Schematics Page Index (Title / Revision / Change Date)

BOM Control Table

Value / Prefix	CA_	AT_	DS_	ND_	LND_	HD_
UMA (W/ Dock)	V		V			
UMA (W/O Dock)	V			V	V	
M82 (W/ Dock)		V	V			
M82 (W/O Dock HDMI)		V		V		
M82 (w/dock W/ HDMI)		V	V			V

Project Code & Schematics Subject: M750 Main Board

PCB P/N:

FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	Index Page	
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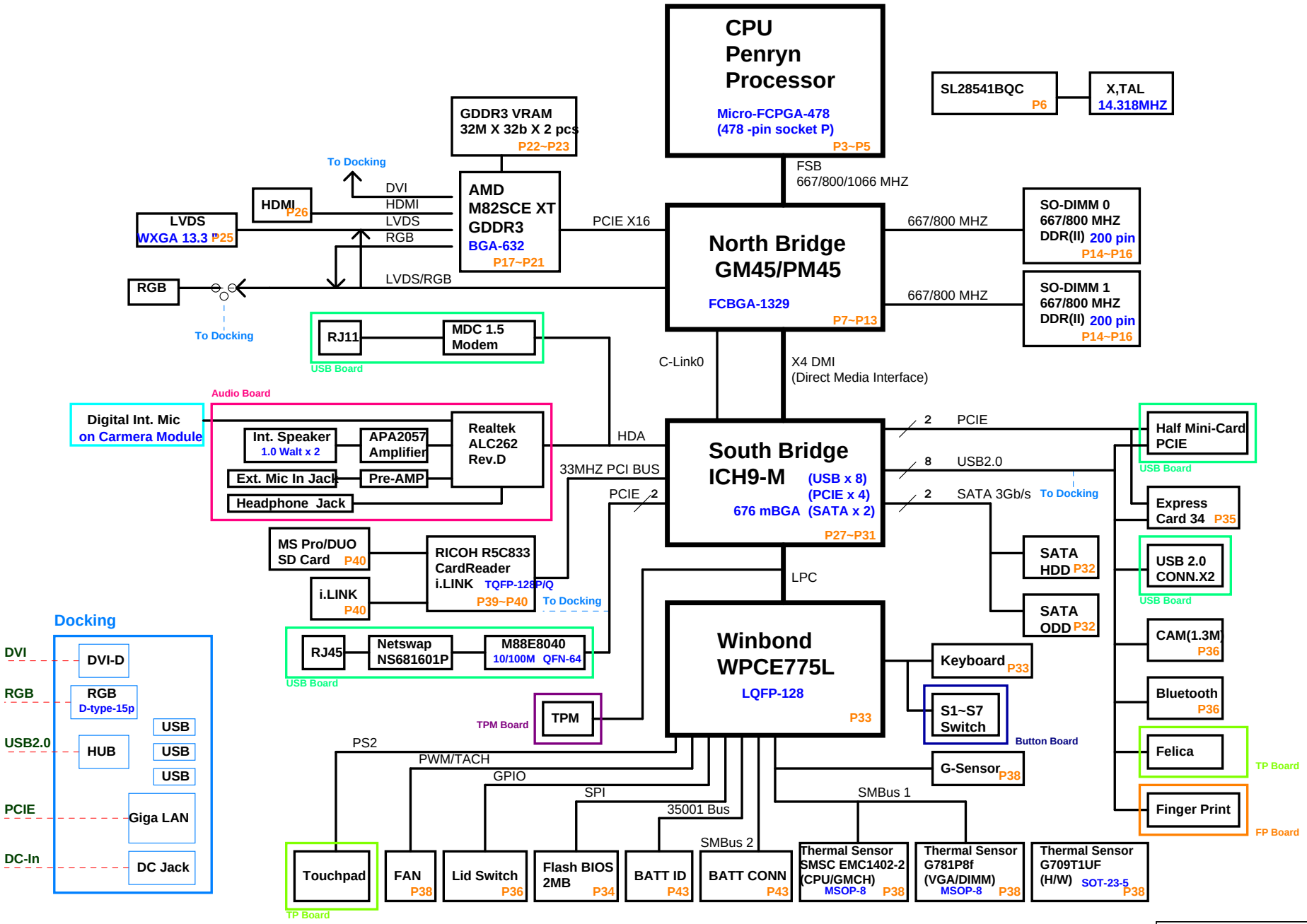
M750 (Montevina + M82SCE XT)



FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	Block Diagram	
Size: Custom	Document Number: M750-1-01	Rev: 1.0
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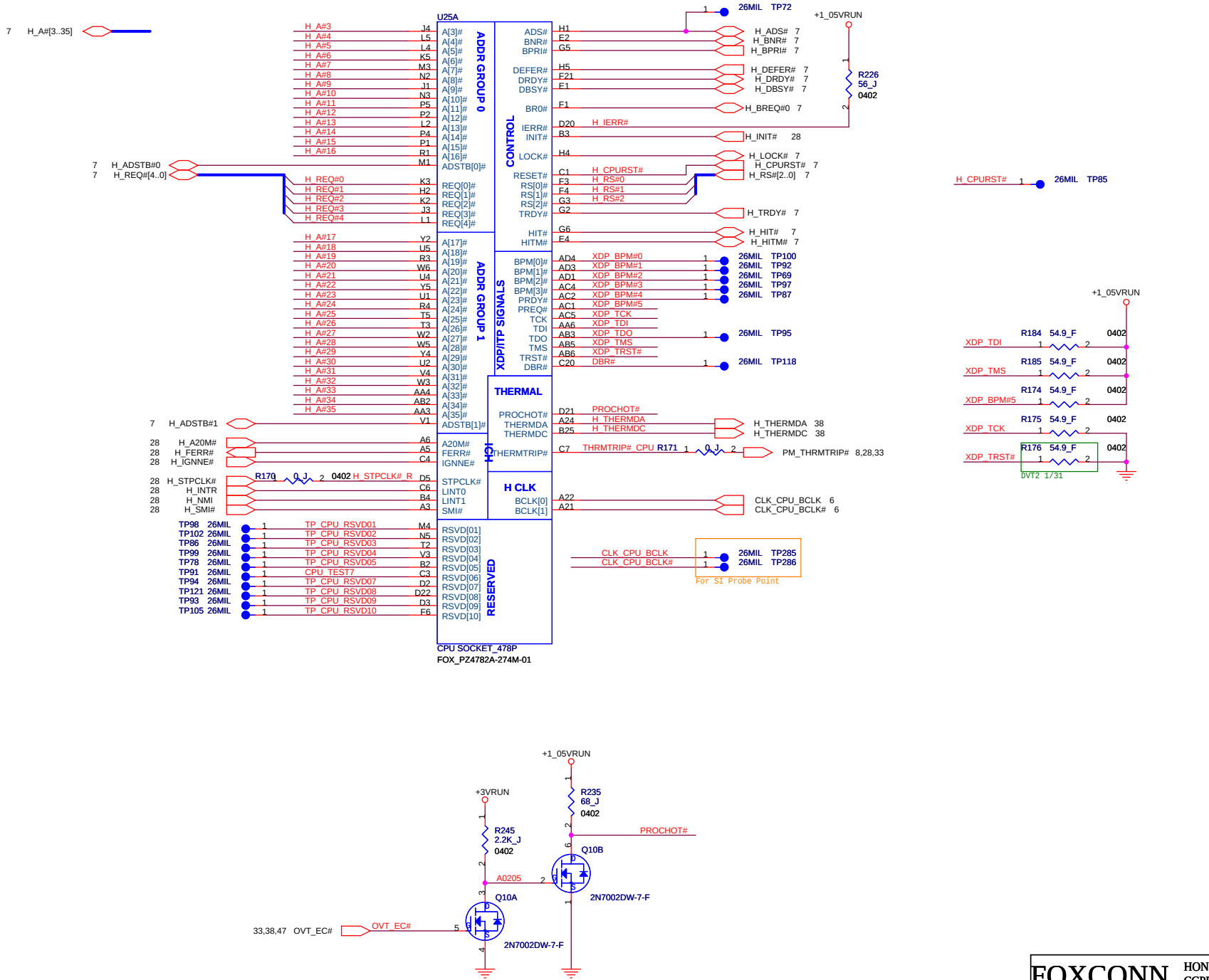
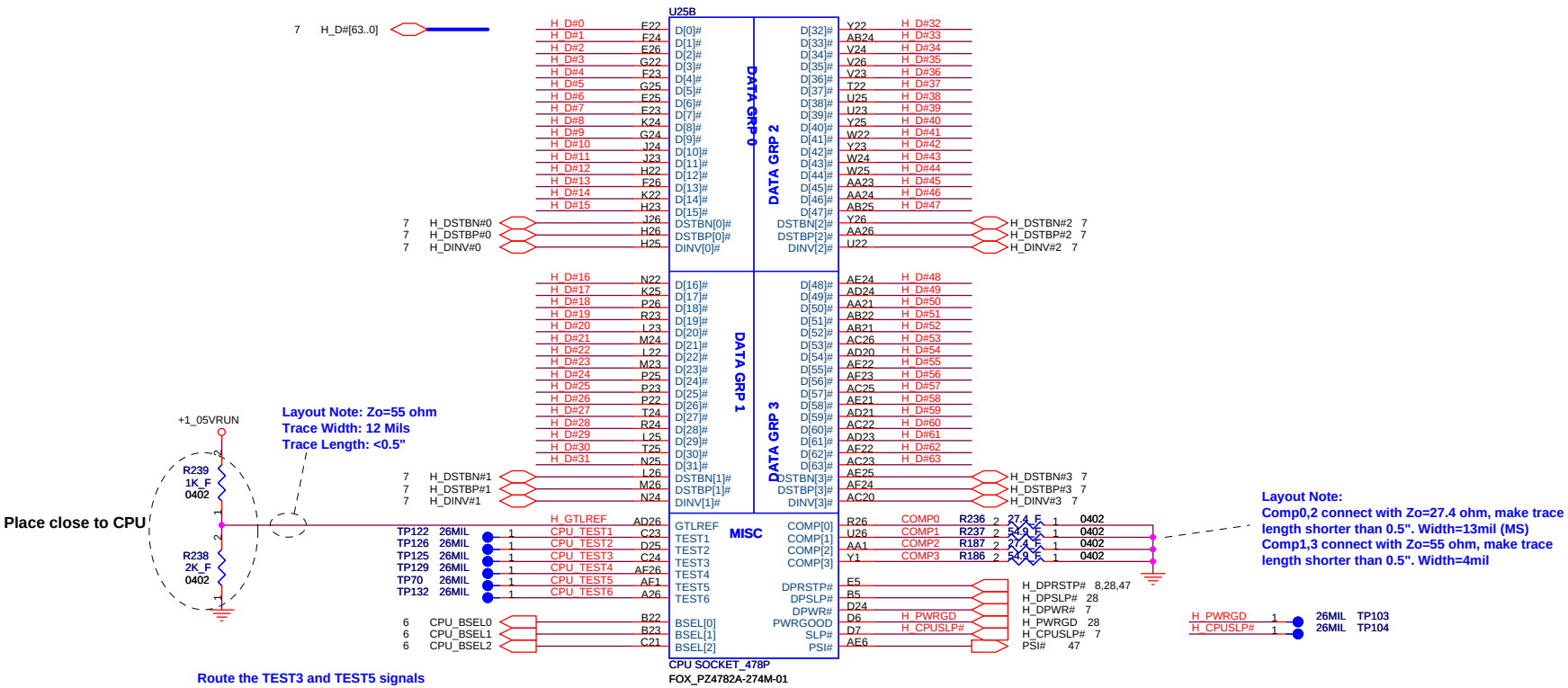
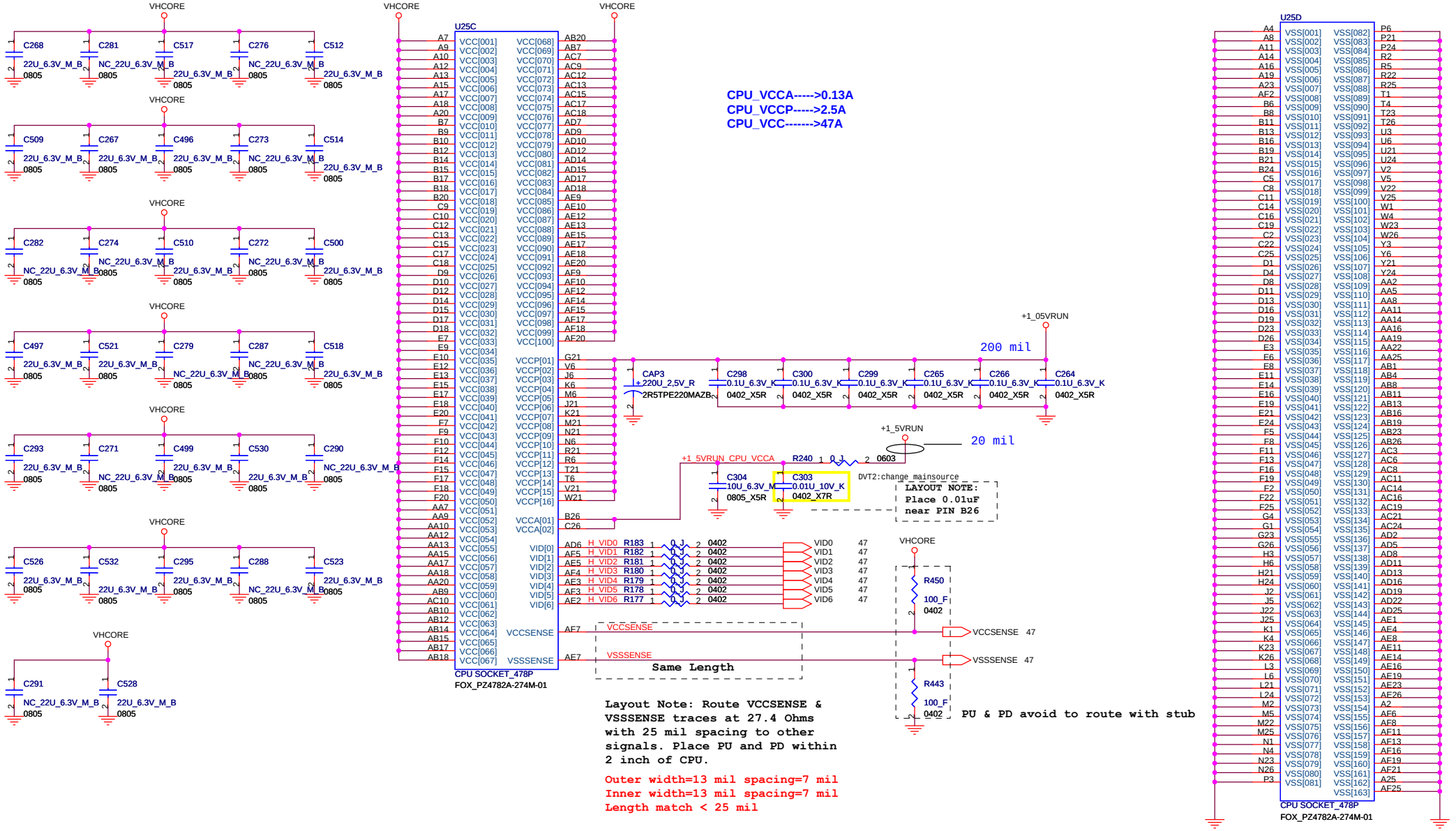


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division		
Title	Penryn (HOST BUS) 1/3		
Size A3	Document Number M750-1-01		Rev 1.0
Date: Monday, June 23, 2008	Sheet 3 of 54		



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Penryn (HOST BUS) 2/3	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 4 of 54	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Penryn (POWER/GROUND) 3/3	
Size A3	Document Number M750-1-01	Rev 1.0
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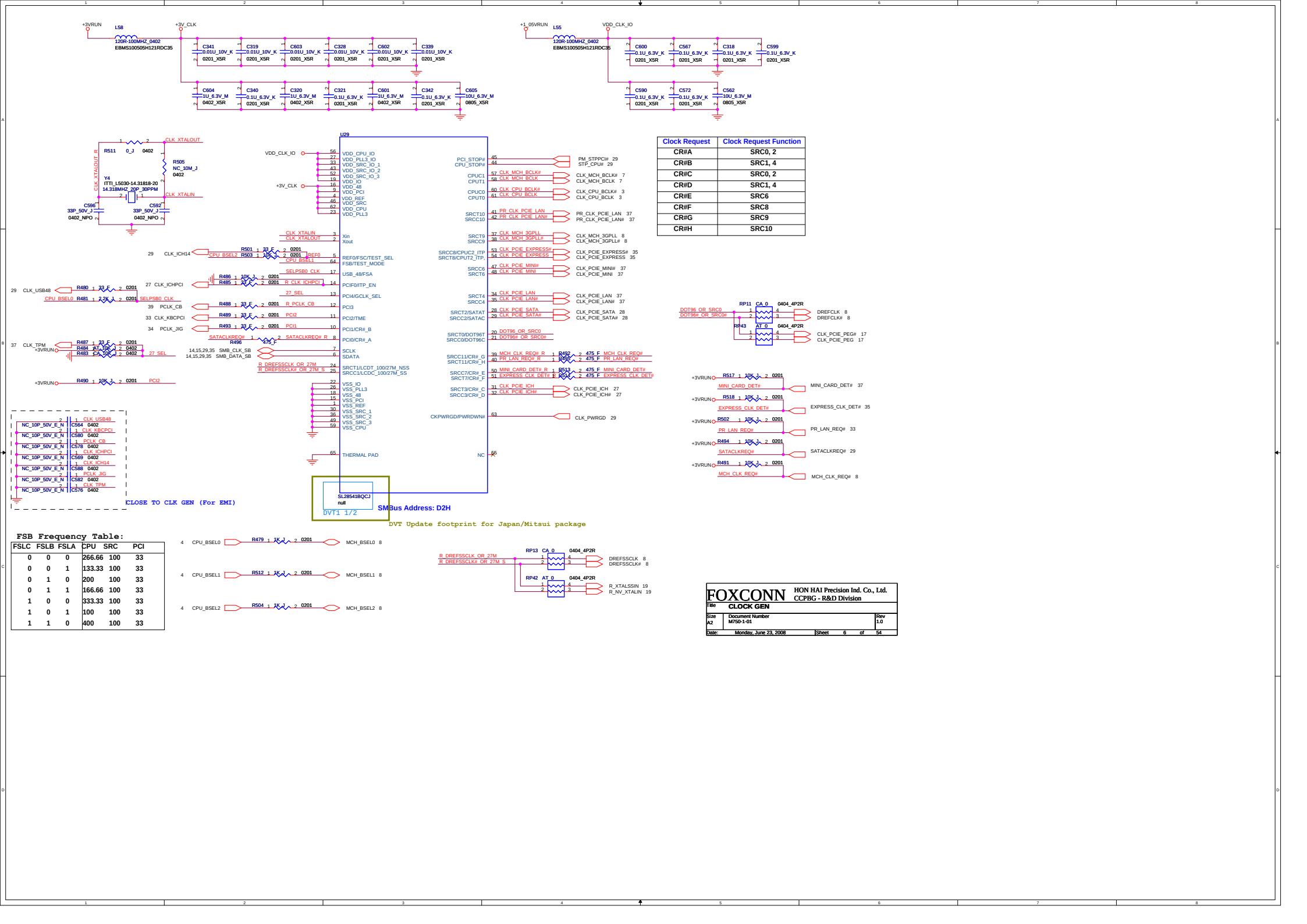

Clock Request	Clock Request Function
CR#A	SRC0, 2
CR#B	SRC1, 4
CR#C	SRC0, 2
CR#D	SRC1, 4
CR#E	SRC6
CR#F	SRC8
CR#G	SRC9
CR#H	SRC10

FSB Frequency Table:

FSLC	FSLB	FSLA	CPU	SRC	PCI
0	0	0	266.66	100	33
0	0	1	133.33	100	33
0	1	0	200	100	33
0	1	1	166.66	100	33
1	0	0	333.33	100	33
1	0	1	100	100	33
1	1	0	400	100	33

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	CLOCK GEN
Size A2	Document Number M750-1-01 Rev 1.0
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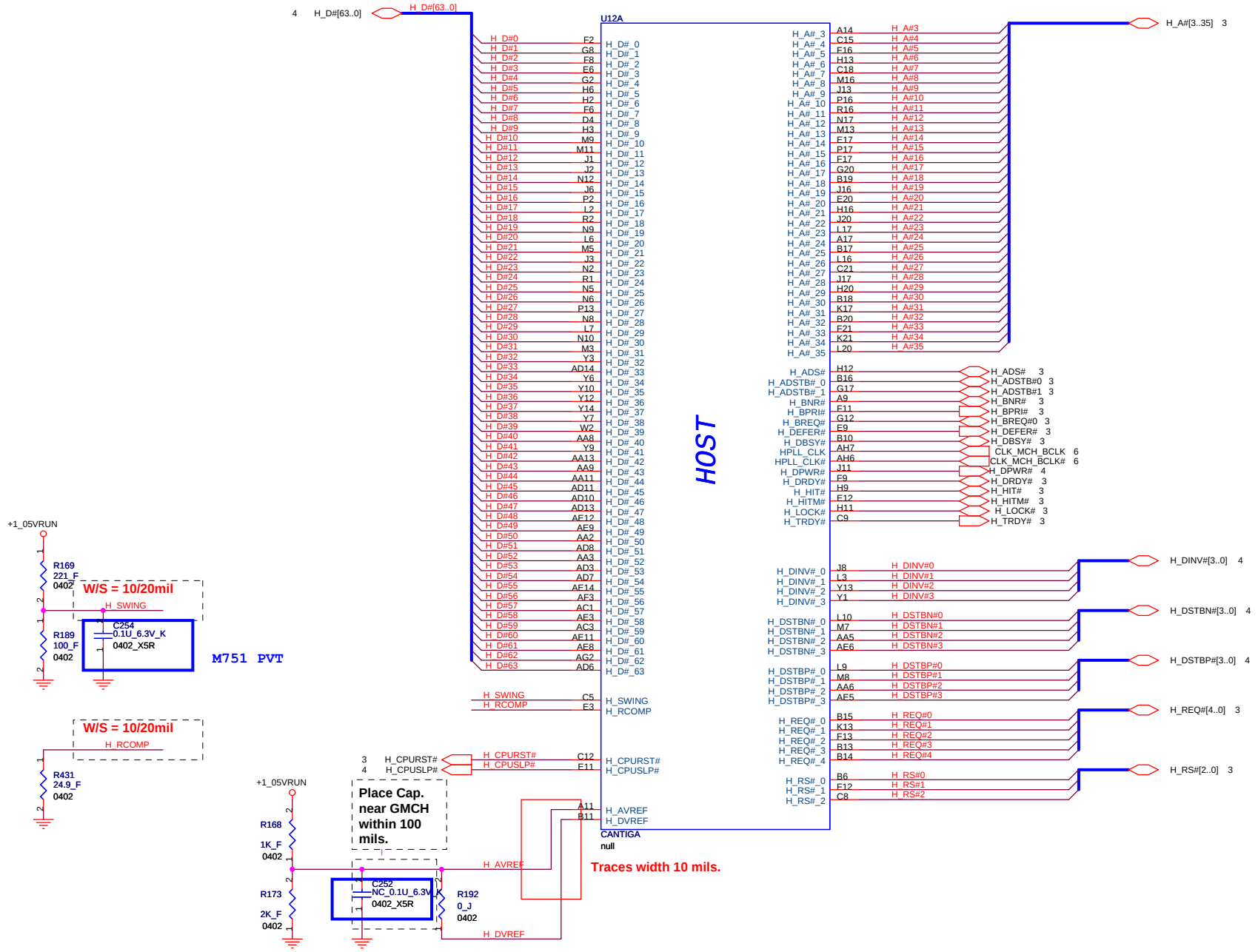

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	Cantiga (HOST) 1/7
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MCH_CFG_0~2 FSB Frequency	000 = FSB1066 ; 010 = FSB800; 011 = FSB667 ; Others = Reserved
MCH_CFG_3~4	Reserved
MCH_CFG_5 DMI X2 Select	Low = DMI X2 High = DMI X4 (Default)
MCH_CFG_6 ITPM Host Interface	Low =The ITPM Host Interface is enabled High = The ITPM Host Interface is disabled (default)
MCH_CFG_7 Intel Management Engine Crypto Strap	Low = Intel Management Engine Crypto Transport Layer Security (TLS) cipher suite with no confidentiality High = Intel Management Engine Crypto TLS cipher suite with confidentiality (default)
MCH_CFG_8	Reserved
MCH_CFG_9 PCIE Graphics Lane	Low = Lane Reversed High = Normal operation
MCH_CFG_10 PCIE Loopback enable	Low = Enabled High = Disabled (default)
MCH_CFG_11	Reserved
MCH_CFG_12 ALLZ	Low = ALLZ mode enabled High = Disabled (default)
MCH_CFG_13 XOR	Low = XOR mode enabled High = Disabled (default)
MCH_CFG_14~15	Reserved
MCH_CFG_16 FSB Dynamic ODT	Low = Dynamic ODT disabled High = Dynamic ODT enabled (default)
MCH_CFG_17~18	Reserved
MCH_CFG_19 DMI Lane Reversal	Low = Normal operation (Default): Lane Numbered in Order High = Reverse Lanes DMI x4 mode [(G)MCH->ICH]: (3->0, 2-> 1, 1->2 and 0->3) DMI x2 mode [(G)MCH ->ICH]: (3->0, 2->1)
MCH_CFG_20 Digital Display Port (SDVO/ DP/iHDMI) Concurrent with PCIe	Low = Only digital display port (SDVO/DP/iHDMI) or PCIe is operational (default) High = Digital display port (SDVO/DP/iHDMI) and PCIe are operating simultaneously via the PEG port

U12B

RSVD

TP229 26MIL 1 MCH_RSVD_1 M36 RSVD1
TP235 26MIL 1 MCH_RSVD_2 N36 RSVD2
TP233 26MIL 1 MCH_RSVD_3 R33 RSVD3
TP240 26MIL 1 MCH_RSVD_4 T33 RSVD4
TP248 26MIL 1 MCH_RSVD_5 AH9 RSVD5
TP246 26MIL 1 MCH_RSVD_6 AH10 RSVD6
TP243 26MIL 1 MCH_RSVD_7 AH12 RSVD7
TP245 26MIL 1 MCH_RSVD_8 AH13 RSVD8
TP227 26MIL 1 MCH_RSVD_9 K12 RSVD9
TP250 26MIL 1 MCH_RSVD_10 AL34 RSVD10
TP244 26MIL 1 MCH_RSVD_11 AK34 RSVD11
TP252 26MIL 1 MCH_RSVD_12 AN35 RSVD12
TP253 26MIL 1 MCH_RSVD_13 AM35 RSVD13
TP241 26MIL 1 MCH_RSVD_14 T24 RSVD14

TP81 26MIL 1 MCH_RSVD_15 B31 RSVD15
TP65 26MIL 1 MCH_RSVD_16 B2 RSVD16
TP106 26MIL 1 MCH_RSVD_17 M1 RSVD17

TP254 26MIL 1 MCH_RSVD_20 AY21 RSVD20

TP140 26MIL 1 MCH_RSVD_22 BG23 RSVD22
TP255 26MIL 1 MCH_RSVD_23 BF23 RSVD23
TP142 26MIL 1 MCH_RSVD_24 BH18 RSVD24
TP144 26MIL 1 MCH_RSVD_25 BF18 RSVD25

DDR CLK/ CONTROL/COMPENSATION

SA_CK_0 AP24 M_CLK_DDR0 14
SA_CK_1 AT21 M_CLK_DDR1 14
SB_CK_0 AV24 M_CLK_DDR3 15
SB_CK_1 AU20 M_CLK_DDR4 15

SA_CK#_0 AR24 M_CLK_DDR#0 14
SA_CK#_1 AR21 M_CLK_DDR#1 14
SB_CK#_0 AU24 M_CLK_DDR#3 15
SB_CK#_1 AV20 M_CLK_DDR#4 15

SA_CKE_0 BC28 M_CKE0 14,16
SA_CKE_1 AY28 M_CKE1 14,16
SB_CKE_0 AY36 M_CKE3 15,16
SB_CKE_1 BB36 M_CKE4 15,16

SA_CS#_0 BA17 M_CS#0 14,16
SA_CS#_1 AY16 M_CS#1 14,16
SB_CS#_0 AV16 M_CS#2 15,16
SB_CS#_1 AR13 M_CS#3 15,16

SA_ODT_0 BD17 M_ODT0 14,16
SA_ODT_1 AY17 M_ODT1 14,16
SB_ODT_0 BF15 M_ODT2 15,16
SB_ODT_1 AY13 M_ODT3 15,16

SM_RCOMP BG22 SM_RCOMP R244 1 80.6_F 2 +1_8VSUS
SM_RCOMP# BH21 SM_RCOMP# R243 1 80.6_F 2

SM_RCOMP_VOH BF28 SM_RCOMP_VOH
SM_RCOMP_VOL BH28 SM_RCOMP_VOL

SM_VREF AV42 SMDDR_VREF
SM_PWROK AR36 SM_PWROK
SM_REXT BF17 SM_REXT
SM_DRAMRST# BC36 SM_DRAMRST# 1 26MIL TP256

DDR CLK

DPLL_REF_CLK B38 DREFCLK 6
DPLL_REF_CLK# A38 DREFCLK# 6
DPLL_REF_SSCLK E41 DREFSSCLK 6
DPLL_REF_SSCLK# F41 DREFSSCLK# 6

PEG_CLK F43 CLK_MCH_3GPLL 6
PEG_CLK# F43 CLK_MCH_3GPLL# 6

DMI

DMI_RXN_0 AE41 DMI_TXN0
DMI_RXN_1 AE37 DMI_TXN1
DMI_RXN_2 AE47 DMI_TXN2
DMI_RXN_3 AH39 DMI_TXN3 DMI_TXN[3:0] 27

DMI_RXP_0 AE40 DMI_TXP0
DMI_RXP_1 AE38 DMI_TXP1
DMI_RXP_2 AE48 DMI_TXP2
DMI_RXP_3 AH40 DMI_TXP3 DMI_TXP[3:0] 27

DMI_TXN_0 AE35 DMI_RXN0
DMI_TXN_1 AE43 DMI_RXN1
DMI_TXN_2 AE46 DMI_RXN2
DMI_TXN_3 AH42 DMI_RXN3 DMI_RXN[3:0] 27

DMI_TXP_0 AD35 DMI_RXP0
DMI_TXP_1 AE44 DMI_RXP1
DMI_TXP_2 AE46 DMI_RXP2
DMI_TXP_3 AH43 DMI_RXP3 DMI_RXP[3:0] 27

GFX VID

GFX_VID_0 B33 GFX_VID_0 1 26MIL TP218
GFX_VID_1 B32 GFX_VID_1 1 26MIL TP75
GFX_VID_2 G33 GFX_VID_2 1 26MIL TP223
GFX_VID_3 F33 GFX_VID_3 1 26MIL TP221
GFX_VID_4 E33 GFX_VID_4 1 26MIL TP215

GFX_VR_EN C34 GFX_VR_EN 1 26MIL TP66

MISC

CL_CLK AH37 CL_CLK0 29
CL_DATA AH36 CL_DATA0 29
CL_PWROK AN36 MPWROK 29
CL_RST# AJ35 CL_RST0# 29
CL_VREF AH34 MCH_CLVREF

DDPC_CTRLCLK N28 DDPC_CTRLCLK 1 26MIL TP217
DDPC_CTRLDATA M28 DDPC_CTRLDATA 1 26MIL TP216
SDVO_CTRLCLK G36 SDVO_CTRLCLK 1 26MIL TP225
SDVO_CTRLDATA E36 SDVO_CTRLDATA 1 26MIL TP219
CLKREQ# K36 MCH_CLK_REQ# MCH_CLK_REQ# 6
ICH_SYNC# H36 MCH_ICH_SYNC# MCH_ICH_SYNC# 29

TSATN# B12 GM_TSATN#

HDA

HDA_BCLK B28
HDA_RST# B30
HDA_SDI B29
HDA_SDO C29
HDA_SYNC A28

+1_05VRUN
R190 56_J 0402
GM_TSATN#

CFG[17:3] internal pull-up
CFG[20:18] internal pull-down

6 MCH_BSEL0 T25 CFG_0
6 MCH_BSEL1 R25 CFG_1
6 MCH_BSEL2 P25 CFG_2
TP226 26MIL 1 MCH_CFG_3 P20 CFG_3
TP237 26MIL 1 MCH_CFG_4 P24 CFG_4
TP77 26MIL 1 MCH_CFG_5 C25 CFG_5
TP230 26MIL 1 MCH_CFG_6 N24 CFG_6
MCH_CFG_7 M24 CFG_7
TP220 26MIL 1 MCH_CFG_8 E21 CFG_8
MCH_CFG_9 C23 CFG_9
TP76 26MIL 1 MCH_CFG_10 C24 CFG_10
TP232 26MIL 1 MCH_CFG_11 N21 CFG_11
TP214 26MIL 1 MCH_CFG_12 P21 CFG_12
TP238 26MIL 1 MCH_CFG_13 T21 CFG_13
TP236 26MIL 1 MCH_CFG_14 R20 CFG_14
TP228 26MIL 1 MCH_CFG_15 M20 CFG_15
TP224 26MIL 1 MCH_CFG_16 L21 CFG_16
TP222 26MIL 1 MCH_CFG_17 H21 CFG_17
TP234 26MIL 1 MCH_CFG_18 P29 CFG_18
TP213 26MIL 1 MCH_CFG_19 R28 CFG_19
TP239 26MIL 1 MCH_CFG_20 T28 CFG_20

R449 1 NC_2.2K_J 0201
R426 1 AT_2.2K_J 0201

TP44 26MIL 1

29 PM_SYNC# R29 PM_SYNC#
4,28,47 H_DPRSTP# B7 PM_DPRSTP#
14 PM_EXTTS#0 N33 PM_EXT_TS#_0
15 PM_EXTTS#1 P32 PM_EXT_TS#_1
29,33 IMVP_PWRGD AT40 PWROK
17,27,33,34,35,37 PLT_RST# AT11 RSTIN#
THRMTRIP#_GMCH T20 THERMTRIP#
29,47 DPRSLPVR R32 DPRSLPVR

NC

TP138 26MIL 1 NC_1 BG48 NC_1
TP131 26MIL 1 NC_2 BF48 NC_2
TP130 26MIL 1 NC_3 BD48 NC_3
TP133 26MIL 1 NC_4 BC48 NC_4
TP139 26MIL 1 NC_5 BH47 NC_5
TP137 26MIL 1 NC_6 BG47 NC_6
TP257 26MIL 1 NC_7 BF47 NC_7
TP146 26MIL 1 NC_8 BH46 NC_8
TP145 26MIL 1 NC_9 BF46 NC_9
TP147 26MIL 1 NC_10 BG45 NC_10
TP152 26MIL 1 NC_11 BH44 NC_11
TP143 26MIL 1 NC_12 BH43 NC_12
TP151 26MIL 1 NC_13 BH6 NC_13
TP154 26MIL 1 NC_14 BH5 NC_14
TP153 26MIL 1 NC_15 BG4 NC_15
TP150 26MIL 1 NC_16 BH3 NC_16
TP141 26MIL 1 NC_17 BF3 NC_17
TP149 26MIL 1 NC_18 BH2 NC_18
TP148 26MIL 1 NC_19 BG2 NC_19
TP134 26MIL 1 NC_20 BE2 NC_20
TP136 26MIL 1 NC_21 BG1 NC_21
TP135 26MIL 1 NC_22 BF1 NC_22
TP127 26MIL 1 NC_23 BD1 NC_23
TP128 26MIL 1 NC_24 BC1 NC_24
TP88 26MIL 1 NC_25 F1 NC_25
TP74 26MIL 1 NC_26 A47 NC_26

CANTIGA
null

+3VRUN
RP39 10K 0302_4P2R
1 PM_EXTTS#1
2 PM_EXTTS#0

38 DDR_ALERT# R411 1 0_J 2 0402 PM_EXTTS#0
3,28,33 PM_THRMTRIP# R439 1 0_J 2 THRMTRIP#_GMCH

+1_8VSUS
R464 1K_F 0402
R465 3.01K_F 0402
R466 1K_F 0402
C557 0.01U_16V_K_B 0402
C560 0.01U_16V_K_B 0402
SM_RCOMP_VOH
C558 2.2U_10V_Y 0603_Y5V
SM_RCOMP_VOL
C561 2.2U_10V_Y 0603_Y5V

DDRDIMM_VREF
R462 0_J 0402
SMDDR_VREF
C548 0.1U_16V_M_B 0402
C552 0.1U_16V_M_B 0402

SM_PWROK R461 1 10K_F 2 0201
SM_REXT R242 1 499R_F 2 0201

R414 1 AT_0_J 2 0201 DREFCLK
R421 1 AT_0_J 2 0201 DREFSSCLK
R419 AT_0_J 2 0402 DREFCLK#
R420 AT_0_J 2 0402 DREFSSCLK#

+1_05VRUN
R459 1K_F 0402
Width =12mil
MCH_CLVREF
C525 0.1U_10V_K 0402_X5R
R458 499_F 0402

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Cantiga (DMI) 2/7	
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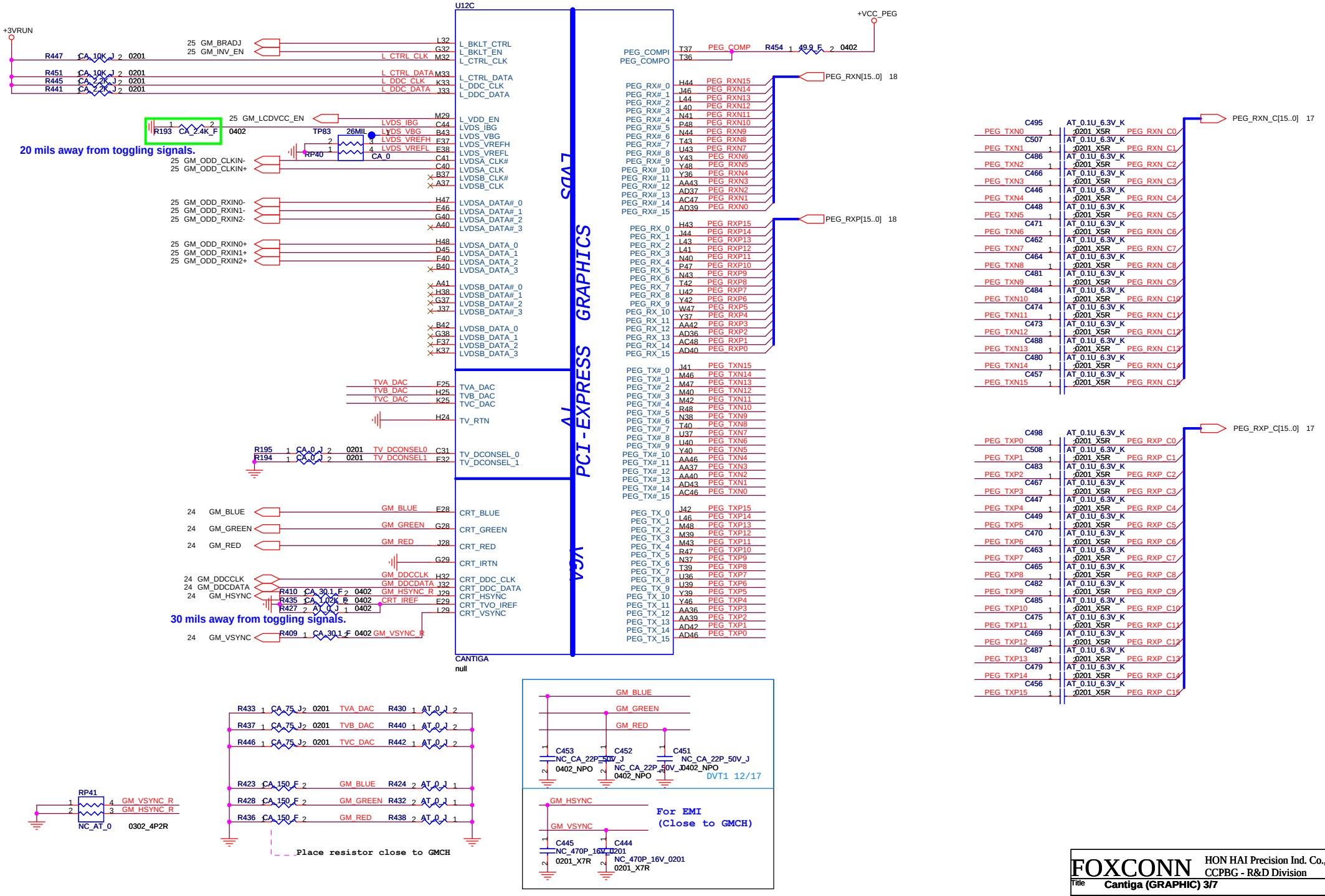

FOXCONN	HON HAI Precision Ind. Co., Ltd.
	CCPBG - R&D Division
Title	Cantiga (GRAPHIC) 3/7
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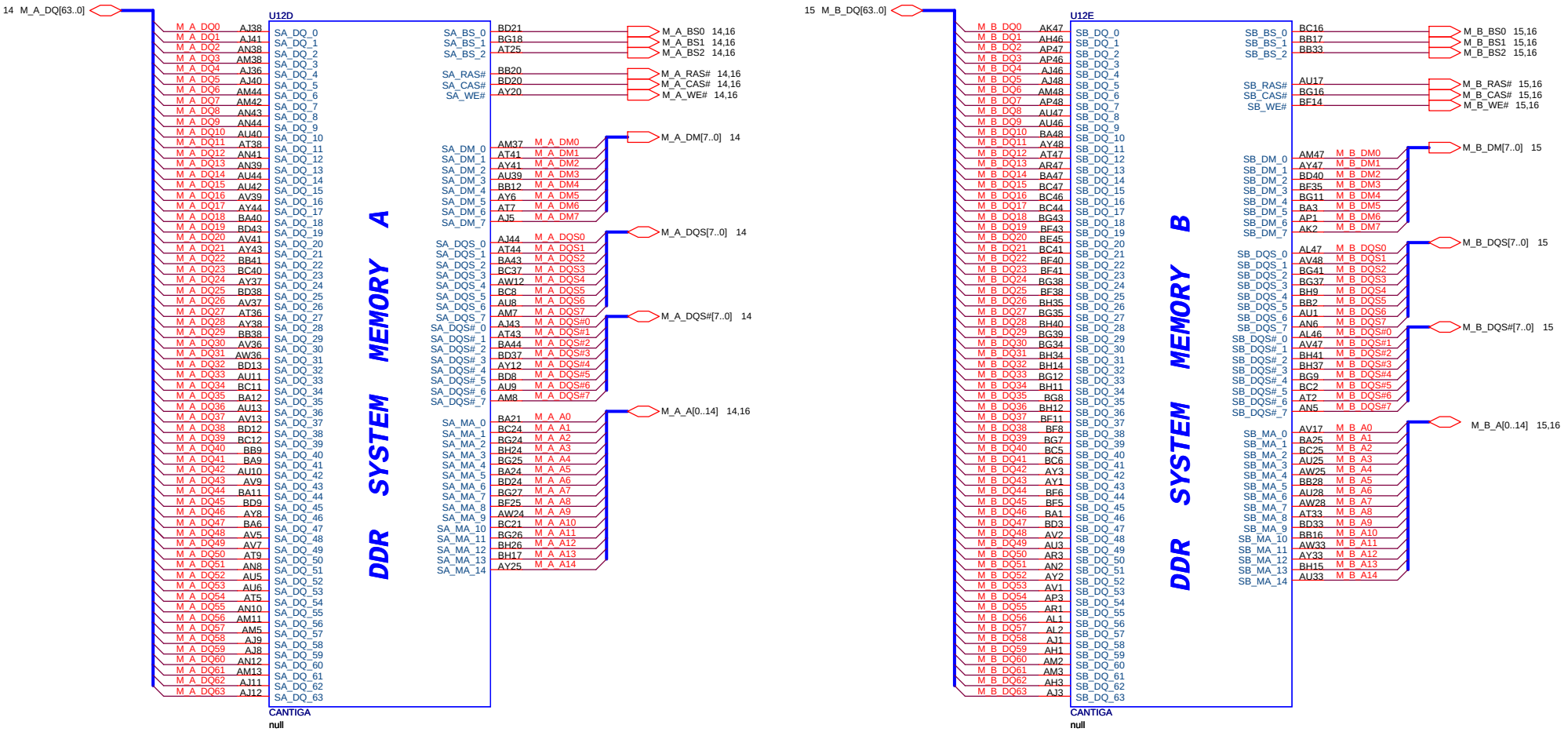

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Cantiga (DDRII) 4/7	
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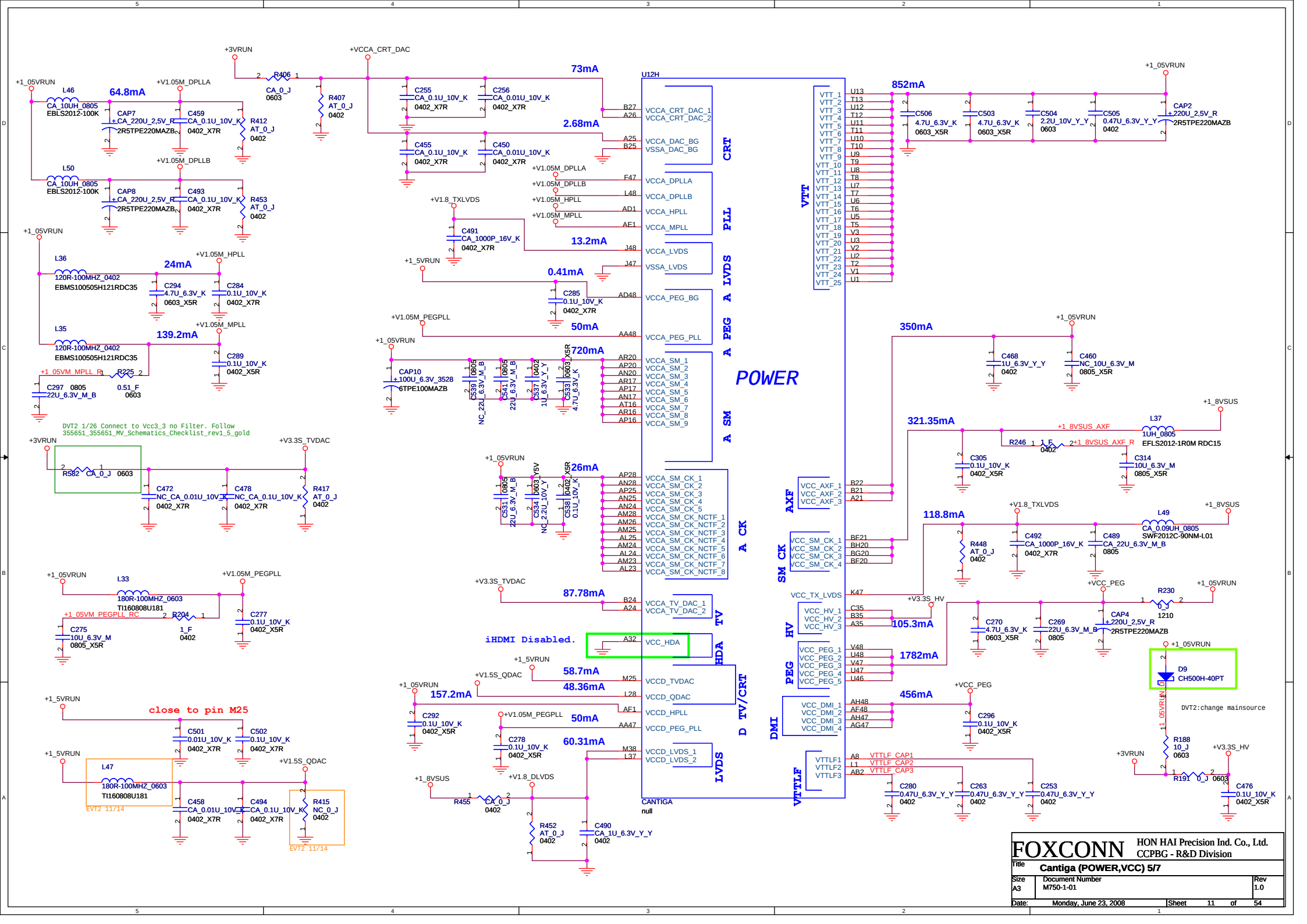
POWER
U12H
CANTIGA
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CRT
PLL
A LVDS
A PEG
A SM
A CK
TV
HDA
D TV/CRT
LVDS
VTT
AXF
SM CK
HV
PEG
DMI
VTTLF
+3VRUN
+1_05VRUN
+1_5VRUN
+1_8VSUS
+V3.3S_TVDAC
+V1.05M_DPLLA
+V1.05M_DPLLB
+V1.05M_HPLL
+V1.05M_MPLL
+V1.05M_PEGPLL
+V1.8_TXLVDS
+V1.5S_QDAC
+V1.8_DLVDS
+V3.3S_HV
+VCC_PEG
+VCCA_CRT_DAC
73mA
2.68mA
13.2mA
0.41mA
50mA
720mA
26mA
87.78mA
58.7mA
48.36mA
157.2mA
50mA
60.31mA
852mA
350mA
321.35mA
118.8mA
105.3mA
1782mA
456mA
iHDMI Disabled.
close to pin M25
DVT2 1/26 Connect to Vcc3_3 no Filter. Follow 355651_355651_MV_Schematics_Checklist_rev1_5_gold
DVT2:change mainsource
EVT2 11/14
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
Cantiga (POWER,VCC) 5/7
Size
A3
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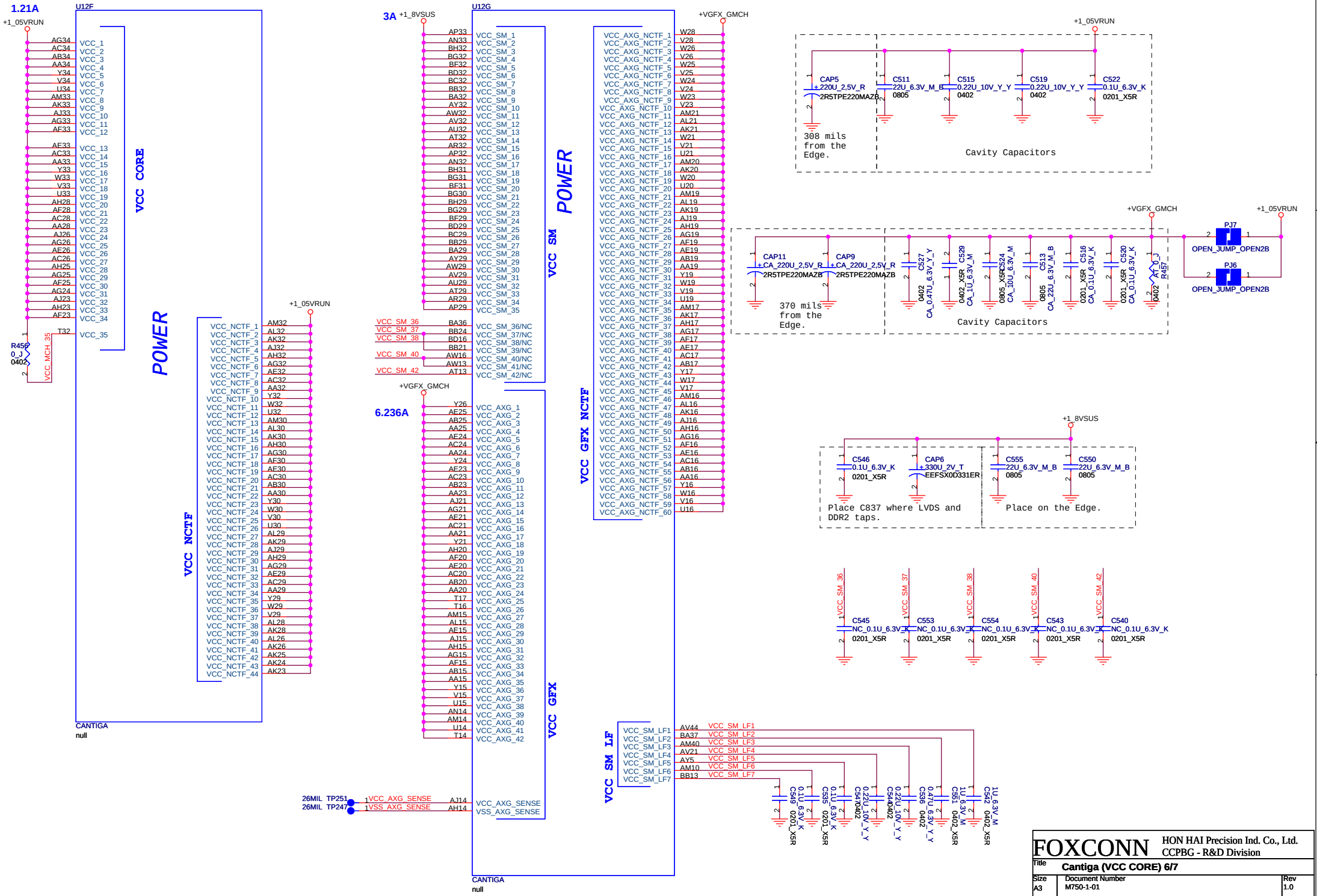

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Cantiga (VCC CORE) 6/7	
Size A3	Document Number M750-1-01	Rev 1.0
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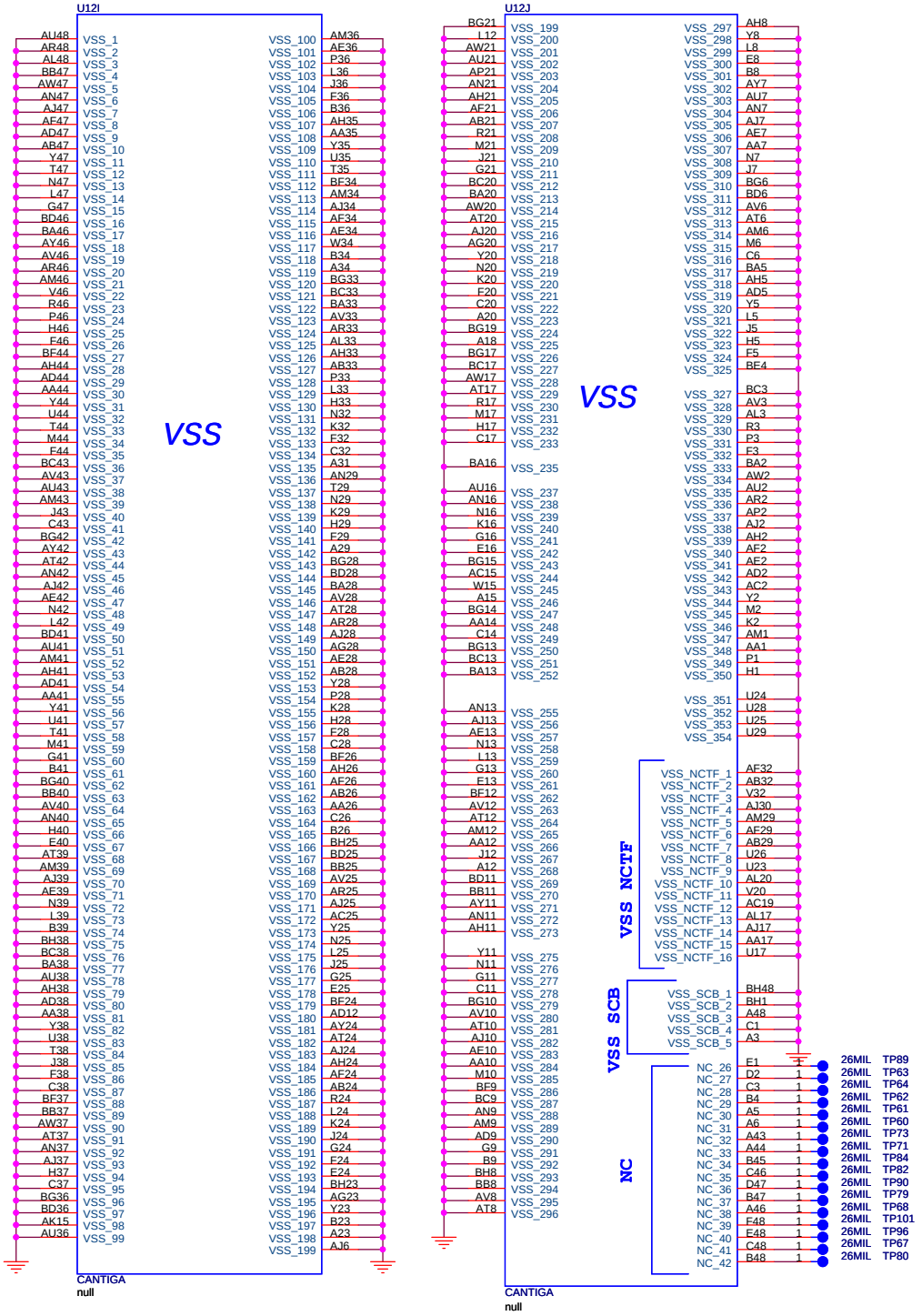

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Cantiga (VSS) 7/7	
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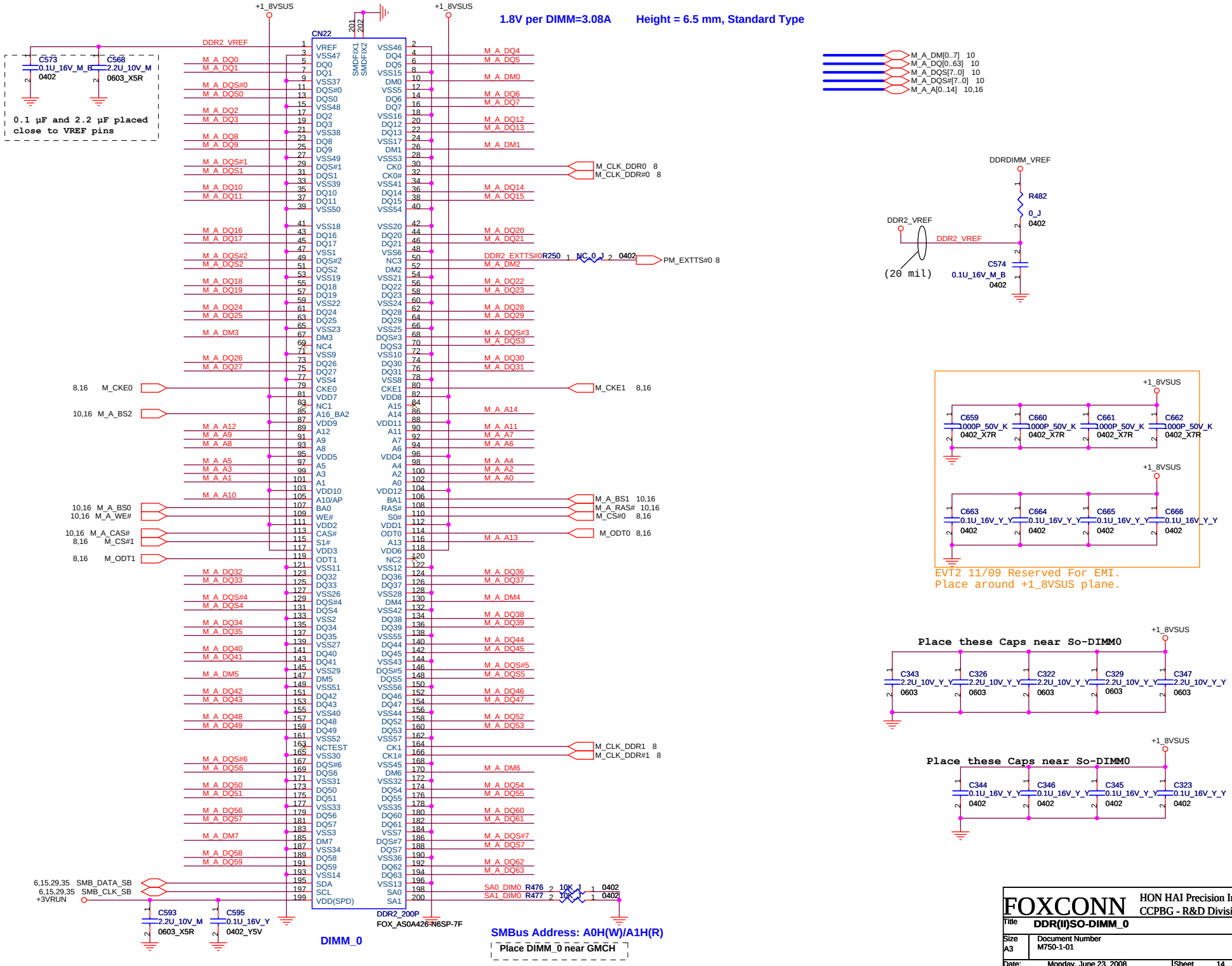

FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	DDR(II)SO-DIMM_0	
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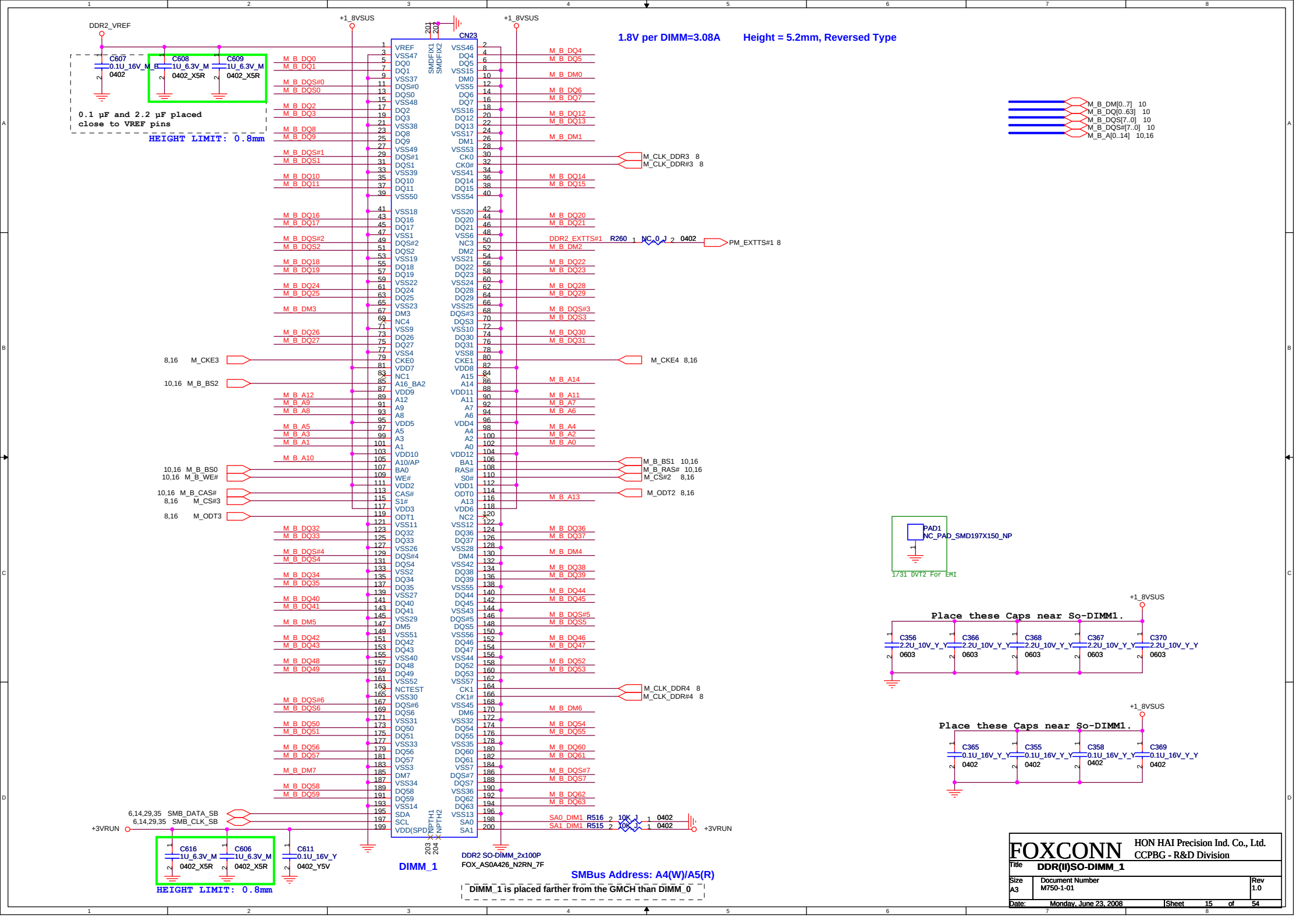
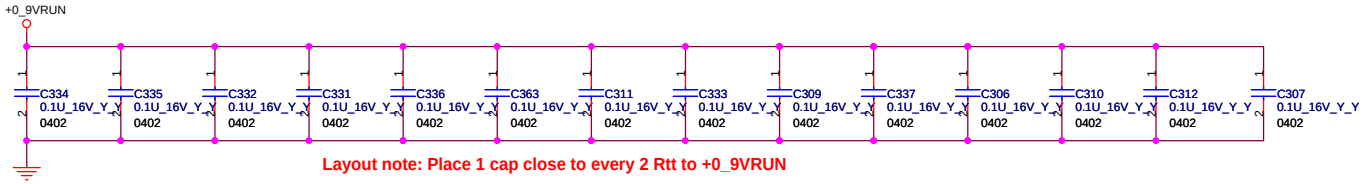
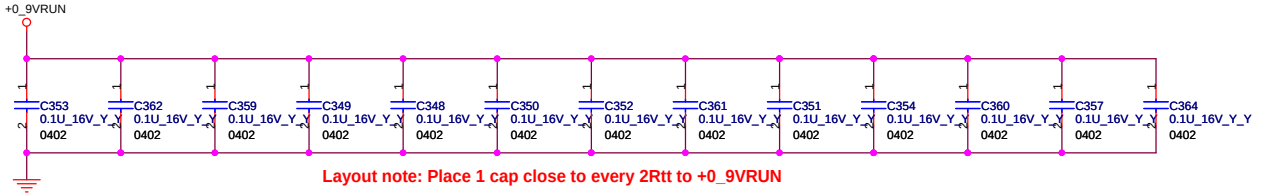

1.8V per DIMM=3.08A
Height = 5.2mm, Reversed Type
DDR2_VREF
+1_8VSUS
+3VRUN
CN23
C607 0.1U_16V_M_B 0402
C608 1U_6.3V_M 0402_X5R
C609 1U_6.3V_M 0402_X5R
0.1 µF and 2.2 µF placed close to VREF pins
HEIGHT LIMIT: 0.8mm
C616 1U_6.3V_M 0402_X5R
C606 1U_6.3V_M 0402_X5R
C611 0.1U_16V_Y 0402_Y5V
HEIGHT LIMIT: 0.8mm
DIMM_1
DDR2 SO-DIMM_2x100P
FOX_AS0A426_N2RN_7F
SMBus Address: A4(W)/A5(R)
DIMM_1 is placed farther from the GMCH than DIMM_0
M_B_DM[0..7] 10
M_B_DQ[0..63] 10
M_B_DQS[7..0] 10
M_B_DQS#[7..0] 10
M_B_A[0..14] 10,16
M_CLK_DDR3 8
M_CLK_DDR#3 8
M_CLK_DDR4 8
M_CLK_DDR#4 8
DDR2_EXTTS#1
R260 NC_0_J 0402
PM_EXTTS#1 8
M_CKE3 8,16
M_CKE4 8,16
M_B_BS2 10,16
M_B_BS0 10,16
M_B_WE# 10,16
M_B_CAS# 10,16
M_CS#3 8,16
M_ODT3 8,16
M_B_BS1 10,16
M_B_RAS# 10,16
M_CS#2 8,16
M_ODT2 8,16
SMB_DATA_SB 6,14,29,35
SMB_CLK_SB 6,14,29,35
SA0_DIM1 R516 10K_J 0402
SA1_DIM1 R515 10K_J 0402
PAD1 NC_PAD_SMD197X150_NP
1/31 DVT2 For EMI
Place these Caps near So-DIMM1.
C356 2.2U_10V_Y_Y 0603
C366 2.2U_10V_Y_Y 0603
C368 2.2U_10V_Y_Y 0603
C367 2.2U_10V_Y_Y 0603
C370 2.2U_10V_Y_Y 0603
Place these Caps near So-DIMM1.
C365 0.1U_16V_Y_Y 0402
C355 0.1U_16V_Y_Y 0402
C358 0.1U_16V_Y_Y 0402
C369 0.1U_16V_Y_Y 0402
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title DDR(II)SO-DIMM_1
Size A3
Document Number M750-1-01
Rev 1.0
Date: Monday, June 23, 2008
Sheet 15 of 54



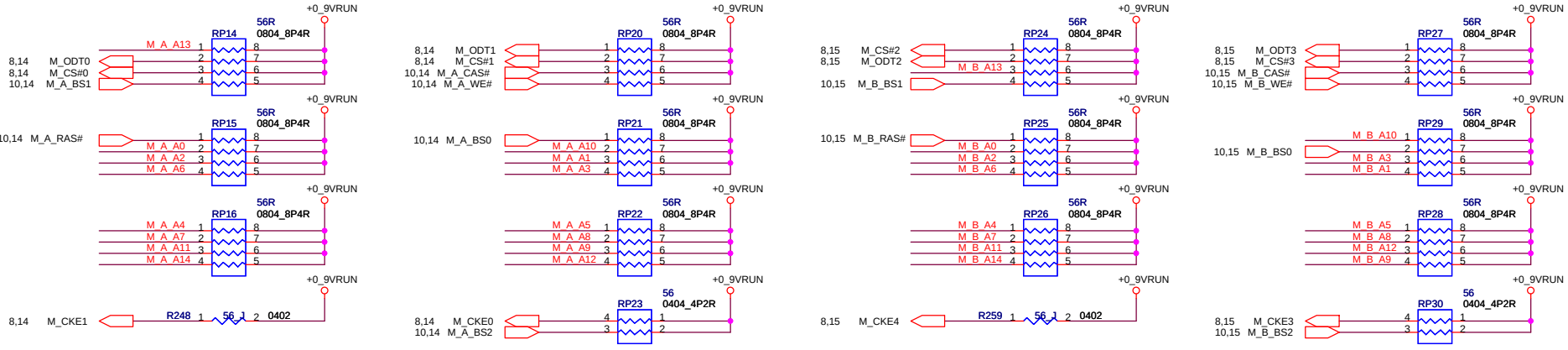
Layout note: Place 1 cap close to every 2 Rtt to +0_9VRUN



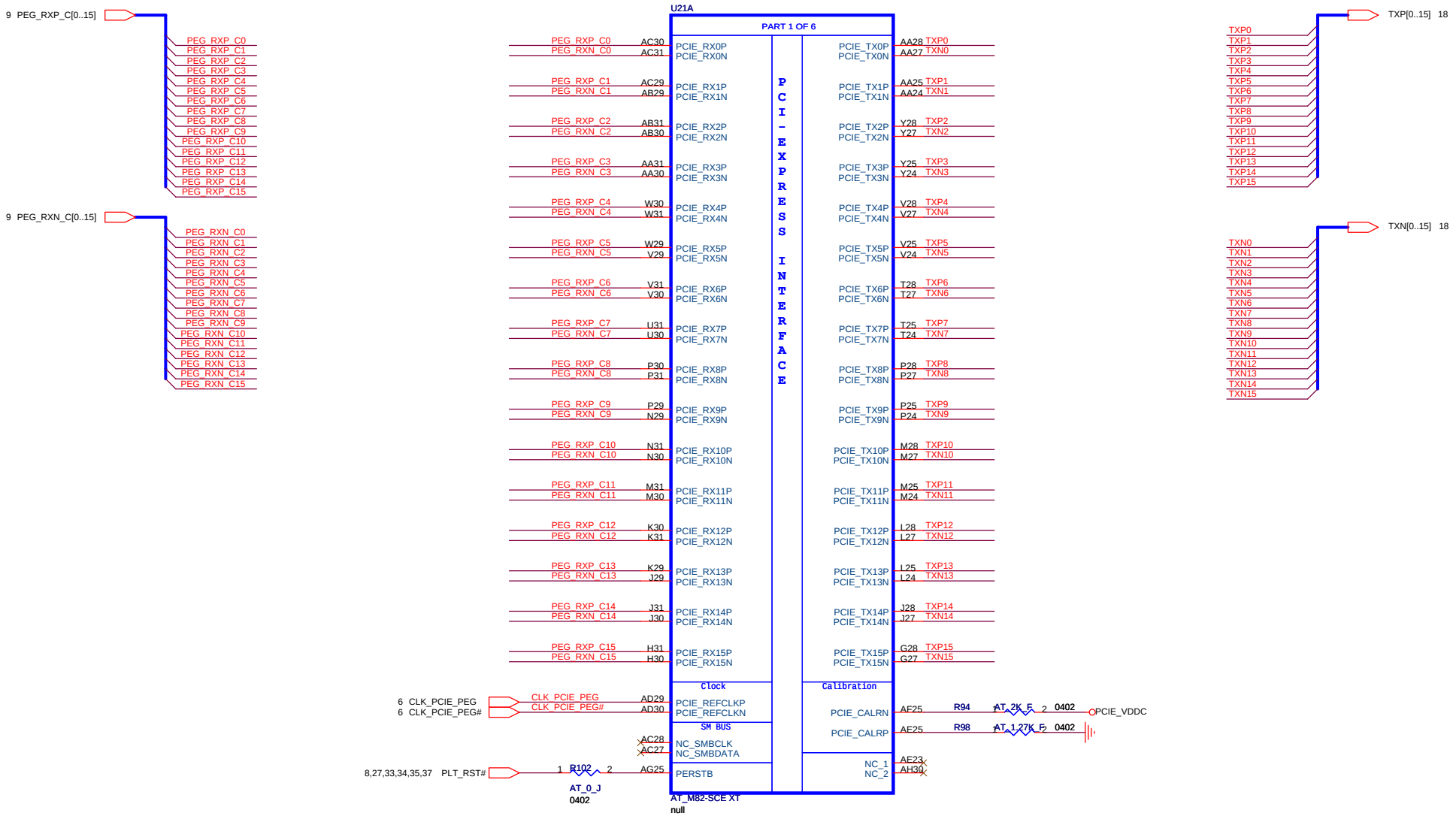
Layout note: Place 1 cap close to every 2Rtt to +0_9VRUN

10,14 M_A_A[0..14]

10,15 M_B_A[0..14]

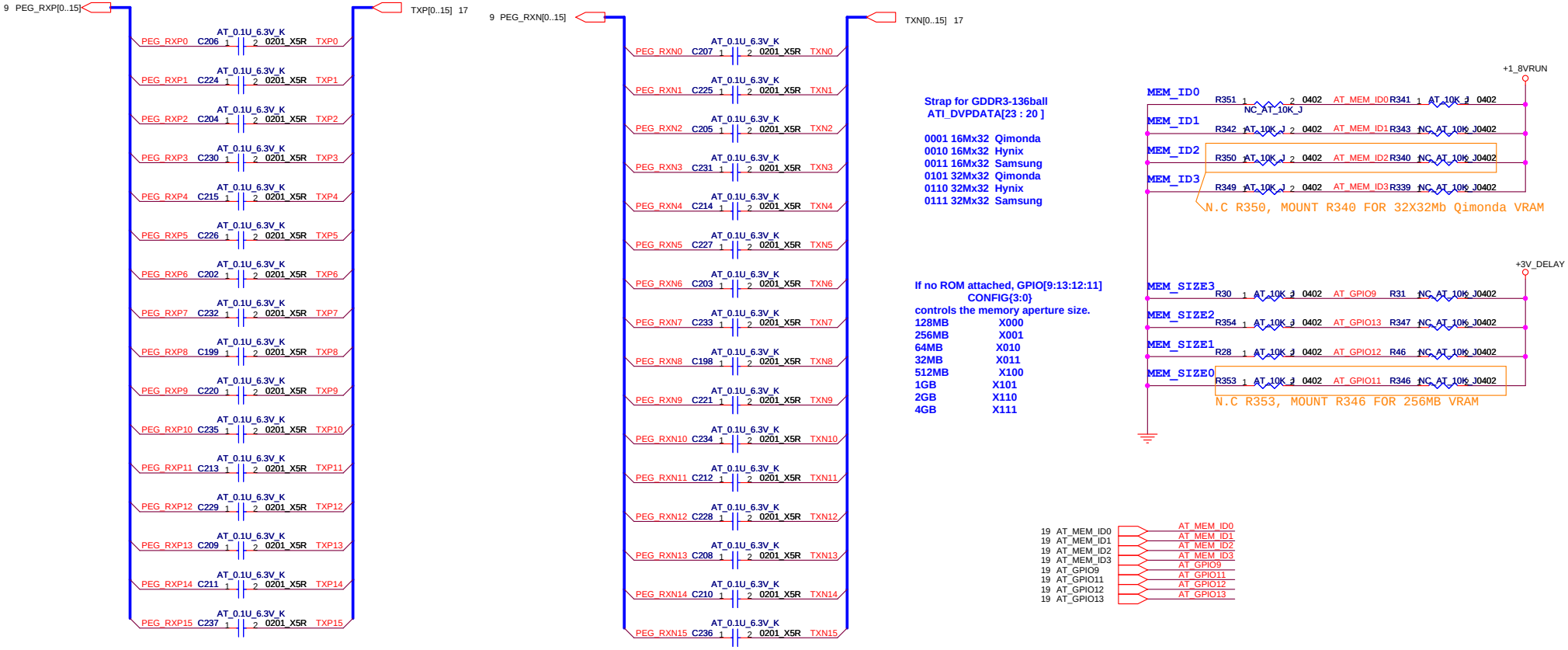


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: DDR(II)Termination		
Size: A3	Document Number: M750-1-01	Rev: 1.0
Date: Monday, June 23, 2008	Sheet 16 of 54	



FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	VGA (PCI-E) 1/5	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 17 of 54	



Strap for GDDR3-136ball
ATI_DVPDATA[23 : 20]

0001 16Mx32 Qimonda
0010 16Mx32 Hynix
0011 16Mx32 Samsung
0101 32Mx32 Qimonda
0110 32Mx32 Hynix
0111 32Mx32 Samsung

If no ROM attached, GPIO[9:13:12:11]
CONFIG{3:0}
controls the memory aperture size.

128MB	X000
256MB	X001
64MB	X010
32MB	X011
512MB	X100
1GB	X101
2GB	X110
4GB	X111

FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	VGA (STRAP) 2/5	
Size: Custom	Document Number: M750-1-01	Rev: 1.0
Date: Monday, June 23, 2008	Sheet 18 of 54	

Put AC Coupling Cap on Docking Station

DVT1 12/1 Inverse +/- polarity
(Special for AMD M8X GPU)

EVT2 11/03 Inverse +/- polarity
(Special for AMD M8X GPU)

DVT1 12/17

For EMI
(Close to GMCH)

DVT1 12/24

VGA_DIS PSYNC_NEW
(M82-S) VGA Disable determines whether or not the card will be recognized as the system's VGA controller (via the SUBCLASS field in the PCI configuration space).
0: VGA Controller capacity enabled
1: The device will not be recognized

VREFG VOLTAGE DIVIDER IS
(VREFG = VDDR4,5(1.8V) / 3 = .6V)

PVT NC R389,R393,Y3,C436,C437 for use AMD internal SS 0328

PVT NC R389,R393,Y3,C436,C437 for use AMD internal SS 0328

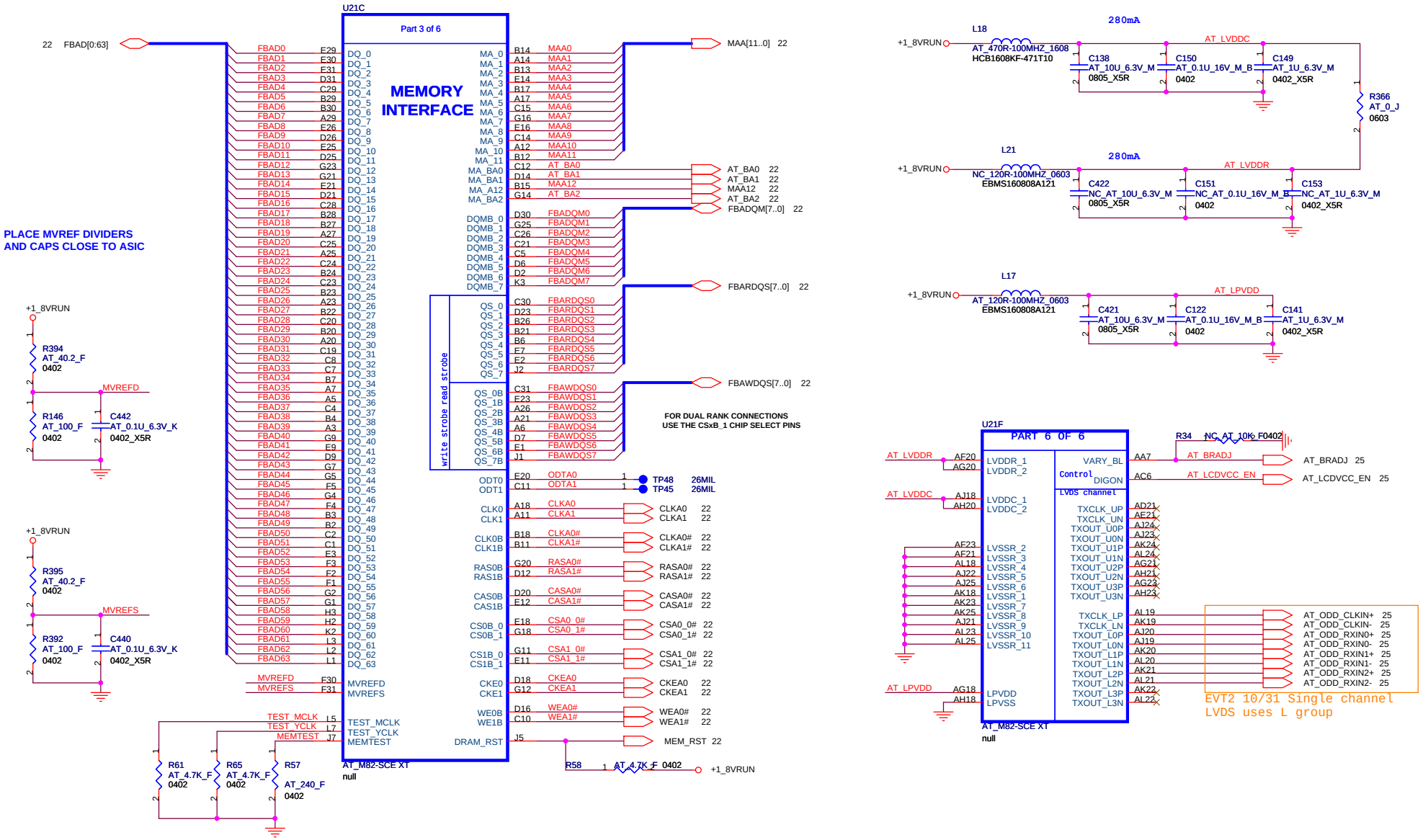
PVT NC for use AMD internal SS 0408

PVT modify R345 value to HD_ for BOM change of 256MB and 128MB
modify R378 to HD_ for BOM change of HDMI disable 0408

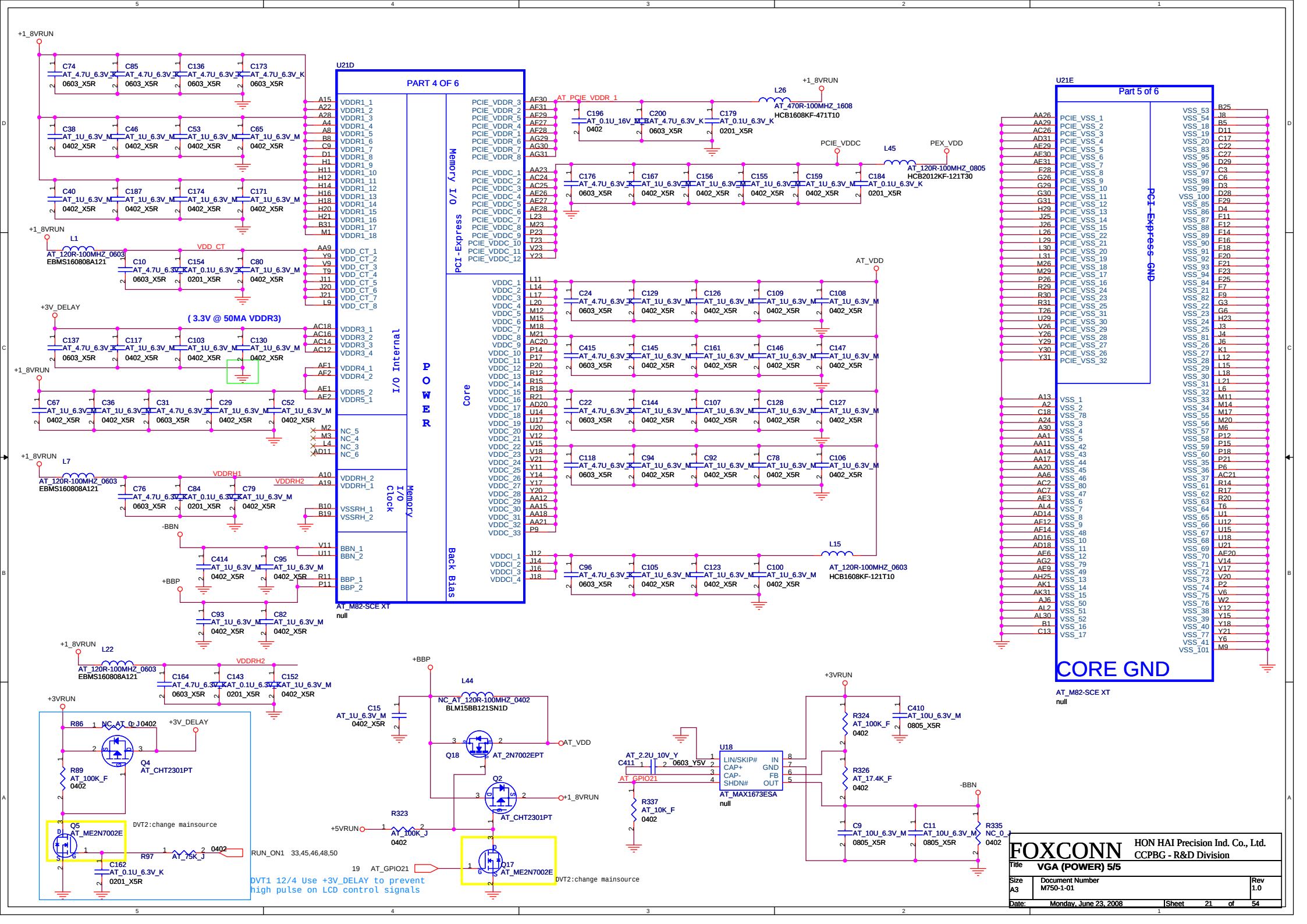
SS	SPREAD DIRECTION	Spread Percentage(%)
0	DOWN	-1.8
M	DOWN	-0.6
1	DOWN	-2.5

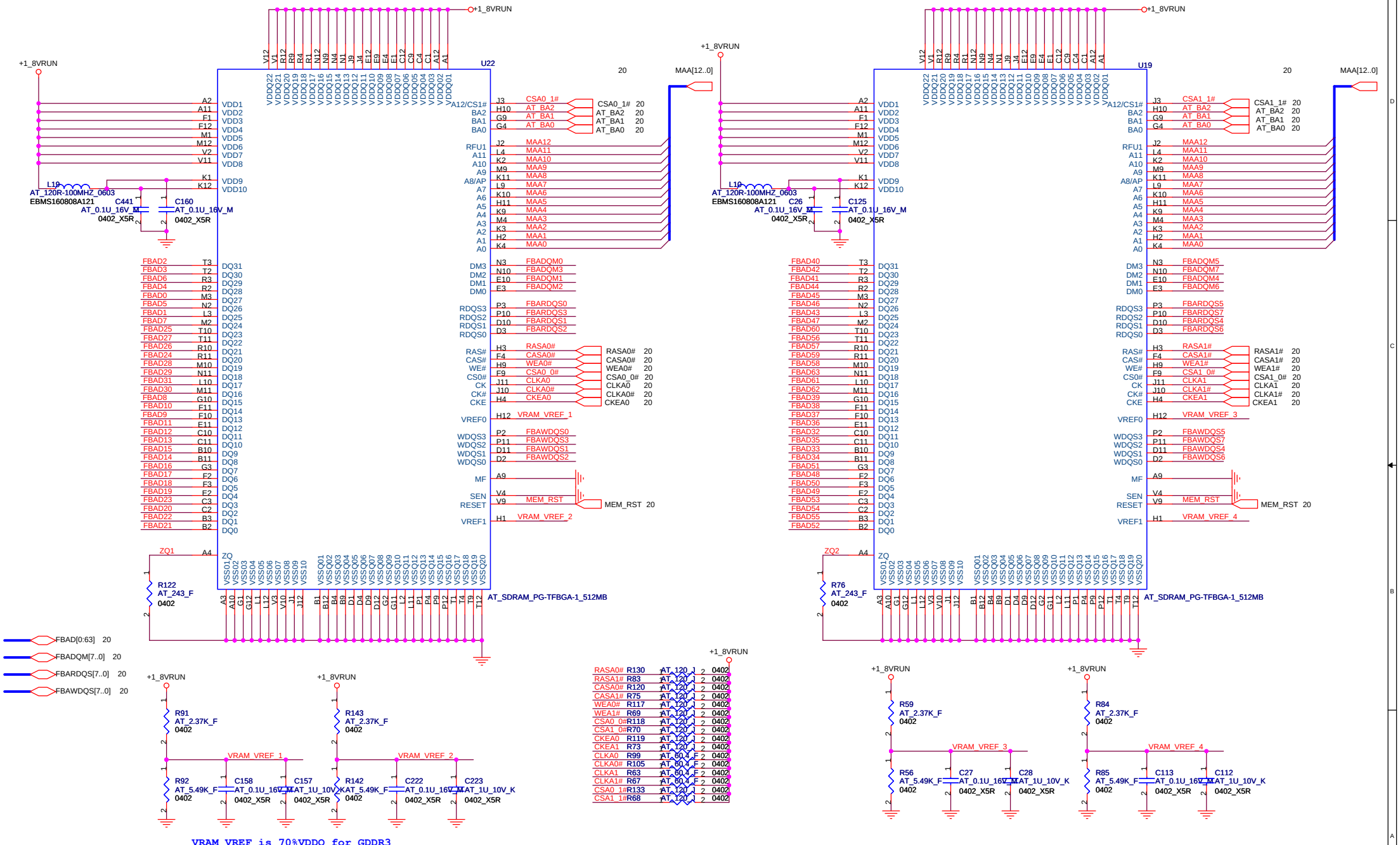
0 = connect to GND
M= unconnected
1 = connect directly to VDD

Company	FOXCONN — HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	VGA (IO) 3/5
Size / Custom	Document Number M750-1-01
Rev	1.0
Date:	Monday, June 23, 2008
Sheet	19 of 54



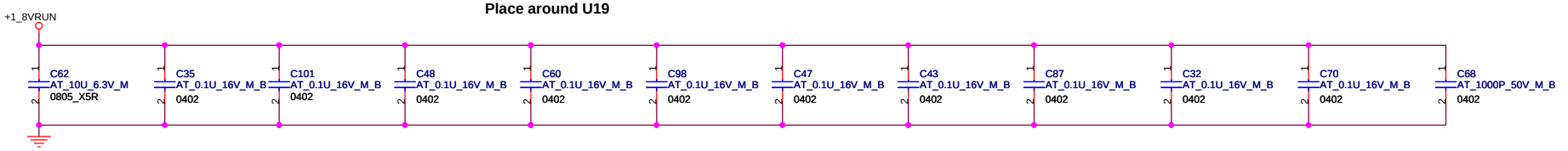
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VGA (GDDR) 4/5	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 20 of 54	

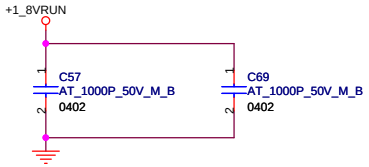

U21D
PART 4 OF 6
POWER
I/O Internal
Memory I/O
PCI-Express
Core
Back Bias
I/O Clock
AT_M82-SCE XT
null
U21E
Part 5 of 6
PCI_Express_GND
CORE GND
AT_M82-SCE XT
null
(3.3V @ 50MA VDDR3)
DVT2:change mainsource
DVT1 12/4 Use +3V_DELAY to prevent high pulse on LCD control signals
RUN_ON1 33,45,46,48,50
AT_GPIO21
AT_PCIE_VDDR_1
PCIE_VDDC
PEX_VDD
AT_VDD
VDD_CT
VDDRH1
VDDRH2
+1_8VRUN
+3V_DELAY
+3VRUN
+BBP
-BBN
+5VRUN
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title VGA (POWER) 5/5
Size A3
Document Number M750-1-01
Rev 1.0
Date: Monday, June 23, 2008
Sheet 21 of 54



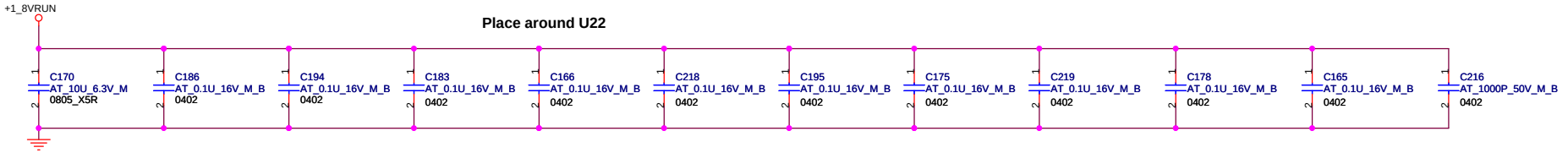
FOXCONN	HON HAI Precision Ind. Co., Ltd.
	CCPBG - R&D Division
Title	VRAM (GDDR3) 1/2
Size A3	Document Number M750-1-01
Rev	1.0
Date: Monday, June 23, 2008	Sheet 22 of 54

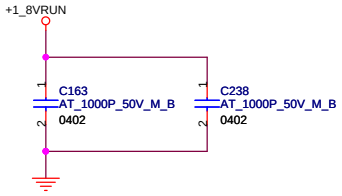
Place around U19



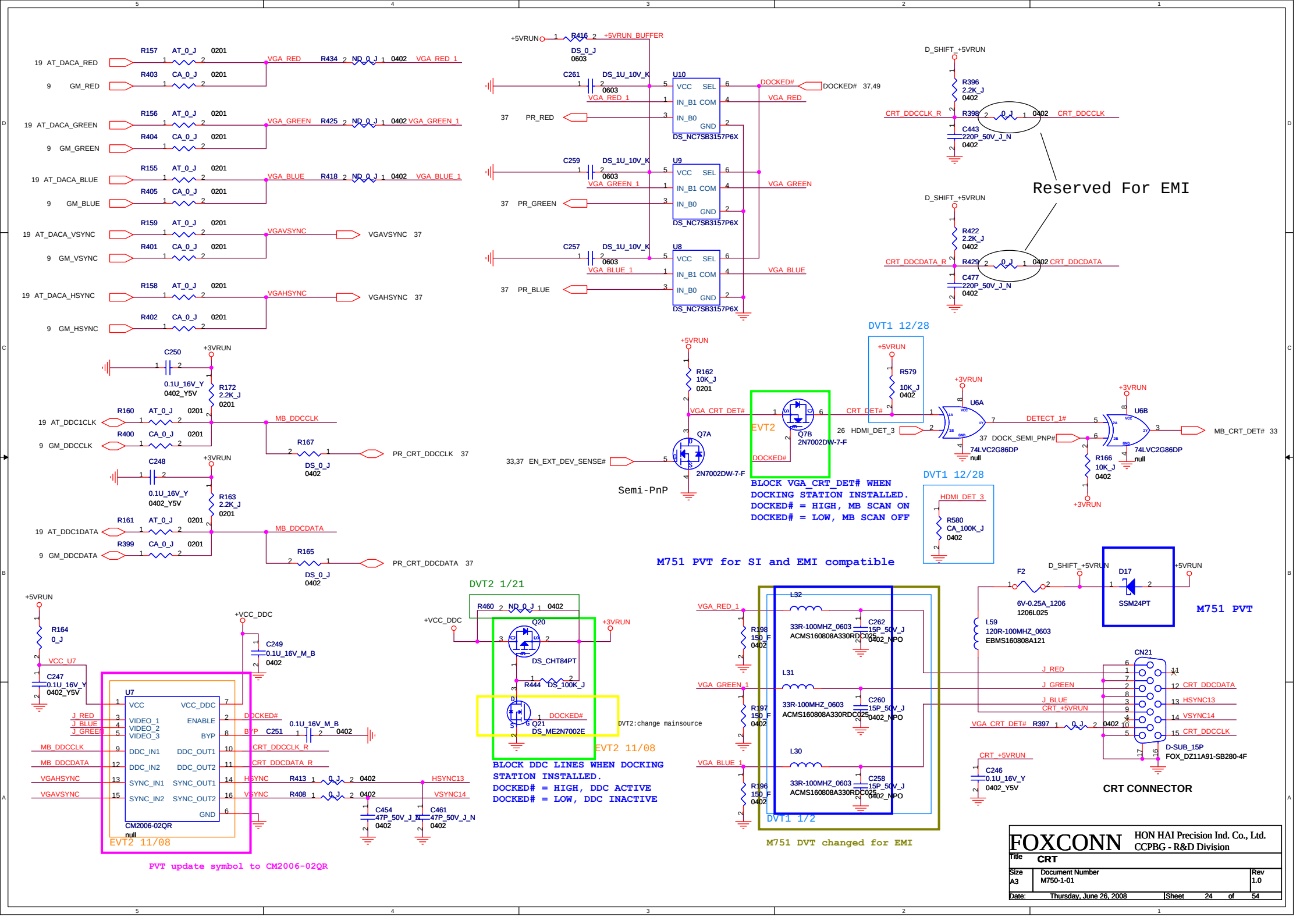


Place around U22



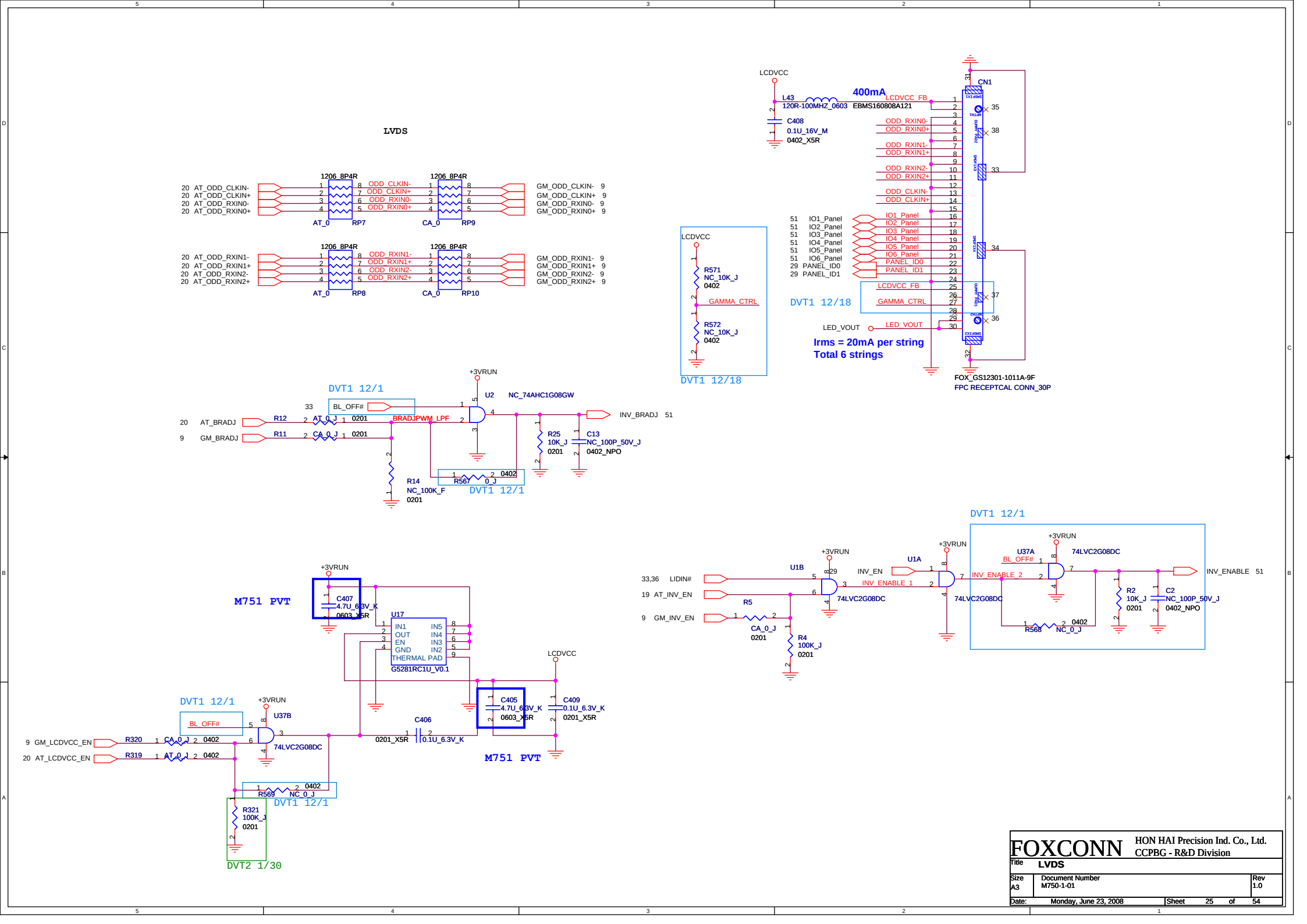


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VRAM (BYPASS) 2/2	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 23 of 54	

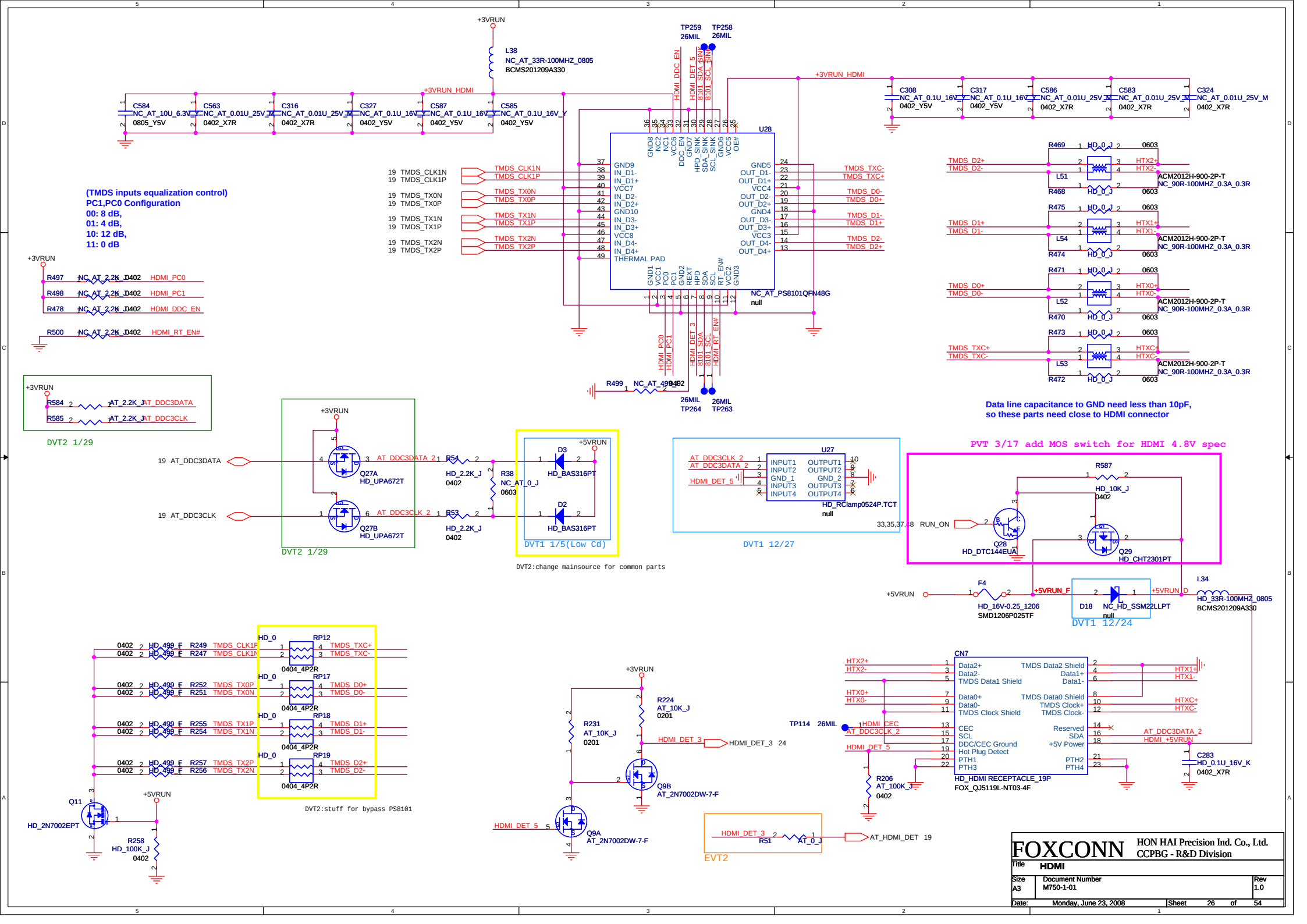


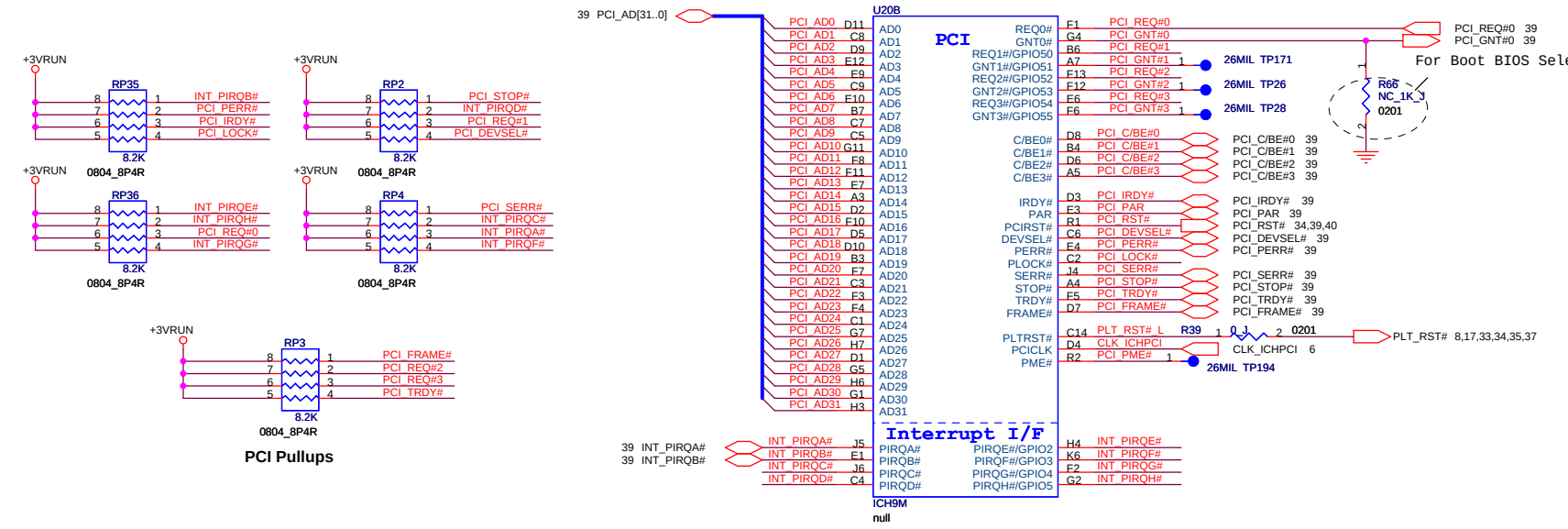
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	CRT		
Size A3	Document Number M750-1-01		Rev 1.0
Date: Thursday, June 26, 2008		Sheet 24 of 54	



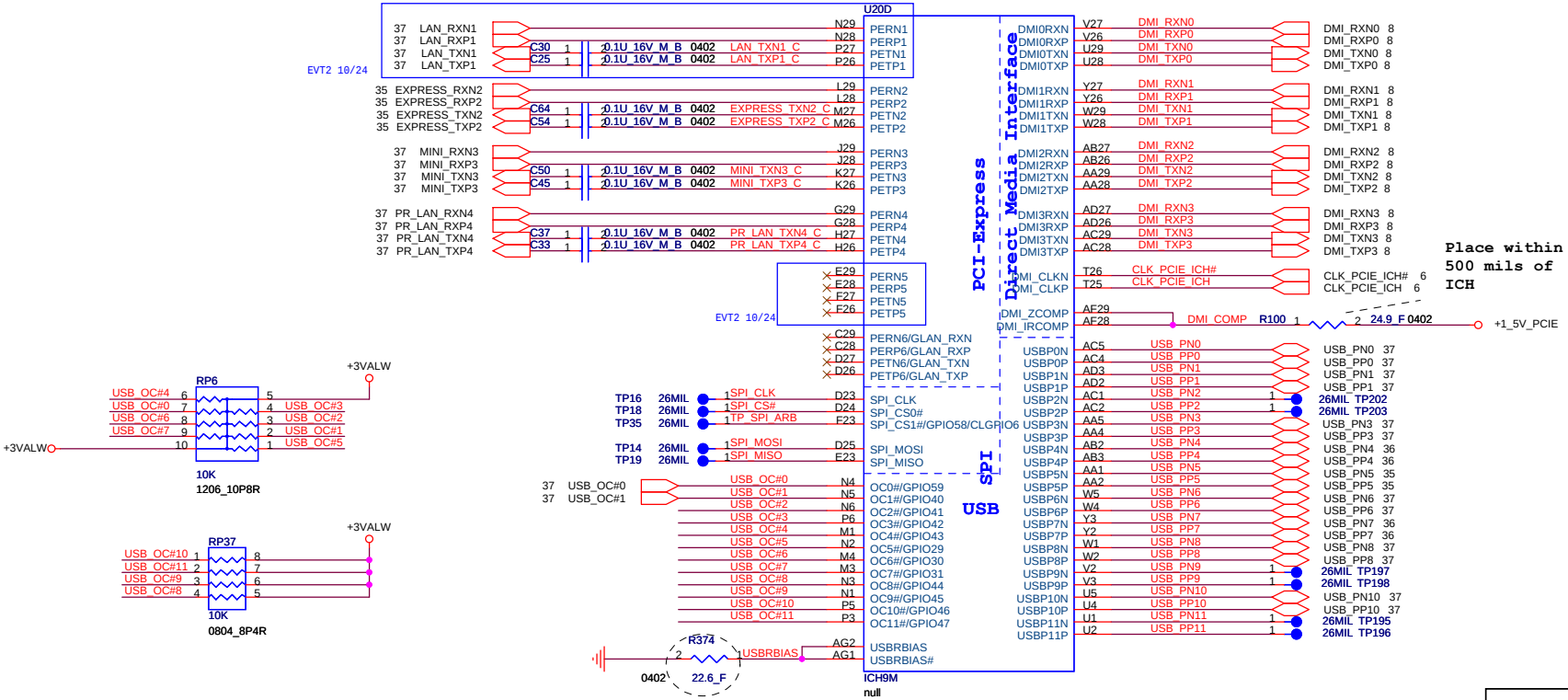
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: LVDS		
Size: A3	Document Number: M750-1-01	Rev: 1.0
Date: Monday, June 23, 2008	Sheet 25 of 54	


+3VRUN
L38
NC_AT_33R-100MHZ_0805
BCMS201209A330
TP259 26MIL
TP258 26MIL
+3VRUN_HDMI
C584 NC_AT_10U_6.3V_Y 0805_Y5V
C563 NC_AT_0.01U_25V_M 0402_X7R
C316 NC_AT_0.01U_25V_M 0402_X7R
C327 NC_AT_0.1U_16V_Y 0402_Y5V
C587 NC_AT_0.1U_16V_Y 0402_Y5V
C585 NC_AT_0.1U_16V_Y 0402_Y5V
C308 NC_AT_0.1U_16V_Y 0402_Y5V
C317 NC_AT_0.1U_16V_Y 0402_Y5V
C586 NC_AT_0.01U_25V_M 0402_X7R
C583 NC_AT_0.01U_25V_M 0402_X7R
C324 NC_AT_0.01U_25V_M 0402_X7R
U28
GND9 IN_D1- IN_D1+ VCC7 IN_D2- IN_D2+ GND10 IN_D3- IN_D3+ VCC8 IN_D4- IN_D4+ THERMAL PAD
GND5 OUT_D1- OUT_D1+ VCC4 OUT_D2- OUT_D2+ GND4 OUT_D3- OUT_D3+ VCC3 OUT_D4- OUT_D4+
GND8 NC2 NC1 VCC6 DDC_EN GND7 HPD_SINK SDA_SINK SCL_SINK GND6 VCC5 OE#
GND1 VCC1 PC0 PC1 GND2 REXT HPD SDA SCL RT_EN# VCC2 GND3
NC_AT_PS8101QFN48G
null
19 TMDS_CLK1N
19 TMDS_CLK1P
19 TMDS_TX0N
19 TMDS_TX0P
19 TMDS_TX1N
19 TMDS_TX1P
19 TMDS_TX2N
19 TMDS_TX2P
TMDS_CLK1N
TMDS_CLK1P
TMDS_TX0N
TMDS_TX0P
TMDS_TX1N
TMDS_TX1P
TMDS_TX2N
TMDS_TX2P
TMDS_TXC-
TMDS_TXC+
TMDS_D0-
TMDS_D0+
TMDS_D1-
TMDS_D1+
TMDS_D2-
TMDS_D2+
HDMI_DDC_EN
HDMI_DET_5
HDMI_PC0
HDMI_PC1
HDMI_RT_EN#
R469 HD_0_J 0603
R468 HD_0_J 0603
R475 HD_0_J 0603
R474 HD_0_J 0603
R471 HD_0_J 0603
R470 HD_0_J 0603
R473 HD_0_J 0603
R472 HD_0_J 0603
L51
L54
L52
L53
HTX2+
HTX2-
HTX1+
HTX1-
HTX0+
HTX0-
HTXC+
HTXC-
ACM2012H-900-2P-T
NC_90R-100MHZ_0.3A_0.3R
(TMDS inputs equalization control)
PC1,PC0 Configuration
00: 8 dB,
01: 4 dB,
10: 12 dB,
11: 0 dB
R497 NC_AT_2.2K_J 0402 HDMI_PC0
R498 NC_AT_2.2K_J 0402 HDMI_PC1
R478 NC_AT_2.2K_J 0402 HDMI_DDC_EN
R500 NC_AT_2.2K_J 0402 HDMI_RT_EN#
R499 NC_AT_4.99K_F 0402
26MIL TP264
26MIL TP263
Data line capacitance to GND need less than 10pF,
so these parts need close to HDMI connector
R584 AT_2.2K_J AT_DDC3DATA
R585 AT_2.2K_J AT_DDC3CLK
DVT2 1/29
19 AT_DDC3DATA
19 AT_DDC3CLK
Q27A HD_UPA672T
Q27B HD_UPA672T
AT_DDC3DATA_2
AT_DDC3CLK_2
R54 HD_2.2K_J 0402
R53 HD_2.2K_J 0402
R38 NC_AT_0_J 0603
D3 HD_BAS316PT
D2 HD_BAS316PT
+5VRUN
DVT1 1/5(Low Cd)
DVT2:change mainsource for common parts
U27
INPUT1 INPUT2 GND_1 INPUT3 INPUT4
OUTPUT1 OUTPUT2 GND_2 OUTPUT3 OUTPUT4
HD_RClamp0524P.TCT
null
AT_DDC3CLK_2
AT_DDC3DATA_2
HDMI_DET_5
33,35,37,38 RUN_ON
DVT1 12/27
PVT 3/17 add MOS switch for HDMI 4.8V spec
R587 HD_10K_J 0402
Q28 HD_DTC144EUA
Q29 HD_CHT2301PT
F4 HD_16V-0.25_1206 SMD1206P025TF
+5VRUN_F
D18 NC_HD_SSM22LLPT null
+5VRUN_D
L34 HD_33R-100MHZ_0805 BCMS201209A330
DVT1 12/24
R249 R247 R252 R251 R255 R254 R257 R256
TMDS_CLK1P TMDS_CLK1N TMDS_TX0P TMDS_TX0N TMDS_TX1P TMDS_TX1N TMDS_TX2P TMDS_TX2N
RP12 RP17 RP18 RP19
HD_0
0404_4P2R
DVT2:stuff for bypass PS8101
Q11 HD_2N7002EPT
R258 HD_100K_J 0402
+5VRUN
R224 AT_10K_J 0201
R231 AT_10K_J 0201
Q9B AT_2N7002DW-7-F
Q9A AT_2N7002DW-7-F
HDMI_DET_3
HDMI_DET_3 24
TP114 26MIL
R206 AT_100K_J 0402
R51 AT_0_J
AT_HDMI_DET 19
EVT2
CN7
Data2+ Data2- TMDS Data1 Shield Data0+ Data0- TMDS Clock Shield CEC SCL DDC/CEC Ground Hot Plug Detect PTH1 PTH3
TMDS Data2 Shield Data1+ Data1- TMDS Data0 Shield TMDS Clock+ TMDS Clock- Reserved SDA +5V Power PTH2 PTH4
HD_HDMI RECEPTACLE_19P
FOX_QJ5119L-NT03-4F
HDMI_CEC
HDMI_+5VRUN
C283 HD_0.1U_16V_K 0402_X7R
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title HDMI
Size A3
Document Number M750-1-01
Rev 1.0
Date: Monday, June 23, 2008
Sheet 26 of 54



Strap for Boot-BIOS

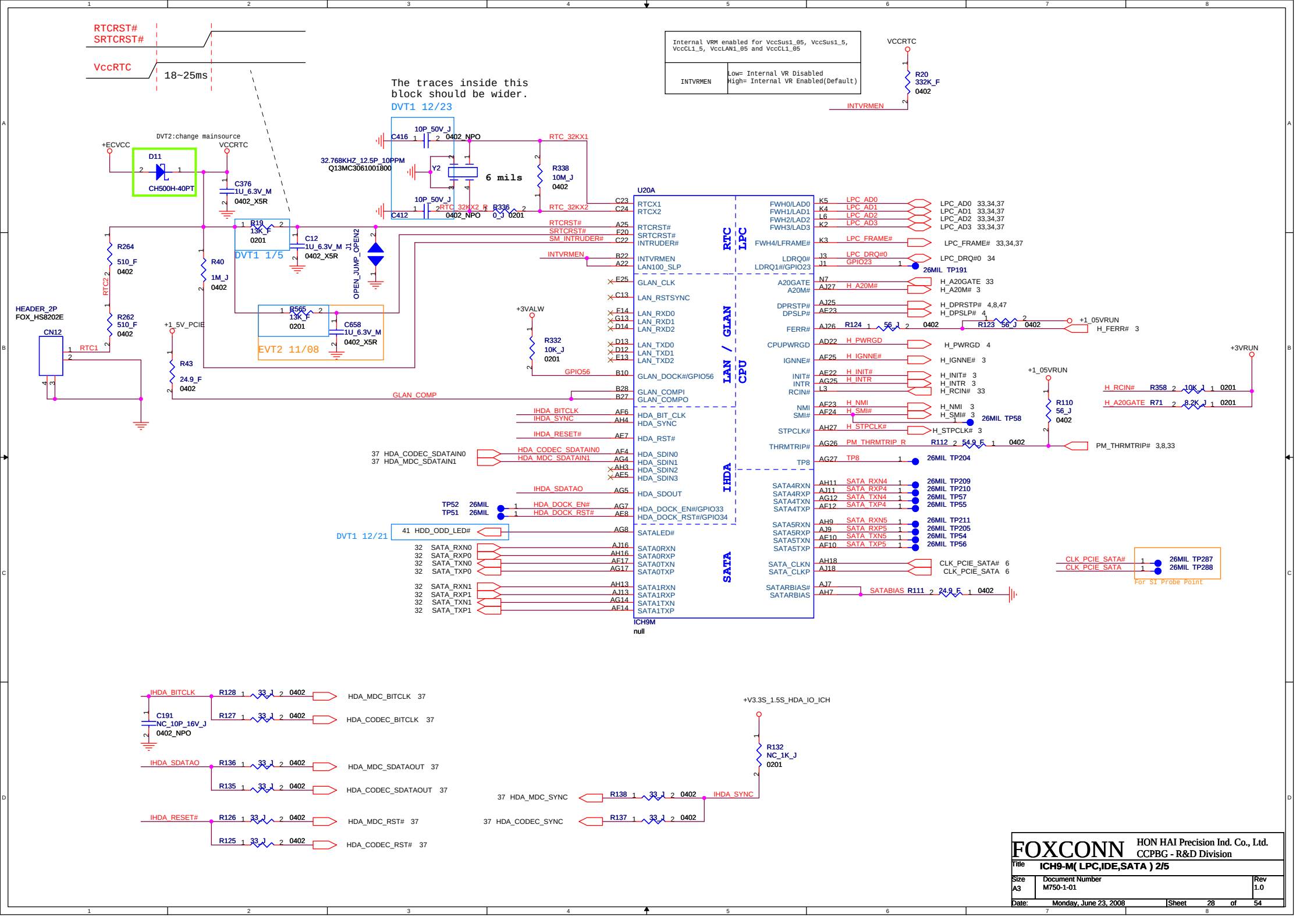
	GNT0#	SPI_CS1#
LPC(Default)	Hi	Hi
PCI	Hi	LOW
SPI	LOW	Hi



USB PORT	Function
PORT-0	SIDE-1
PORT-1	SIDE-2
PORT-2	x
PORT-3	Docking Hub
PORT-4	Bluetooth
PORT-5	ExpressCard
PORT-6	FingerPrint
PORT-7	Camera
PORT-8	Felica
PORT-9	x
PORT-10	Wimax
PORT-11	x

FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	ICH9-M(PCI/DMI/USB/PCIE) 1/5	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 27 of 54	


RTCRST#
SRTCRST#
VccRTC
18~25ms
The traces inside this block should be wider.
DVT1 12/23
Internal VRM enabled for VccSus1_05, VccSus1_5, VccCL1_5, VccLAN1_05 and VccCL1_05
INTVRMEN
Low= Internal VR Disabled
High= Internal VR Enabled(Default)
VCCRTC
R20
332K_F
0402
INTVRMEN
DVT2:change mainsource
+ECVCC
VCCRTC
D11
CH500H-40PT
C376
1U_6.3V_M
0402_X5R
C416
10P_50V_J
0402_NPO
32.768KHZ_12.5P_10PPM
Q13MC3061001800
Y2
6 mils
C412
10P_50V_J
0402_NPO
RTC_32KX1
RTC_32KX2_R
R336
0_J
0201
RTC_32KX2
R338
10M_J
0402
R19
13K_F
0201
C12
1U_6.3V_M
0402_X5R
DVT1 1/5
J1
OPEN_JUMP_OPEN2
R264
510_F
0402
R40
1M_J
0402
RTC2
R262
510_F
0402
HEADER_2P
FOX_HS8202E
CN12
RTC1
+1_5V_PCIE
R43
24.9_F
0402
R565
13K_F
0201
C658
1U_6.3V_M
0402_X5R
EVT2 11/08
+3VALW
R332
10K_J
0201
GPIO56
GLAN_COMP
U20A
RTCX1
RTCX2
RTCRST#
SRTCRST#
INTRUDER#
INTVRMEN
LAN100_SLP
GLAN_CLK
LAN_RSTSYNC
LAN_RXD0
LAN_RXD1
LAN_RXD2
LAN_TXD0
LAN_TXD1
LAN_TXD2
GLAN_DOCK#/GPIO56
GLAN_COMPI
GLAN_COMPO
HDA_BIT_CLK
HDA_SYNC
HDA_RST#
HDA_SDIN0
HDA_SDIN1
HDA_SDIN2
HDA_SDIN3
HDA_SDOUT
HDA_DOCK_EN#/GPIO33
HDA_DOCK_RST#/GPIO34
SATALED#
SATA0RXN
SATA0RXP
SATA0TXN
SATA0TXP
SATA1RXN
SATA1RXP
SATA1TXN
SATA1TXP
RTC
LPC
LAN / GLAN
CPU
IHDA
SATA
ICH9M
null
FWH0/LAD0
FWH1/LAD1
FWH2/LAD2
FWH3/LAD3
FWH4/LFRAME#
LDRQ0#
LDRQ1#/GPIO23
A20GATE
A20M#
DPRSTP#
DPSLP#
FERR#
CPUPWRGD
IGNNE#
INIT#
INTR
RCIN#
NMI
SMI#
STPCLK#
THRMTRIP#
TP8
SATA4RXN
SATA4RXP
SATA4TXN
SATA4TXP
SATA5RXN
SATA5RXP
SATA5TXN
SATA5TXP
SATA_CLKN
SATA_CLKP
SATARBIAS#
SATARBIAS
LPC_AD0 33,34,37
LPC_AD1 33,34,37
LPC_AD2 33,34,37
LPC_AD3 33,34,37
LPC_FRAME# 33,34,37
LPC_DRQ#0 34
26MIL TP191
H_A20GATE 33
H_A20M# 3
H_DPRSTP# 4,8,47
H_DPSLP# 4
R124 56_J 0402
R123 56_J 0402
+1_05VRUN
H_FERR# 3
H_PWRGD 4
H_IGNNE# 3
H_INIT# 3
H_INTR 3
H_RCIN# 33
H_NMI 3
H_SMI# 3
26MIL TP58
H_STPCLK# 3
PM_THRMTRIP_R
R112 54.9_F 0402
PM_THRMTRIP# 3,8,33
TP8
26MIL TP204
SATA_RXN4
SATA_RXP4
SATA_TXN4
SATA_TXP4
26MIL TP209
26MIL TP210
26MIL TP57
26MIL TP55
SATA_RXN5
SATA_RXP5
SATA_TXN5
SATA_TXP5
26MIL TP211
26MIL TP205
26MIL TP54
26MIL TP56
CLK_PCIE_SATA# 6
CLK_PCIE_SATA 6
SATABIAS
R111 24.9_F 0402
R110
56_J
0402
+3VRUN
H_RCIN#
R358 10K_J 0201
H_A20GATE
R71 8.2K_J 0201
CLK_PCIE_SATA#
CLK_PCIE_SATA
26MIL TP287
26MIL TP288
For SI Probe Point
IHDA_BITCLK
IHDA_SYNC
IHDA_RESET#
IHDA_SDATAO
HDA_DOCK_EN#
HDA_DOCK_RST#
41 HDD_ODD_LED#
DVT1 12/21
TP52 26MIL
TP51 26MIL
37 HDA_CODEC_SDATAIN0
37 HDA_MDC_SDATAIN1
HDA_CODEC_SDATAIN0
HDA_MDC_SDATAIN1
32 SATA_RXN0
32 SATA_RXP0
32 SATA_TXN0
32 SATA_TXP0
32 SATA_RXN1
32 SATA_RXP1
32 SATA_TXN1
32 SATA_TXP1
IHDA_BITCLK
R128 33_J 0402
HDA_MDC_BITCLK 37
C191
NC_10P_16V_J
0402_NPO
R127 33_J 0402
HDA_CODEC_BITCLK 37
IHDA_SDATAO
R136 33_J 0402
HDA_MDC_SDATAOUT 37
R135 33_J 0402
HDA_CODEC_SDATAOUT 37
IHDA_RESET#
R126 33_J 0402
HDA_MDC_RST# 37
R125 33_J 0402
HDA_CODEC_RST# 37
+V3.3S_1.5S_HDA_IO_ICH
R132
NC_1K_J
0201
37 HDA_MDC_SYNC
R138 33_J 0402
IHDA_SYNC
37 HDA_CODEC_SYNC
R137 33_J 0402
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
ICH9-M(LPC,IDE,SATA) 2/5
Size
A3
Document Number
M750-1-01
Rev
1.0
Date:
Monday, June 23, 2008
Sheet
28
of
54

Stuff for No-reboot
Low=Default
High=No-reboot

SYSTEM ID0-3

SW1: DISPLAY OUTOUT SELECTION
(FOR DEBUG ONLY)

DISPLAY_SEL	
0	CRT
1	LVDS

Dock Support Selection

	Dock Support
0	Not Support
1	Support

12/27 DVT1

For SI Probe Point

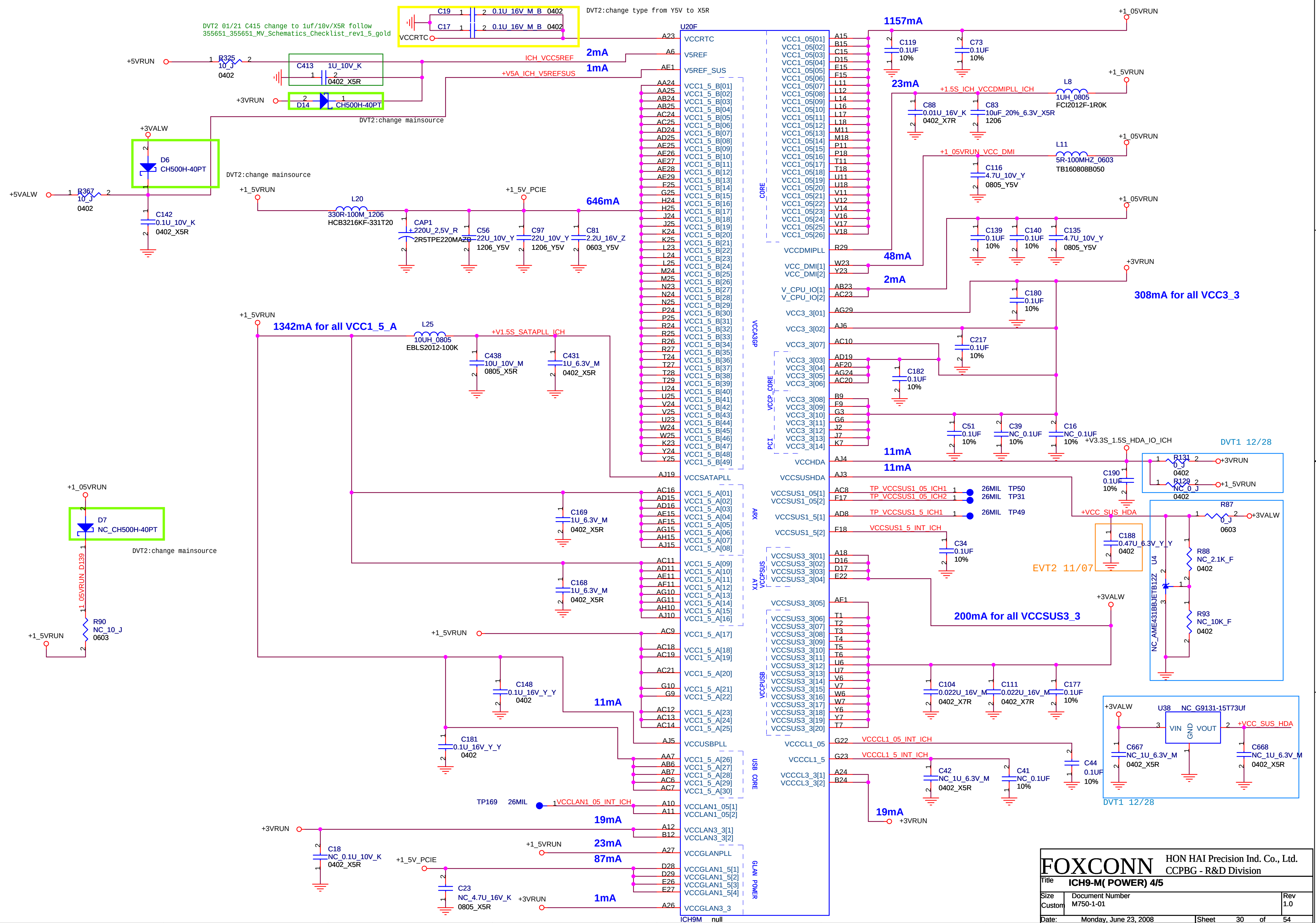
1/29 DVT2

ID_LPC_PCI#
80 Port I/F:
H: LPC bus
L: PCI bus

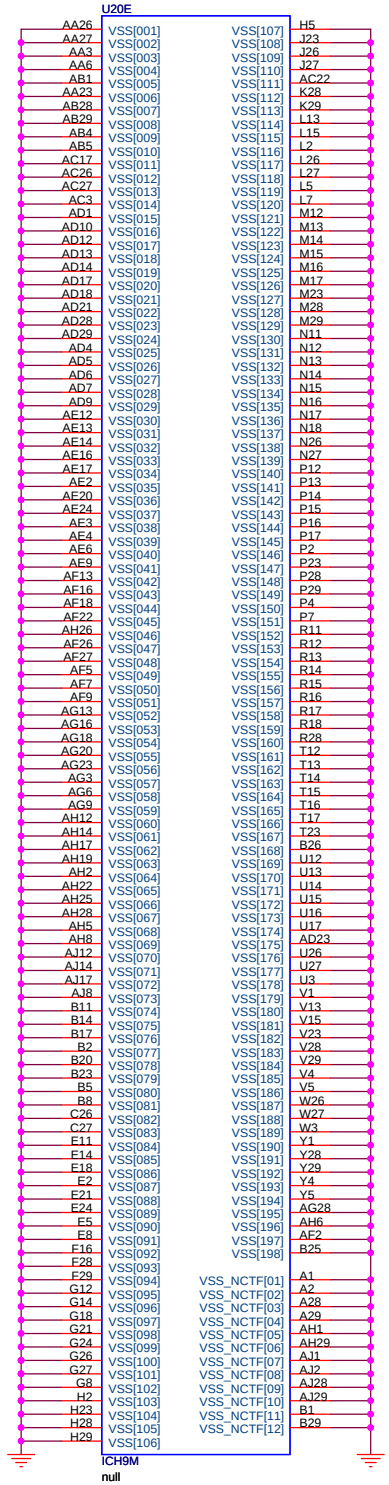
DVT2 1/26 If G3 -> S5 WOL is not supported,
GPIO9/WOL_EN can be be connected to ground.

SMBus Address: AEH

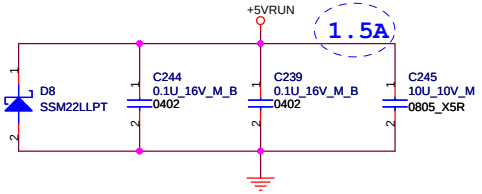
U20C
ICH9M null

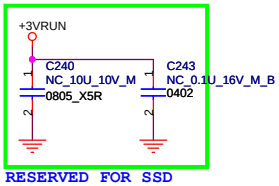


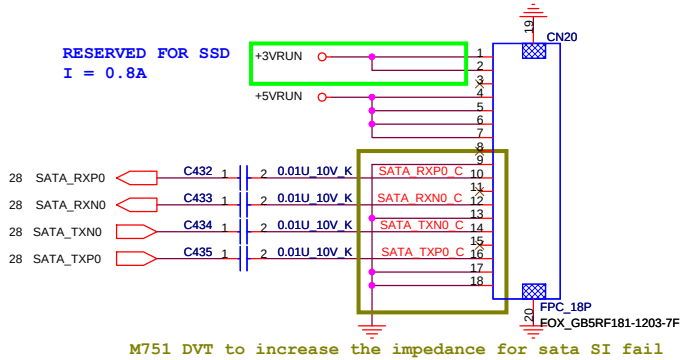
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	ICH9-M(POWER) 4/5	
Size: Custom	Document Number: M750-1-01	Rev: 1.0
Date: Monday, June 23, 2008	Sheet 30 of 54	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	ICH9-M(GND) 5/5	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 31 of 54	

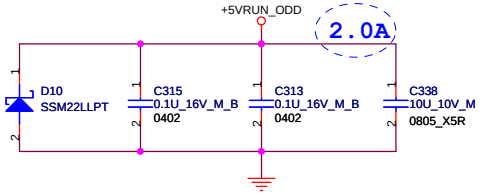


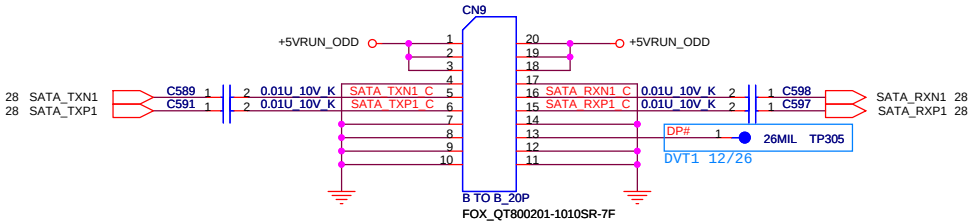




M751 DVT to increase the impedance for sata SI fail

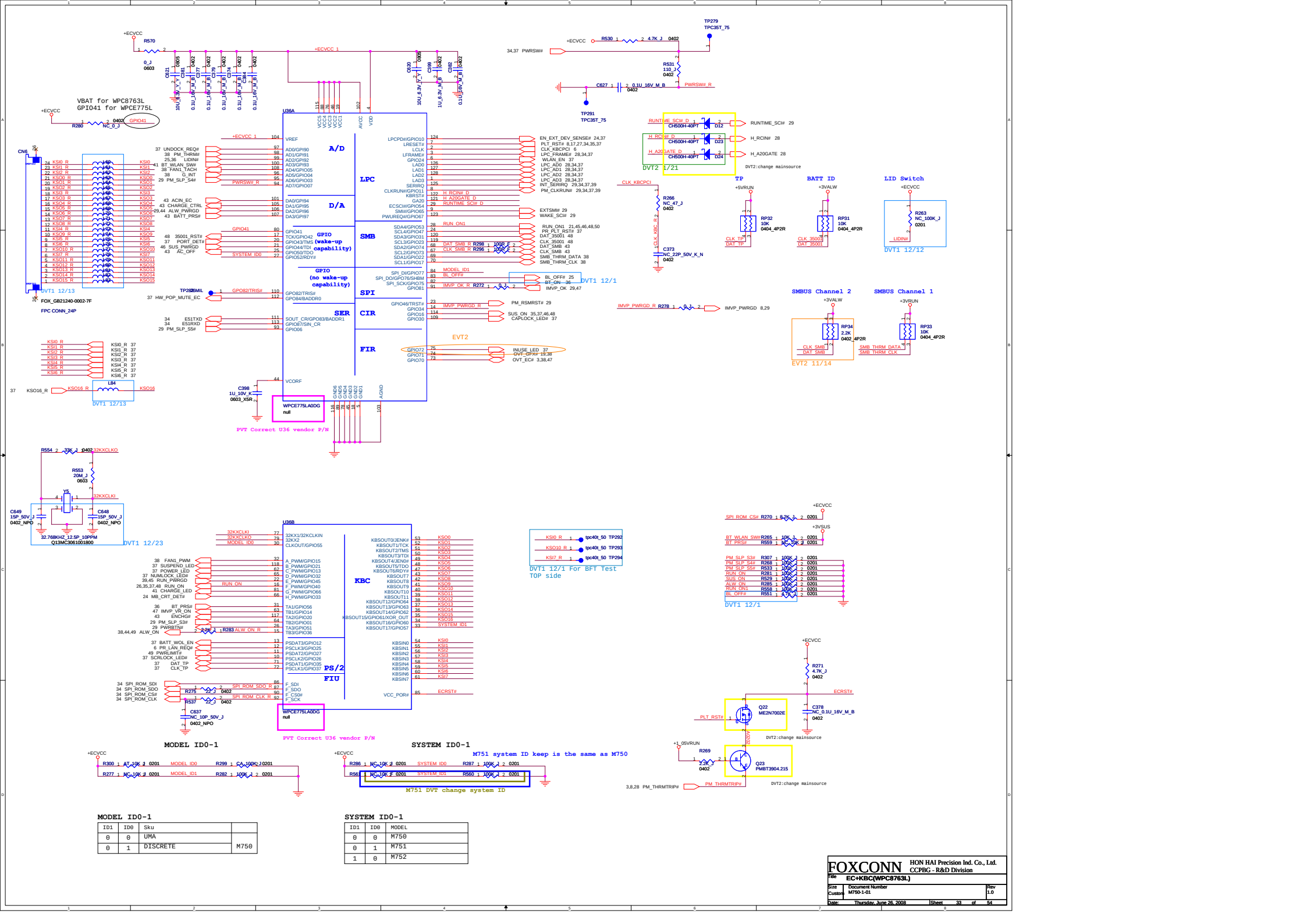
SATA HDD CONN





SATA ODD CONN

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: SATA HDD/ODD		
Size: A3	Document Number: M750-1-01	Rev: 1.0
Date: Monday, June 23, 2008	Sheet 32 of 54	



MODEL ID0-1

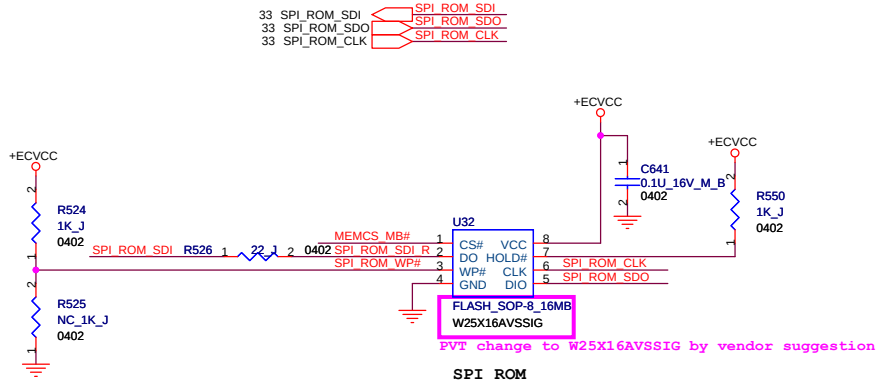
ID1	ID0	Sku	
0	0	UMA	M750
0	1	DISCRETE	

SYSTEM ID0-1

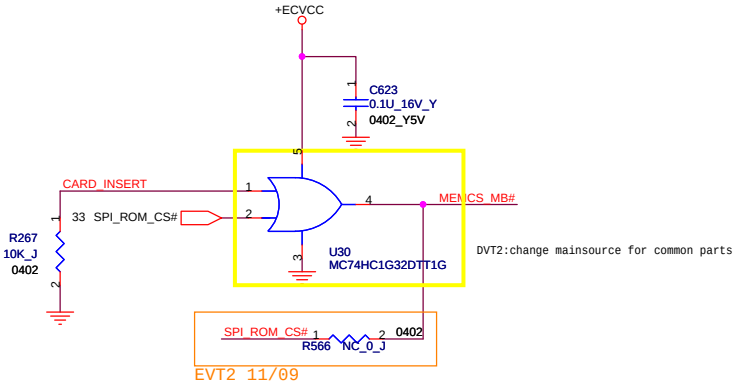
ID1	ID0	MODEL
0	0	M750
0	1	M751
1	0	M752

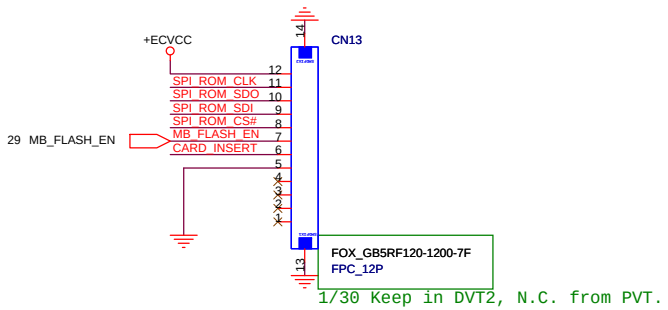
FOXCONN — HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title: EC+KBC(WPC8763L)		
Size: Custom	Document Number: M750-1-01	Rev: 1.0
Date: Thursday, June 26, 2008	Sheet 33 of 54	

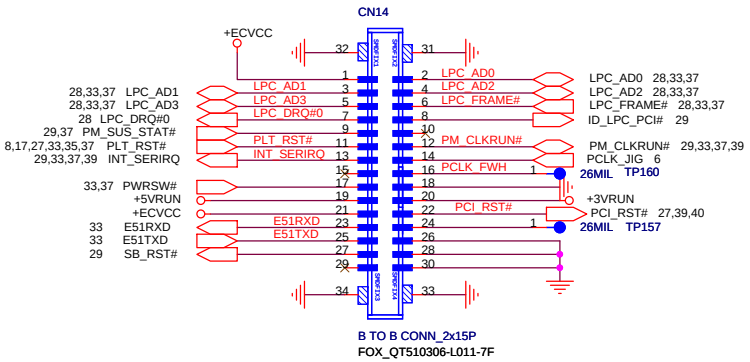


SPI ROM





EXTERNAL SPI ROM INTERFACE

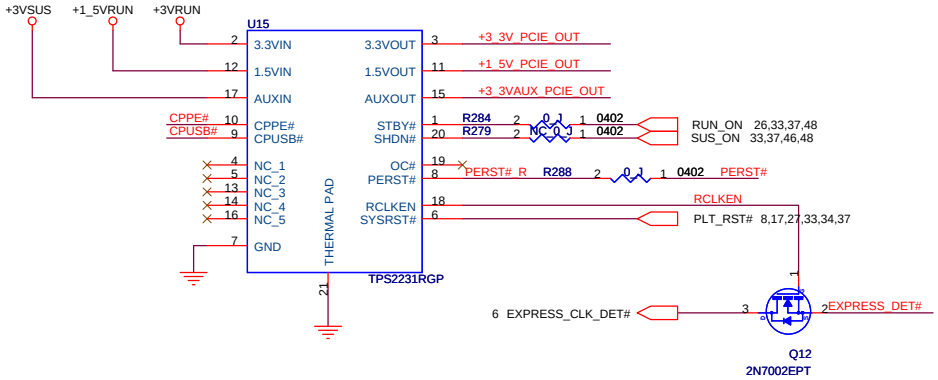


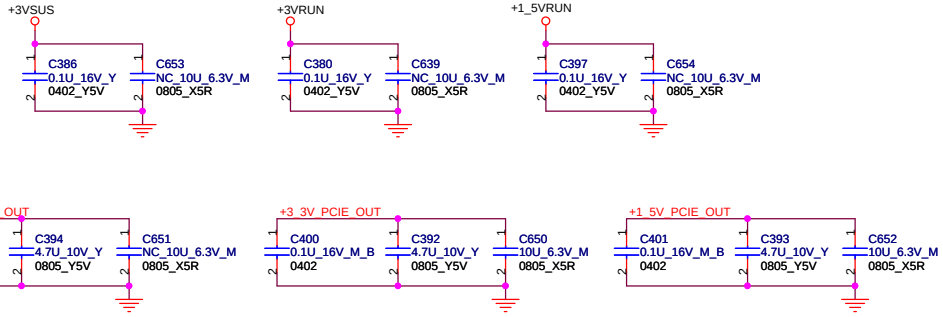
JIG-120

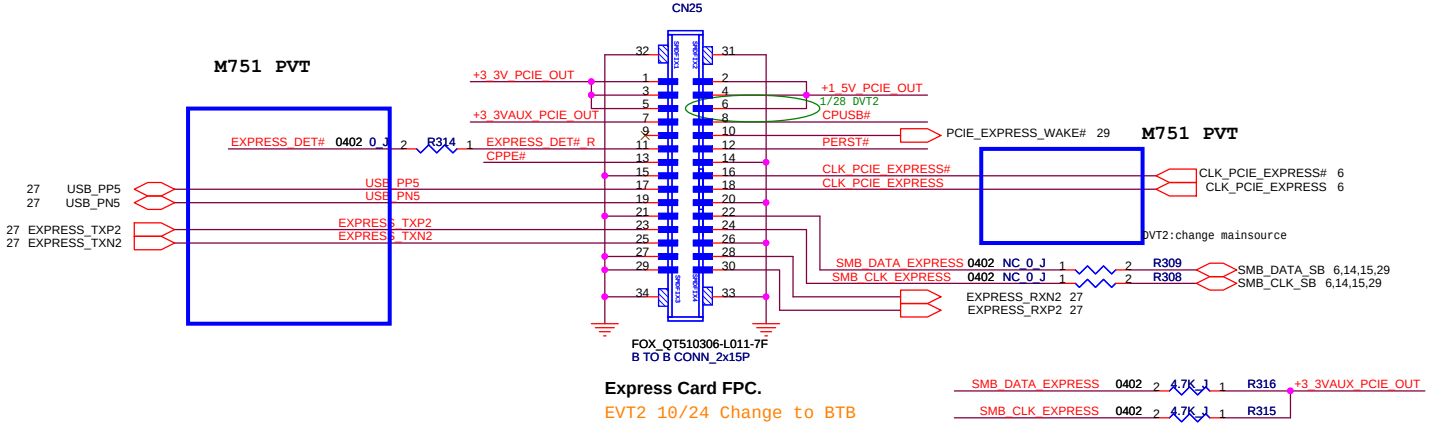
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	BIOS ROM/DEBUG PORT	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 34 of 54	

+1_5V=>0.65A
+3_3VAux=>0.275A
+3_3V=>1.3A

Express Card Power Switch





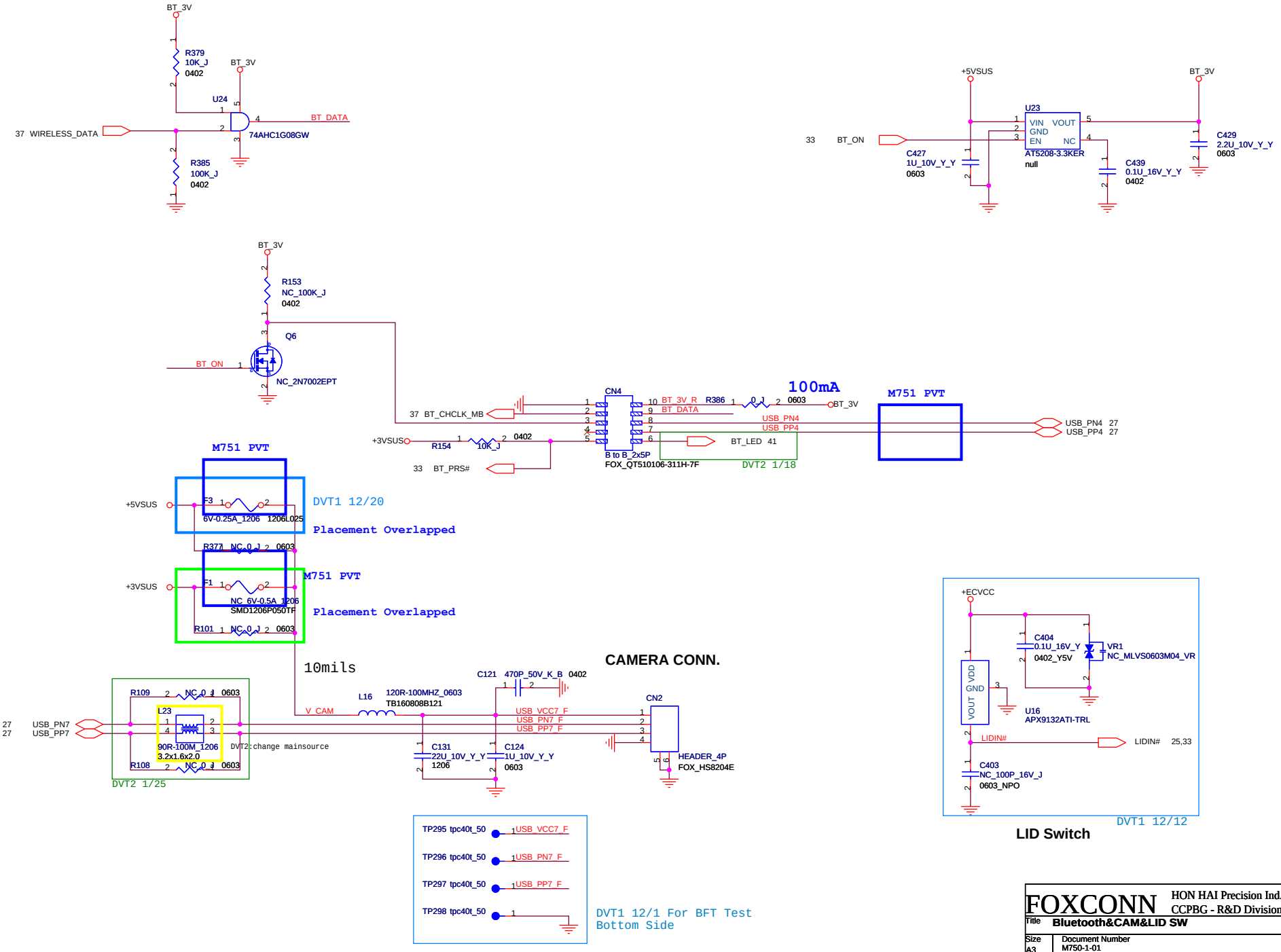


Express Card FPC.

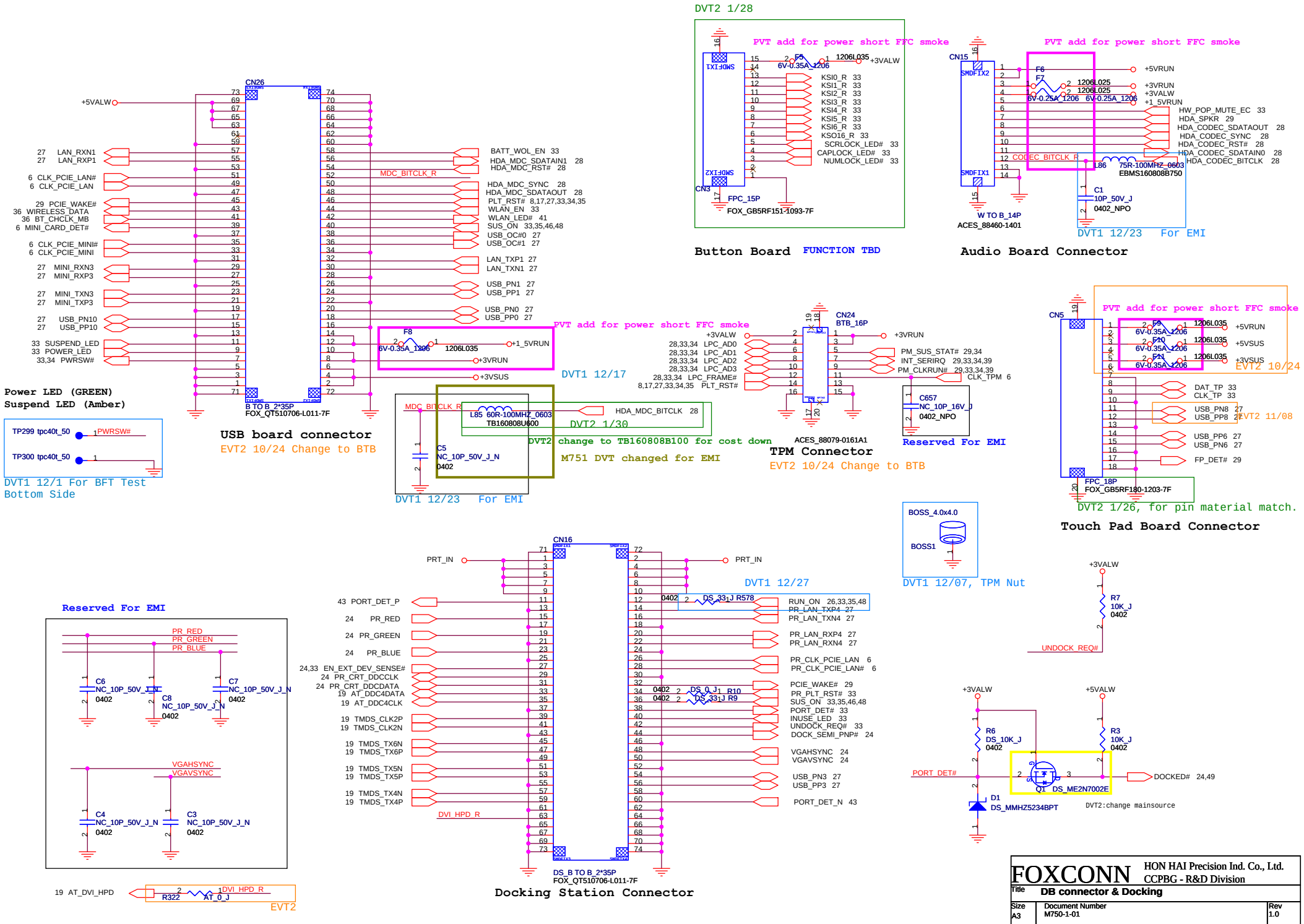
EVT2 10/24 Change to BTB

SMB_DATA_EXPRESS 0402 4.7K_J R316 +3_3VAUX_PCIE_OUT
SMB_CLK_EXPRESS 0402 4.7K_J R315

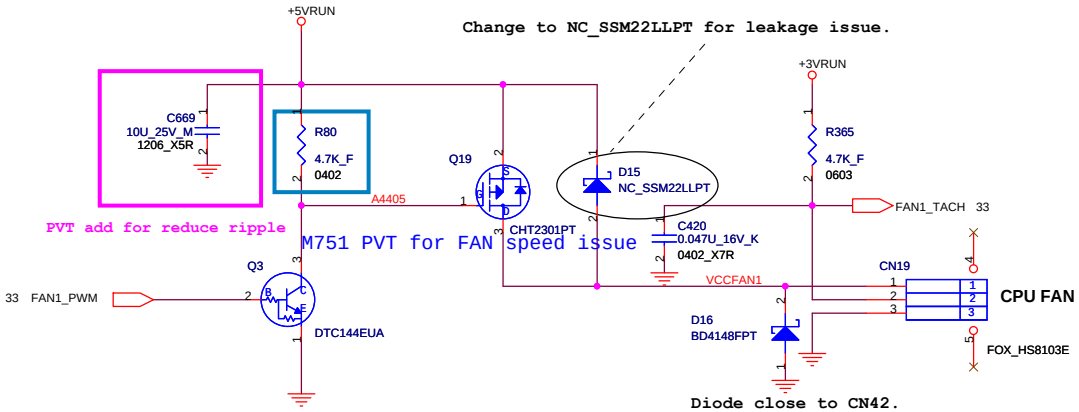
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: EXPRESS CARD		
Size: A3	Document Number: M750-1-01	Rev: 0.1
Date: Monday, June 23, 2008	Sheet 35 of 54	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Bluetooth&CAM&LID SW	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 36 of 54	


DVT2 1/28
PVT add for power short FFC smoke
Button Board FUNCTION TBD
PVT add for power short FFC smoke
Audio Board Connector
DVT1 12/23 For EMI
CN26
B TO B_2*35P
FOX_QT510706-L011-7F
USB board connector
EVT2 10/24 Change to BTB
PVT add for power short FFC smoke
DVT1 12/17
DVT1 12/23 For EMI
DVT2 1/30
DVT2 change to TB160808B100 for cost down
M751 DVT changed for EMI
CN24
BTB_16P
ACES_88079-0161A1
TPM Connector
EVT2 10/24 Change to BTB
Reserved For EMI
Power LED (GREEN)
Suspend LED (Amber)
DVT1 12/1 For BFT Test
Bottom Side
CN5
PVT add for power short FFC smoke
FPC_18P
FOX_GB5RF180-1203-7F
DVT2 1/26, for pin material match.
Touch Pad Board Connector
EVT2 11/08
BOSS_4.0x4.0
DVT1 12/07, TPM Nut
CN16
DS_B TO B_2*35P
FOX_QT510706-L011-7F
Docking Station Connector
DVT1 12/27
Reserved For EMI
EVT2
DVT2:change mainsource
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
DB connector & Docking
Size A3
Document Number M750-1-01
Rev 1.0
Date: Monday, June 23, 2008
Sheet 37 of 54

HW THERMAL PROTECTION

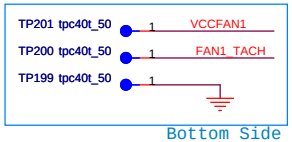


Change to NC_SSM22LLPT for leakage issue.

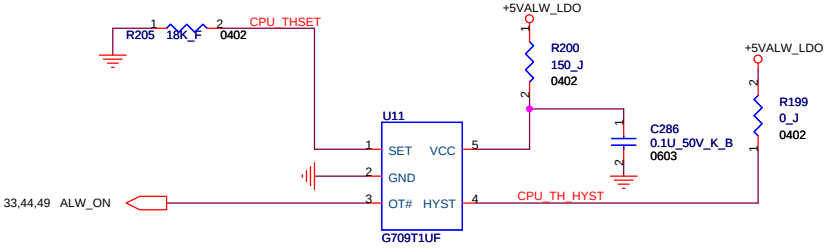
PVT add for reduce ripple

M751 PVT for FAN speed issue

Diode close to CN42.



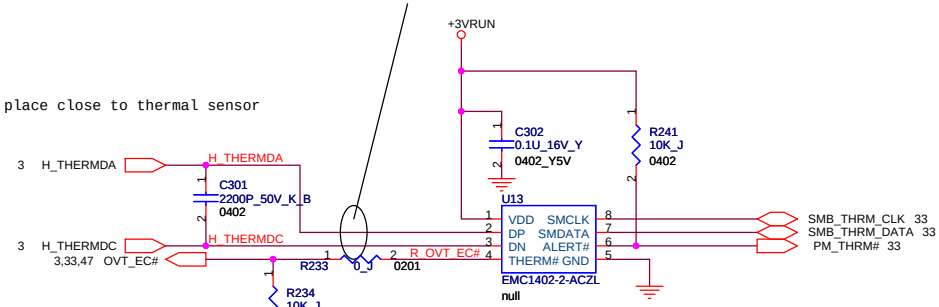
Bottom Side



HW thermal shut down tempature setting 95 degree . Put Near CPU .

W/S:10/10 (microstrip)

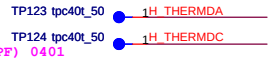
place close to thermal sensor

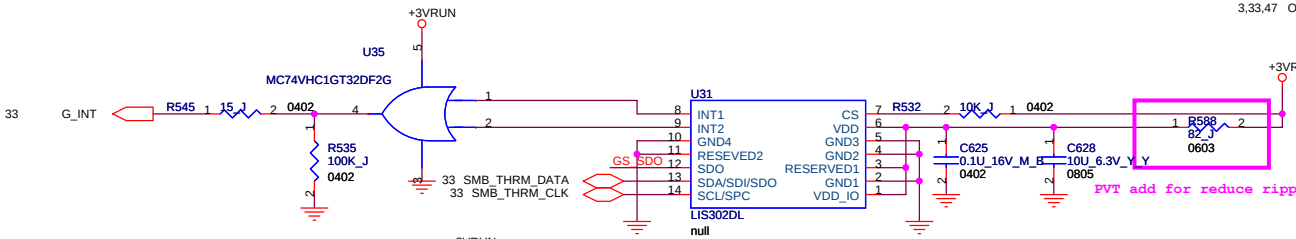


SMBus Address: 9AH

CPU Thermal-Sensor

Place Thermal-Sensor near GMCH.

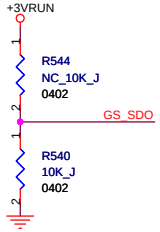


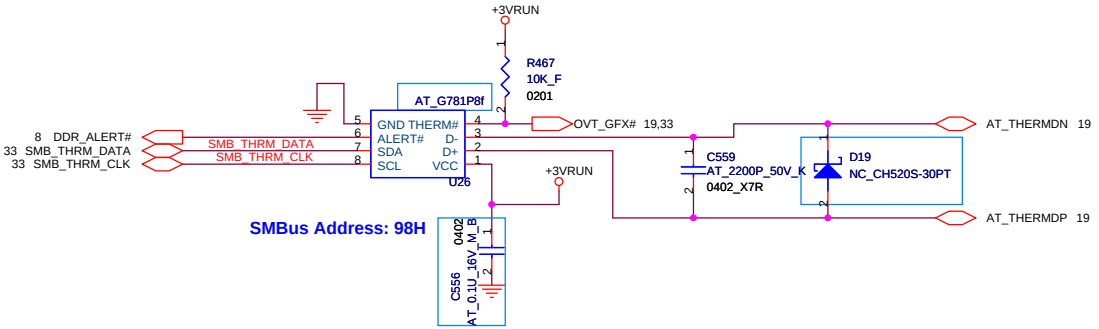


PVT add for reduce ripple(LPF) 0401

G-Sensor

SMBus Address: 38H

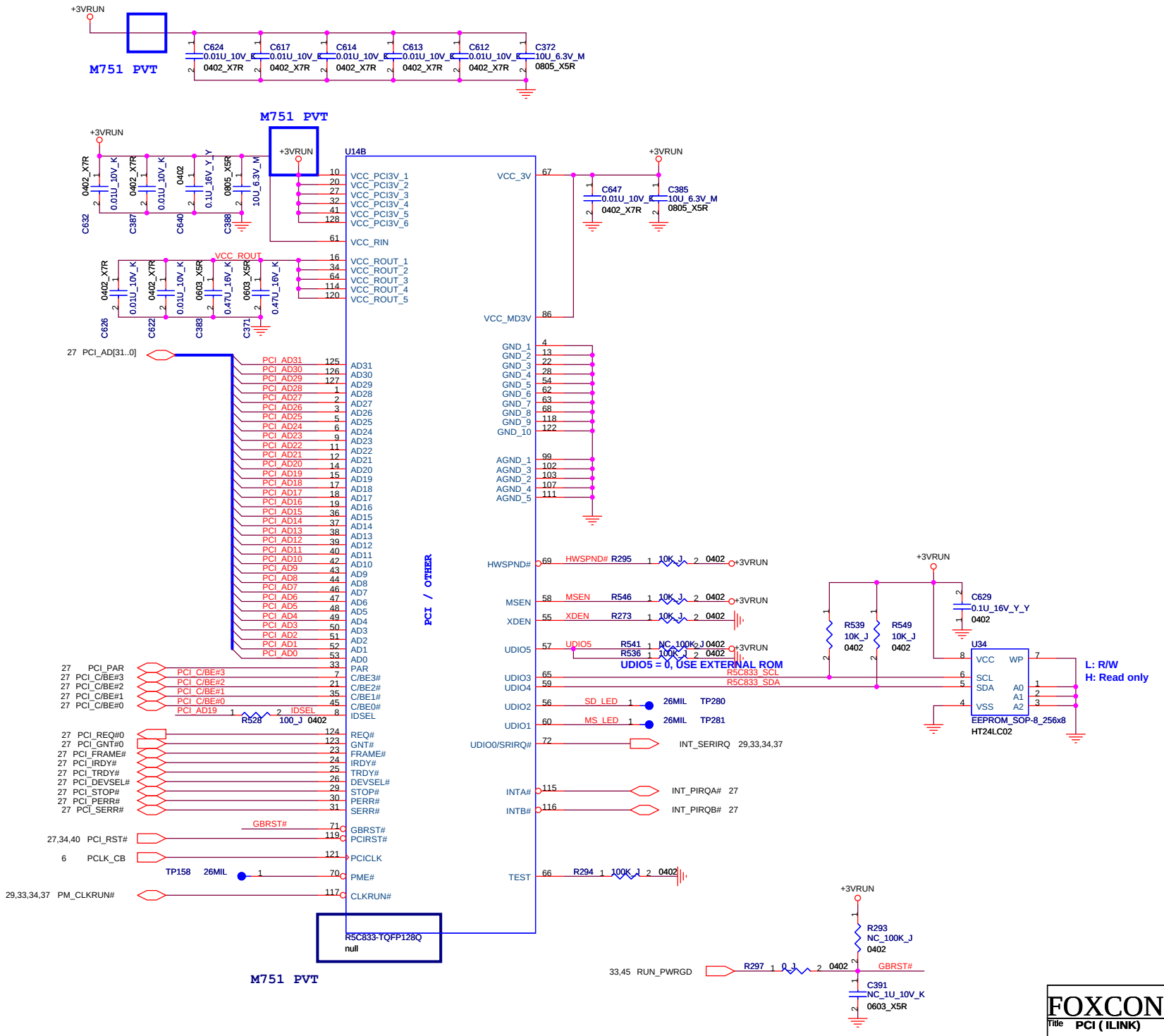


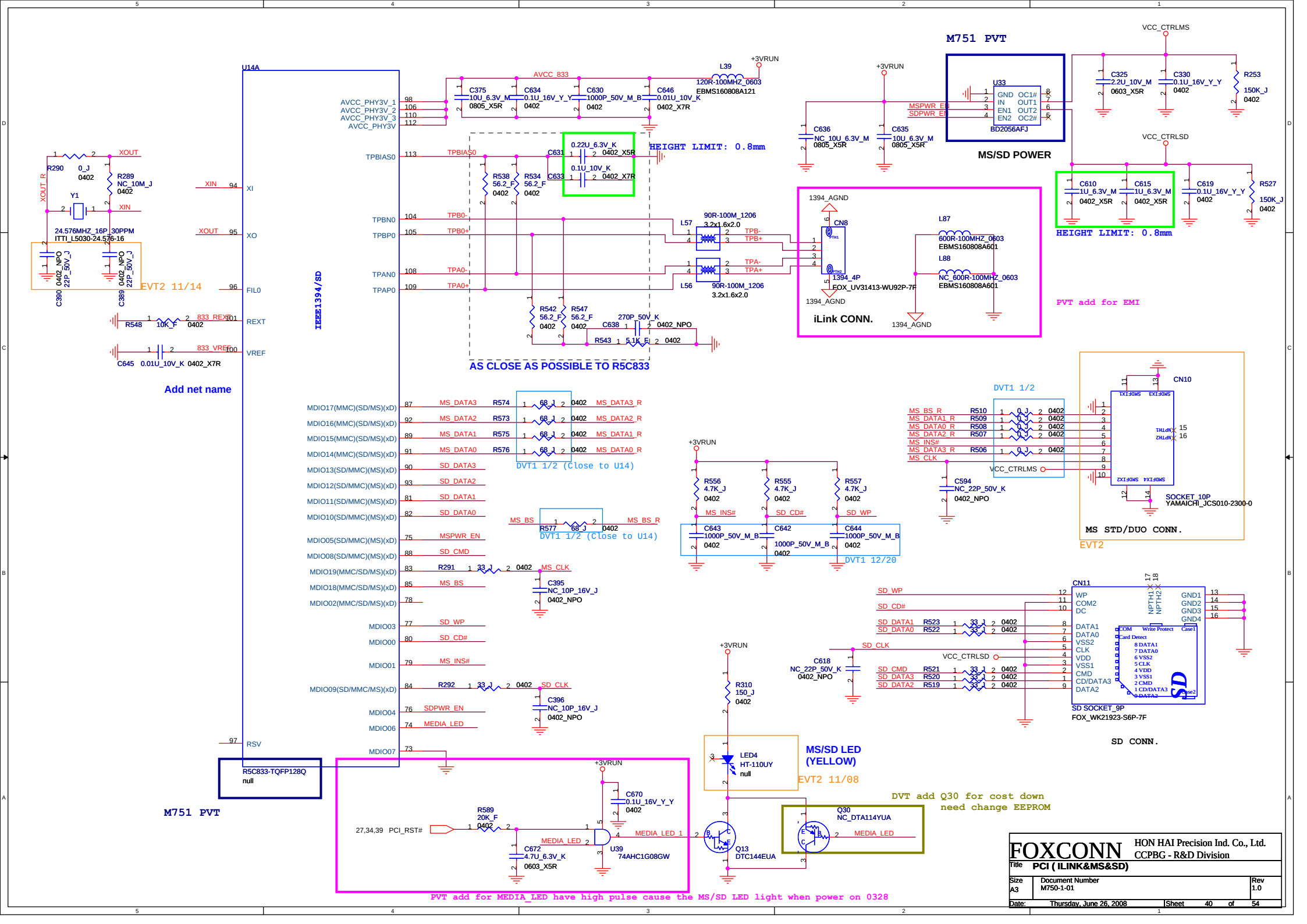


SMBus Address: 98H

VGA Thermal-Sensor near DIMM Socket

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	FAN/Thermal & G-Sensor	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Thursday, June 26, 2008	Sheet 38 of 54	


M751 PVT
+3VRUN
C624 0.01U_10V_K 0402_X7R
C617 0.01U_10V_K 0402_X7R
C614 0.01U_10V_K 0402_X7R
C613 0.01U_10V_K 0402_X7R
C612 0.01U_10V_K 0402_X7R
C372 10U_6.3V_M 0805_X5R
U14B
R5C833-TQFP128Q
null
PCI / OTHER
VCC_PCI3V_1
VCC_PCI3V_2
VCC_PCI3V_3
VCC_PCI3V_4
VCC_PCI3V_5
VCC_PCI3V_6
VCC_RIN
VCC_ROUT_1
VCC_ROUT_2
VCC_ROUT_3
VCC_ROUT_4
VCC_ROUT_5
VCC_3V
VCC_MD3V
GND_1
GND_2
GND_3
GND_4
GND_5
GND_6
GND_7
GND_8
GND_9
GND_10
AGND_1
AGND_3
AGND_2
AGND_4
AGND_5
27 PCI_AD[31..0]
AD31
AD30
AD29
AD28
AD27
AD26
AD25
AD24
AD23
AD22
AD21
AD20
AD19
AD18
AD17
AD16
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
PAR
C/BE3#
C/BE2#
C/BE1#
C/BE0#
IDSEL
REQ#
GNT#
FRAME#
IRDY#
TRDY#
DEVSEL#
STOP#
PERR#
SERR#
GBRST#
PCIRST#
PCICLK
PME#
CLKRUN#
HWSPND#
MSEN
XDEN
UDIO5
UDIO3
UDIO4
UDIO2
UDIO1
UDIO0/SRIRQ#
INTA#
INTB#
TEST
R295 10K_J 0402
R546 10K_J 0402
R273 10K_J 0402
R541 NC_100K_J 0402
R536 100K_J 0402
UDIO5 = 0, USE EXTERNAL ROM
R5C833_SCL
R5C833_SDA
SD_LED
MS_LED
26MIL TP280
26MIL TP281
INT_SERIRQ 29,33,34,37
INT_PIRQA# 27
INT_PIRQB# 27
R294 100K_J 0402
R528 100_J 0402
TP158 26MIL
27,34,40 PCI_RST#
6 PCLK_CB
29,33,34,37 PM_CLKRUN#
27 PCI_PAR
27 PCI_C/BE#3
27 PCI_C/BE#2
27 PCI_C/BE#1
27 PCI_C/BE#0
27 PCI_REQ#0
27 PCI_GNT#0
27 PCI_FRAME#
27 PCI_IRDY#
27 PCI_TRDY#
27 PCI_DEVSEL#
27 PCI_STOP#
27 PCI_PERR#
27 PCI_SERR#
C647 0.01U_10V_K 0402_X7R
C385 10U_6.3V_M 0805_X5R
C629 0.1U_16V_Y_Y 0402
R539 10K_J 0402
R549 10K_J 0402
U34
EEPROM_SOP-8_256x8
HT24LC02
L: R/W
H: Read only
R293 NC_100K_J 0402
R297 0_J 0402
C391 NC_1U_10V_K 0603_X5R
33,45 RUN_PWRGD
GBRST#
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title PCI (ILINK)
Size A3
Document Number M750-1-01
Rev 1.0
Date: Tuesday, June 24, 2008
Sheet 39 of 54


M751 PVT
U14A
IEEE1394/SD
AVCC_PHY3V_1
AVCC_PHY3V_2
AVCC_PHY3V_3
AVCC_PHY3V
AVCC_833
+3VRUN
L39
120R-100MHZ_0603
EBMS160808A121
C375 10U_6.3V_M 0805_X5R
C634 0.1U_16V_Y_Y 0402
C630 1000P_50V_M_B 0402
C646 0.01U_10V_K 0402_X7R
TPBIAS0
C631 0.22U_6.3V_K 0402_X5R
C633 0.1U_10V_K 0402_X7R
HEIGHT LIMIT: 0.8mm
R538 56.2_F 0402
R534 56.2_F 0402
TPBN0
TPBP0
TPAN0
TPAP0
TPB0-
TPB0+
TPA0-
TPA0+
L57 90R-100M_1206 3.2x1.6x2.0
L56 90R-100M_1206 3.2x1.6x2.0
TPB-
TPB+
TPA-
TPA+
R542 56.2_F 0402
R547 56.2_F 0402
C638 270P_50V_K 0402_NPO
R543 5.1K_F 0402
AS CLOSE AS POSSIBLE TO R5C833
1394_AGND
CN8
1394_4P
FOX_UV31413-WU92P-7F
iLink CONN.
L87 600R-100MHZ_0603 EBMS160808A601
L88 NC_600R-100MHZ_0603 EBMS160808A601
PVT add for EMI
MS/SD POWER
U33
BD2056AFJ
MSPWR_EN
SDPWR_EN
C636 NC_10U_6.3V_M 0805_X5R
C635 10U_6.3V_M 0805_X5R
VCC_CTRLMS
C325 2.2U_10V_M 0603_X5R
C330 0.1U_16V_Y_Y 0402
R253 150K_J 0402
VCC_CTRLSD
C610 1U_6.3V_M 0402_X5R
C615 1U_6.3V_M 0402_X5R
C619 0.1U_16V_Y_Y 0402
R527 150K_J 0402
HEIGHT LIMIT: 0.8mm
XOUT
XIN
R290 0_J 0402
R289 NC_10M_J 0402
Y1
24.576MHZ_16P_30PPM
ITTI_L5030-24.576-16
C390 0402_NPO 22P_50V_J
C389 0402_NPO 22P_50V_J
EVT2 11/14
XI
XO
FIL0
REXT
VREF
RSV
R548 10K_F 0402
833_REXT
833_VREF
C645 0.01U_10V_K 0402_X7R
Add net name
R5C833-TQFP128Q
null
MDIO17(MMC)(SD/MS)(xD)
MDIO16(MMC)(SD/MS)(xD)
MDIO15(MMC)(SD/MS)(xD)
MDIO14(MMC)(SD/MS)(xD)
MDIO13(SD/MMC)(MS)(xD)
MDIO12(SD/MMC)(MS)(xD)
MDIO11(SD/MMC)(MS)(xD)
MDIO10(SD/MMC)(MS)(xD)
MDIO05(SD/MMC)(MS)(xD)
MDIO08(SD/MMC)(MS)(xD)
MDIO19(MMC/SD/MS)(xD)
MDIO18(MMC/SD/MS)(xD)
MDIO02(MMC/SD/MS)(xD)
MDIO03
MDIO00
MDIO01
MDIO09(SD/MMC/MS)(xD)
MDIO04
MDIO06
MDIO07
MS_DATA3
MS_DATA2
MS_DATA1
MS_DATA0
SD_DATA3
SD_DATA2
SD_DATA1
SD_DATA0
MSPWR_EN
SD_CMD
MS_BS
SD_WP
SD_CD#
MS_INS#
SD_CLK
SDPWR_EN
MEDIA_LED
R574 68_J 0402
R573 68_J 0402
R575 68_J 0402
R576 68_J 0402
DVT1 1/2 (Close to U14)
R577 68_J 0402
DVT1 1/2 (Close to U14)
R291 33_J 0402
R292 33_J 0402
C395 NC_10P_16V_J 0402_NPO
C396 NC_10P_16V_J 0402_NPO
+3VRUN
R556 4.7K_J 0402
R555 4.7K_J 0402
R557 4.7K_J 0402
C643 1000P_50V_M_B 0402
C642 1000P_50V_M_B 0402
C644 1000P_50V_M_B 0402
DVT1 12/20
DVT1 1/2
R510 0_J 0402
R509 0_J 0402
R508 0_J 0402
R507 0_J 0402
R506 0_J 0402
C594 NC_22P_50V_K 0402_NPO
CN10
SOCKET_10P
YAMAICHI_JCS010-2300-0
MS STD/DUO CONN.
EVT2
CN11
SD SOCKET_9P
FOX_WK21923-S6P-7F
SD CONN.
R523 33_J 0402
R522 33_J 0402
R521 33_J 0402
R520 33_J 0402
R519 33_J 0402
C618 NC_22P_50V_K 0402_NPO
R310 150_J 0402
LED4 HT-110UY
MS/SD LED (YELLOW)
EVT2 11/08
DVT add Q30 for cost down
need change EEPROM
Q30 NC_DTA114YUA
Q13 DTC144EUA
R589 20K_F 0402
C672 4.7U_6.3V_K 0603_X5R
C670 0.1U_16V_Y_Y 0402
U39 74AHC1G08GW
27,34,39 PCI_RST#
MEDIA_LED_1
PVT add for MEDIA_LED have high pulse cause the MS/SD LED light when power on 0328
M751 PVT
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title PCI (ILINK&MS&SD)
Size A3
Document Number M750-1-01
Rev 1.0
Date: Thursday, June 26, 2008
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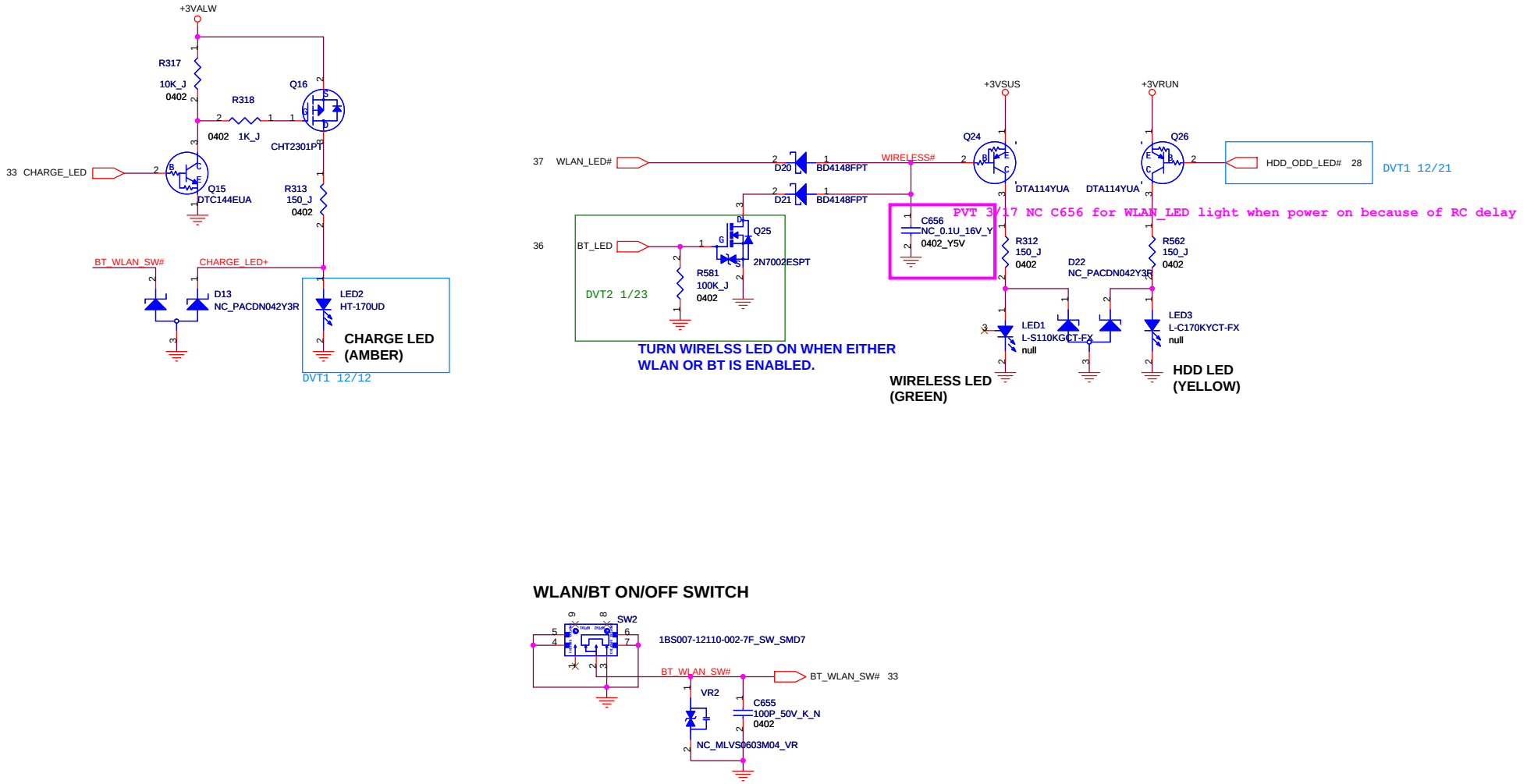
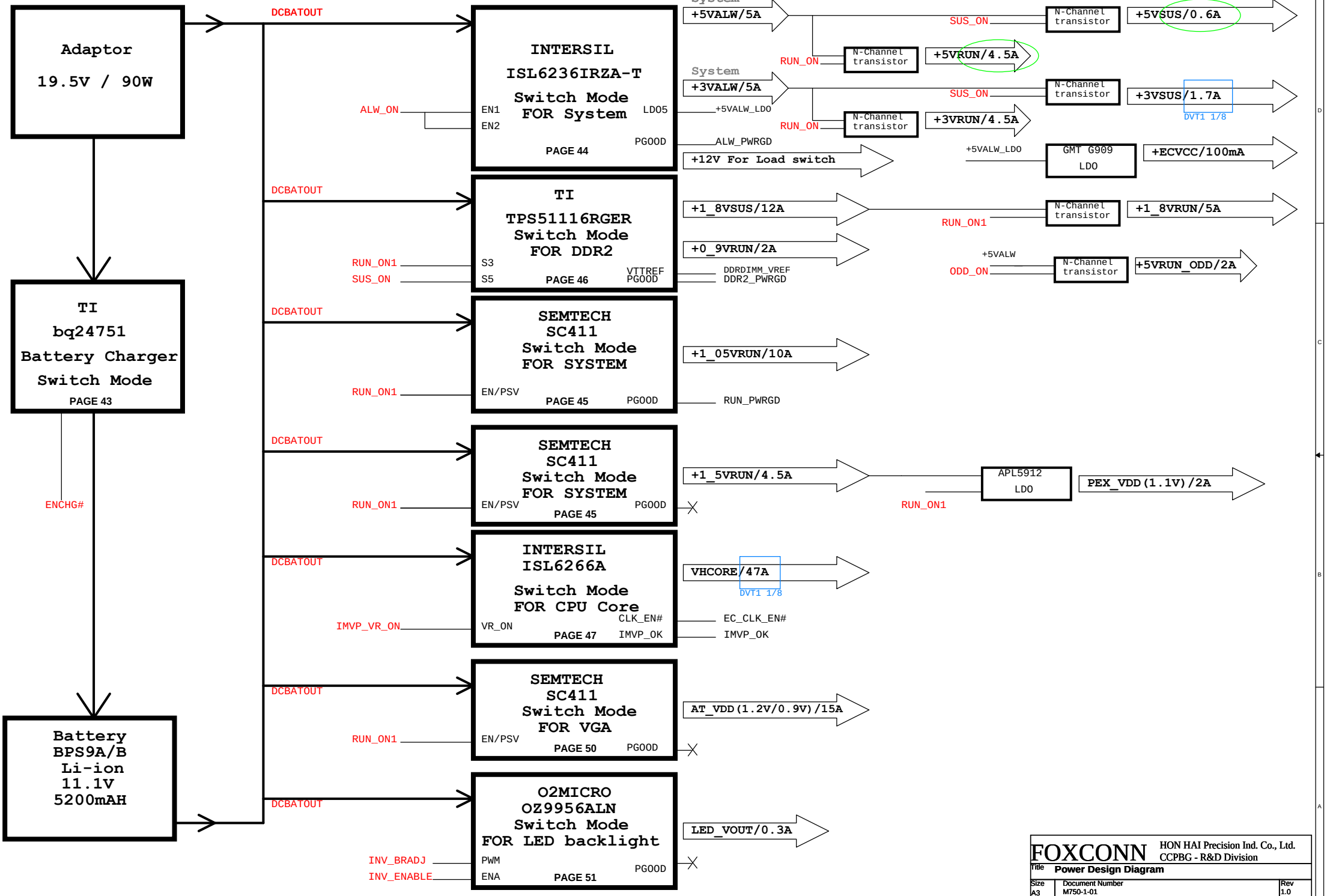
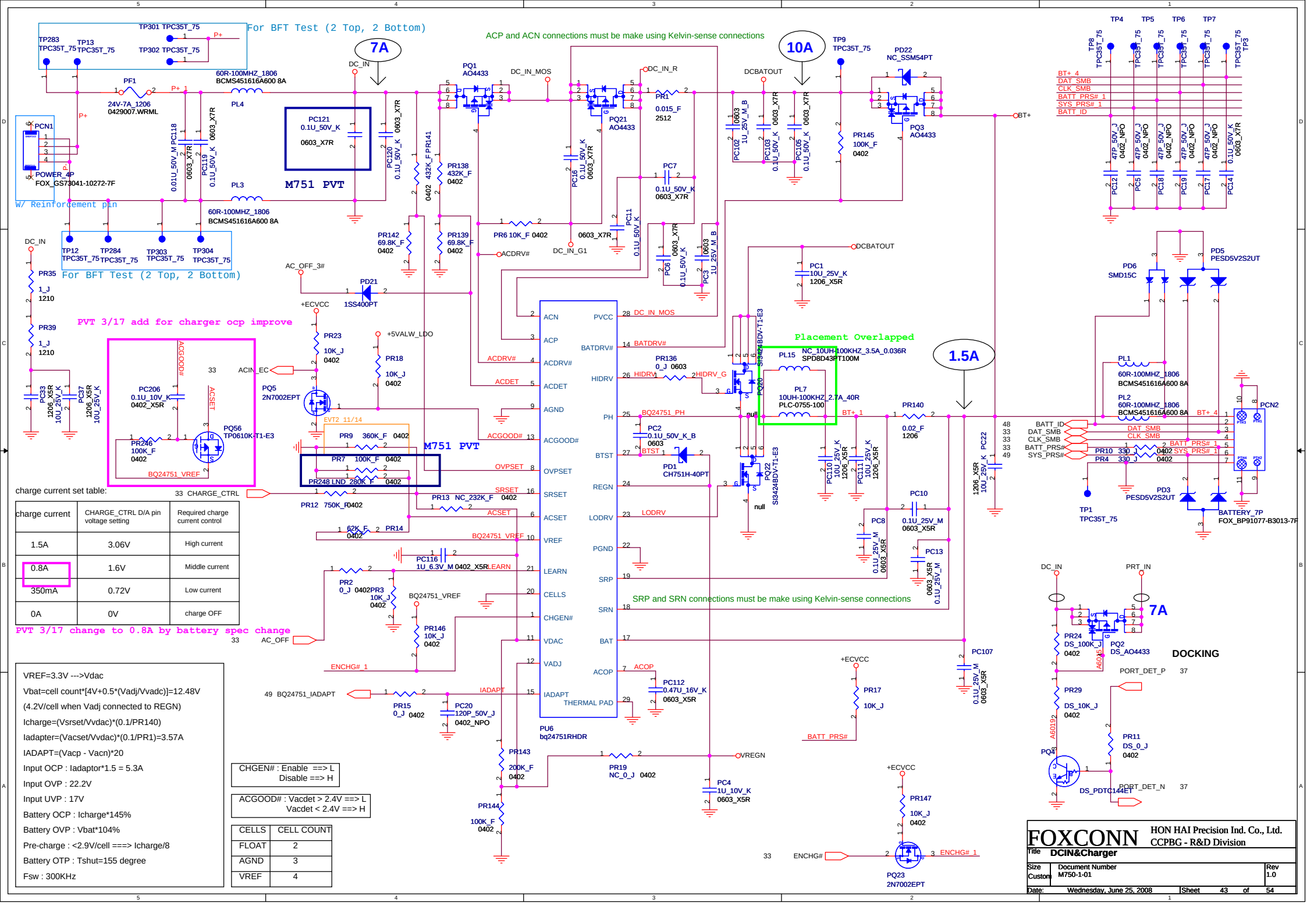


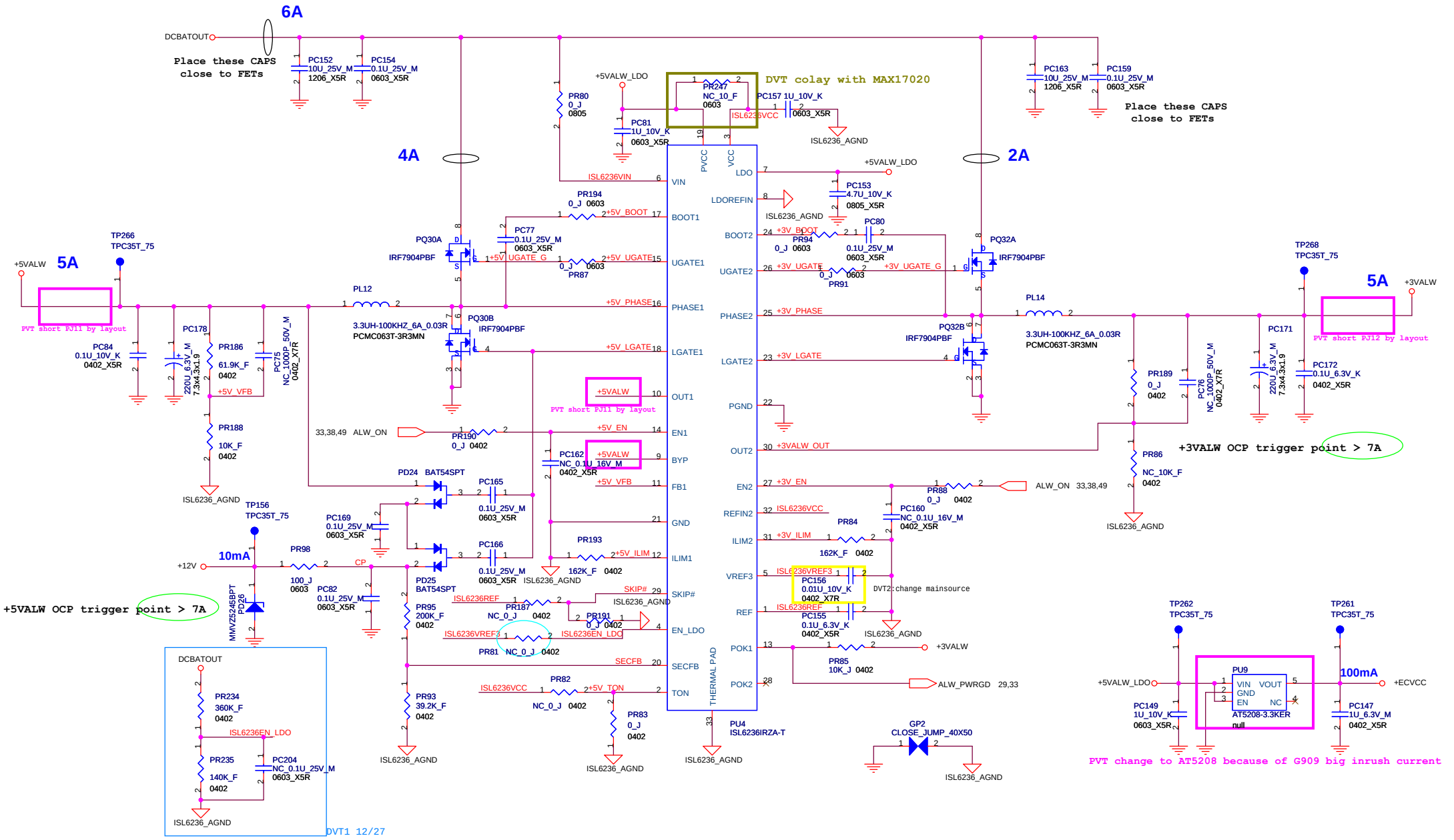
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	LED & Switch	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 41 of 54	



FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	Power Design Diagram	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 42 of 54	


For BFT Test (2 Top, 2 Bottom)
ACP and ACN connections must be make using Kelvin-sense connections
7A
10A
1.5A
M751 PVT
PVT 3/17 add for charger ocp improve
Placement Overlapped
SRP and SRN connections must be make using Kelvin-sense connections
PVT 3/17 change to 0.8A by battery spec change
DOCKING
charge current set table:
charge current | CHARGE_CTRL D/A pin voltage setting | Required charge current control
1.5A | 3.06V | High current
0.8A | 1.6V | Middle current
350mA | 0.72V | Low current
0A | 0V | charge OFF
VREF=3.3V --->Vdac
Vbat=cell count*[4V+0.5*(Vadj/Vvadc)]=12.48V
(4.2V/cell when Vadj connected to REGN)
Icharge=(Vsrset/Vvdac)*(0.1/PR140)
Iadapter=(Vacset/Vvdac)*(0.1/PR1)=3.57A
IADAPT=(Vacp - Vacn)*20
Input OCP : Iadaptor*1.5 = 5.3A
Input OVP : 22.2V
Input UVP : 17V
Battery OCP : Icharge*145%
Battery OVP : Vbat*104%
Pre-charge : <2.9V/cell ===> Icharge/8
Battery OTP : Tshut=155 degree
Fsw : 300KHz
CHGEN# : Enable ==> L
Disable ==> H
ACGOOD# : Vacdet > 2.4V ==> L
Vacdet < 2.4V ==> H
CELLS | CELL COUNT
FLOAT | 2
AGND | 3
VREF | 4
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title DCIN&Charger
Size Custom
Document Number M750-1-01
Rev 1.0
Date: Wednesday, June 25, 2008
Sheet 43 of 54



TON	Operating Frequence (+5VALW/+3VALW)
VCC	200KHz/300KHz
REF(OPEN)	400KHz/300KHz
GND	400KHz/500KHz

SKIP#	Operating Mode
GND	Pulse-Skipping
REF	Ultrasonic-Skip
VCC	PWM

L=VOUT(VIN-VOUT)/(VIN*f*LIR*ILOAD(MAX))
Rocp=(Iocp-Iripple/2)*(10*Rds(on))/5u
+5VALW=((PR186/PR188)+1)*VFB1

FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title: SYS Power (+3_3V/+5V)

Size	Document Number	Rev
A3	M750-1-01	1.0

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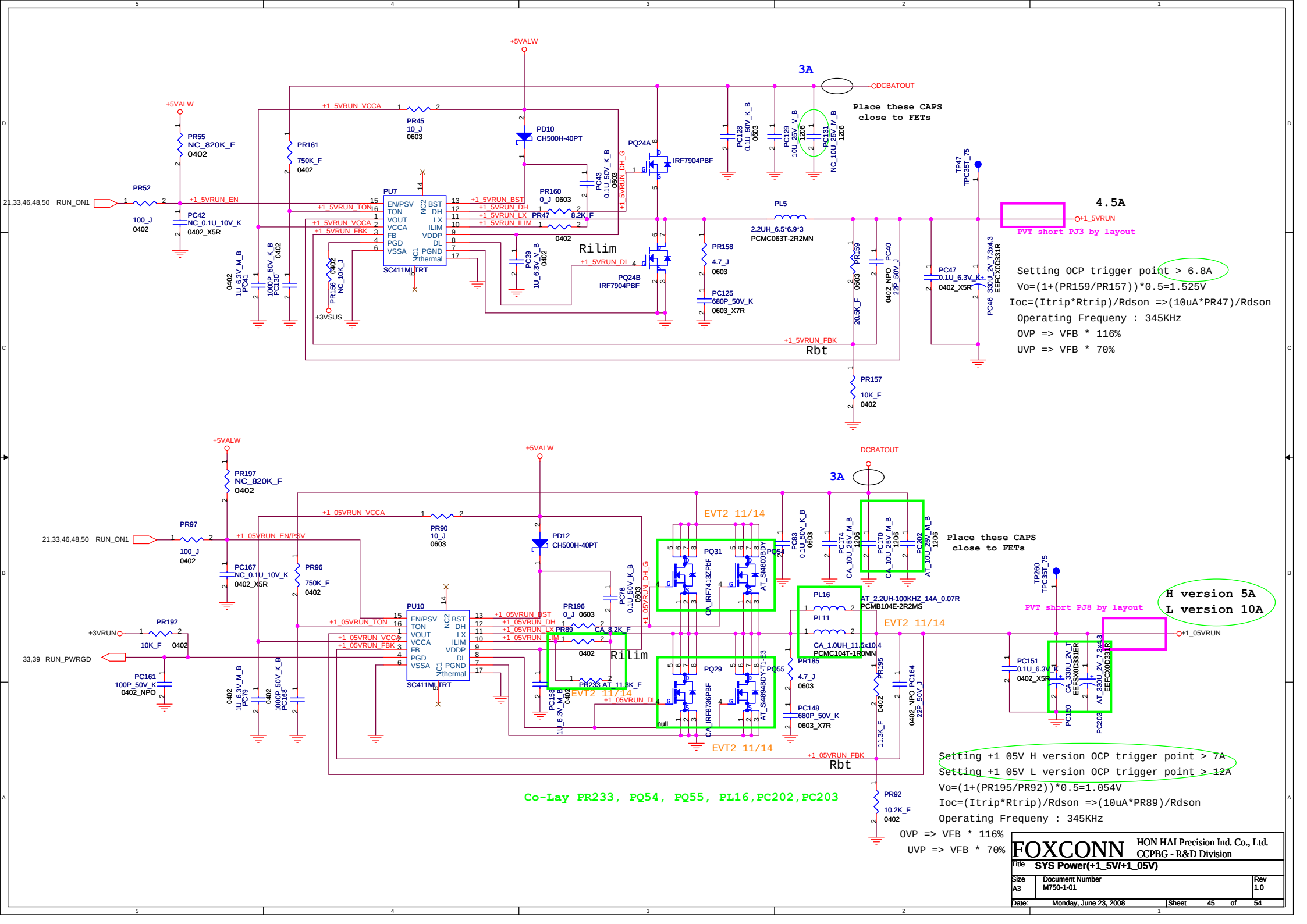
+5VALW
3A
DCBATOUT
Place these CAPS close to FETs
PR55 NC_820K_F 0402
PR52 100_J 0402
PC42 NC_0.1U_10V_K 0402_X5R
21,33,46,48,50 RUN_ON1
+1_5VRUN_EN
PR161 750K_F 0402
PR45 10_J 0603
PD10 CH500H-40PT
PQ24A IRF7904PBF
PC128 0.1U_50V_K_B 0603
PC129 10U_25V_M_B 1206
PC131 NC_10U_25V_M_B 1206
TP47 TPC35T_75
PU7
EN/PSV TON VOUT VCCA FB PGD VSSA
BST DH LX ILIM VDDP DL PGND Thermal
SC411MLTRT
+1_5VRUN_VCCA
+1_5VRUN_TON
+1_5VRUN_FBK
+1_5VRUN_BST
+1_5VRUN_DH
+1_5VRUN_LX
+1_5VRUN_ILIM
+1_5VRUN_DH_G
PR160 0_J 0603
PR47 8.2K_F 0402
PC43 0.1U_50V_K_B 0603
PL5 2.2UH_6.5*6.9*3 PCMC063T-2R2MN
4.5A
+1_5VRUN
PVT short PJ3 by layout
PR158 4.7_J 0603
PC125 680P_50V_K 0603_X7R
PQ24B IRF7904PBF
PR159 20.5K_F 0603
PC40 22P_50V_J 0402_NPO
PC47 0.1U_6.3V_K 0402_X5R
PC46 330U_2V_7.3x4.3 EEFCX0D331R
PR156 NC_10K_J 0402
+3VSUS
PC41 1U_6.3V_M_B 0402
PC130 1000P_50V_K_B 0402
PC39 1U_6.3V_M_B 0402
+1_5VRUN_DL
+1_5VRUN_FBK
Rbt
PR157 10K_F 0402
Rilim
Setting OCP trigger point > 6.8A
Vo=(1+(PR159/PR157))*0.5=1.525V
Ioc=(Itrip*Rtrip)/Rdson =>(10uA*PR47)/Rdson
Operating Frequeny : 345KHz
OVP => VFB * 116%
UVP => VFB * 70%
PR197 NC_820K_F 0402
PR97 100_J 0402
21,33,46,48,50 RUN_ON1
+1_05VRUN_EN/PSV
PC167 NC_0.1U_10V_K 0402_X5R
PR96 750K_F 0402
PR90 10_J 0603
PD12 CH500H-40PT
PU10
SC411MLTRT
+1_05VRUN_VCCA
+1_05VRUN_TON
+1_05VRUN_FBK
+1_05VRUN_BST
+1_05VRUN_DH
+1_05VRUN_LX
+1_05VRUN_ILIM
+1_05VRUN_DH_G
PR196 0_J 0603
PR89 CA_8.2K_F 0402
PR233 AT_11.3K_F 0402
PC78 0.1U_50V_K_B 0603
PC158 1U_6.3V_M_B 0402
EVT2 11/14
PQ31 PQ54 PQ29 PQ55
CA_IRF7413ZPbF
AT_SI4800BDY
CA_IRF8736PBF
AT_SI4894BDY-T1-E3
null
PC83 0.1U_50V_K_B 0603
PC174 CA_10U_25V_M_B 1206
PC170 CA_10U_25V_M_B 1206
PC202 AT_10U_25V_M_B 1206
Place these CAPS close to FETs
PL16 AT_2.2UH-100KHZ_14A_0.07R PCMB104E-2R2MS
PL11 CA_1.0UH_11.5x10.4 PCMC104T-1R0MN
PR185 4.7_J 0603
PC148 680P_50V_K 0603_X7R
PR195 11.3K_F 0402
PC164 22P_50V_J 0402_NPO
PR92 10.2K_F 0402
PR192 10K_F 0402
+3VRUN
33,39 RUN_PWRGD
PC161 100P_50V_K 0402_NPO
PC79 1U_6.3V_M_B 0402
PC158 1000P_50V_K_B 0402
TP260 TPC35T_75
PVT short PJ8 by layout
+1_05VRUN
PC151 0.1U_6.3V_K 0402_X5R
PC150 CA_330U_2V_T EEFSX0D331ER
PC203 AT_330U_2V_7.3x4.3 EEFCX0D331R
H version 5A
L version 10A
Setting +1_05V H version OCP trigger point > 7A
Setting +1_05V L version OCP trigger point > 12A
Vo=(1+(PR195/PR92))*0.5=1.054V
Ioc=(Itrip*Rtrip)/Rdson =>(10uA*PR89)/Rdson
Operating Frequeny : 345KHz
OVP => VFB * 116%
UVP => VFB * 70%
Co-Lay PR233, PQ54, PQ55, PL16,PC202,PC203
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title SYS Power(+1_5V/+1_05V)
Size A3
Document Number M750-1-01
Rev 1.0
Date: Monday, June 23, 2008
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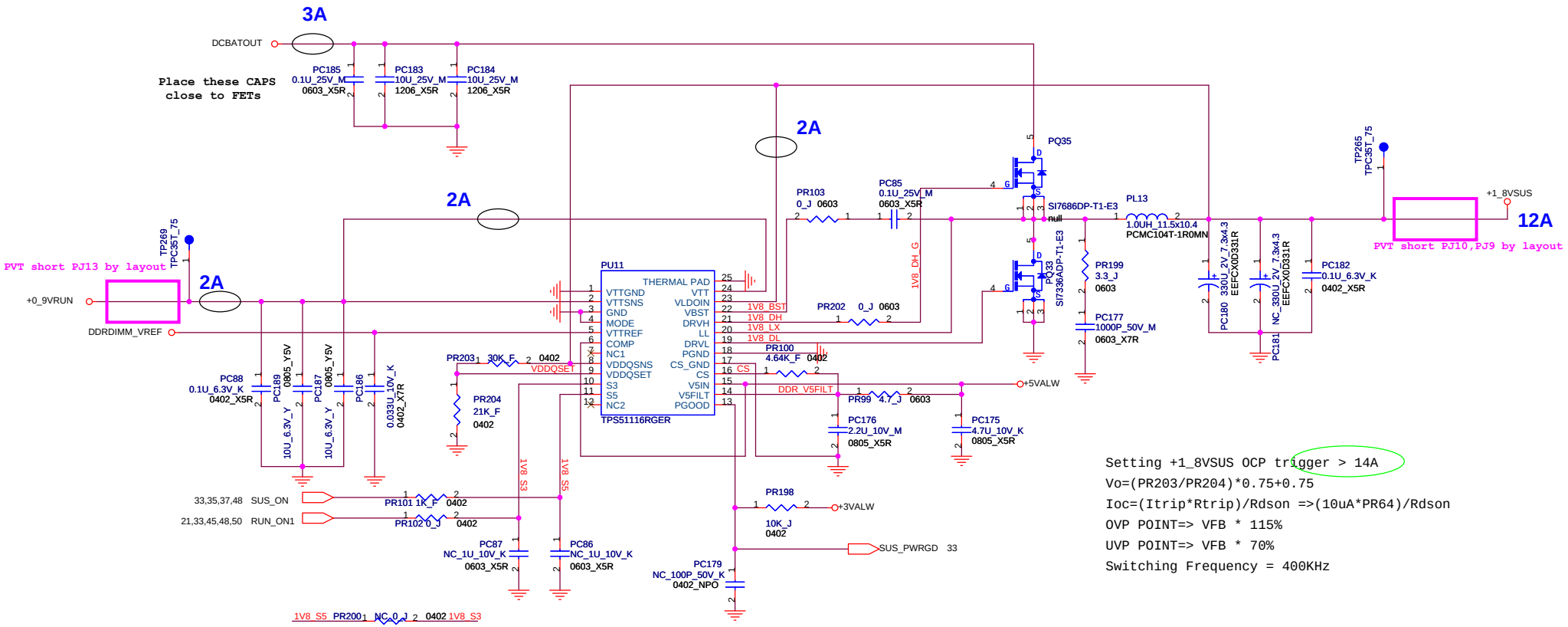
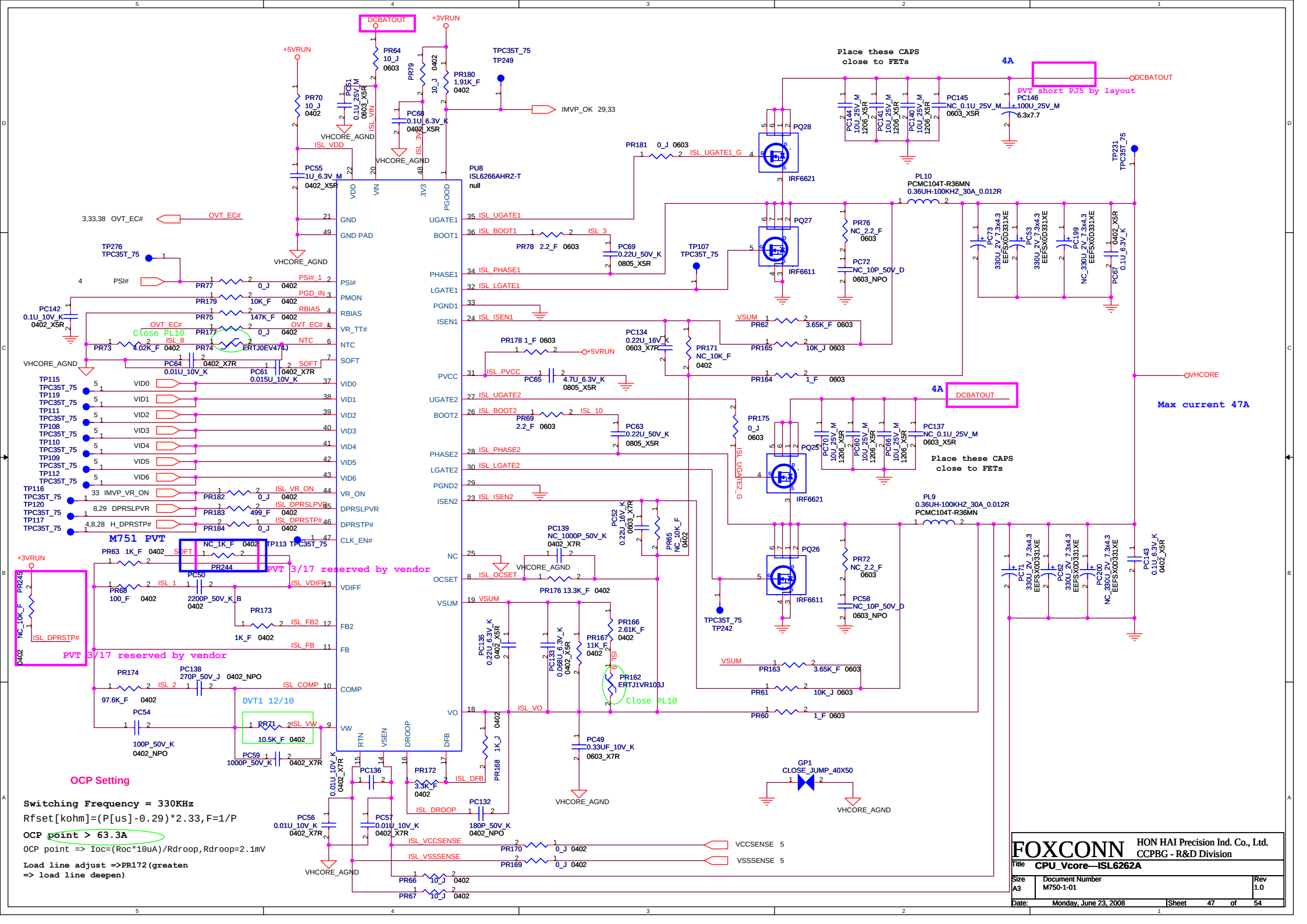
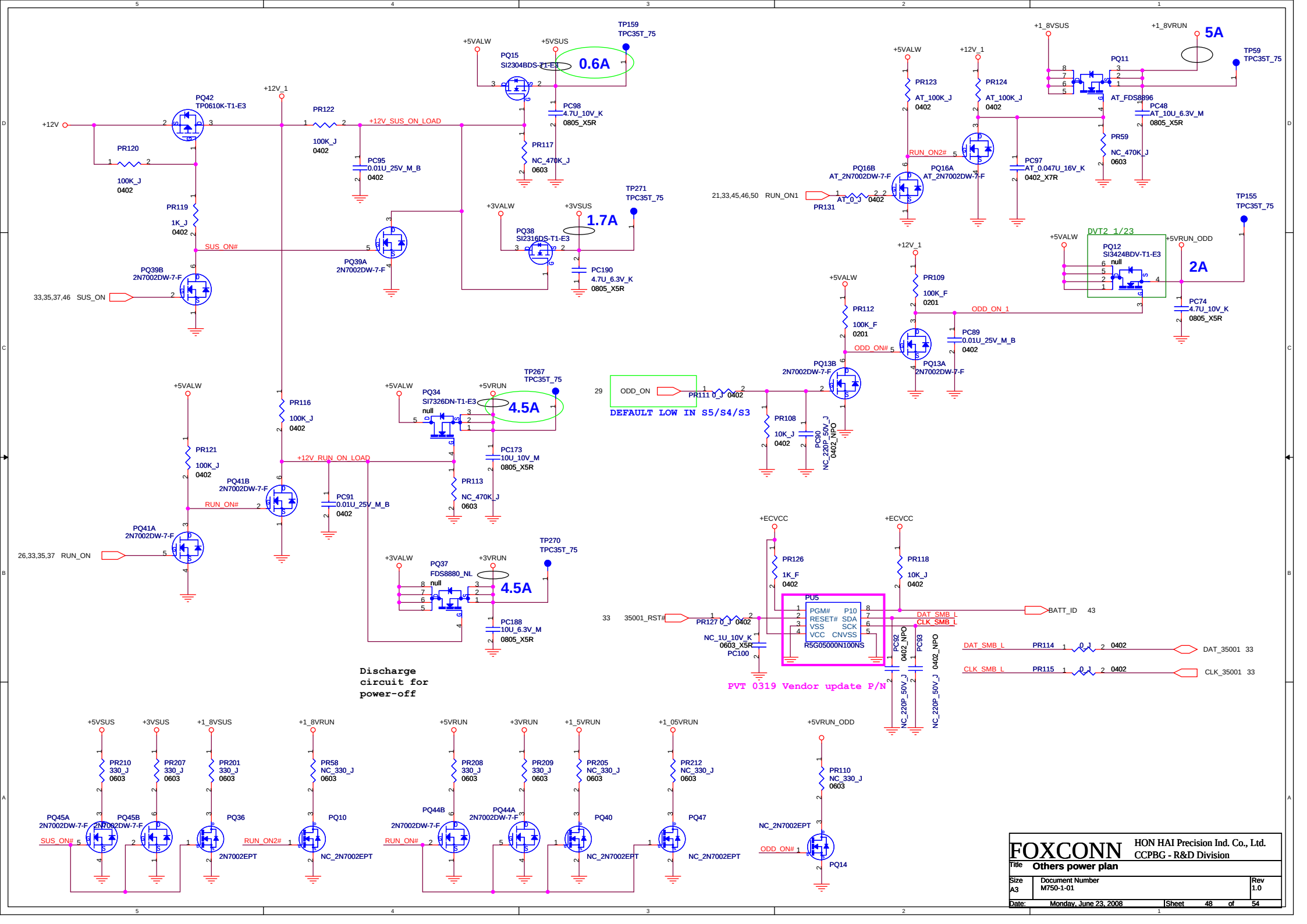


Setting +1_8VSUS OCP trigger > 14A
Vo=(PR203/PR204)*0.75+0.75
Ioc=(Itrip*Rtrip)/Rdson =>(10uA*PR64)/Rdson
OVP POINT=> VFB * 115%
UVP POINT=> VFB * 70%
Switching Frequency = 400KHz

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	DDR2 Power(+1_8V/+0_9V)	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 46 of 54	


DCBATOUT
+3VRUN
+5VRUN
PU8
ISL6266AHRZ-T
null
VID0
VID1
VID2
VID3
VID4
VID5
VID6
M751 PVT
PVT 3/17 reserved by vendor
PVT 3/17 reserved by vendor
OCP Setting
Switching Frequency = 330KHz
Rfset[kohm]=(P[us]-0.29)*2.33,F=1/P
OCP point > 63.3A
OCP point => Ioc=(Roc*10uA)/Rdroop,Rdroop=2.1mV
Load line adjust =>PR172(greaten
=> load line deepen)
Place these CAPS
close to FETs
4A
PVT short PJ5 by layout
Place these CAPS
close to FETs
Max current 47A
DVT1 12/10
Close PL10
Close PL10
IRF6621
IRF6611
IRF6621
IRF6611
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
CPU_Vcore---ISL6262A
M750-1-01
1.0
Monday, June 23, 2008
47
54


+12V
PQ42 TP0610K-T1-E3
PR120 100K_J 0402
PR119 1K_J 0402
SUS_ON#
PQ39B 2N7002DW-7-F
33,35,37,46 SUS_ON
+12V_1
PR122 100K_J 0402
+12V_SUS_ON_LOAD
PC95 0.01U_25V_M_B 0402
PQ39A 2N7002DW-7-F
+5VALW
+5VSUS
PQ15 SI2304BDS-T1-E3
0.6A
TP159 TPC35T_75
PC98 4.7U_10V_K 0805_X5R
PR117 NC_470K_J 0603
+3VALW
+3VSUS
PQ38 SI2316DS-T1-E3
1.7A
TP271 TPC35T_75
PC190 4.7U_6.3V_K 0805_X5R
+5VALW
PR121 100K_J 0402
PQ41B 2N7002DW-7-F
RUN_ON#
PQ41A 2N7002DW-7-F
26,33,35,37 RUN_ON
PR116 100K_J 0402
+12V_RUN_ON_LOAD
PC91 0.01U_25V_M_B 0402
+5VALW
+5VRUN
PQ34 SI7326DN-T1-E3 null
4.5A
TP267 TPC35T_75
PC173 10U_10V_M 0805_X5R
PR113 NC_470K_J 0603
+3VALW
+3VRUN
PQ37 FDS8880_NL null
4.5A
TP270 TPC35T_75
PC188 10U_6.3V_M 0805_X5R
Discharge circuit for power-off
+1_8VSUS
+1_8VRUN
5A
TP59 TPC35T_75
PQ11 AT_FDS8896
PC48 AT_10U_6.3V_M 0805_X5R
PR59 NC_470K_J 0603
+5VALW
+12V_1
PR123 AT_100K_J 0402
PR124 AT_100K_J 0402
RUN_ON2#
PQ16B AT_2N7002DW-7-F
PQ16A AT_2N7002DW-7-F
21,33,45,46,50 RUN_ON1
PR131 AT_0_J 0402
PC97 AT_0.047U_16V_K 0402_X7R
TP155 TPC35T_75
DVT2 1/23
+5VALW
PQ12 SI3424BDV-T1-E3 null
+5VRUN_ODD
2A
PC74 4.7U_10V_K 0805_X5R
+12V_1
PR109 100K_F 0201
ODD_ON_1
+5VALW
PR112 100K_F 0201
ODD_ON#
PC89 0.01U_25V_M_B 0402
PQ13B 2N7002DW-7-F
PQ13A 2N7002DW-7-F
29 ODD_ON
PR111 0_J 0402
DEFAULT LOW IN S5/S4/S3
PR108 10K_J 0402
PC90 NC_220P_50V_J 0402_NPO
+ECVCC
+ECVCC
PR126 1K_F 0402
PR118 10K_J 0402
PU5
PGM# P10
RESET# SDA
VSS SCK
VCC CNVSS
R5G05000N100NS
33 35001_RST#
PR127 0_J 0402
NC_1U_10V_K 0603_X5R
PC100
DAT_SMB_L
CLK_SMB_L
BATT_ID 43
PC92 NC_220P_50V_J 0402_NPO
PC93 NC_220P_50V_J 0402_NPO
PVT 0319 Vendor update P/N
DAT_SMB_L PR114 0_J 0402 DAT_35001 33
CLK_SMB_L PR115 0_J 0402 CLK_35001 33
+5VSUS
+3VSUS
+1_8VSUS
+1_8VRUN
PR210 330_J 0603
PR207 330_J 0603
PR201 330_J 0603
PR58 NC_330_J 0603
PQ45A 2N7002DW-7-F
PQ45B 2N7002DW-7-F
SUS_ON#
PQ36
2N7002EPT
RUN_ON2#
PQ10
NC_2N7002EPT
+5VRUN
+3VRUN
+1_5VRUN
+1_05VRUN
PR208 330_J 0603
PR209 330_J 0603
PR205 NC_330_J 0603
PR212 NC_330_J 0603
PQ44B 2N7002DW-7-F
PQ44A 2N7002DW-7-F
RUN_ON#
PQ40
PQ47
NC_2N7002EPT
NC_2N7002EPT
+5VRUN_ODD
PR110 NC_330_J 0603
NC_2N7002EPT
ODD_ON#
PQ14
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title Others power plan
Size A3
Document Number M750-1-01
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Date: Monday, June 23, 2008
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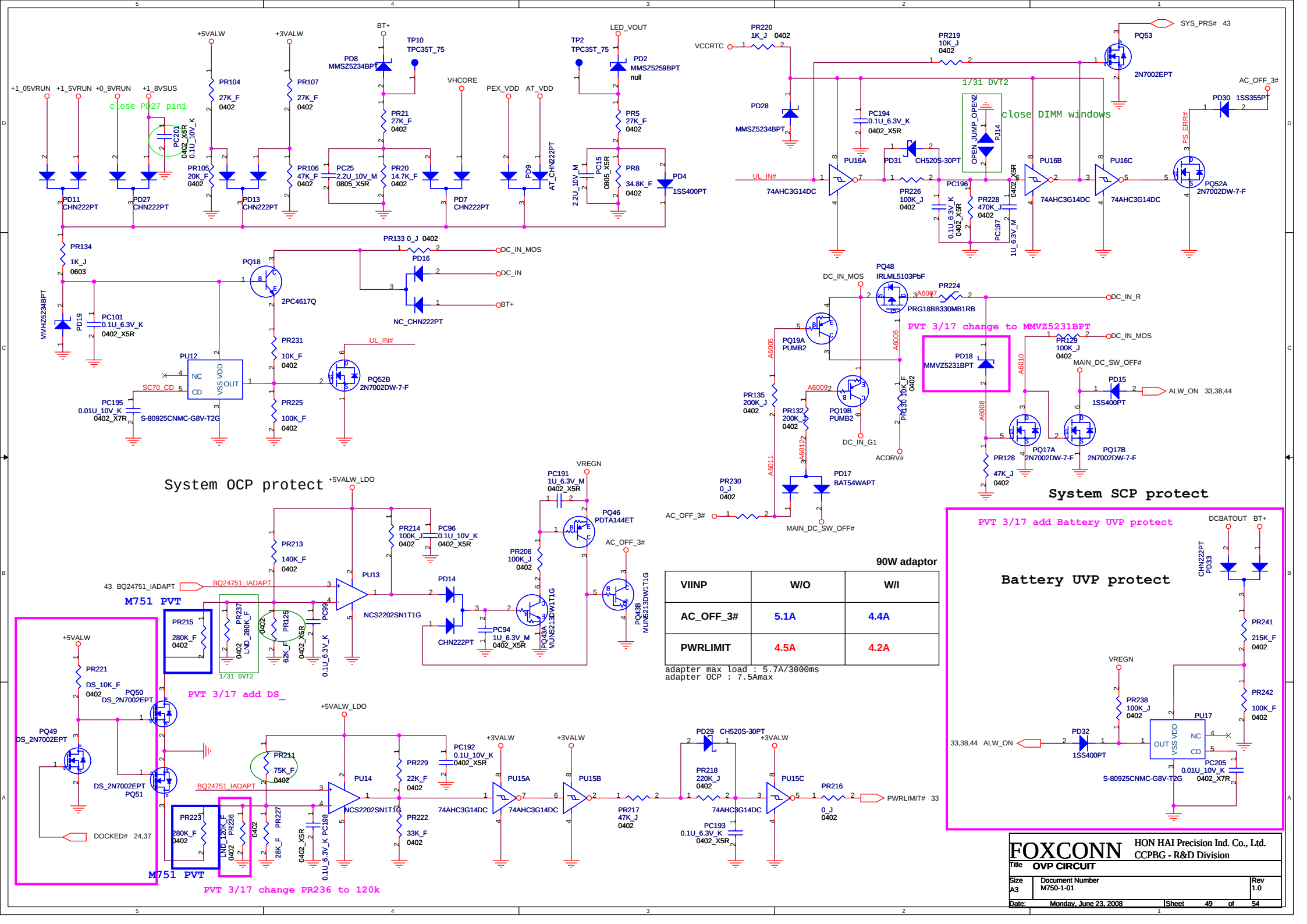
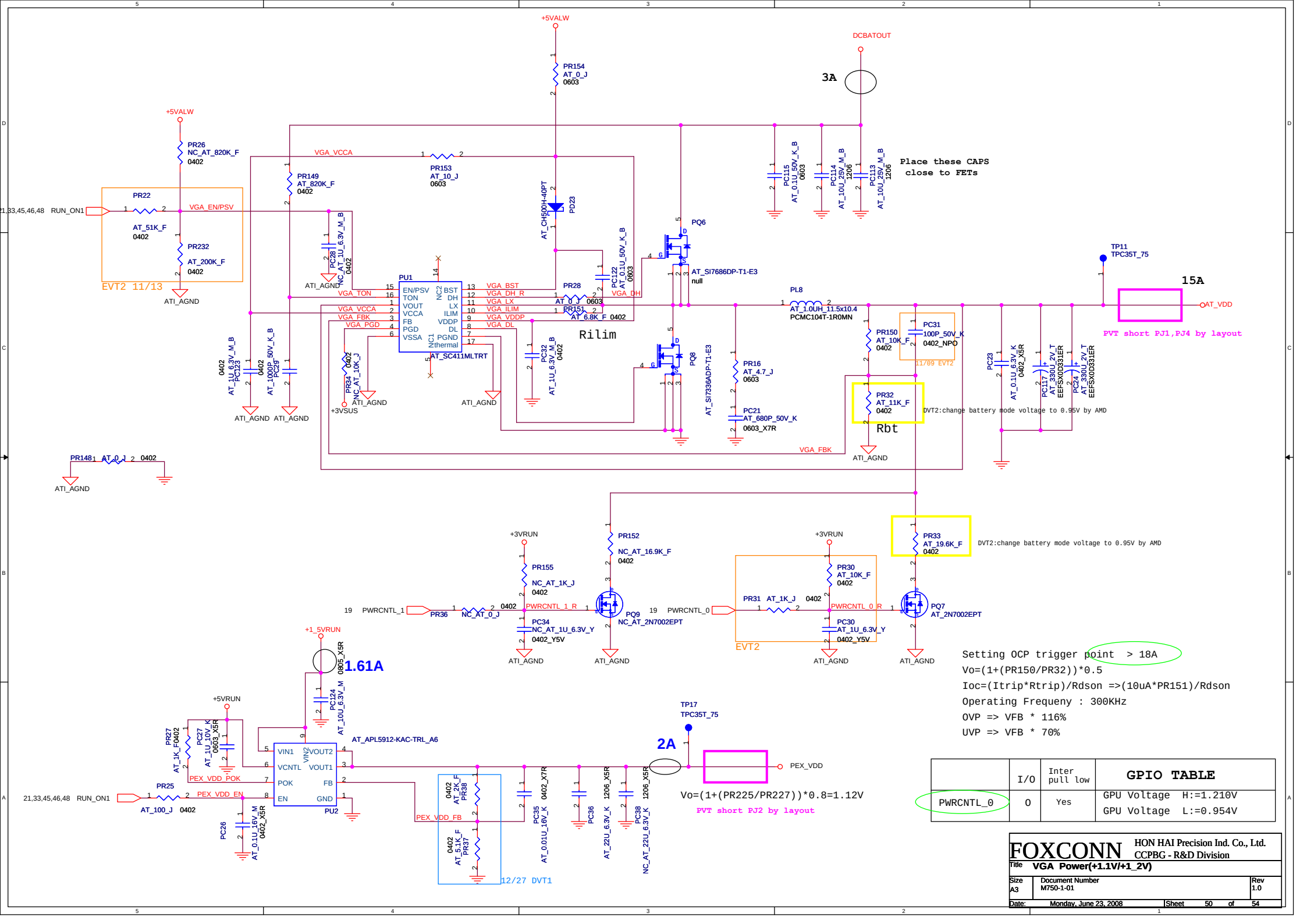


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	OVP CIRCUIT	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Monday, June 23, 2008	Sheet 49 of 54	



	I/O	Inter pull low	GPIO TABLE
PWRCNTL_0	O	Yes	GPU Voltage H:=1.210V GPU Voltage L:=0.954V

FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title: VGA Power(+1.1V/+1_2V)

Size	Document Number	Rev
A3	M750-1-01	1.0

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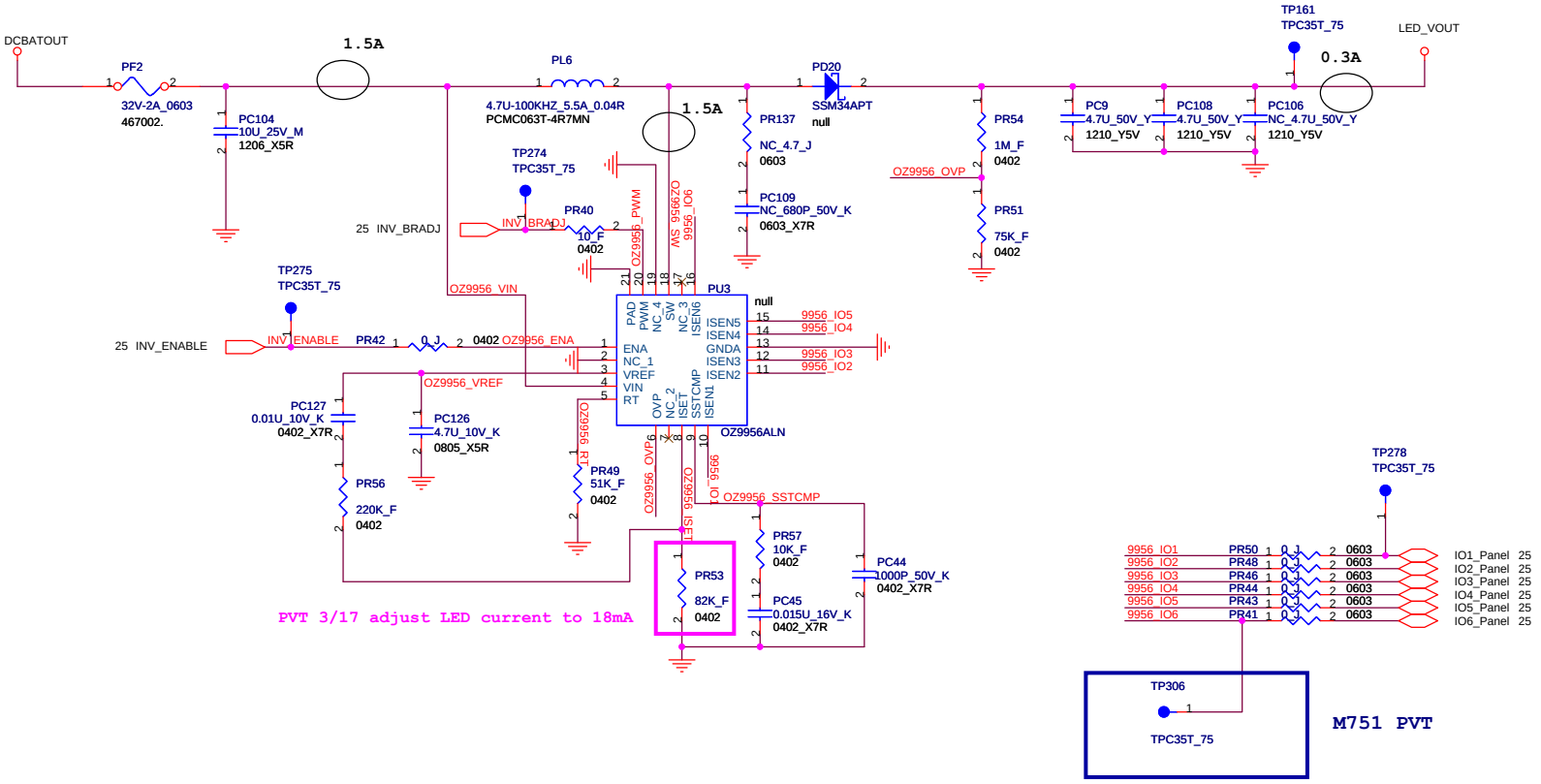
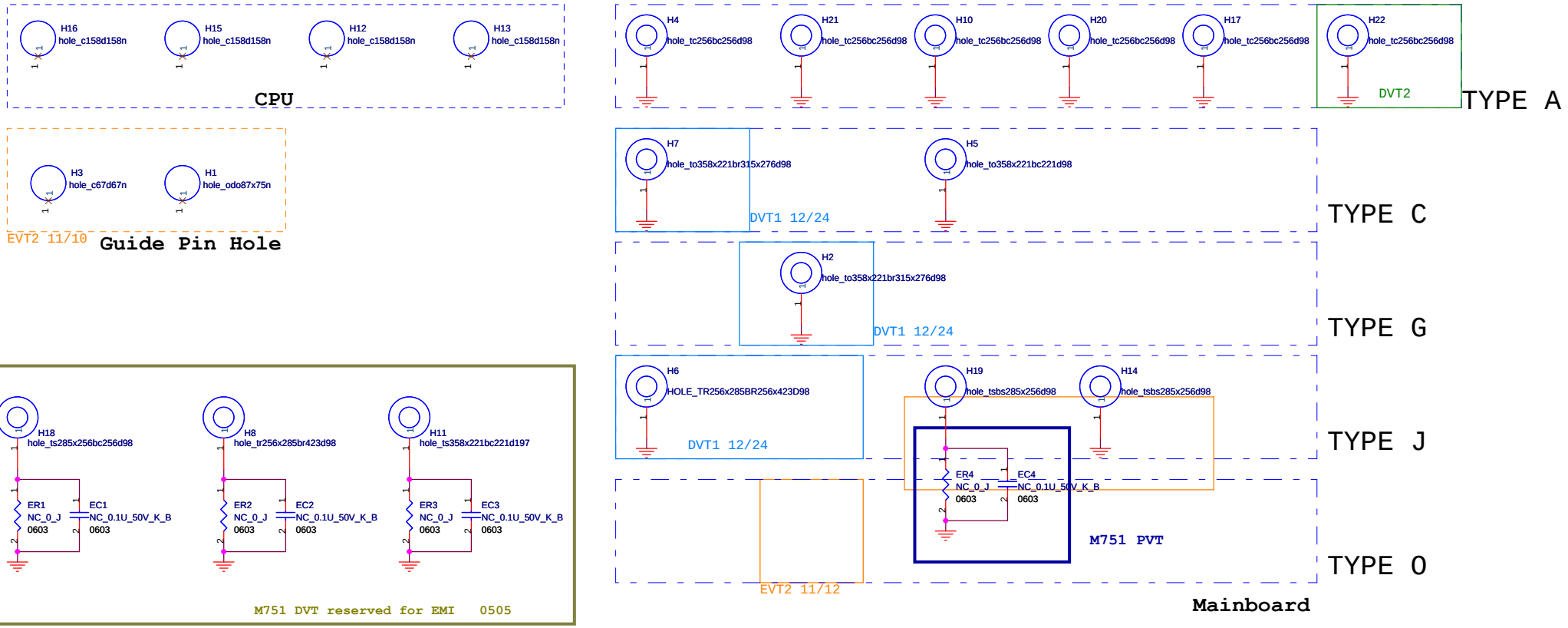


FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

Title	LED Backlight Power	
Size A3	Document Number M750-1-01	Rev 1.0
Date: Thursday, June 26, 2008	Sheet 51 of 54	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	HOLE	
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Date: Wednesday, June 25, 2008	Sheet 52 of 54	

10/12
Change color of MS/SD/HDD LED.
Mount R419, R414, R420, R421.
10/13
SYSTEM_ID, MODEL_ID definition update.
10/20
CPU 22uF CAP N.C. parts location change.
N.C. R101 For EVT2 (Use +5V type camera module)
10/24
Move PCI Express pair of LAN from port5 to port1.
10/29
Change PR9 to 422K.
Add PL15 and PL7 co-lay.
Modify charge current setting table.
Mount PR83.
PL11 change to 1uH.
Add TP276 test point.
Add PC201 0.1uF and close to PD27 pin1.
Change PL6 to 4.7uH and add TP274,TP275 test points.
10/30
Refer to PUR sugguestoin to change component source.
Add NC_PR232
Change PR30 to 10K and PR31 to 1K.
Mount PC30
Add TP278 test point.
10/31
Refer to PUR sugguestoin to change component source.
Swap LVDS group of ATI M82.
11/02
Change "#" to net "EN_EXT_DEV_SENSE" for low active.
Modify MB Semi-PNP circuit.
11/03
Inverse HDMI pairs polarity(DVI pairs inversed on docking side).
11/04
Change USB board connector.
Combine MS/SD LED to one(MEDIA_LED).
11/05
N.C. R377, Mount F3.
Change INUSE_LED to GPIO72.
Change MS slot to YAMAICHI JCS010-2300-0.
11/06
Change part of CN16/CN26.(Height Change)
Change netname of "SD_WP#" to "SD_WP".
Change PR143 to 200Kohm.
Update charge current setting table.
Reserve BATT_WOL_EN for LAN wake up enable/disable in battery mode.
11/07
C453, C452, C451,C426, C425, C424 change size to 0402.
Mount PR158, PC125 and PR185, PC148 and PR199, PC177 and PR16, PC21.
N.C. PR36.
Change C188 from 0.1uF to 0.47uF.
11/08
Swap USB_PP8/PN8 for ease of routing.
Change button board connector to WBF31326-F04TR.
Change MS/SD LED to side view, yellow color.
Change U7 from CM2009 to CM2006.
Update VCC_DDC power isolation circuit.
Add R565,C658 for SRTCRST#.
11/09
Change PC31 from 22p to 100p.
Reserve R566 for removal of Ext. SPI Conn on DVT.
Reverse Button Brd CN pin assignment.
Add EMI Cap C659~C666 on +1_8VSUS.
11/10
Delete guide pin hole H9, H22.
N.C. F3, mount F1. (Use +3VSUS for camera power on EVT2).
11/11
Change pin assignment of Express CN.

11/12
Change PTH hole size. (H11)
Add TP283,TP284.
Change net name "ISL_VSSSENSE_" to "ISL_VSSSENSE".
11/13
Add TP285~290 for SI probe point.
Change type of H14,H19.
Change PR22=51K, PR232=200k.
11/14
Tune crystal accuracy, change C390/C389/C416/C412 to 22PF,C648/C649 to 18PF.
Change PR6=360K.(Charge Current Control)
Co-Lay PR233, PQ54, PQ55, PL16.
Change RP34 to 2.2K for SI.
N.C. R415, mount L47 on H model.
11/19
N.C. R559 (Double pull up on BT_PRS#)
11/23
Change camera power to +5VSUS.
DVT1 12/01
Swap DVI bus polarity.
Route RUN_ON to docking station CN.
Add logic gate(U37) to prevent panel flash when boot up.
Add R567, bypass brightness control signal.
Use +3V_DELAY(Q4) to prevent M82 high pulse on LCD control signals.
12/07
Change DC-IN CN(PCN1, With Reinforcement Pin).
Add TPM Nut (BOSS1).
Change Button Board CN (CN3) to 15 pin.
Add R570 for power consumption measurement.
12/12
Change U6 from Quad to Dual XOR gate.
Change EMI Caps C424~C426, C451~453 to 10pF.
Change color of LED2(Charge LED) to Amber.
Change U16 from MR-sensor to Hall-sensor. (N.C. R263)
12/13
Change damping resistors of keyboard matrix to 120ohm ferrite bead.(For EMI)
12/17
Change C451,C452,C453,C424,C425,C451 to 22pF. (For EMI)
Add one more +3VSUS (CN26) for WLAN module to cover 1500mA(peak)/1100mA(normal) requirement.
12/18
Add one more LCDVCC pin (CN1) for panel to improve voltage drop.
Add optional resistors(R571,R572) for gamma control.
Reduce LED_VOUT from 6 pins to 2 pins.
12/20
Change net "BL_OFF" to "BL_OFF#".
Add R573-577 to improve MS signal overshoot/undershoot.
Mount C642-644.
Change F3 to 0.25A.
12/21
Change Net "HDD_LED#" to "HDD_ODD_LED#"
12/23
Change C412/C416 from 22pF to 10pF.
Change C648,C649 from 18pF to 15pF.
Mount U26(VGA Thermal Sensor) on H model only.
Add 75 ohm bead, 10pF capacitor on HDA_MDC_BITCLK/HDA_CODEC_BITCLK for EMI.
12/24
Update H2/H6/H7/H8 footprint.
Delete R563, R564 (CRT_GND).
Change D17, D18 to SSM22 to reduce voltage drop.
Change pull up voltage of R360/R361 to +3VRUN. (Only Strap/GPIO pin connected to +3V_DELAY)
N.C. C403 (Not necessary for ESD)
12/26
Delete ODD_DP# connection to ICH9M.

12/27
Add PC204 for noise filtering.
Add R578 for protection.
Change U27 from RClamp0514 to RClamp0524.
N.C. SW1, R134,R141
Change PR38 to 2K, PR37 to 5.1K.
12/28
N.C. U4 shunt regulator to reduce S4 consumption.
Mount R131, N.C. R129.
Reserve LDO (U38) for 1.5V type VCCSUSHDA.
Add R579,R580 to avoid floating on input pin.
1/2
N.C. C451~453, C424~426.
N.C. PC204.
Add prefix AT_ on R322, R51.
Change damping resistor value of MS card.
(R573~577 from 33 to 68 ohm)
(R506~510 from 33 to 0 ohm)
Change L30~32 to 27nH inductor.
Change C258,260,262 to 2.2pF.
Change revision of clock generator(U29) to Rev.B
1/5
Change D2/D3 to low capacitance type.
Fine tune delay timiing. Change R19/R565 to 13K.
1/8
Update power design spec.
VCore: 47A, +3VSUS: 1.7A.
DVT2
1/15
Update power budget of VCCHDA,VCCSUSHDA,VCCDMI,VCC1_5_A
Add GND pin on C130.2
1/18
Add BT_LED on CN4.6
Update WIRELESS LED circuit. Page41.
1/21
Add screw hole H22.
Add D23, D24 for leakage issue when EC initialization.
Add R460 for Non-Dock Sku.
1/23
PQ12 change to SI3424BDV-T1-E3.
PR125 change to 62Kohm
PR215 change to 205Kohm
PR211 change to 75Kohm
PR223 change to 154Kohm
Add PR237 ND_280Kohm , PR236 ND_154Kohm for Non-Dock sku.
Add pull down resistor (R581) on BT_LED.
1/25
Mount L23, N.C. R108, R109 for EMI.
Change L86 from 75R to 10R for SI.
For Docking sku, add prefix DS_ on value of C257,C259,C261,CN16 D1,PQ2,PQ4,PR11,PR24,PR29,Q1,Q20,Q21,R6,R9,R10,R165,R167,R416 R444,R578,U8,U9,U10.
1/26
Change R176 from 54.9 to 649 Ohm.
Del L48, Add R582. R583 (N.C.)
Change C413 from 0.1uf to 1uF.
Change CN5 from Gold plated to TIN plated.
1/28
Mount R555, R556, R557.
Add +1_5V_PCIE_OUT on CN25.6 to reduce voltage drop.
Change CN3 from WBF31526-F04TR to GB5RF151-1093-7F.
(Vender naming rule change, same part.
layout footprint pin reversed)
1/29
Add R584, R585, Q27 to solve DDC capacitance issue.
Add R586 for identification of Dock support.
1/30
Change L86 back to 75R, change L85 from 75R to 10R.
Mount CN13 for software debug on DVT2.
N.C. R572.
Move R321 to U37B.6
1/31
Move PJ14 to PR226.2
Change R176 back to 54.9 ohm.
Add prefix LND on PR236,PR237 for Non-Dock skue for LOW model.
Add PAD1 for EMI Grounding.

0218
M750

change U30 from NC7S32M5X(14-NC7S32M-5X00) to MC74HC1G32DTT1G(14-MC74HC1-G300)
change D2,D3 from BAS316(16-BAS3160-0000) to BAS316PT(16-BAS316P-T000) for common parts
chage D6,D7,D9,D11,D12,D14,D23,D24 from 16-SCS500V-4000 to CH500H-40PT(16-CH500H4-0P00) for common parts
change Q1.Q5,Q17,Q21,Q22 from 17-2N7002P-T000 to ME2N7002E(17-ME2N700-2E00) for common parts
change Q23 from 17-MMBT390-4001 to PMBT3904.215(17-PMBT390-4200) for commonn parts
change C303,PC156 from 0.01U_6.3V_K(1C-2B20103-K100) to 0.01U_10V_K(1C-2B20103-K200) for commonn parts
change L23,L28,L40,L41,L42 from 90R-100MHZ_0R35(1L-FDLW31S-N900) to 90R-100M_1206(1L-FWCM321-6F00) for commonn parts

change C19,C17 from Y5V to X5R tolerence
change PR32 to 11K, PR33 to 19.6k to set the battery mode voltage to 0.95V by AMD for battery mode dual display

0318 PVT

NC C656 for WLAN_LED light when power on because of RC delay
update battery identify IC(PU5) P/N to R5G05000N100NS by vendor
update U7 symbol to CM2006-02QR
modify R345 value to HD_ for BOM change of disable HDaudio in 128MB SKU
remove PJ11,PJ12,PJ3,PJ8,PJ10,PJ9,PJ13,PJ5 and short by layout
correct U36 vendor P/N to WPCE775LA0DG
change U32 to W25X16AVSSIG by vendor suggestion
add PQ56,PC206,PR246 for charger ocp improve by M760 battery OCP issue
modify P43 charge current table ,middle current change from 1A to 0.8A
add PR244 and PR245(dummy directly) for intersil ISL6266A found C4 hang at the other company
change PD18 to MMVZ5231BPT for SCP circuit
add UVP circuit (PU17,PR238,PD32,PC205,PR242,PR241,PD33)
change PR236 to 120Kohm for power limit point improved
change PQ50,PQ51,PQ49,PR221 value title to DS_
change PR53 to 82Kohm for LED backlight current modify
add R587,Q28,Q29 for improve HDMI voltage drop

0326
Short PJ1,PJ2,PJ4 by layout
add C669 for reduce fan power source ripple
add L87,L88 for EMI
add U39,C670 for MS/SD abnormal behavior

0327
change PU9 to AT5208 because of G909 big inrush current

0328
NC R389,R393,Y3,C436,C437,C241,C242,L29,U5,R152 for use AMD internal SS
add R589,C672 for MS/SD led abnormal when power on

NC R389,R393,Y3,C436,C437,C241,C242,L29,U5,R152 for use AMD internal SS
add R589,C672 for MS/SD led abnormal when power on
reserve R588 for reduce G-sensor power ripple

0402
add F5~F11 for power short

0403
change PR241 from 232K to 215K for UVP circuit improve

0408
NC R348,R356,R357 for using AMD internal SS
change R378 value to HD_ for HDMI disable

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M751 DVT

0505
Reserve EC1,EC2,EC3, ER1,ER2,ER3 for Hynix 1GB EMI
change HDD sata CN20 pin define to increase the impedance for SATA SI

0506
reserve PR247 for colay with MAX17020
Update U29 footprint for Japan/Mitsui package
change L85 to 60ohm for EMI
NC C5 for EMI

0508
add Q30 for MS/SD LED cost down

M751 PVT

0618
Page 24:Change L30,L31,L32 to 33ohm and change C258,C260,C262 to 15PF for SI issue
Page 25:chang C405 C407 to 1C-2B30475-K100 for PUR request
Page 33:NC R561,Mount R560 ,keep system ID the same as M750
Page 36:NC F1 ,mount F3,for 5v Camera moudle
Page 38:Change R80 to 4.7k from 10k , for FAN speed issue
Page 40 :NC Q30 ,Mount U39 Q13 C672 C670 R589 for mor Request
Page 47:NC PR244 ,Vendor suggestion and it is related with DC4
Page 43,49:1.PR14 change to 62Kohm , co-lay PR248 LND_86.6Kohm with PR7.
2.PR215 205Kohm change to 280Kohm
3.PR223 154Kohm change to 280Kohm
Page 24: change D17 to 16-SSM24AP-T000' for leakage issue
Page 7;Change C254,C252 rating to 6.3v for cost down
Page 35:del R301,R302,R303,R304,R305,R306,L40,L41,L42 for cost down
Page36:del R147 R150 L28 for cost down
Page 39:del R261 for cost down,change U14 version
Page 33:Change CN6 to 1N-0024000-F1T0 for pur request
Page 52:add ER4 EC4 for EMI Issue

0625

Page 43:.PC121 change from 0.1uF/25V to 0.1uF/50V(1C-2B30104-K000)
Page 52 : change ER4 EC4 to 0603 for EMI request
Page 40:modify the U33 P/N to 15-BD2056A-FJ00 for CE update component library
Page 35:resume CN6 main source 1N-0024000-M1T0,for 2nd source layout issue
Page 24:change D17 to 16-SSM24PT-0000 For design change
Page 51:add one test point in PR41 pin1.

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