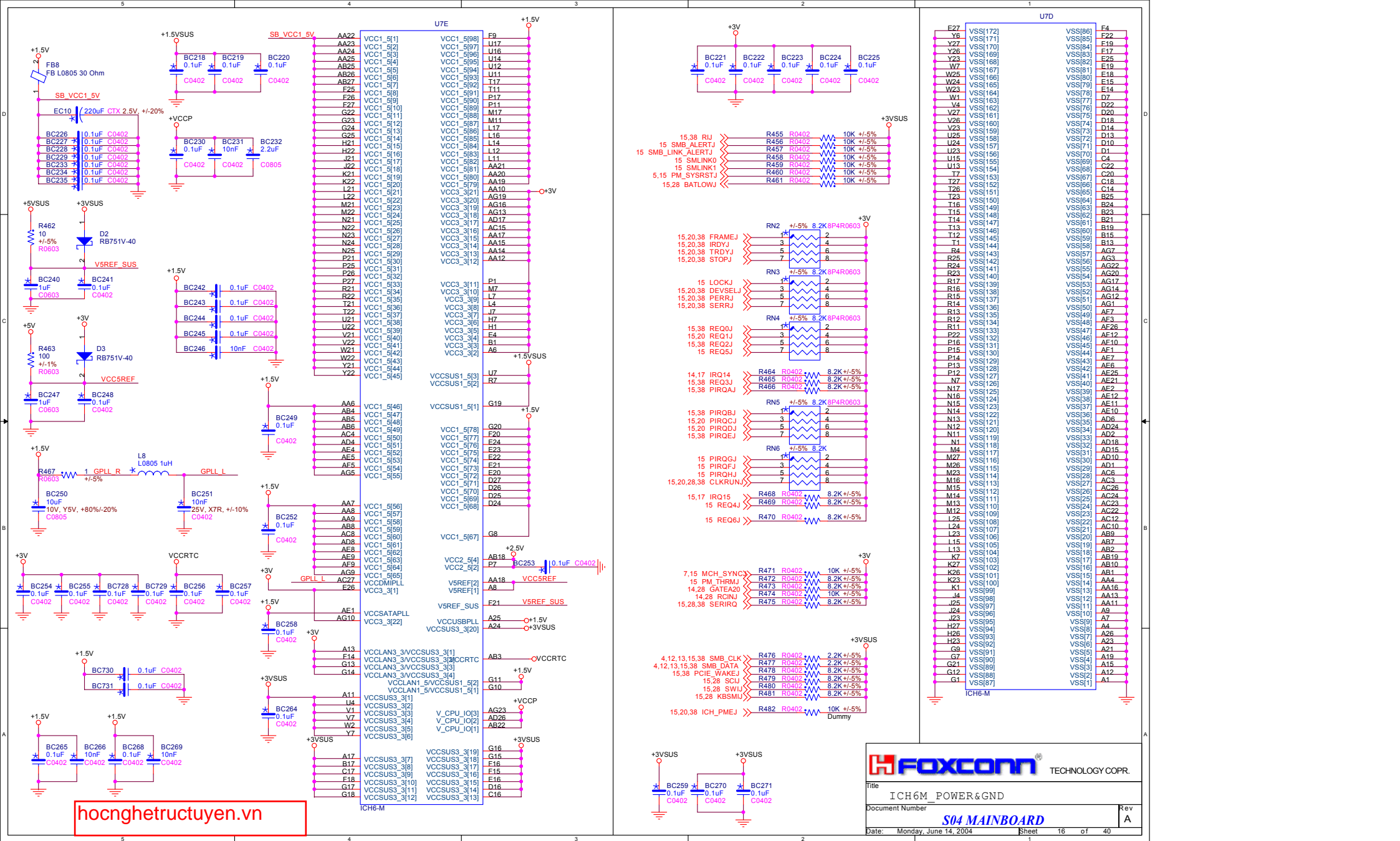
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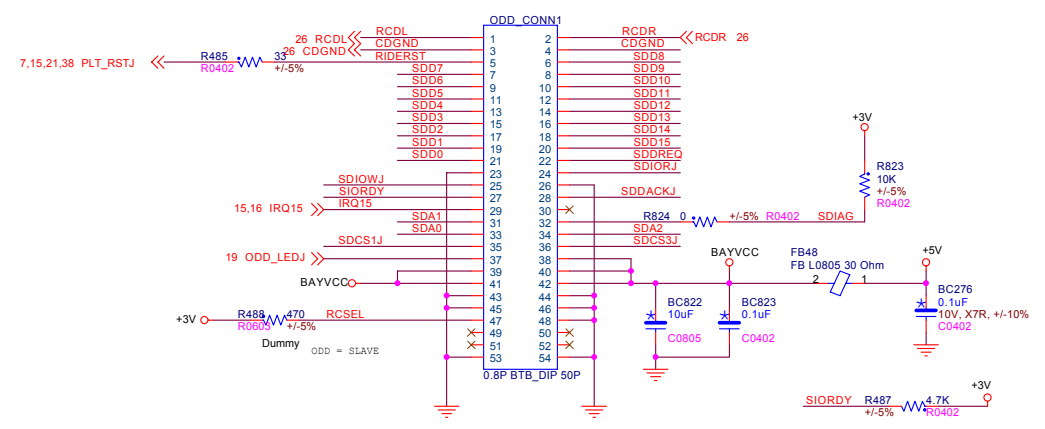
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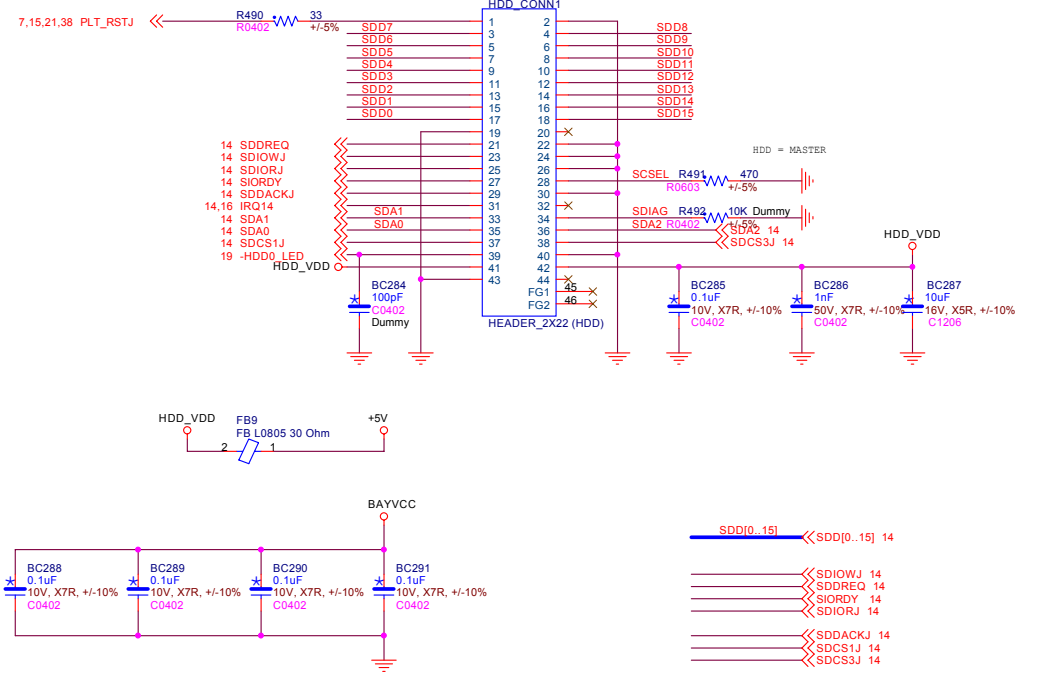
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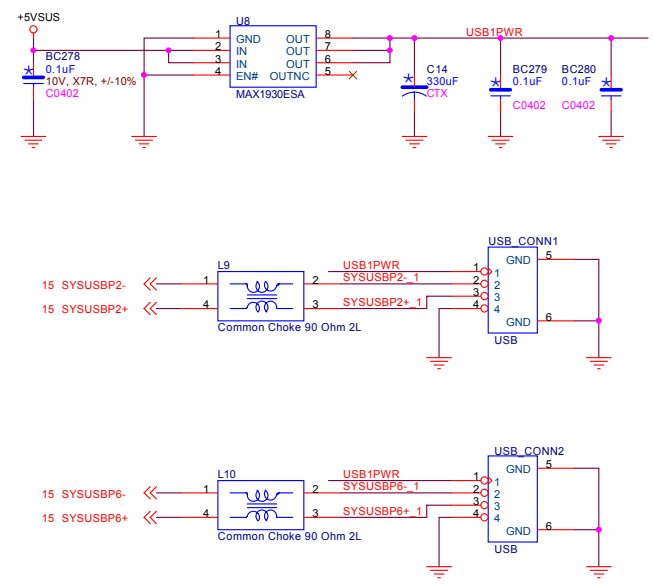
ODD CONNECTOR



HDD CONNECTOR



Del ODD hot plug function



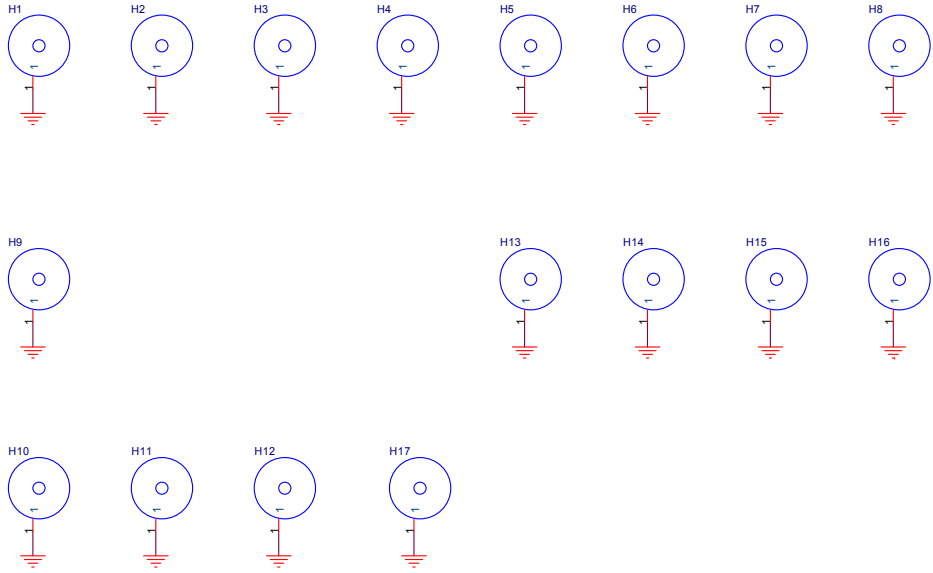
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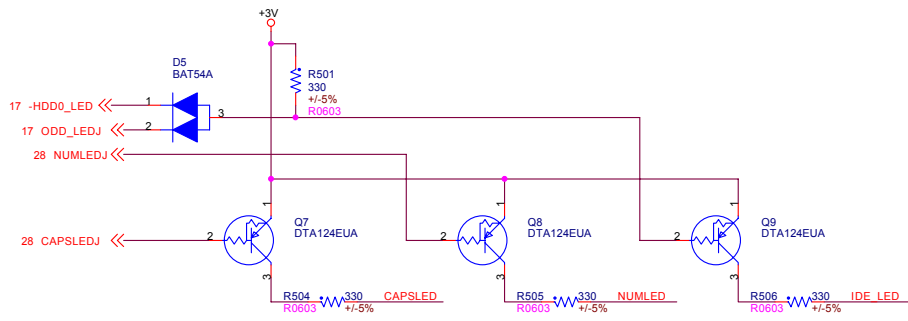
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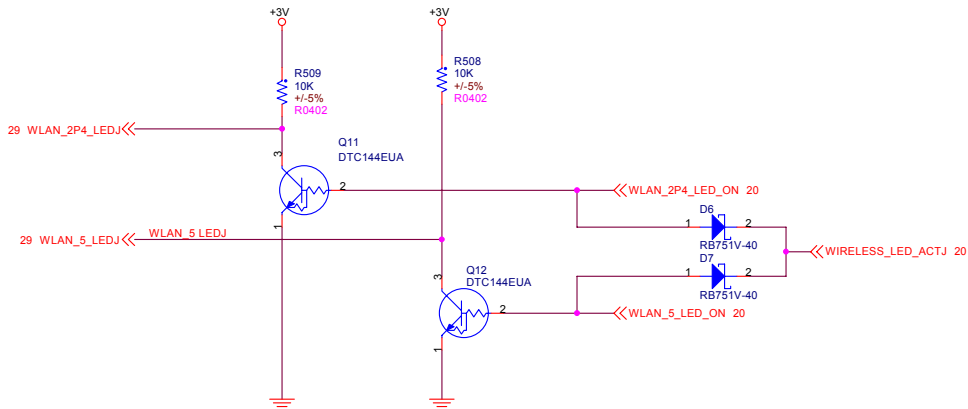
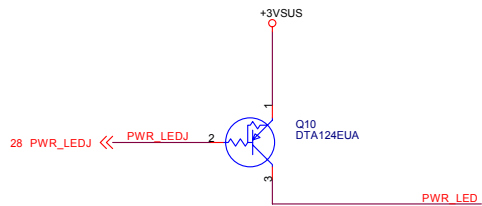
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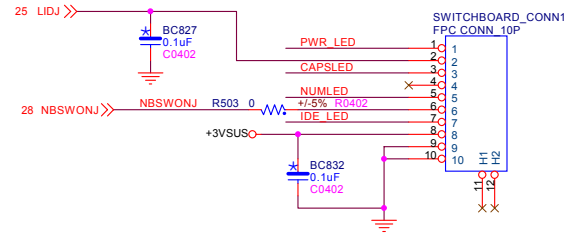
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Document Number: S04 MAINBOARD	
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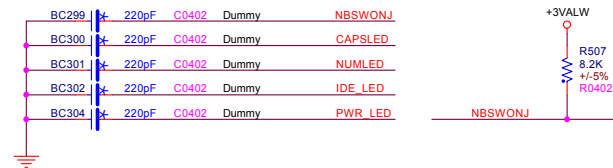
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Switch Board Connector



Switch Board EMI CAPS



FOXCONN TECHNOLOGY CORP.

Title: Switch board

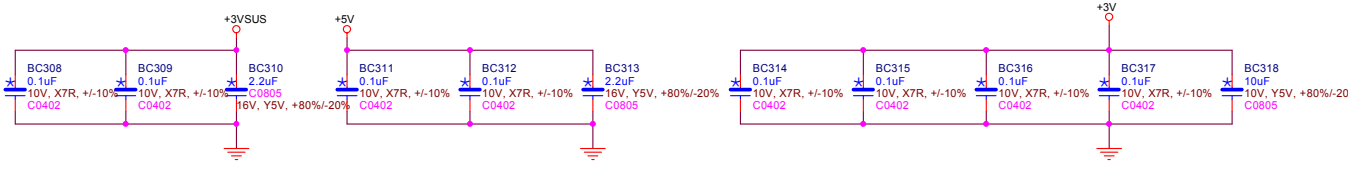
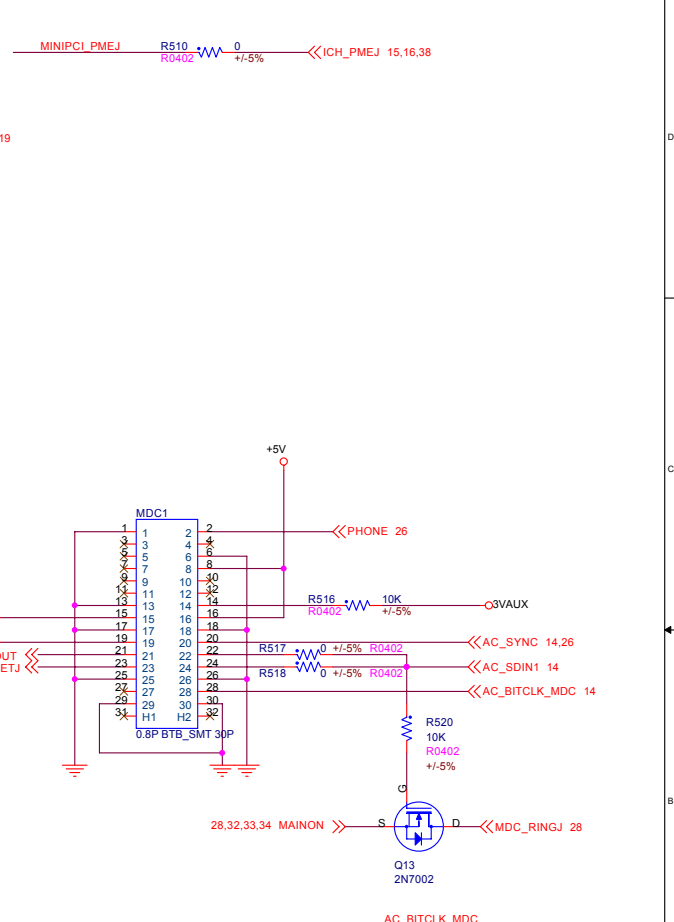
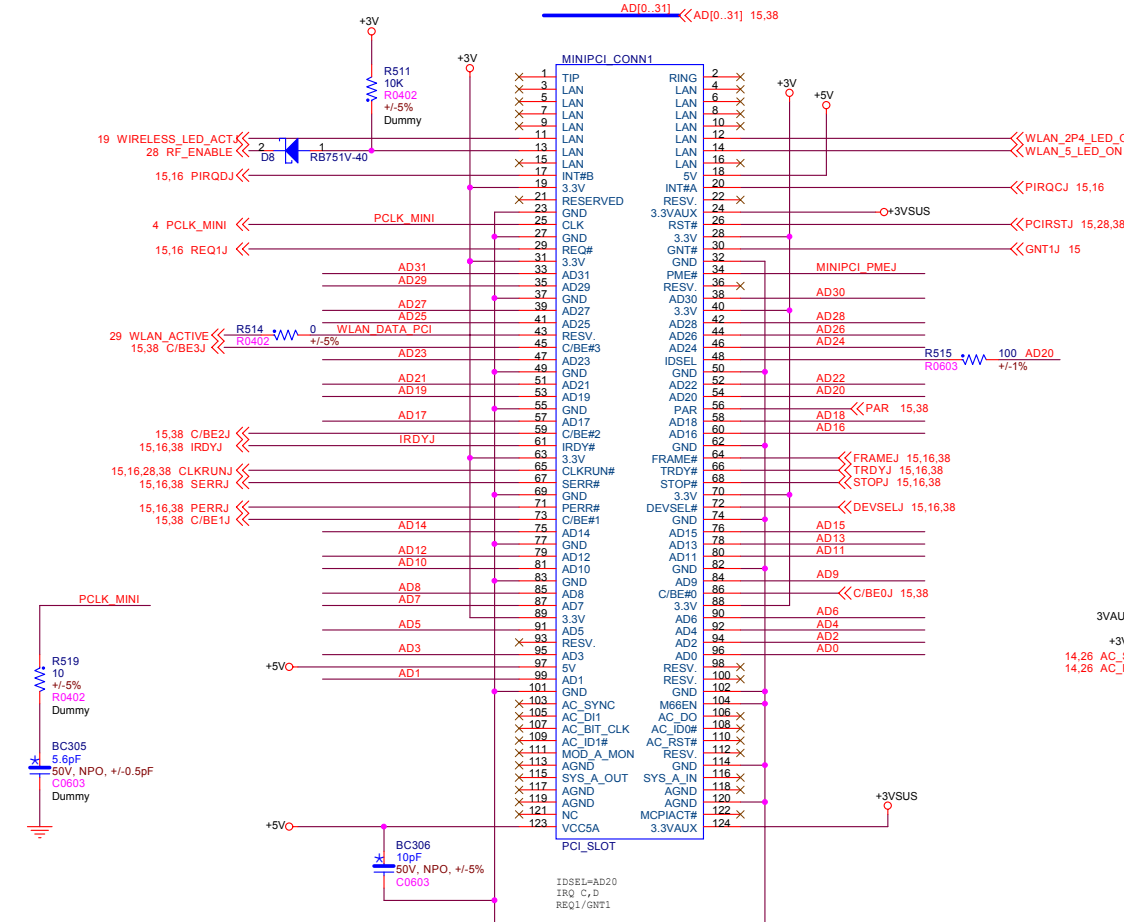
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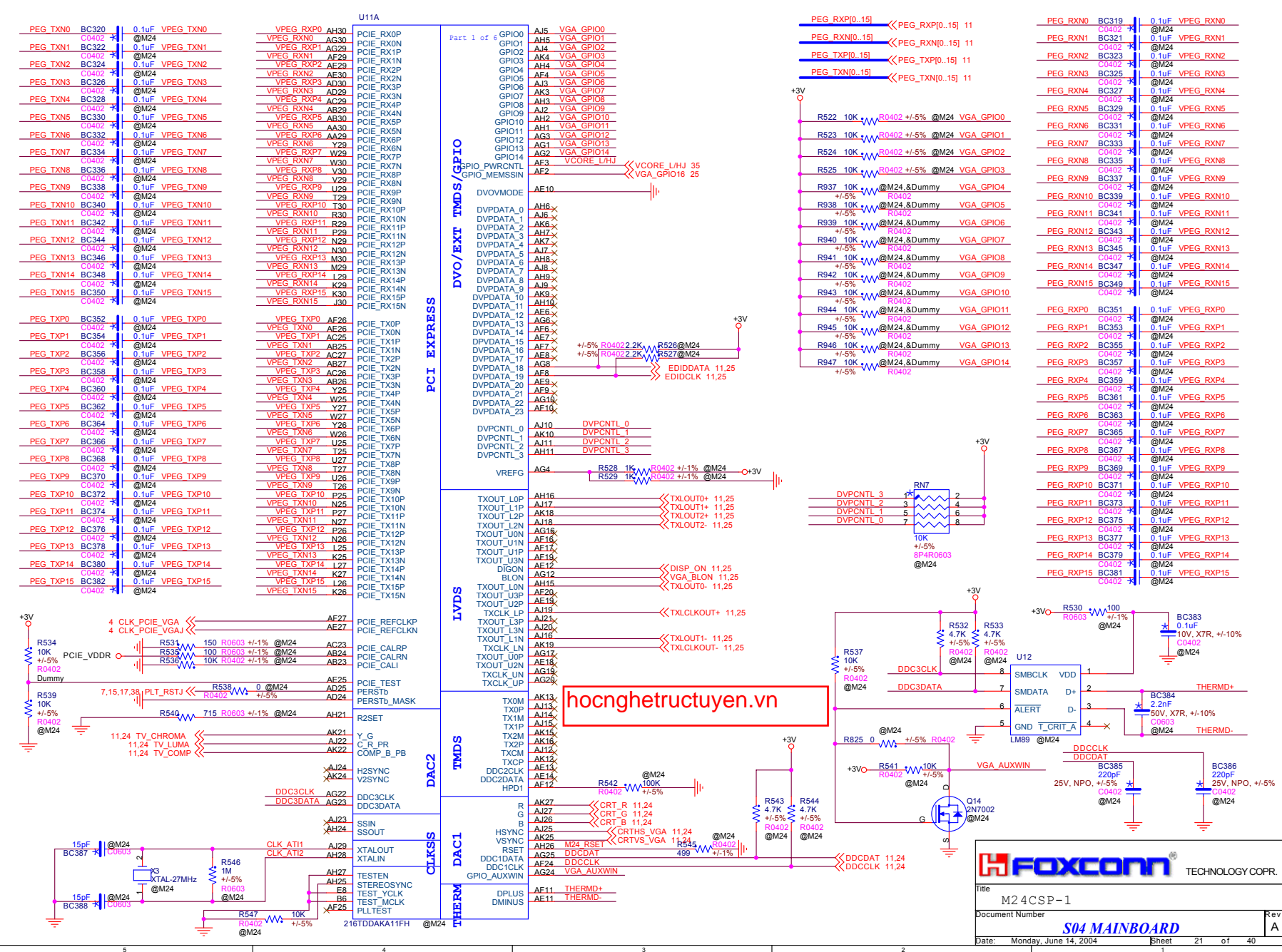
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Title: Mini PCI/MDC	
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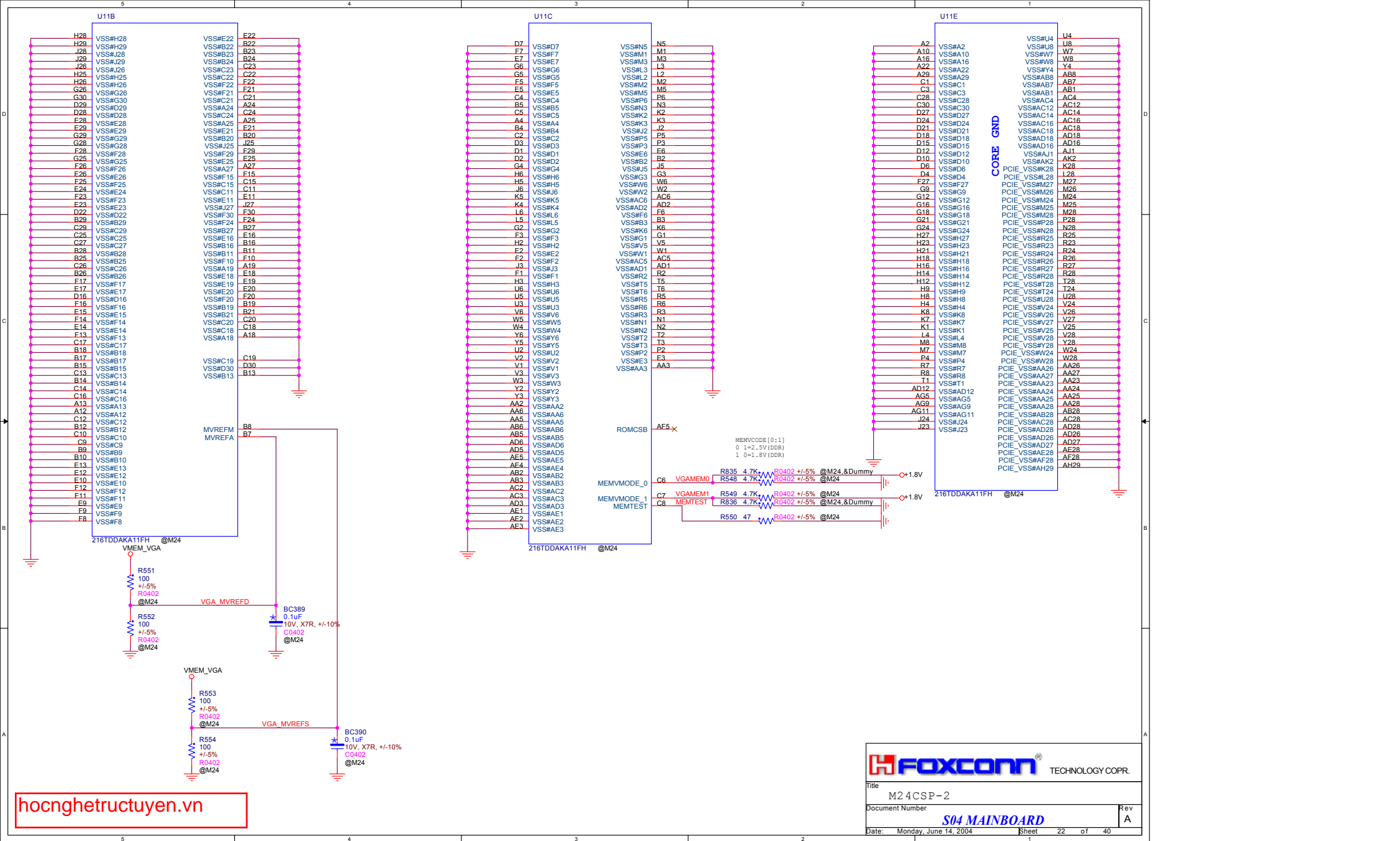
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Document Number: S04 MAINBOARD

Date: Monday, June 14, 2004

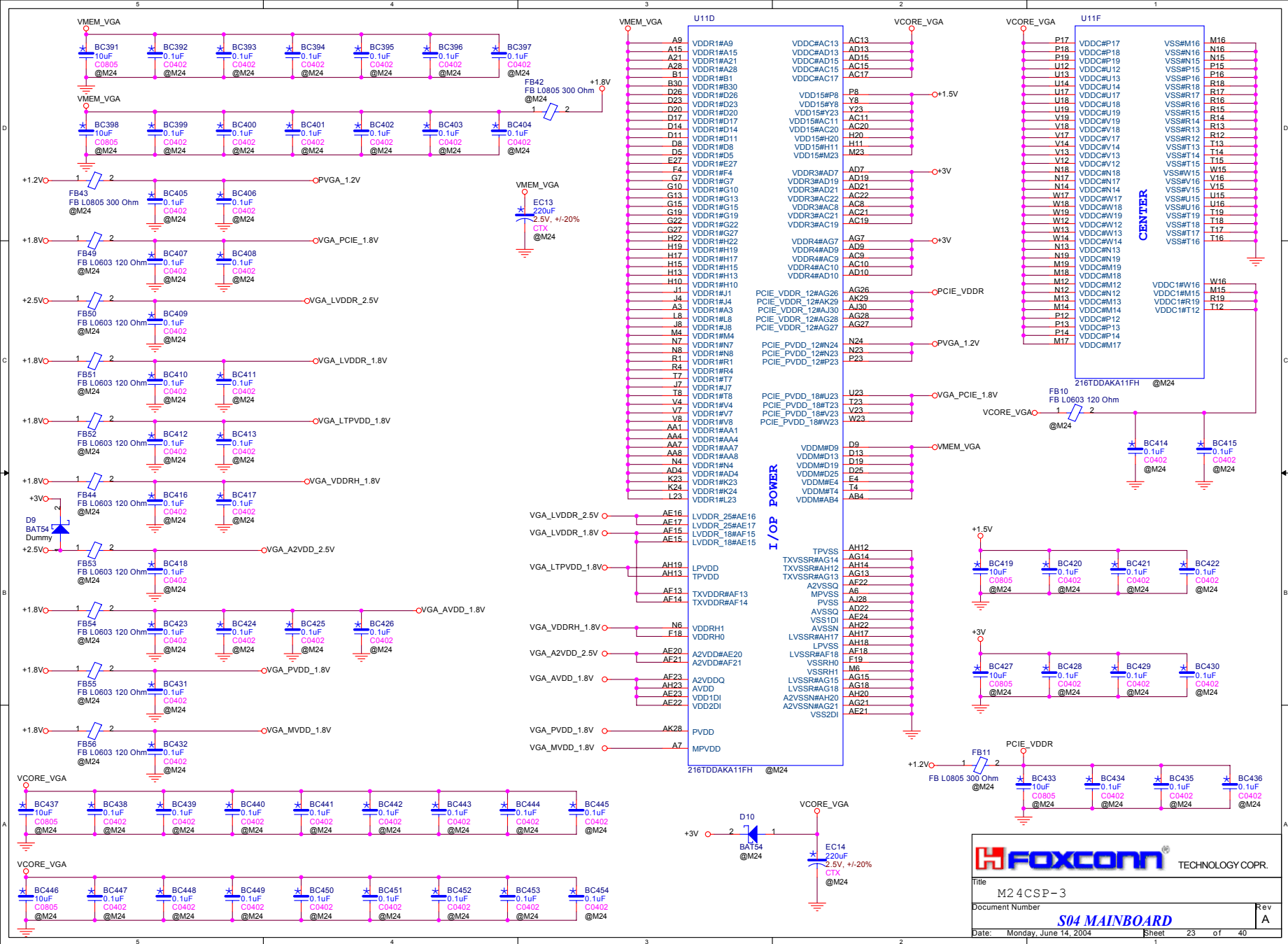
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Title M2 4 CSP-2		
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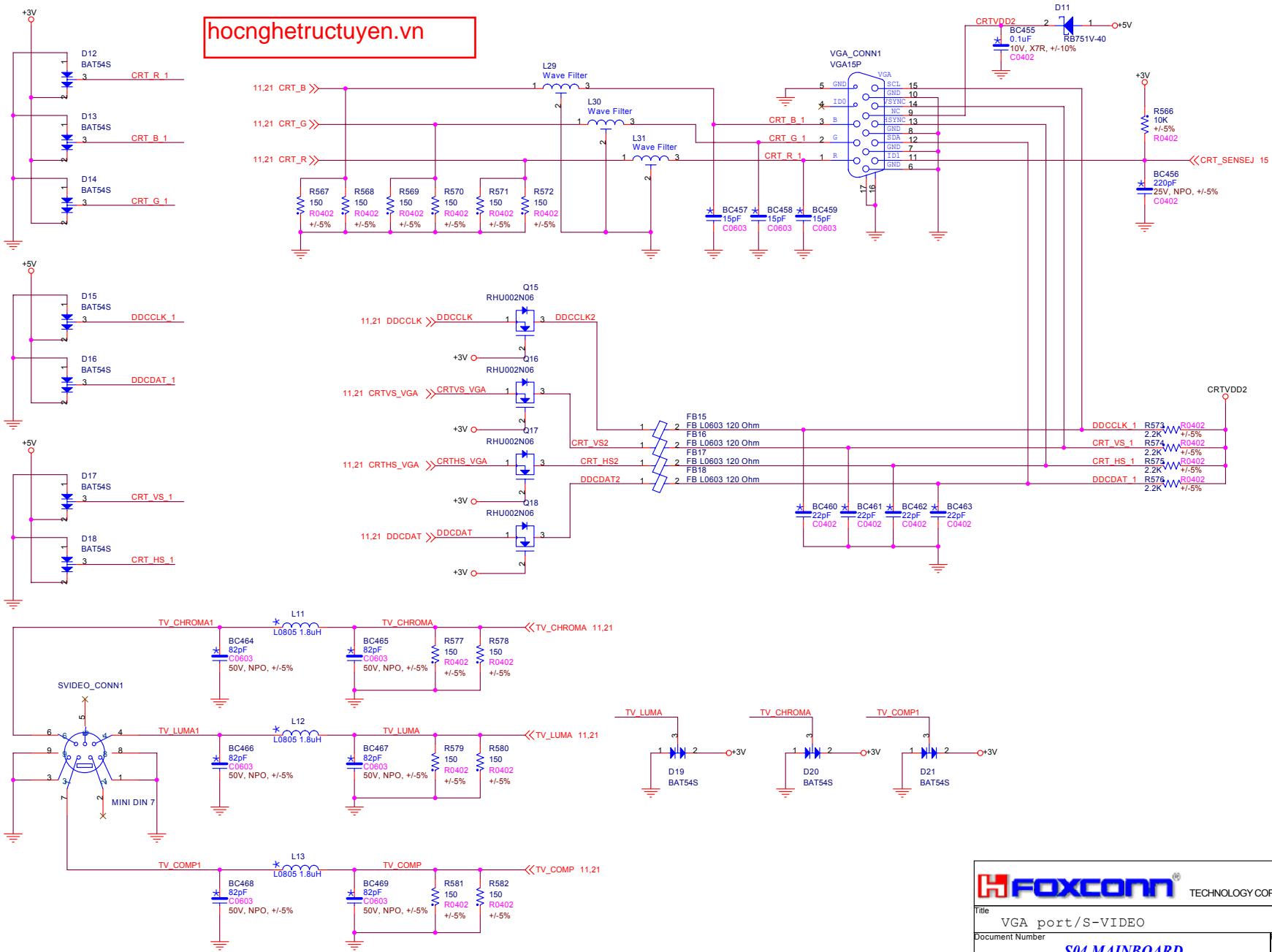
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Document Number: S04 MAINBOARD

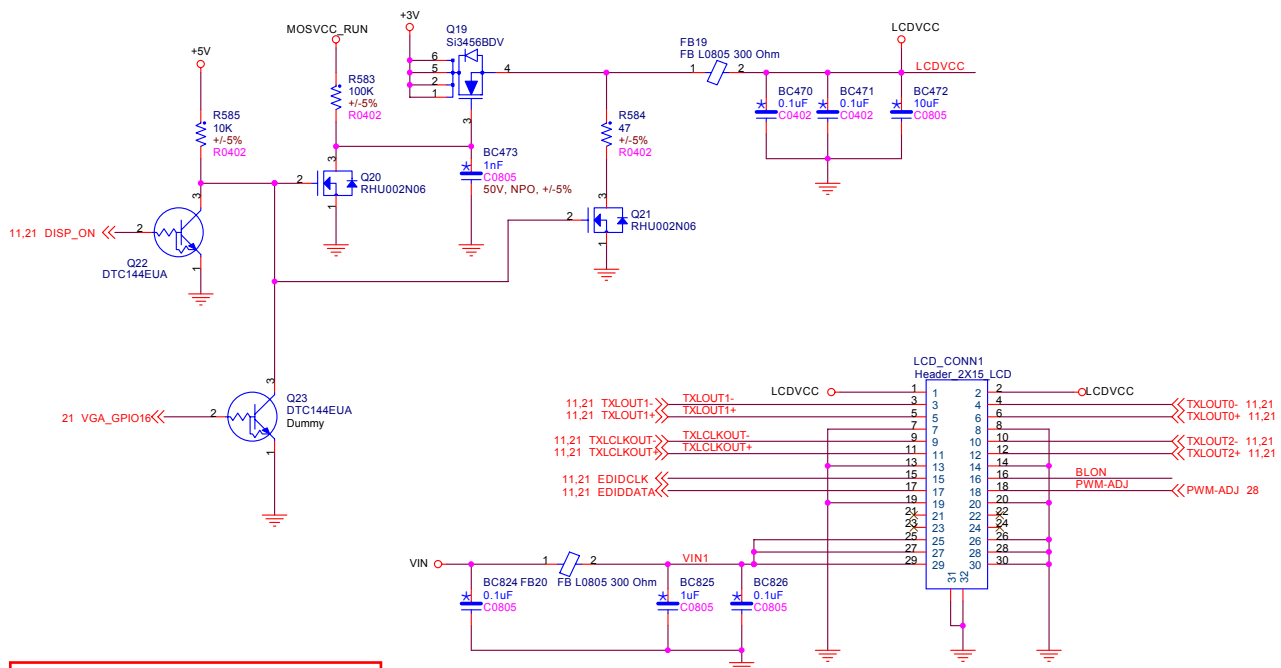
Date: Monday, June 14, 2004

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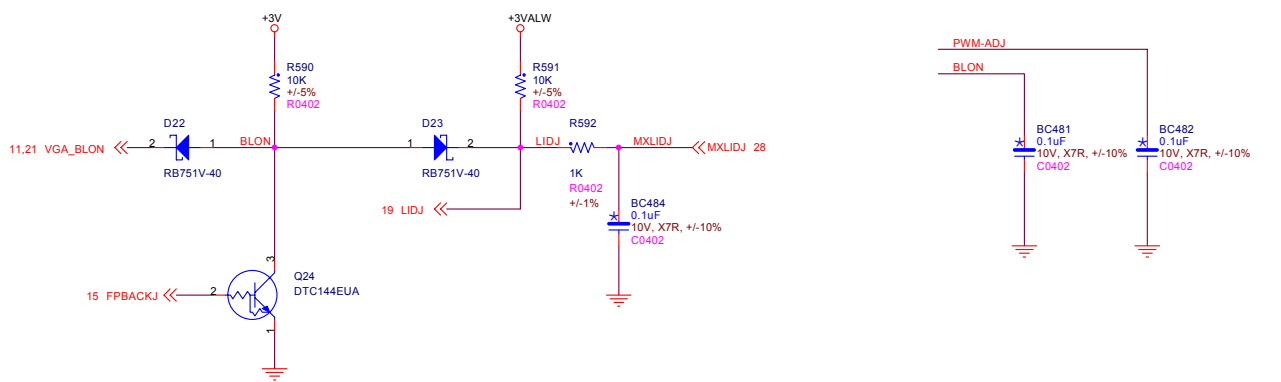
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Title VGA port/S-VIDEO	
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FOXCONN TECHNOLOGY CORP.

Title: LCD_CONN

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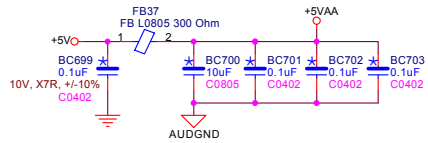
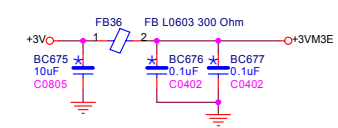
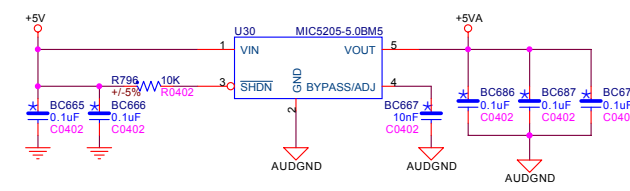
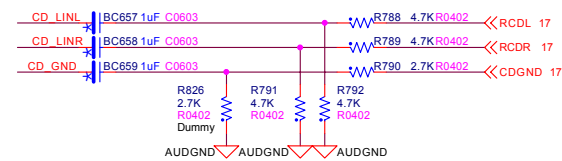
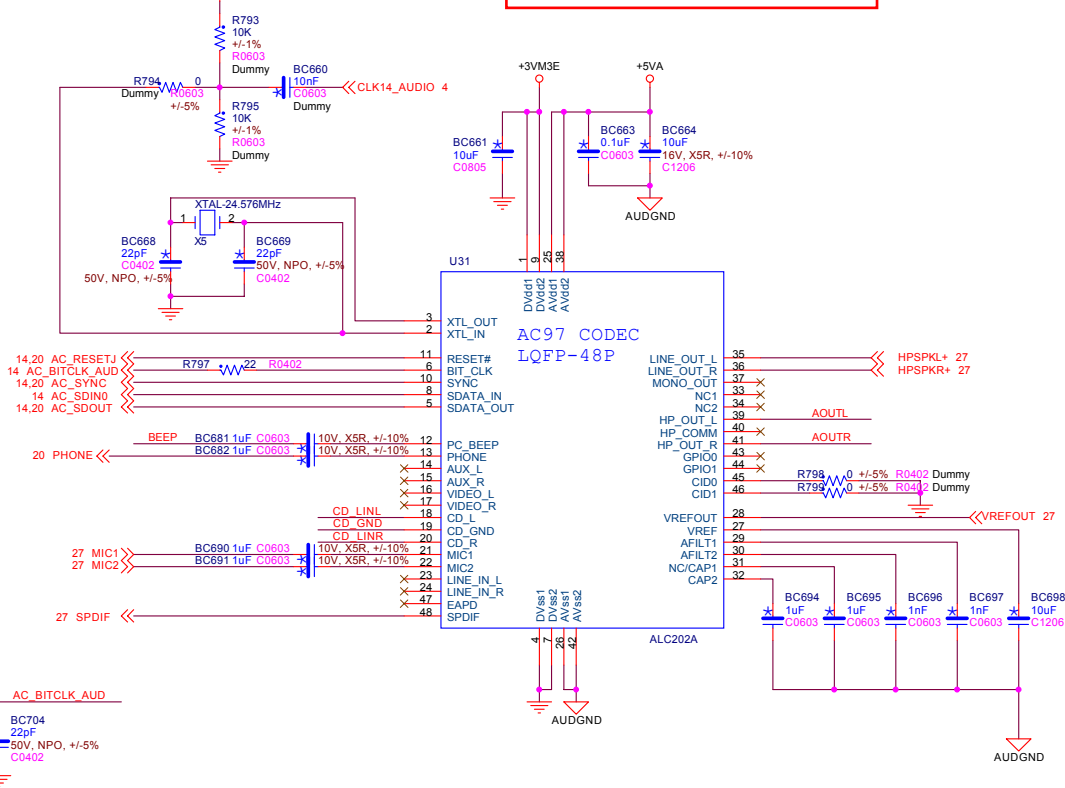
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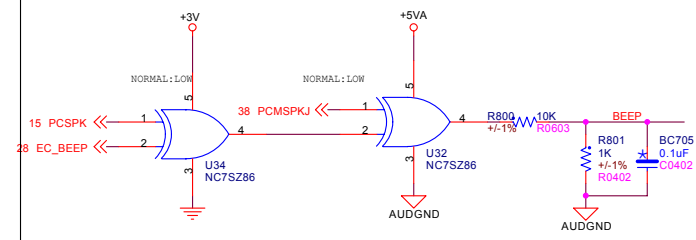
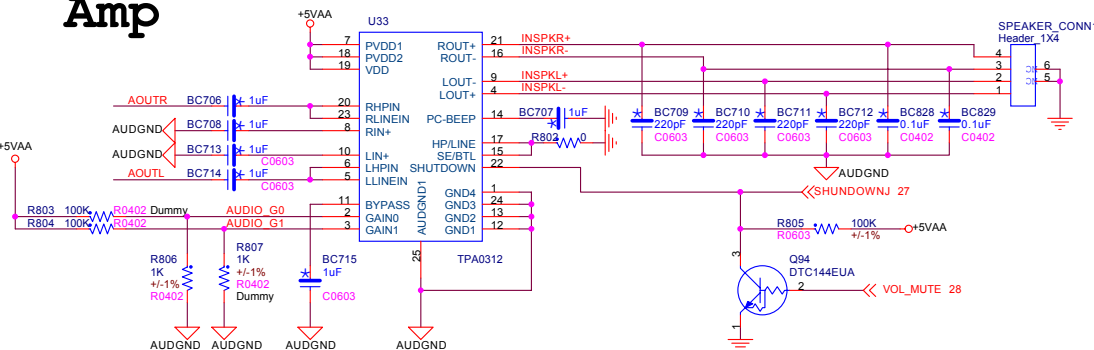
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CODEC

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Amp



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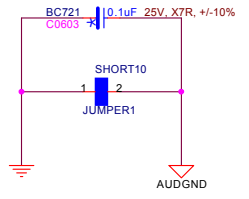
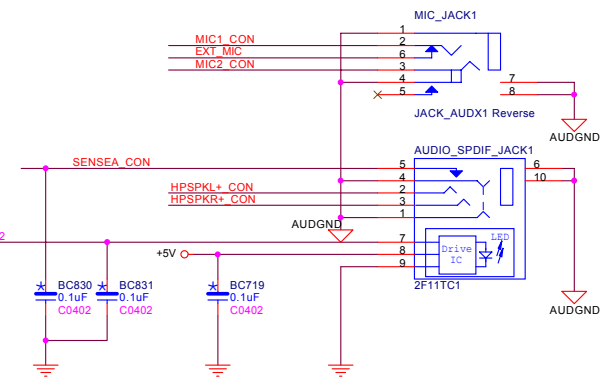
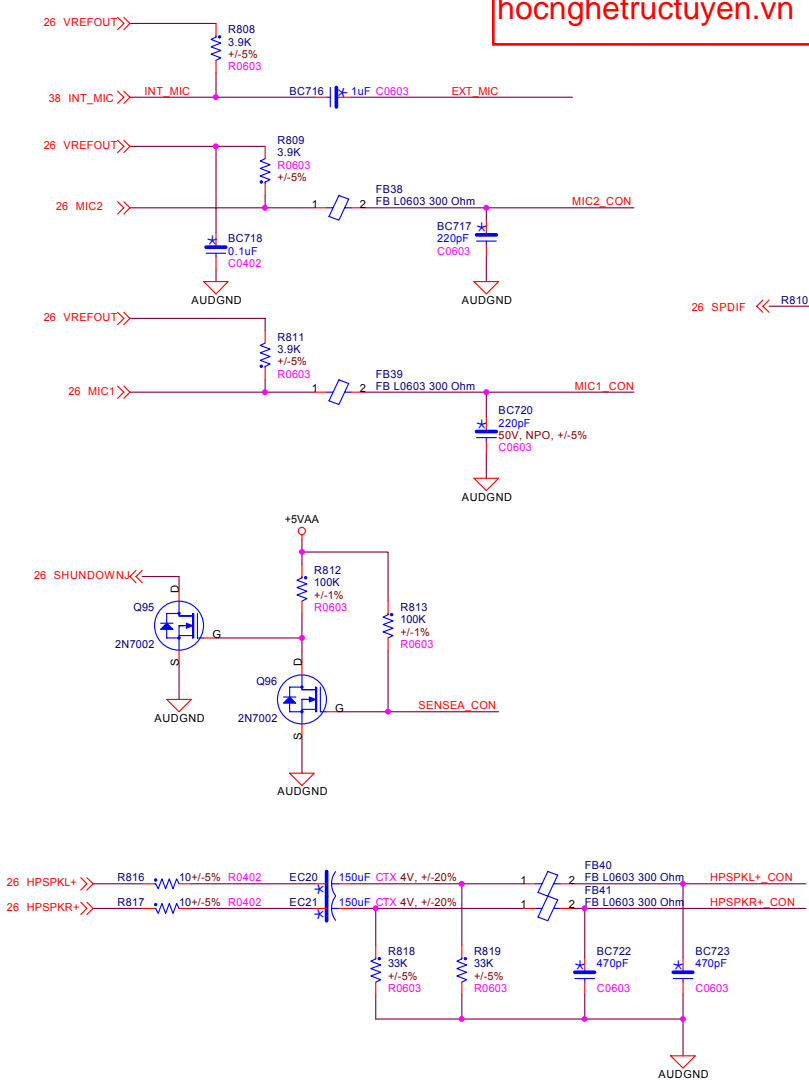
Title: AUDIO ALC202A & AMP

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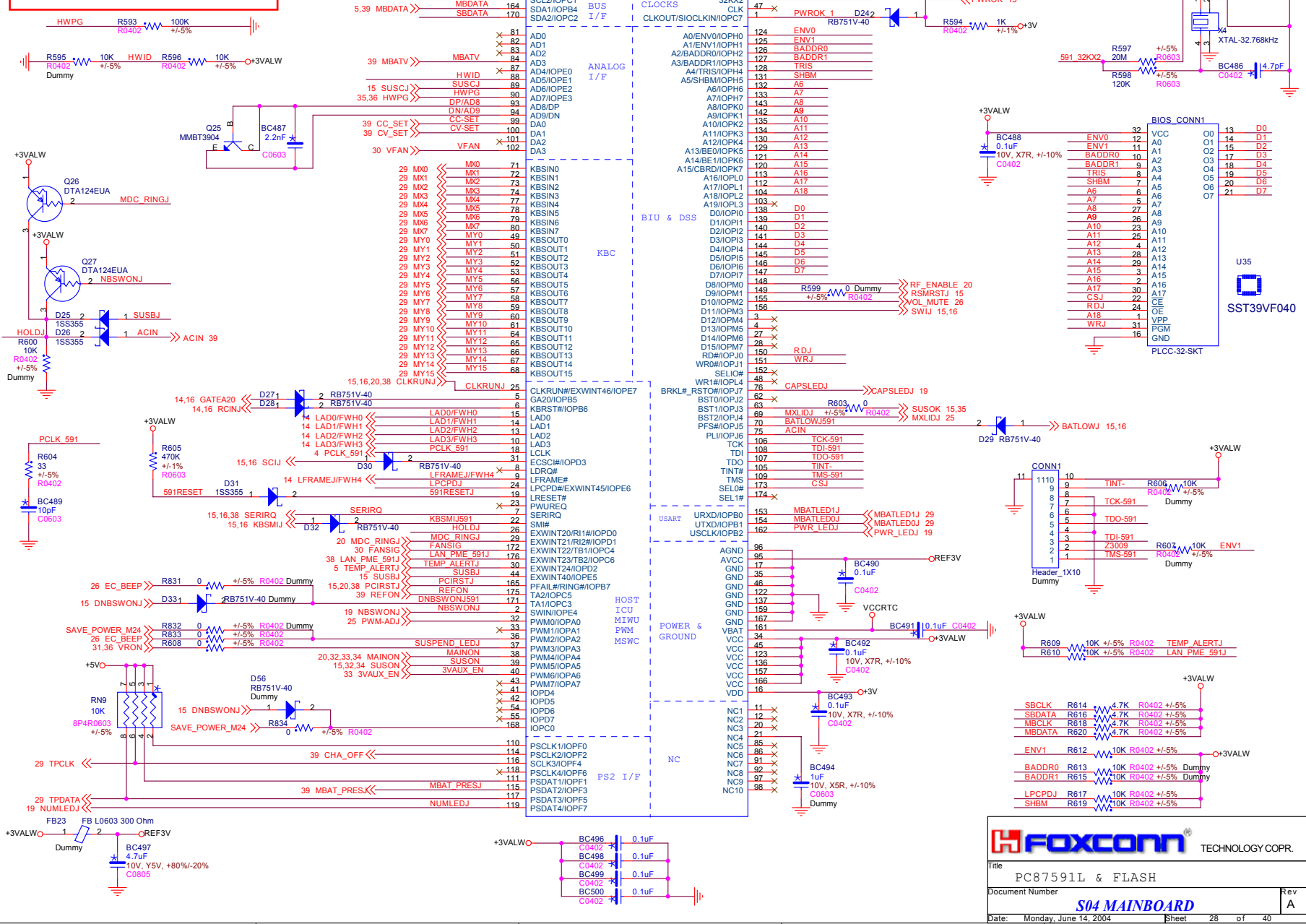


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Title: MIC Jack & AUDIO Jack

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FOXCONN TECHNOLOGY COPR.

Title: PC87591L & FLASH

Document Number: **S04 MAINBOARD**

Date: Monday, June 14, 2004

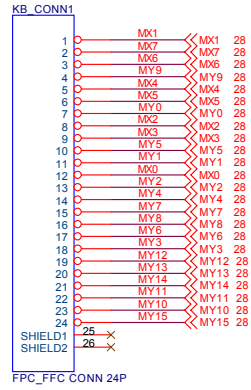
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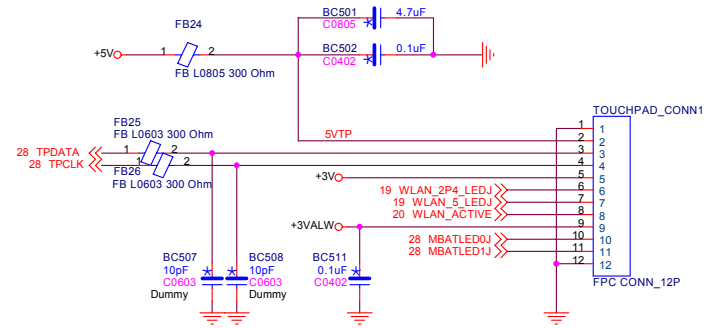
PC87591 & FLASH

PC87591 & FLASH

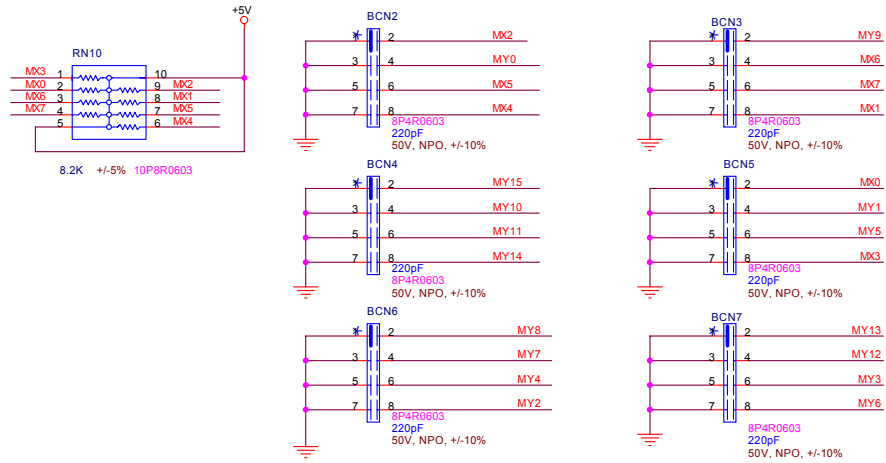
KEY BOARD

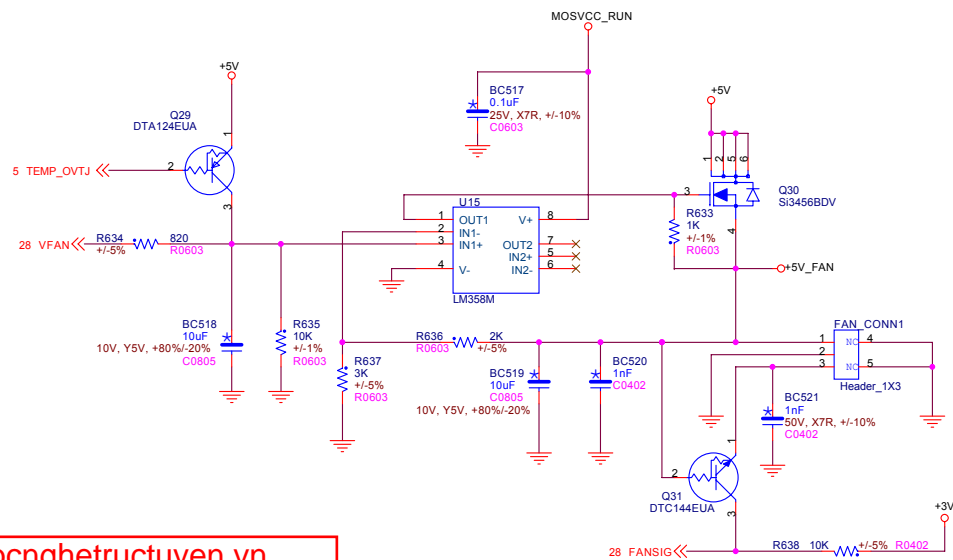


TOUCH PAD

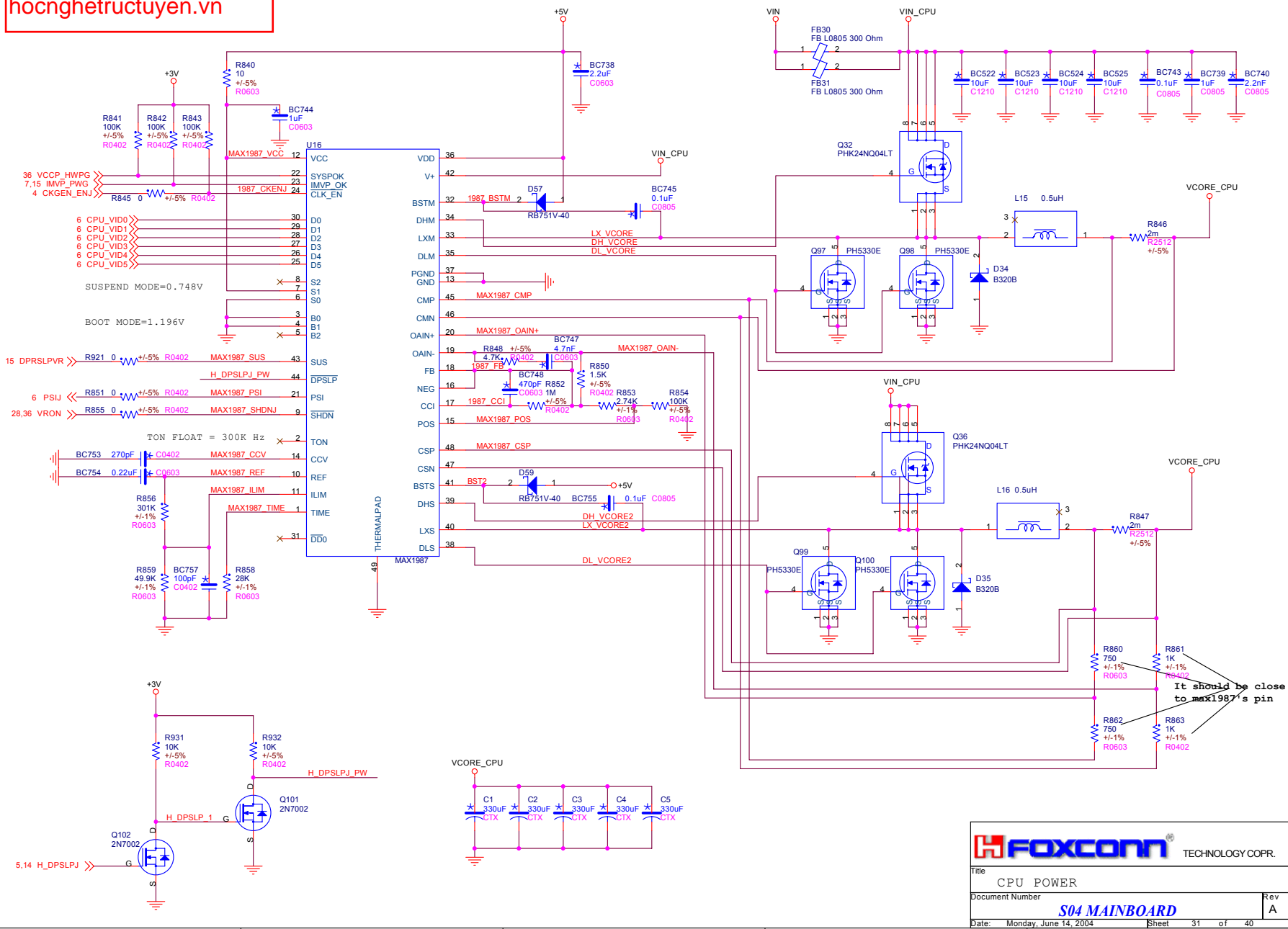


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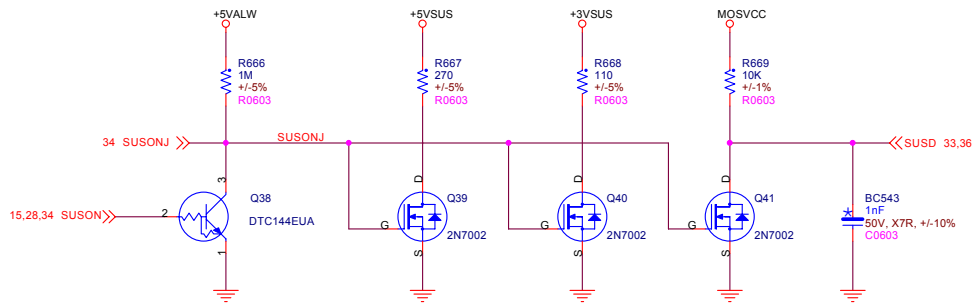
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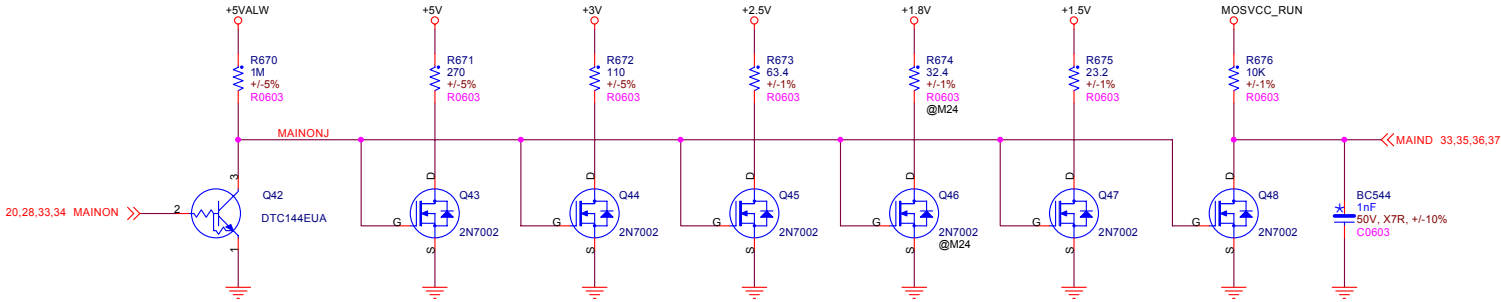
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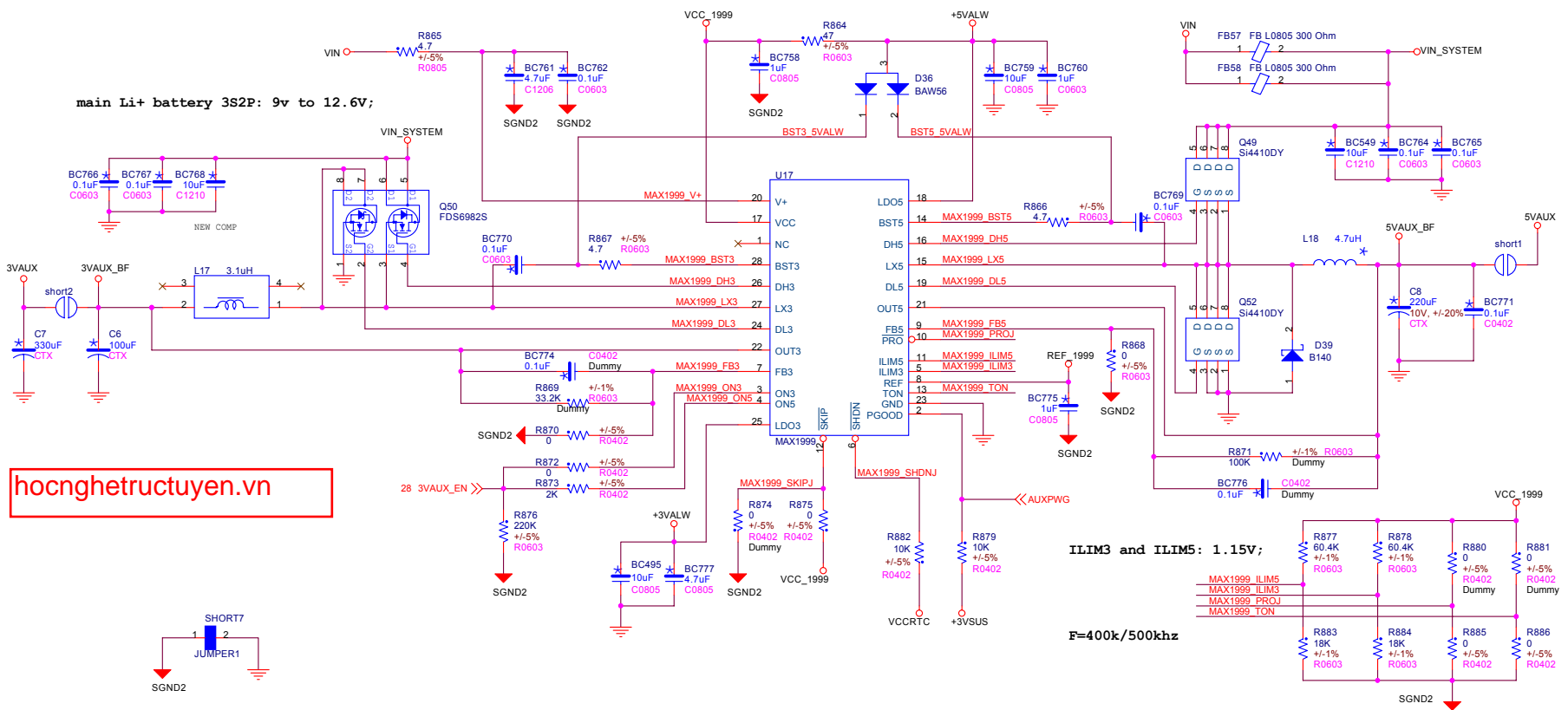


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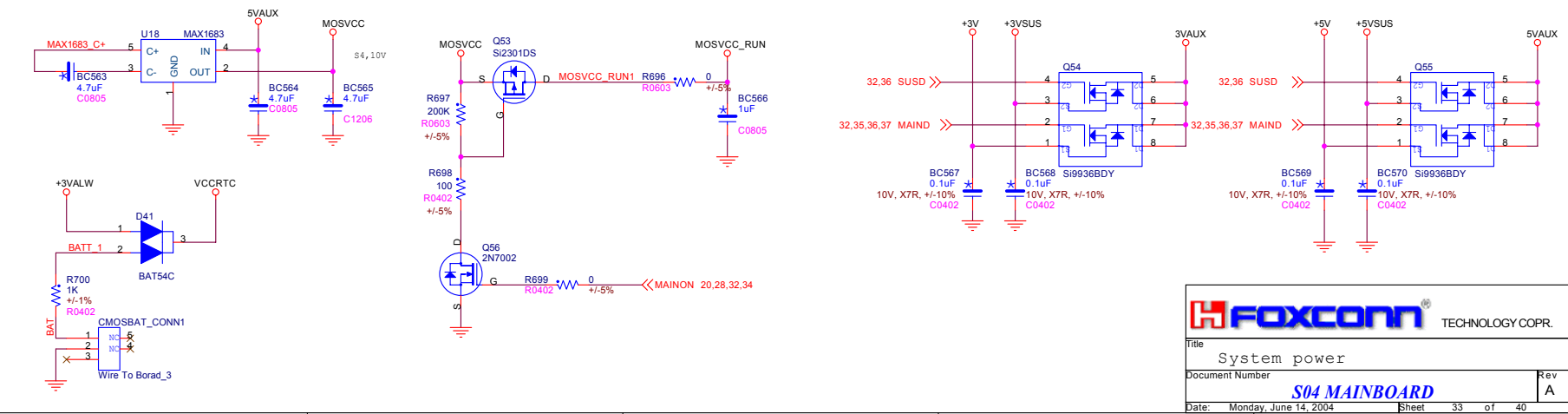
main Li+ battery 3S2P: 9v to 12.6V;



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ILIM3 and ILIM5: 1.15V;

F=400k/500khz



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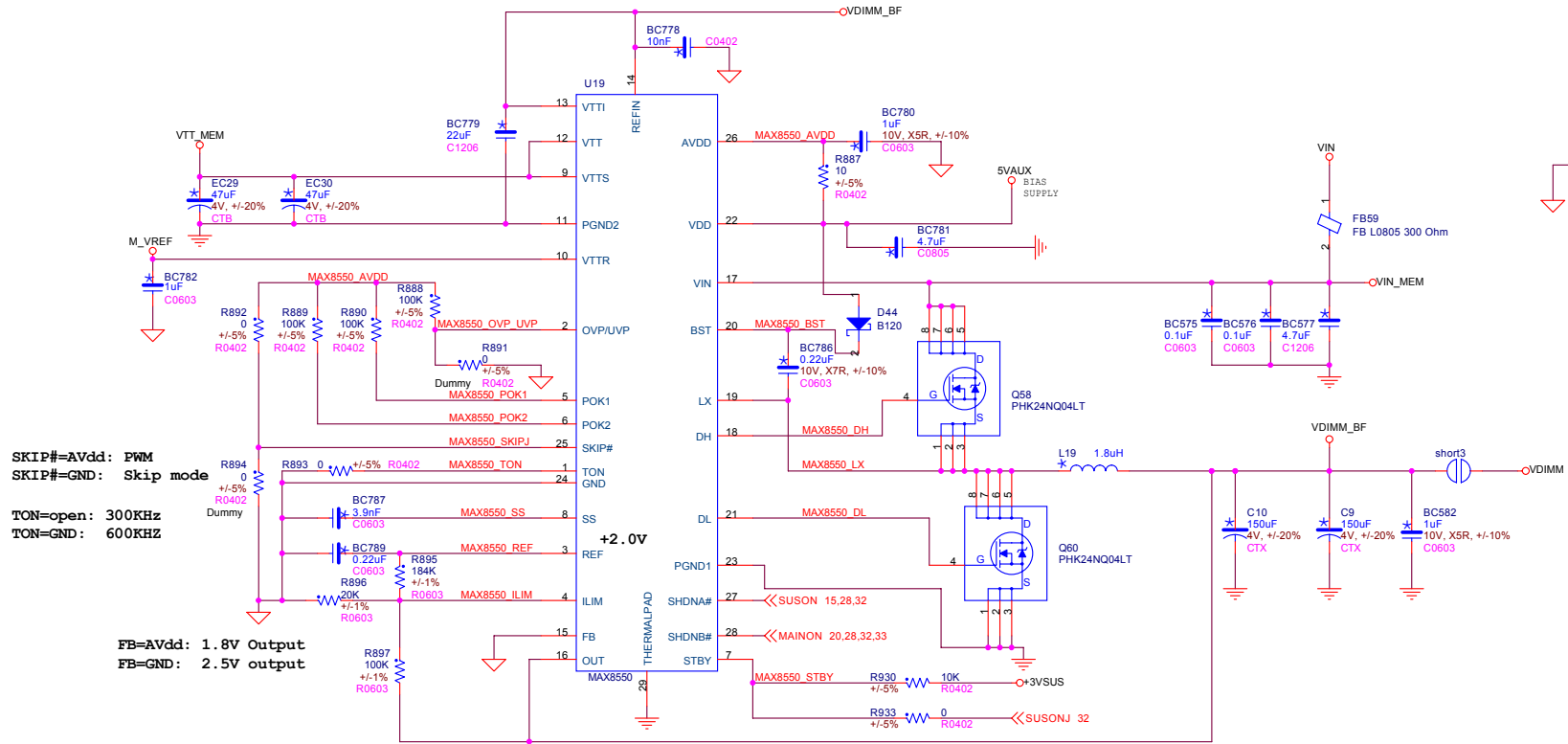
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SKIP#=AVdd: PWM
 SKIP#=GND: Skip mode
 TON=open: 300KHz
 TON=GND: 600KHz

FB=AVdd: 1.8V Output
 FB=GND: 2.5V output

$$Vilim(min) = 10 * I_{outmax} * (1 - LIR/2) * R_{dsonlow25c} * 1.25$$

$$= 10 * 6 * 0.85 * 7.5 * 1.25$$

$$= 478.125mV$$

$$Vilim_rating = 478.125 * 1.15 = 549.84375mV$$

$$R895 = (2V - 0.3 * Vilim_rating) / 10 = 183.5Kohm;$$

$$R896 | R897 = 2V / 10u - 183.5K = 16.5Kohm;$$

$$R896 = 19.8Kohm;$$

$$R897 = 98.3Kohm$$

$$L19 = V_{out} * (V_{in} - V_{out}) / (V_{in} * f_{sw} * I_{max} * LIR)$$

$$L19_{max} = 2.5 * (19 - 2.5) / (19 * 600K * 6 * 0.3)$$

$$= 2.01uH$$

$$L19_{min} = 2.5 * (9 - 2.5) / (9 * 600K * 6 * 0.3)$$

$$= 1.67uH$$

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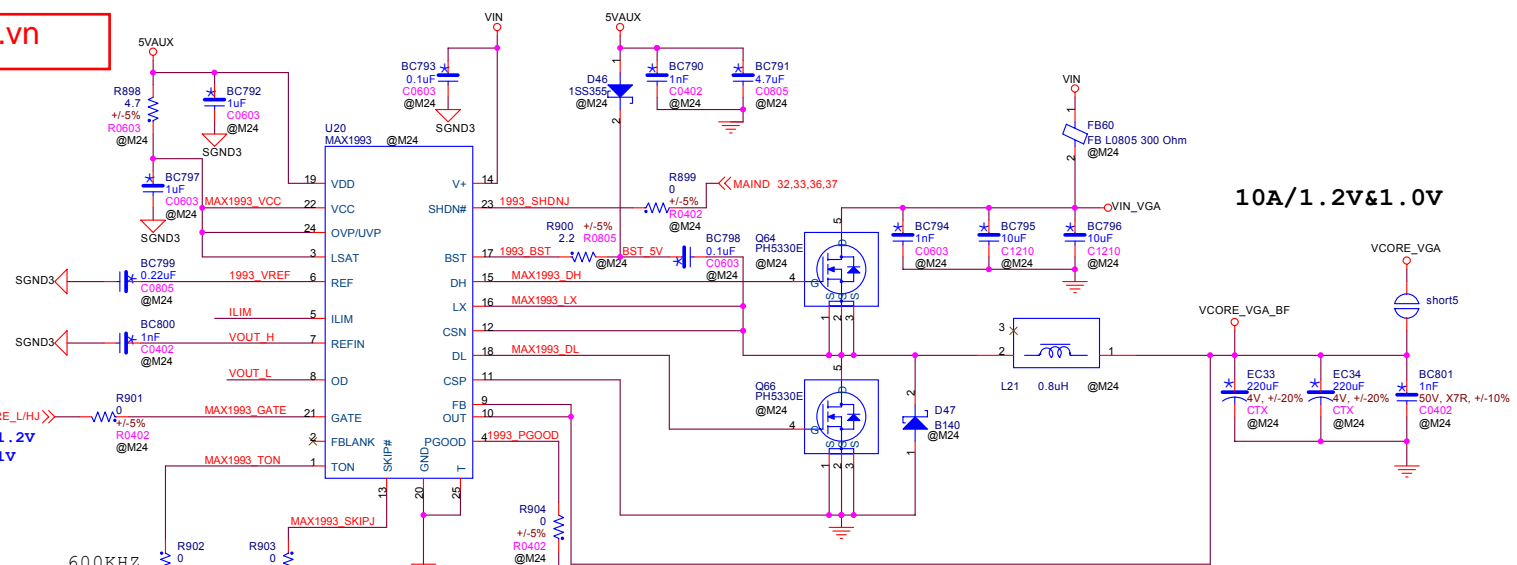
Title: VDIMM&VTT_MEM

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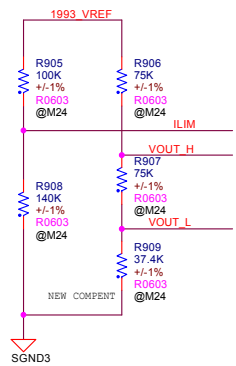
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10A/1.2V&1.0V

21 VCORE_L/HJ
 0 : Core VCC=1.2V
 1 : Core VCC=1V

Vref=2.0V



600KHZ



PH5330E: 30V-85A-7.5mohm
 $I_{lim} = 79mV > (I_{loadmax} - 0.15 I_{loadmax}) * R_{daon}$
 $= (10 - 0.15 * 10) * 7.5$
 $= 63.75;$

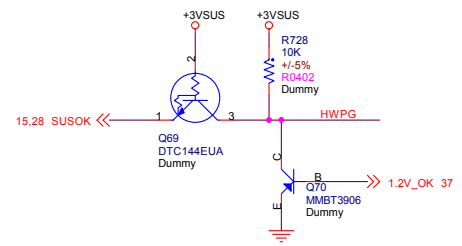
$$L21 = Vout * (Vin - Vout) / (Vin * fsw * Imax * LIR)$$

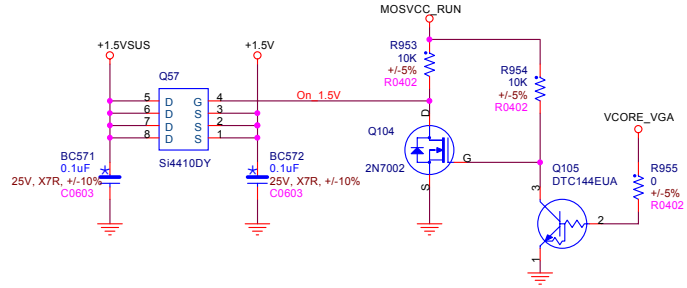
$$L21_{max}(1.2) = 1.2 * (19 - 1.2) / (19 * 600K * 10 * 0.3) = 0.625uH$$

$$L21_{min}(1.2) = 1.2 * (9 - 1.2) / (9 * 600K * 10 * 0.3) = 0.578uH$$

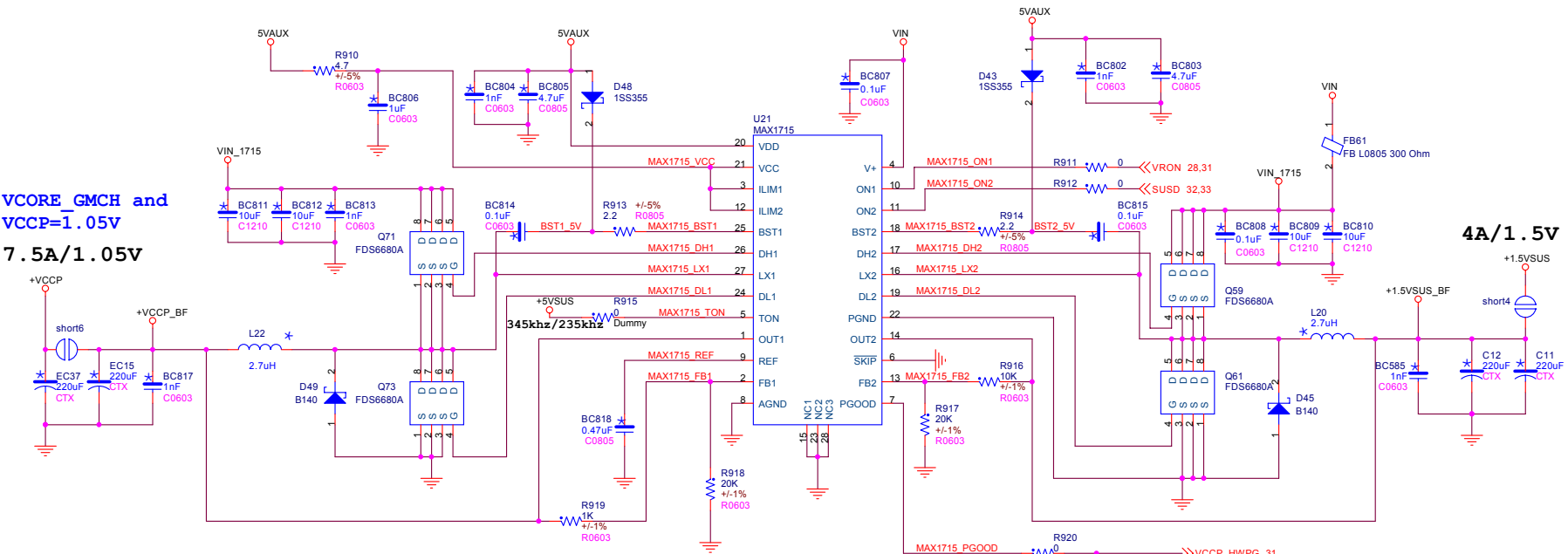
$$L21_{max}(1.0) = 1 * (19 - 1) / (19 * 600K * 10 * 0.3) = 0.526uH$$

$$L21_{min}(1.0) = 1 * (9 - 1) / (9 * 600K * 10 * 0.3) = 0.494uH$$





VCORE_GMCH and VCCP=1.05V
7.5A/1.05V



4A/1.5V

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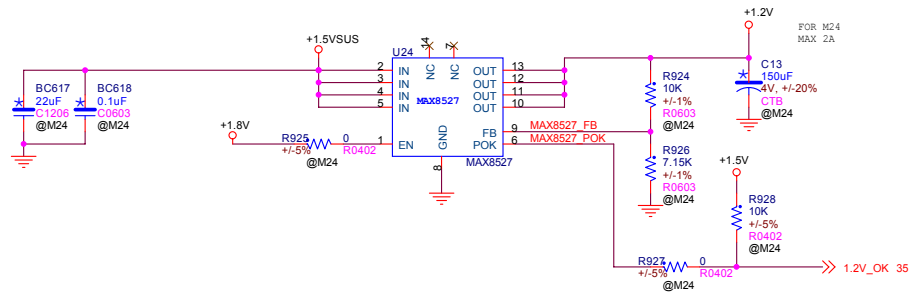
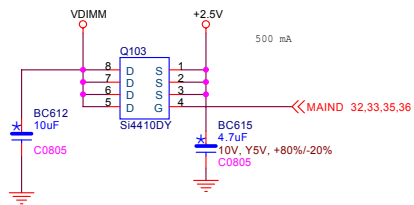
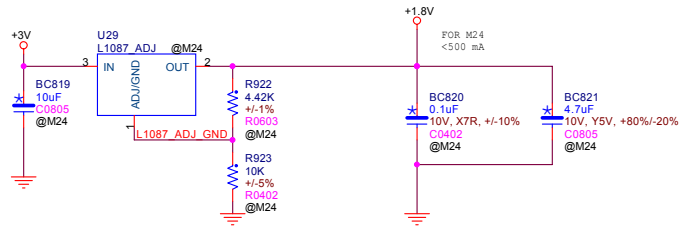
Title: VCCP & +1.5VSUS

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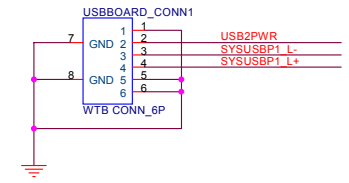
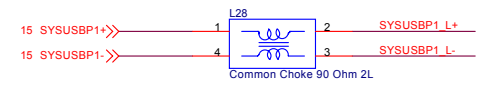
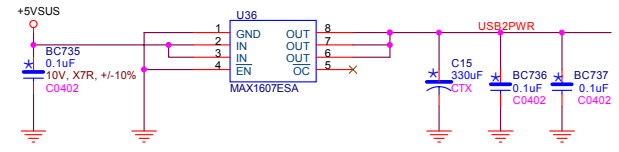
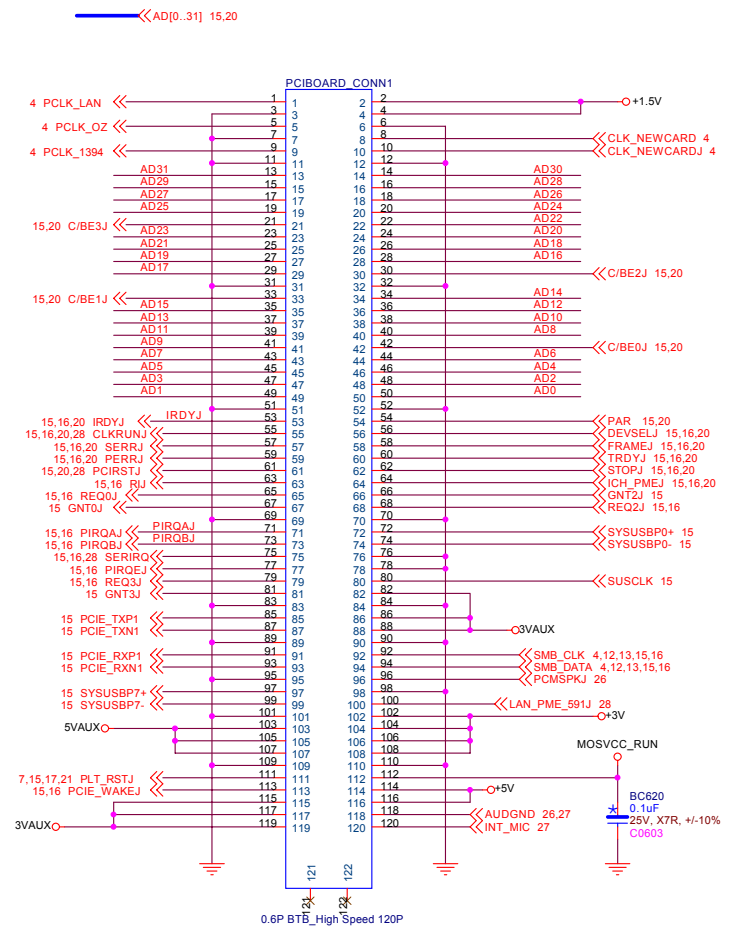
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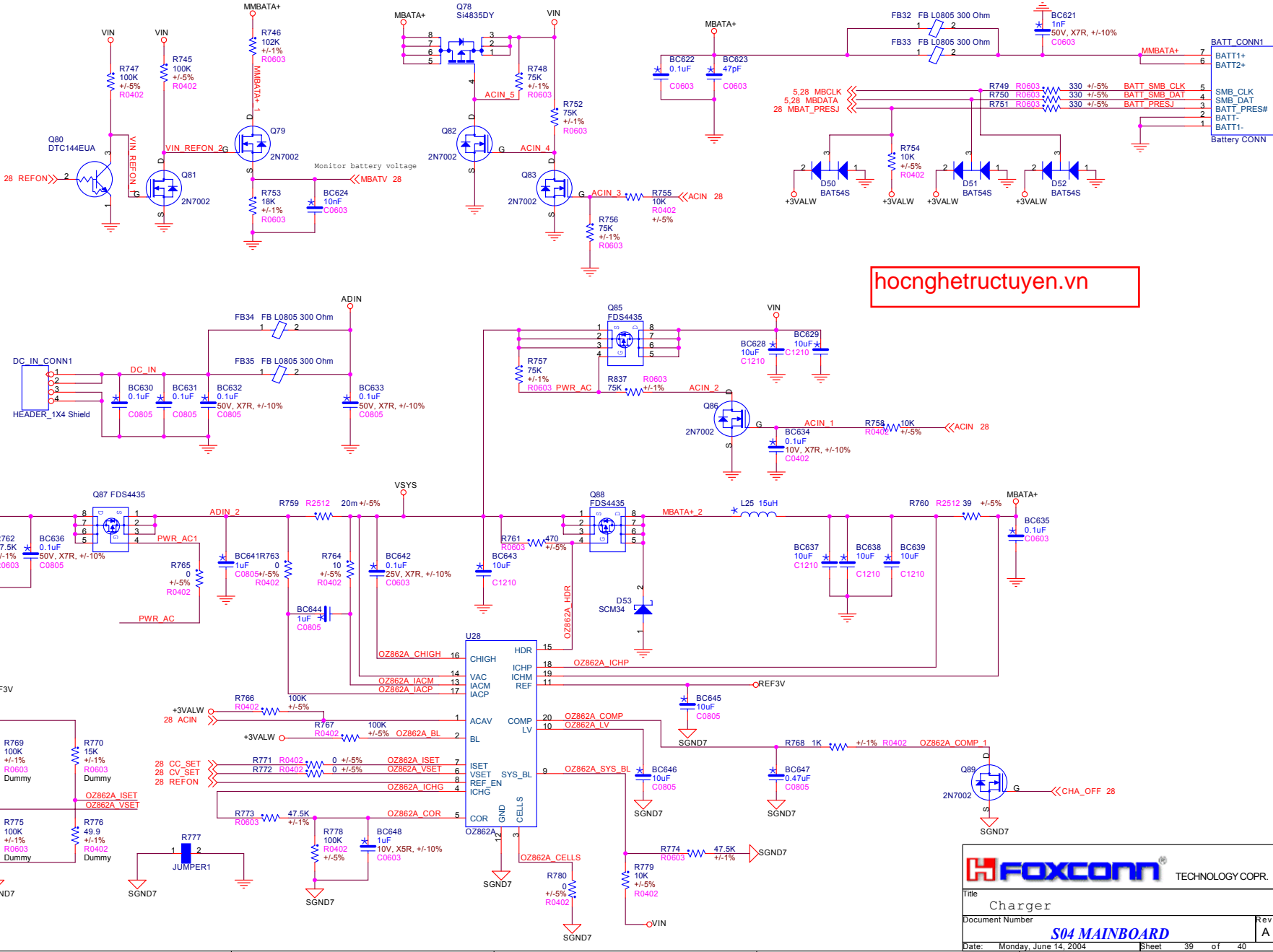


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0527:
 1) Update Keyboard connector, LCD connector, USB board connector;
 2) Delete trackpoint;
 3) Place R453;
 4) No stuff R19, R22, R26, Q1;
 5) Root mode: Vboot=1.190V, connect B0, B1 to GND and OPEN B2;
 6) Suspend mode: Vuspend=0.748V, connect S0 to GND, connect S1 to Vcc, and OPEN S2;

P4, change R36 to 33ohm, del signal PCLK_TPM;
 P8, del R119, R121 and signal CRG10/L1;
 P10, put EC7 in P12;
 F11, del R143;
 F13, del thermal sensor;
 P19, del signal NOVW_BTJ and R502, BC303;
 P29, del TPM (including components and signal SUS_STATJ);
 P31, change R840 to R0603, add R931, R932, Q101 and Q102;
 P33, del U35, change BC759 to 10uf;
 P34, connect SHDN# to SUSON, SHDN# to MAINONJ, STBY to SUSON through R933.

0528:
 P7, no stuff R100 and R101;
 F11, float pin H24;
 P28, move BC495 into P33;
 F37, update 2.5V schematics;
 F26, del Q93 and the signal EAPD, del BC678, BC679, BC680, BC662;

0529:
 P7, no stuff R100 and R101;
 F11, float pin H24;
 P28, move BC495 into P33;
 F37, update 2.5V schematics;
 F26, del Q93 and the signal EAPD, del BC678, BC679, BC680, BC662,
 change BC661 to C0805, change BC686 to 0.1uF
 P29, update FOCCHPAB_CONN1;
 P31, del Q97, Q99, update R845, R847, D34, D35, L15, L16;
 P34, update L19;
 F39, update L25.

0530:
 F11, name the signals;
 F16, stuff R469, R470;

0531:
 change R777 to a short.
 update R935, R936, R937;
 update R909 (change to 37.4kohm), R997 (change to 100kohm);
 delete BC692, BC693, BC671, BC672, BC673, BC674;
 connect DREF_SCLKN to GND, DREF_SCLKP to +1.5V;
 update U11 (M24);
 update L25 (15uh).
 update POWER signals' name.

0601:
 update L15, L16;
 update L19, L21;
 F4, delete R33, R35, R11, R12; delete CLK_PCIE_SATA/J;
 F14, delete R230, R235, connect SATA_CLKN/P and SATARBIAS/J to GND;

0602:
 update the front page;
 update EC3, EC5, EC10, EC13, EC14, and EC22;

0603:
 RN7, change pin1 with pin7, pin3 with pin5;
 F24, connect CHTVDD2 to CRT_CONN1 pin9;
 F18, add 16 holes;
 F33, change Q50 to FDS6982S; change Q49, Q52 to SI4410DY, del Q51, D38;
 F35, update Q64, Q66;
 update L17, L18;

0604:
 P19, reserve BC827 on "LIDJ" near "Switchboard_conn1"; reserve a 0.1uF BC832 on "+3Vaux";
 P26, reserve BC828, BC829 on PIN4, PIN3 of SPEAKER_CONN1;
 F27, reserve BC830, BC831 on PIN5, PIN7 of AUDIO_SFDrF_JACK1;
 F34, BC700, BC709 connect to AUDGND;
 F21, Leave pull-up footprint on all GPIO straps, no place R937 -- R947;
 Change R531 and R536 to 1% tolerance resistors; change the power connected to R535 (for PCIE_CALRN) to PCIE_VDDR.
 P23, change R557--R560, R562--R565 to FB (120ohm, 600mA);
 F24, D19, D29, D21, connect to +3V;

0607:
 F38, connect 5VAUX to PCIBOARD_CONN1 pin103;
 update the footprint of Q11, Q12, Q22, Q23, Q24, Q31, Q38, Q42, Q69, Q80, Q94, Q7, Q8, Q9, Q10, Q26, Q27, Q29; Q15, Q16, Q17, Q18, Q20, Q21;
 F34, BC700, BC709 connect to AUDGND;
 Q32, Q35, Q58, Q60, change to SHZ4N0041L;
 F32, change R669, R676 to 10K, +/-1% tolerance;

0608:
 P4, connect DREFSCLK/J to pin 17, 18 of U1 through R950, R951; and pull down them through R948, R949;
 P7, connect DREFSCLK/J to pin c37, d37 of U4B;
 P36, update the control circuit of Q57;
 P37, change MAIND to +1.8V to connect to U24 pin 1 EN.
 P18, del 4 EMI caps, update the holes in the MB;
 P37, change R922 to 4.42K;
 F11, pull up SDVOCRTL_DATA (pin H24) to +2.5V through R956 (3.6Kohm);

0609:
 change R9, R20 from 0ohm to 2.2ohm; change R10 from 0ohm to 1ohm;
 change BC142, BC143, BC485, BC486 to 4.7pF 0402;

0610:
 P24, change FB12, FB13, F14 to EMI filter L29, L30, L31;

0611:
 P4, DREFSCLK pull up through R957 (8GM) to +1.5V; DREFCLK pull up through R958 (8GM) to +1.5V; and R52, R53 all 8GM;
 P16, connect LCH6 pin A13 to +3V;

0612:
 P6, change R84 to +/-1% tolerance;
 P33, P34, P35, P36, add FB57, FB58, FB59, FB60, FB61;

0613:
 P12, Del some caps: BC163, BC164, BC165, BC166, BC167, BC200, BC201, BC203, BC205, BC206, BC208, BC209, BC210, BC211, BC204;
 change BC485, BC486, BC142, BC143 to 4.7pF 0402;

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