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80			

P. Leader	Check by	Design by

DVT to PVT

Project Code & Schematics Subject: **M780 EVT Main Board**

PCB P/N: FUBAI 1P-0086102-8010

FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: *Index*

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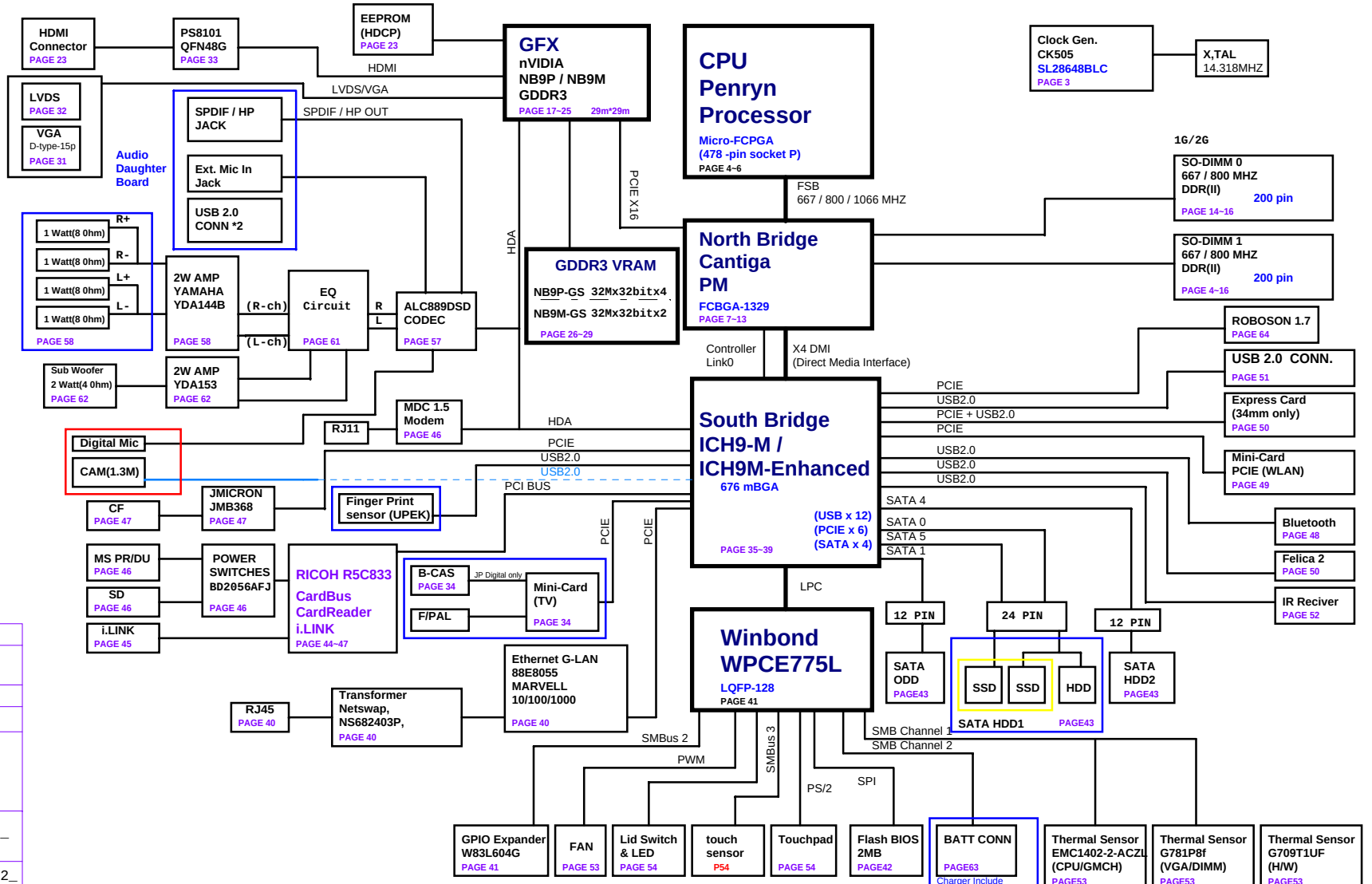
M780 Montevina Block Diagram



TI CHARGER B024751 P.63

INPUTS	OUTPUTS
DC_IN	BT+ DCBATOUT

SYSTEM DC/DC ISL6236IRZA-T P.64

INPUTS	OUTPUTS
DCBATOUT	+5VALW +5VALW_LDO +3VALW +ECVCC +15V_ALW

SYSTEM DC/DC SC411 P.65

INPUTS	OUTPUTS
DCBATOUT	+1_5VRUN +1_05VM

SYSTEM DC/DC ISL6269A P.66

INPUTS	OUTPUTS
DCBATOUT	+1_8VSUS

SYSTEM DC/DC G2998 P.66

INPUTS	OUTPUTS
DCBATOUT	+0_9VRUN

CPU DC/DC ISL6266A P.67

INPUTS	OUTPUTS
DCBATOUT	VHCORE

SYSTEM DC/DC APL5913 P.70

INPUTS	OUTPUTS
+1_5VRUN	APL5913

SYSTEM DC/DC SC411 P.70

INPUTS	OUTPUTS
DCBATOUT	NV_VDD

M780 BOM configuration

unstuff	NC_
NB9P-GS + NB9M-GS	NV_
for L model	NV9L_
for M model	NV9M_
B-CAS Card, FeliCa module for J SKU stuff Roboson,TV Tuner ,IR,Reciever,CF Card Slot unstuff for L Model	LNC_
for H M model	NV9HM_
for L model 32Mx32 GDDR3	NV9L32_
for H model	NV9H_
for Qimonda VRAM	NV9QI_
for Samsung VRAM	NV9SAM_

H-model used ICH9M enhanced
L-model used NB9M-GS

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Title: Block Diagram

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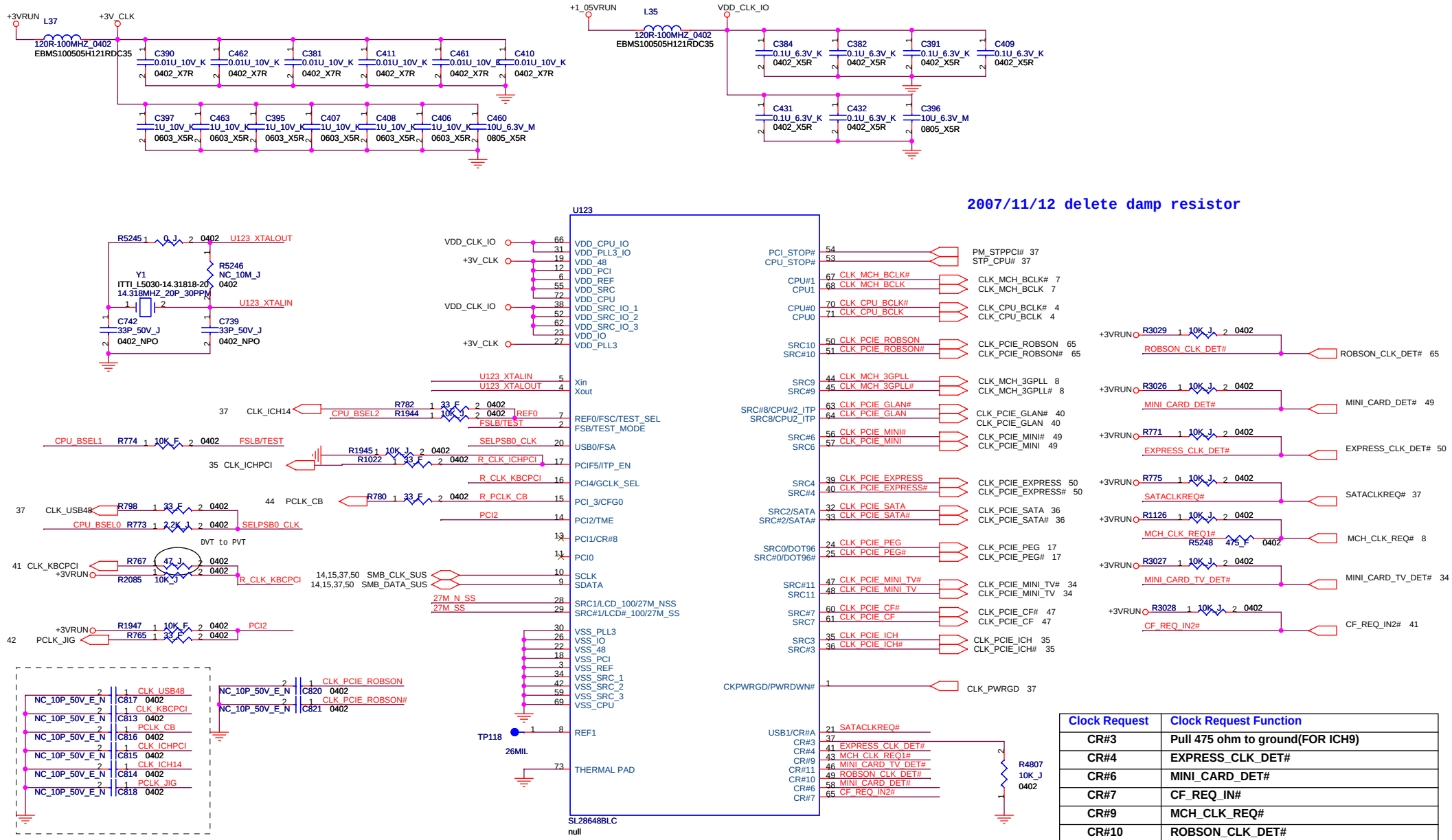

FSB Frequency Table: close to clk gen (For EMI)

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

Clock Request	Clock Request Function
CR#3	Pull 475 ohm to ground(FOR ICH9)
CR#4	EXPRESS_CLK_DET#
CR#6	MINI_CARD_DET#
CR#7	CF_REQ_IN#
CR#9	MCH_CLK_REQ#
CR#10	ROBSON_CLK_DET#
CR#11	MINI_CARD_TV_DET#
CR#A	SATACLKREQ#

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Title: CLOCK GEN (SL28648LFXC)

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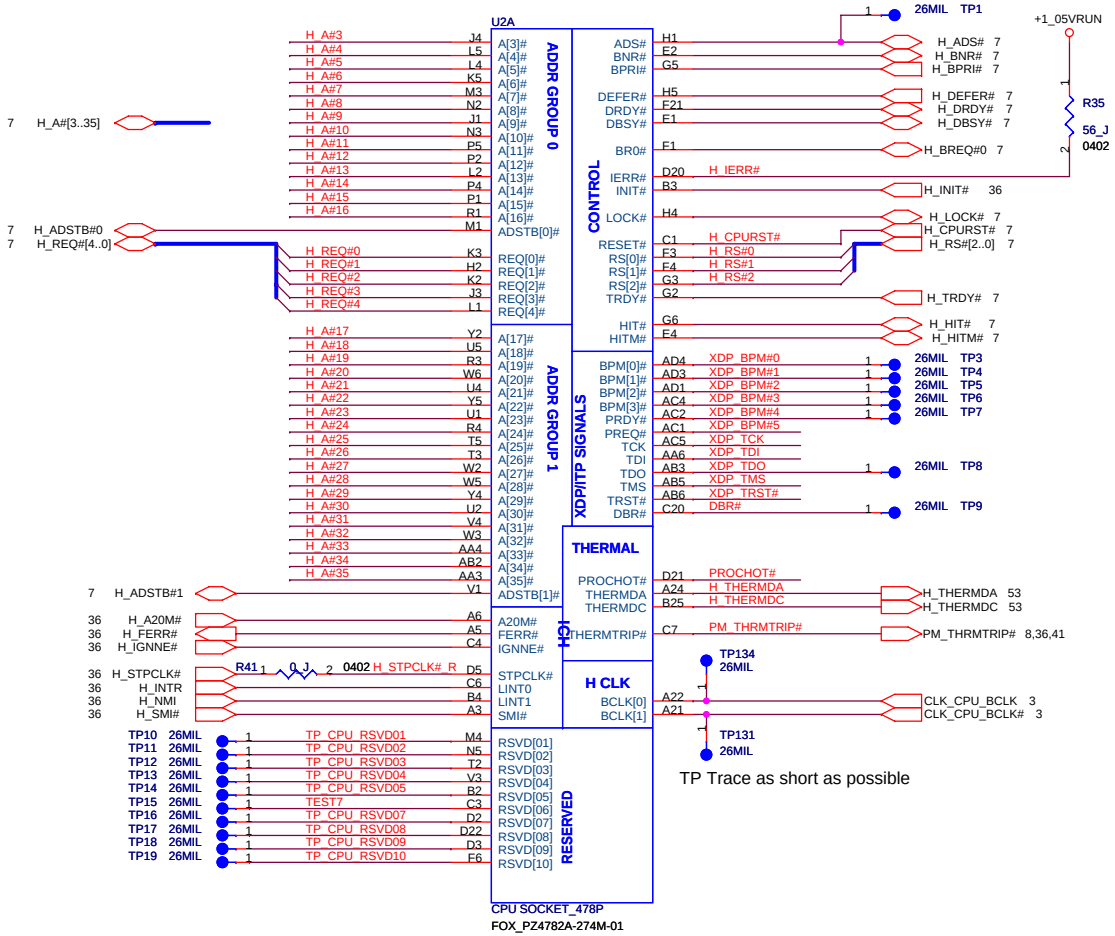

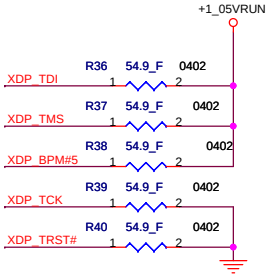

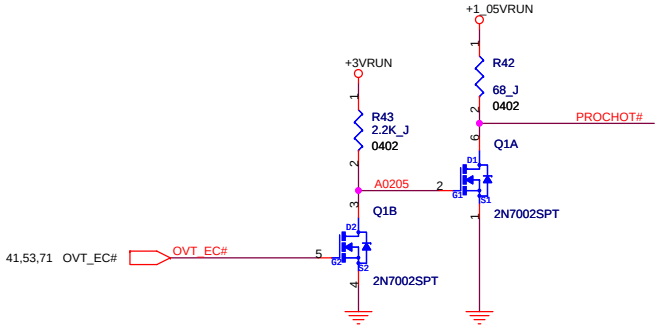

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *Penryn (HOST BUS) 1/3*		
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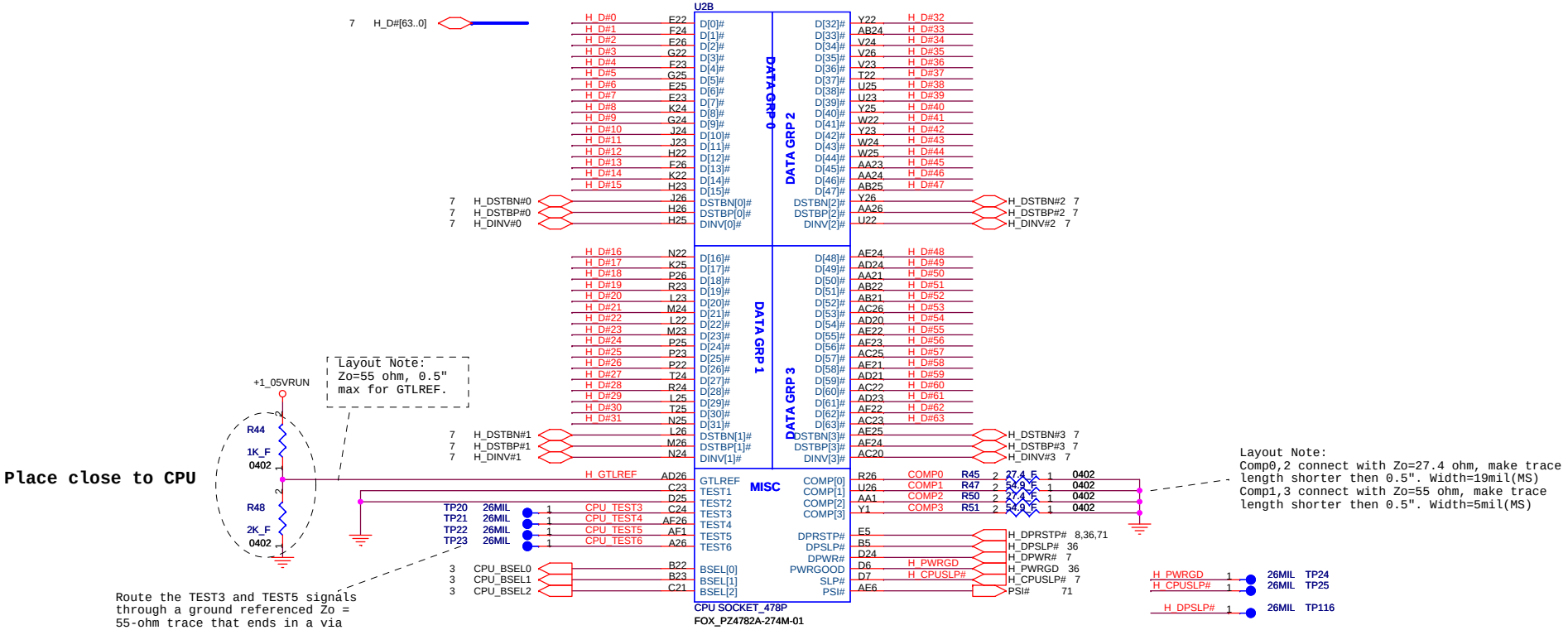

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	Penryn (HOST BUS) 2/3	
Size A3	Document Number M780(MBX-194)	Rev 0.1
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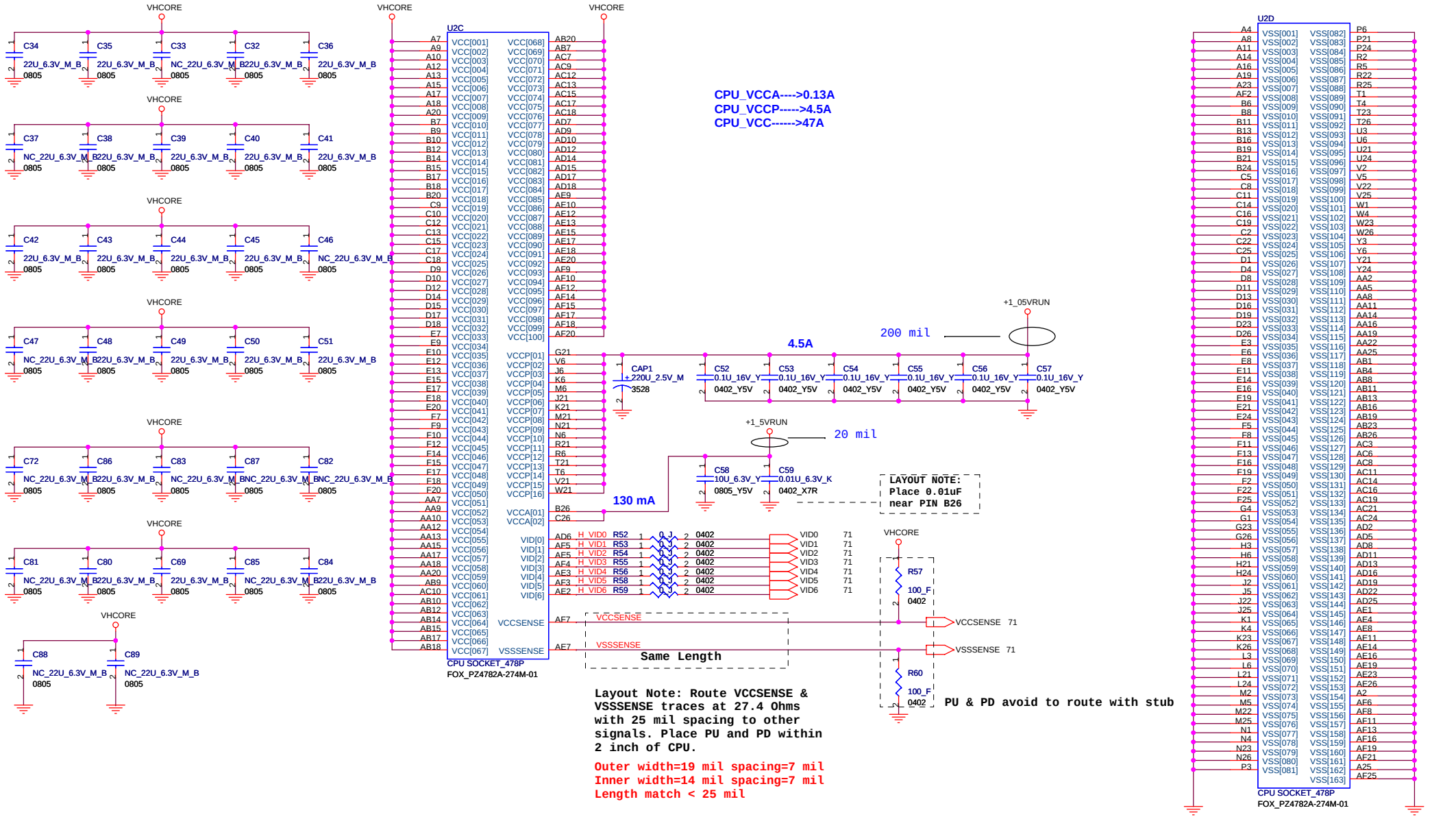

FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: Penryn (HOST BUS) 3/3

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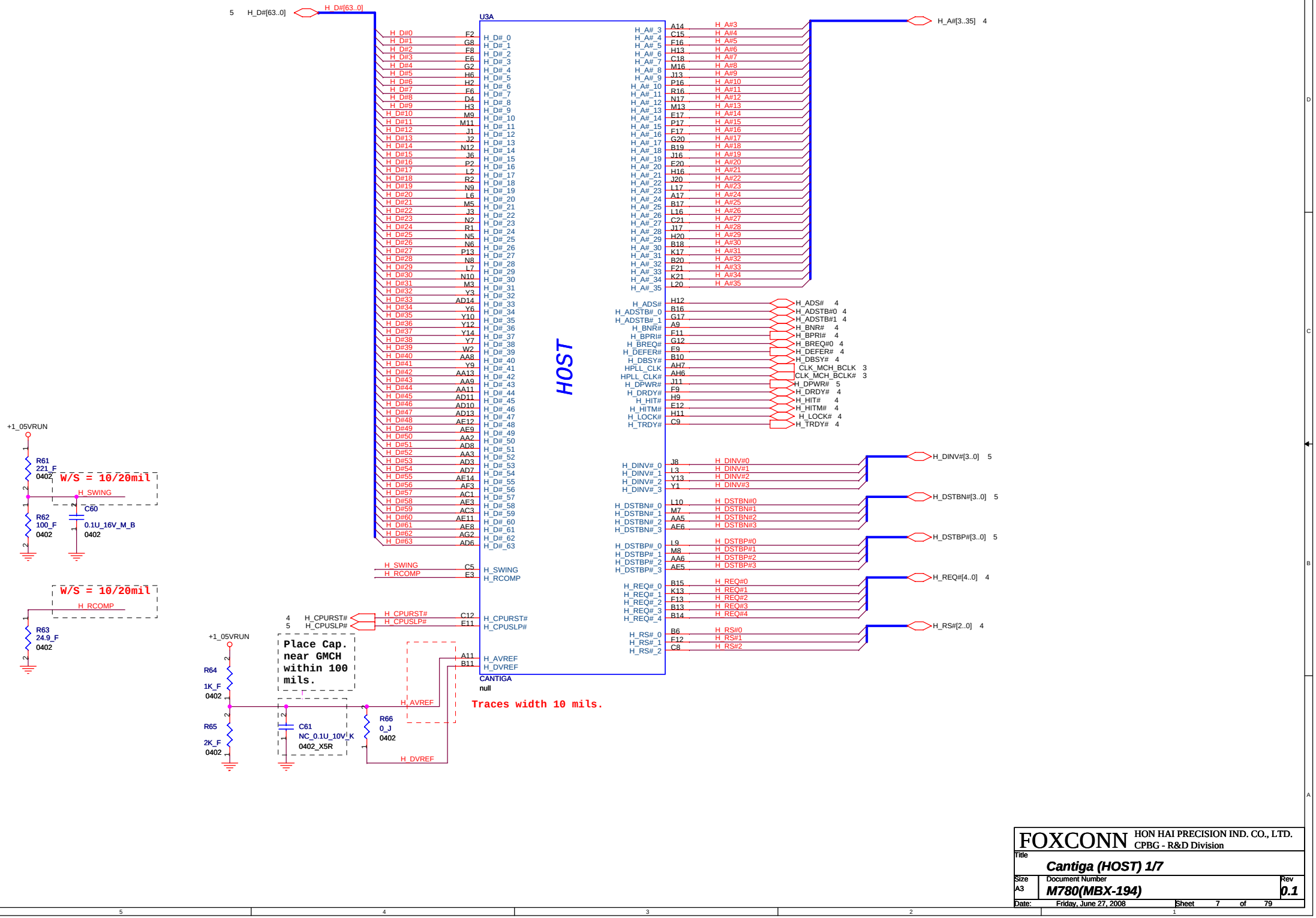

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	Cantiga (HOST) 1/7
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MCH_CFG_2~0 FSB Frequency	000 = FSB1066 ; 010 = FSB800; 011 = FSB667 ; Others = Reserved
MCH_CFG_3~4	Reserved
MCH_CFG_5 DMI X2 Select	Low = DMI X2 High = DMI X4 (Default)
MCH_CFG_6 ITPM Host Interface	Low =The ITPM Host Interface is enabled2 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 = Reverse Lane High = Normal operation
MCH_CFG_10 PCIE Loopback enable	Low = Enabled3 High = Disabled (default)
MCH_CFG_11	Reserved
MCH_CFG_12 ALLZ	Low = ALLZ mode enabled3 High = Disabled (default)
MCH_CFG_13 XOR	Low = XOR mode enabled3 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

U3B

RSVD
DDR CLK/ CONTROL/COMPENSATION
CLK
DMI
GRAPHICS VID
GMCH
MISC
HDA
NC

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

External Graphics (GMCH CRT/TVOUT Disable)

Width =12mil

TP Trace as short as possible

CANTIGA
null

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

Title	Cantiga (DMI) 2/7	
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214.(Page 9) 07/11/28 Change PCIE Capactior size from 0402 to 0201

20 mils away from toggling signals.

External Graphics (GMCH CRT/TVOUT Disable)

Project	Cantiga (GRAPHIC) 3/7
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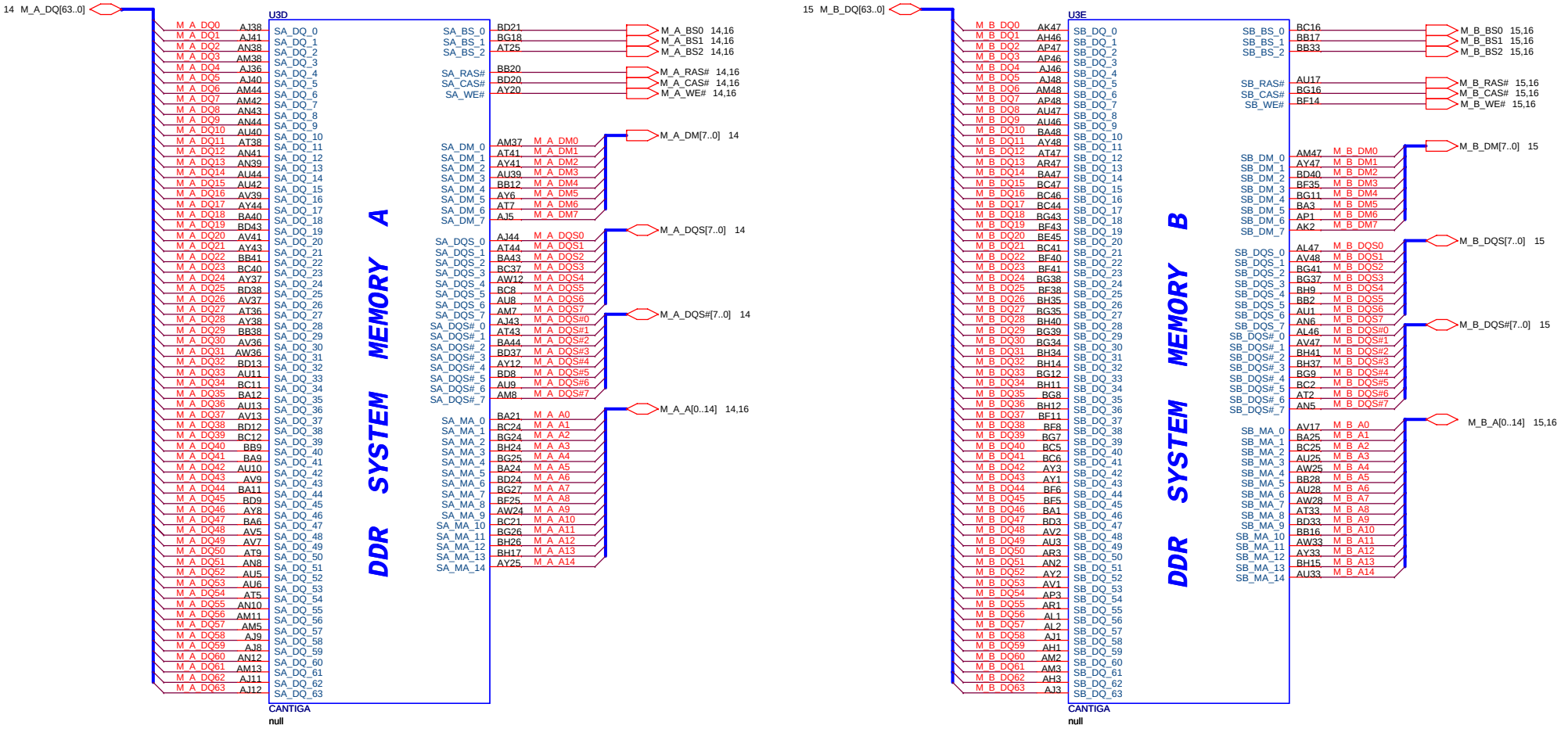
CPBG - R&D Division



FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: Cantiga (DDRII) 4/7

Size: A3 | Document Number: M780(MBX-194) | Rev: 0.1

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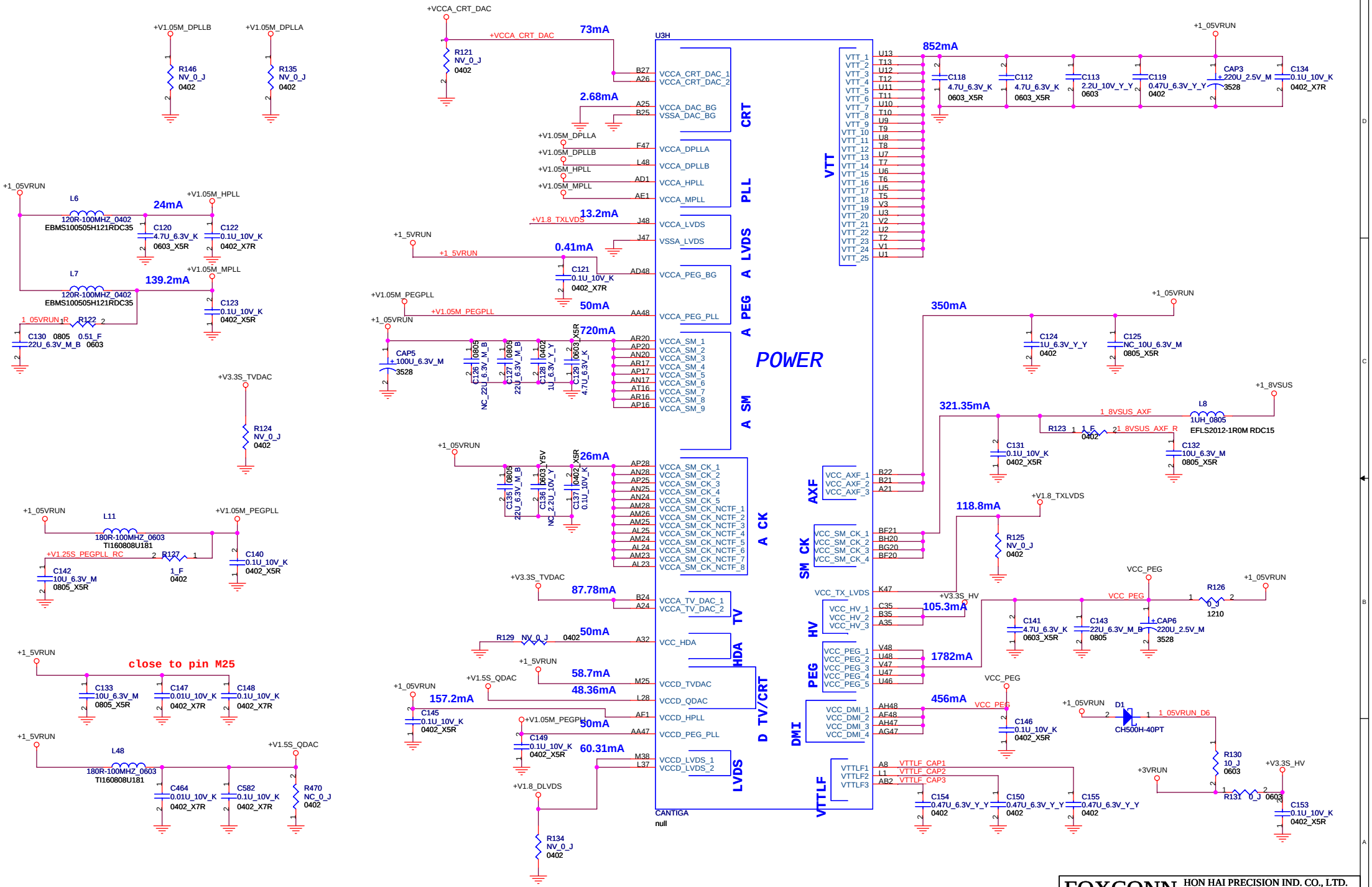

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	Cantiga (POWER,VCC) 5/7	
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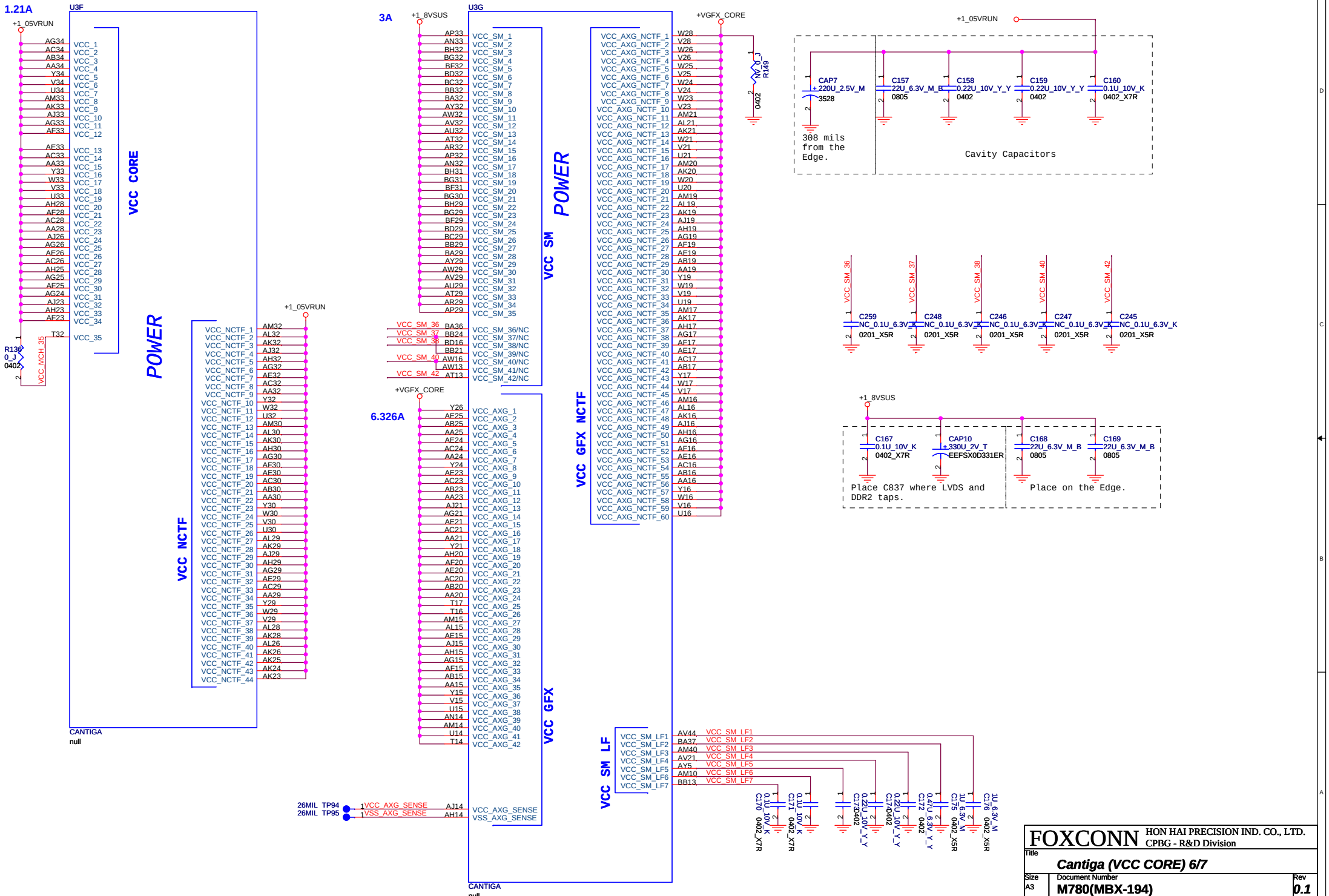

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	Cantiga (VCC CORE) 6/7	
Size A3	Document Number M780(MBX-194)	Rev 0.1
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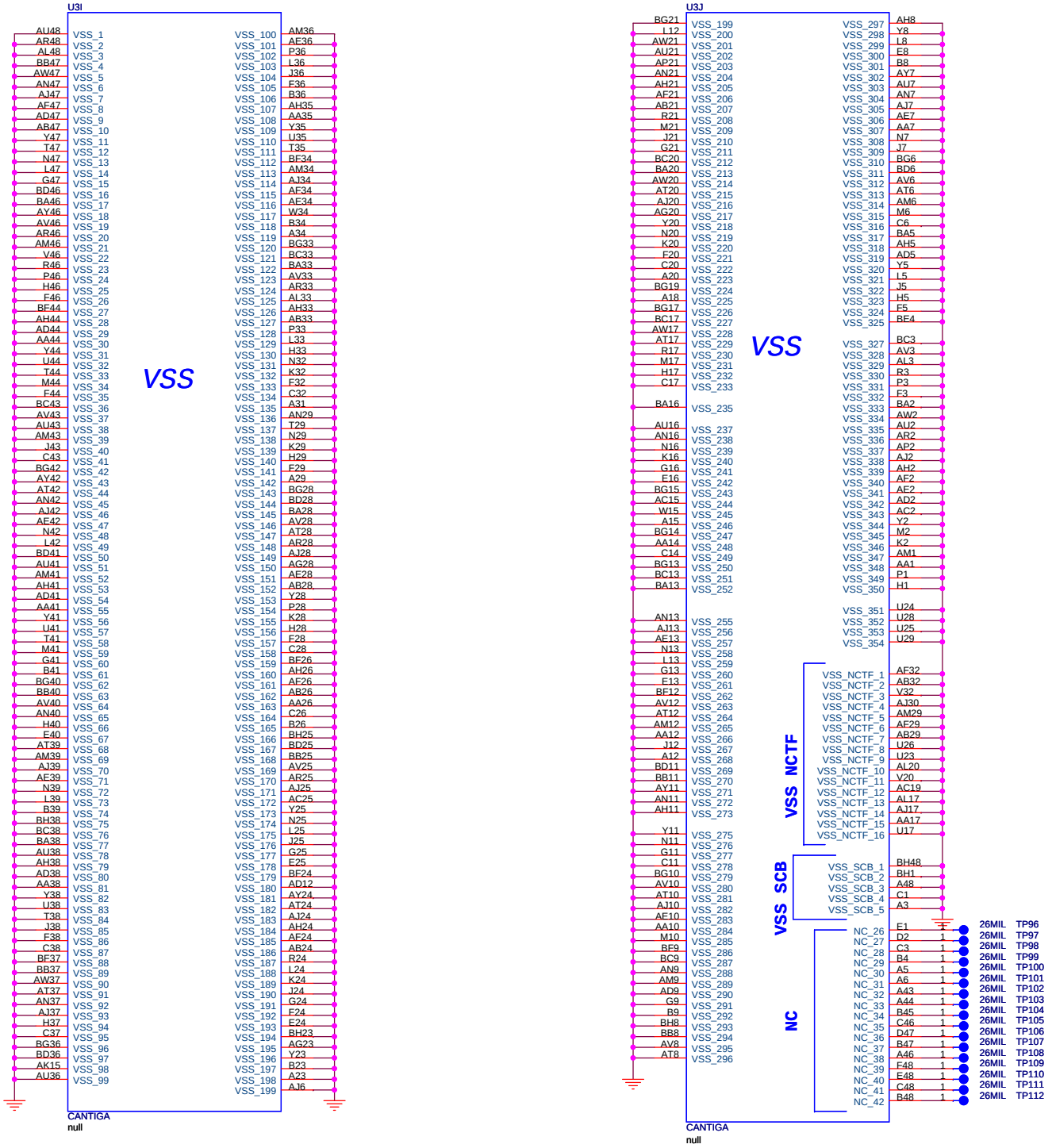

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	Cantiga (VSS) 7/7
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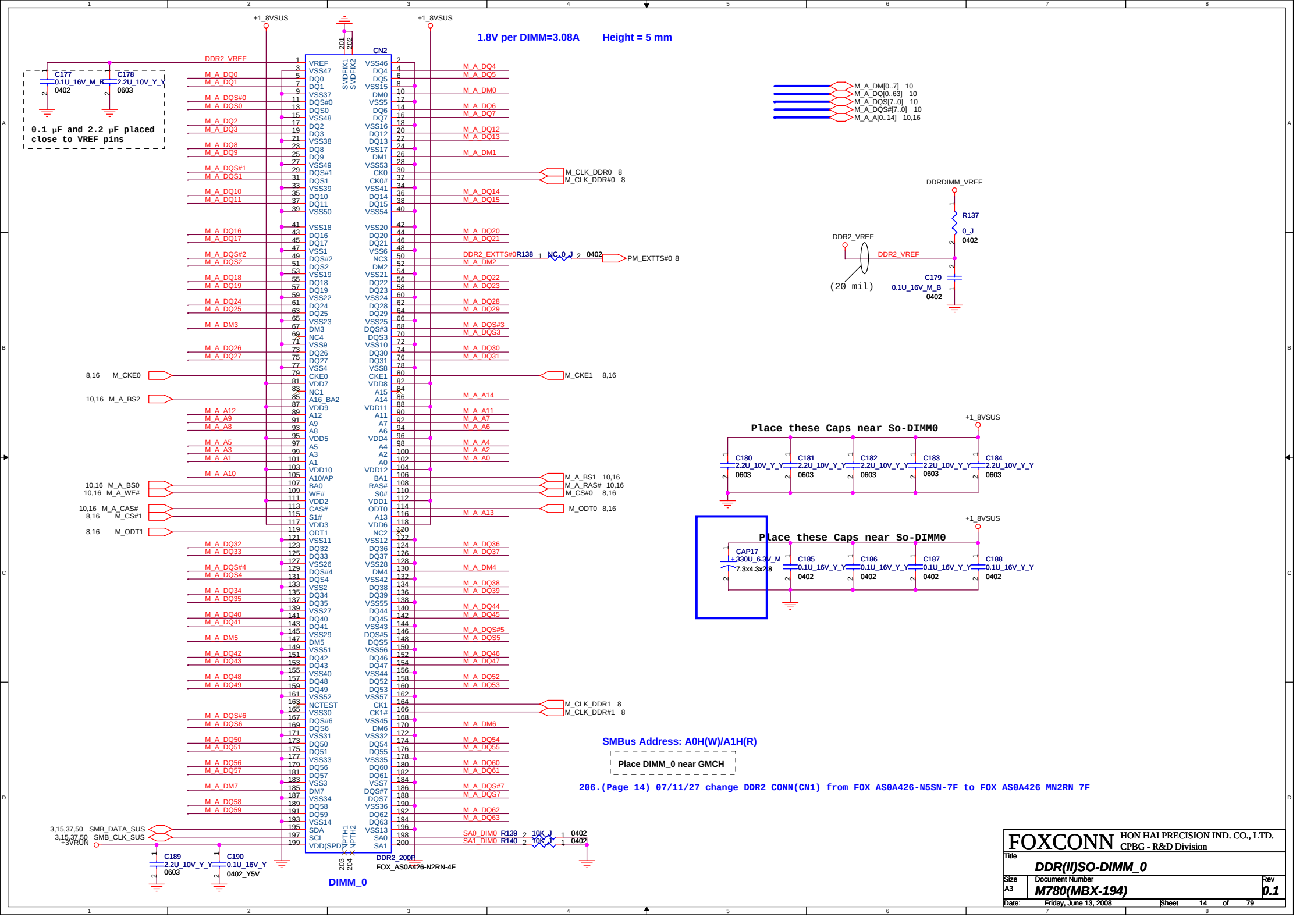
1.8V per DIMM=3.08A
Height = 5 mm
CN2
DDR2_200P
FOX_AS0A426-N2RN-4F
DIMM_0
0.1 µF and 2.2 µF placed close to VREF pins
C177 0.1U_16V_M_B 0402
C178 2.2U_10V_Y_Y 0603
C189 2.2U_10V_Y_Y 0603
C190 0.1U_16V_Y 0402_Y5V
M_A_DM[0..7] 10
M_A_DQ[0..63] 10
M_A_DQS[7..0] 10
M_A_DQS#[7..0] 10
M_A_A[0..14] 10,16
DDRDIMM_VREF
R137 0_J 0402
C179 0.1U_16V_M_B 0402
(20 mil)
Place these Caps near So-DIMM0
C180 2.2U_10V_Y_Y 0603
C181 2.2U_10V_Y_Y 0603
C182 2.2U_10V_Y_Y 0603
C183 2.2U_10V_Y_Y 0603
C184 2.2U_10V_Y_Y 0603
Place these Caps near So-DIMM0
CAP17 +330U_6.3V_M 7.3x4.3x2.8
C185 0.1U_16V_Y_Y 0402
C186 0.1U_16V_Y_Y 0402
C187 0.1U_16V_Y_Y 0402
C188 0.1U_16V_Y_Y 0402
SMBus Address: A0H(W)/A1H(R)
Place DIMM_0 near GMCH
206.(Page 14) 07/11/27 change DDR2 CONN(CN1) from FOX_AS0A426-N5SN-7F to FOX_AS0A426_MN2RN_7F
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
DDR(II)SO-DIMM_0
Size A3
Document Number M780(MBX-194)
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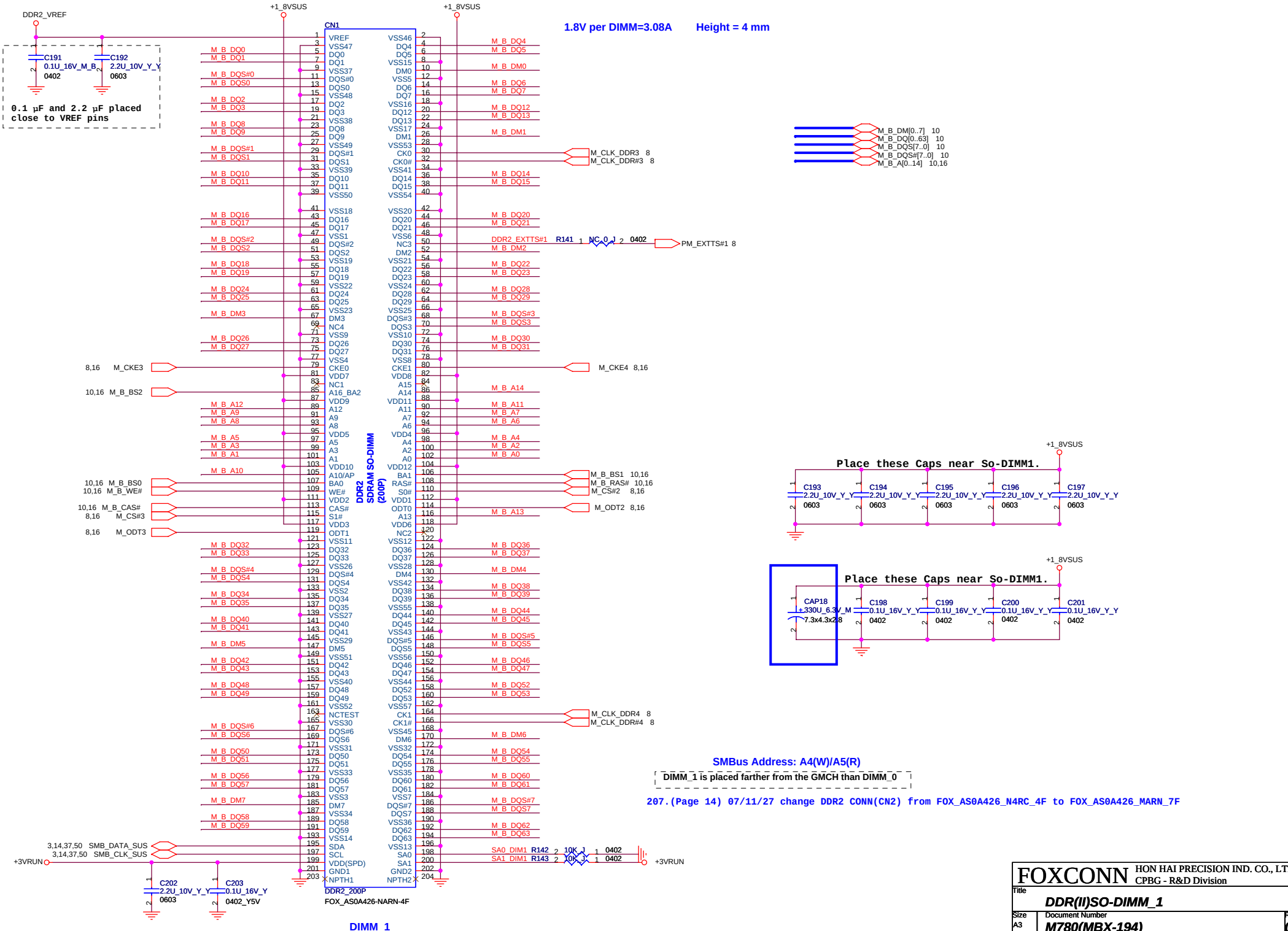
1.8V per DIMM=3.08A
Height = 4 mm
DDR2_VREF
+1_8VSUS
CN1
C191 0.1U_16V_M_B 0402
C192 2.2U_10V_Y_Y 0603
0.1 µF and 2.2 µF placed close to VREF pins
DDR2 SDRAM SO-DIMM (200P)
M_CLK_DDR3 8
M_CLK_DDR#3 8
M_CLK_DDR4 8
M_CLK_DDR#4 8
M_B_DM[0..7] 10
M_B_DQ[0..63] 10
M_B_DQS[7..0] 10
M_B_DQS#[7..0] 10
M_B_A[0..14] 10,16
DDR2_EXTTS#1 R141 NC_0_J 0402
PM_EXTTS#1 8
M_CKE3 8,16
M_CKE4 8,16
M_B_BS2 10,16
M_B_BS1 10,16
M_B_BS0 10,16
M_B_WE# 10,16
M_B_RAS# 10,16
M_CS#2 8,16
M_CAS# 10,16
M_CS#3 8,16
M_ODT2 8,16
M_ODT3 8,16
Place these Caps near So-DIMM1.
C193 2.2U_10V_Y_Y 0603
C194 2.2U_10V_Y_Y 0603
C195 2.2U_10V_Y_Y 0603
C196 2.2U_10V_Y_Y 0603
C197 2.2U_10V_Y_Y 0603
CAP18 ±330U_6.3V_M 7.3x4.3x2.8
C198 0.1U_16V_Y_Y 0402
C199 0.1U_16V_Y_Y 0402
C200 0.1U_16V_Y_Y 0402
C201 0.1U_16V_Y_Y 0402
SMBus Address: A4(W)/A5(R)
DIMM_1 is placed farther from the GMCH than DIMM_0
207.(Page 14) 07/11/27 change DDR2 CONN(CN2) from FOX_AS0A426_N4RC_4F to FOX_AS0A426_MARN_7F
3,14,37,50 SMB_DATA_SUS
3,14,37,50 SMB_CLK_SUS
+3VRUN
SA0_DIM1 R142 10K_J 0402
SA1_DIM1 R143 10K_J 0402
C202 2.2U_10V_Y_Y 0603
C203 0.1U_16V_Y 0402_Y5V
DDR2_200P
FOX_AS0A426-NARN-4F
DIMM_1
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
DDR(II)SO-DIMM_1
Size A3
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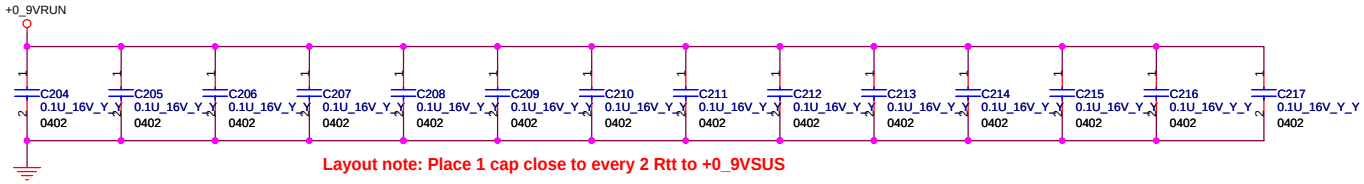
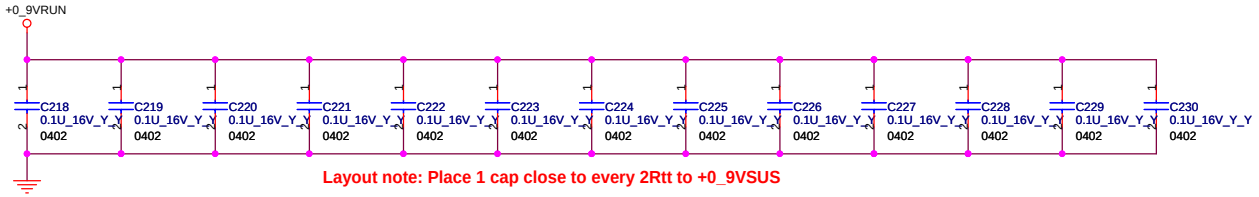
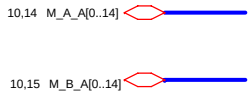
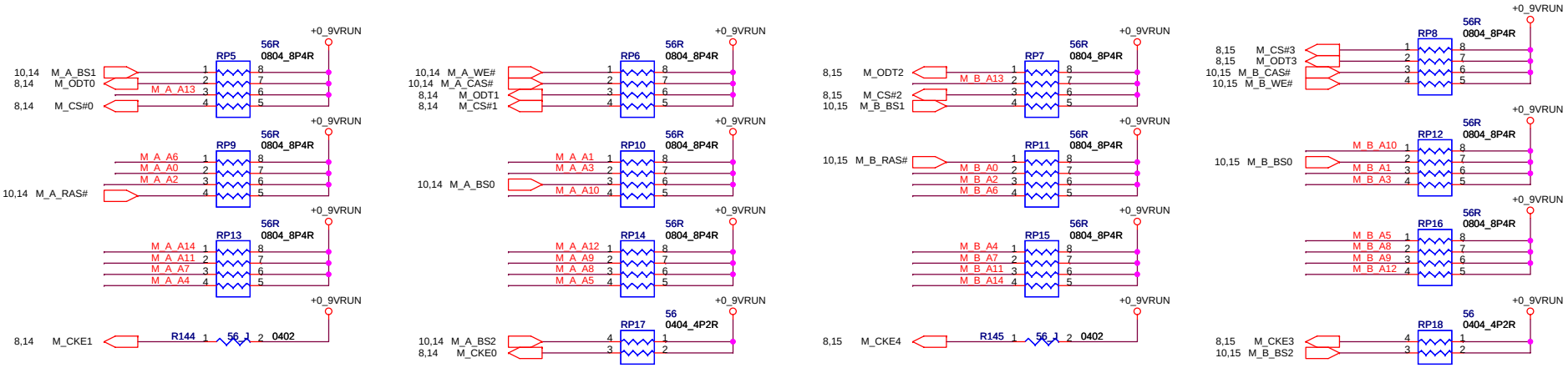


Layout note: Place 1 cap close to every 2 Rtt to +0_9VSUS



Layout note: Place 1 cap close to every 2Rtt to +0_9VSUS





FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: ***DDR(II)Termination***		
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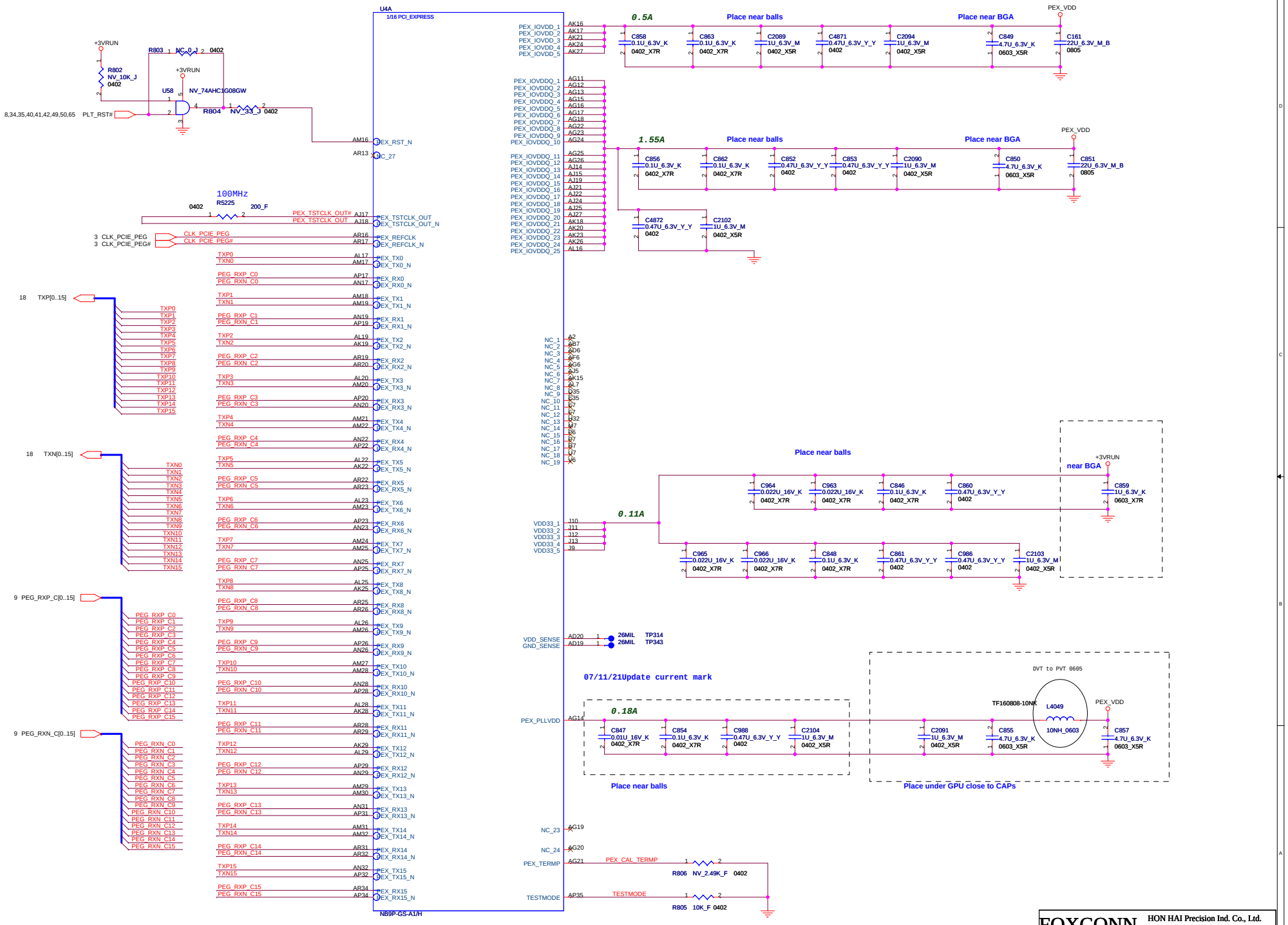

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	VGA (PCI EXPRESS) 1 OF 9
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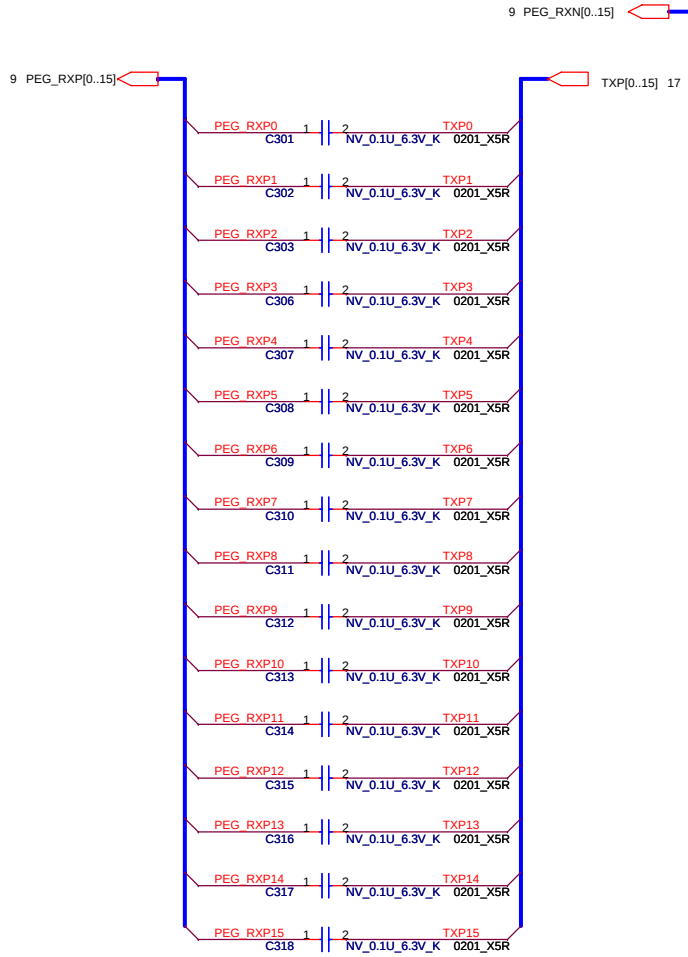
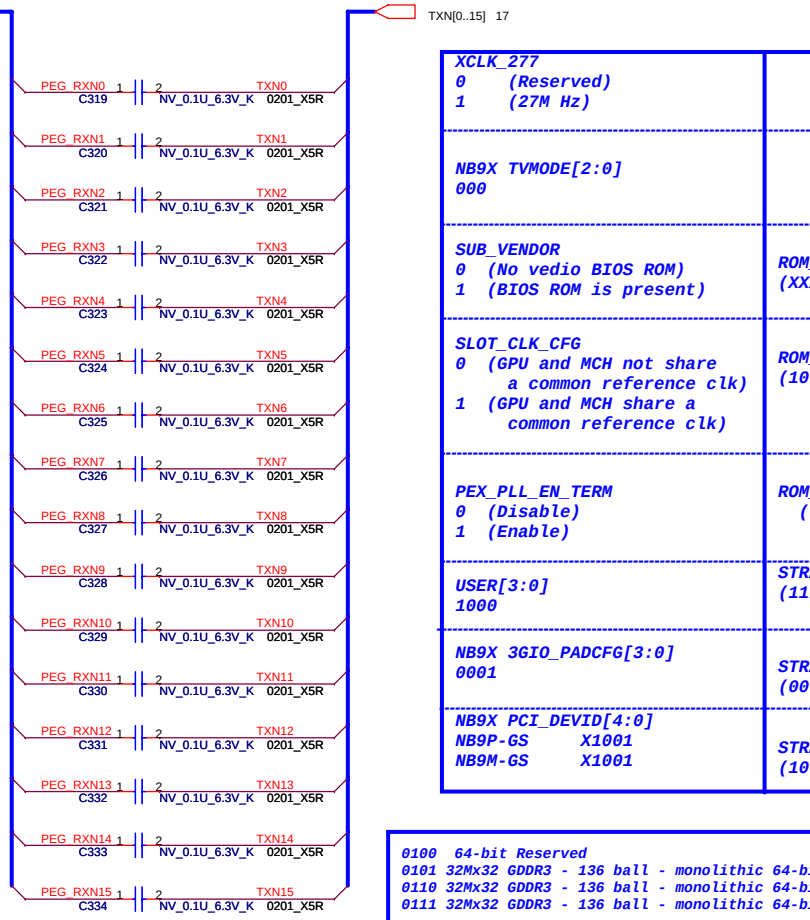




XCLK_277 *0 (Reserved)* *1 (27M Hz)*	
NB9X TVMODE[2:0] *000*	
SUB_VENDOR *0 (No vedio BIOS ROM)* *1 (BIOS ROM is present)*	*ROM_SI (XXXX)*
SLOT_CLK_CFG *0 (GPU and MCH not share a common reference clk)* *1 (GPU and MCH share a common reference clk)*	*ROM_SO (1000)*
PEX_PLL_EN_TERM *0 (Disable)* *1 (Enable)*	*ROM_SCLK (0010)*
USER[3:0] *1000*	*STRAP0 (1111)*
NB9X 3GIO_PADCFG[3:0] *0001*	*STRAP1 (0001)*
NB9X PCI_DEVID[4:0] *NB9P-GS X1001* *NB9M-GS X1001*	*STRAP2 (1001)*

<< ROM_SI Setting condition >>

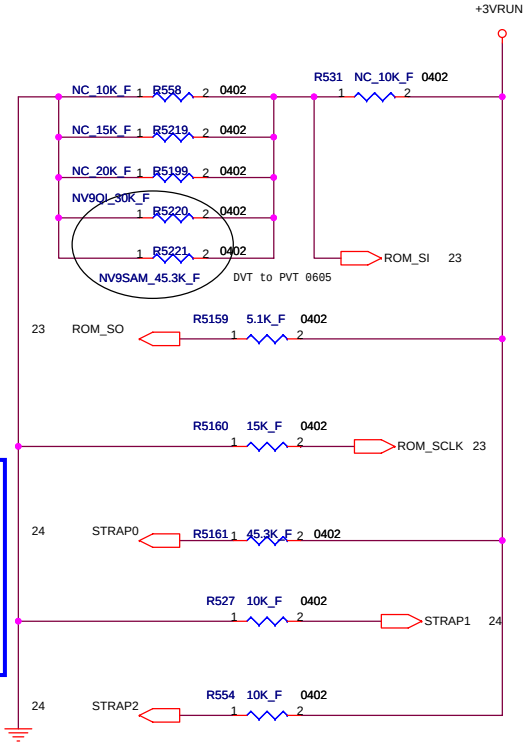
H Model
=> 32Mx32bx4 - 0101 Qimonda - 30K pull Low

M Model
=> 32Mx32bx4 - 0101(Qimonda) - 30K pul Low

L Model
=> 32Mx32bx2 - 0101 Qimonda - 30K pull Low

0100 64-bit Reserved
0101 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Qimonda
0110 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Hynix
0111 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Samsung

0000 64-bit Reserved
0001 16Mx32 GDDR3 - 136 ball 64-bit Qimonda
0010 16Mx32 GDDR3 - 136 ball 64-bit Hynix
0011 16Mx32 GDDR3 - 136 ball 64-bit Samsung



Logical Strap bit Mapping

Resister values	Pull-up to VDD	Pull-down to GND
5KΩ	1000	0000
10KΩ	1001	0001
15KΩ	1010	0010
20KΩ	1011	0011
25KΩ	1100	0100
30KΩ	1101	0101
35KΩ	1110	0110
45KΩ	1111	0111

Strap Options

Physical Strapping pin	Power Rail	Logical Strapping pin3	Logical Strapping pin2	Logical Strapping pin1	Logical Strapping pin0
ROM_SI	+3VRUN	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
ROM_SO	+3VRUN	XCLK_277	TVMODE[2]	TVMODE[1]	TVMODE[0]
ROM_SCLK	+3VRUN	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG	PEX_PLL_EN_TERM
STRAP0	+3VRUN	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	+3VRUN	3GIO_PADCFG[3]	3GIO_PADCFG[2]	3GIO_PADCFG[1]	3GIO_PADCFG[0]
STRAP2	+3VRUN	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]

Refer to <GB1 Family Design Guide DG-03276-001_v01_secured>

FOXCONN HON HAI PRECISION IND. CO., LTD.
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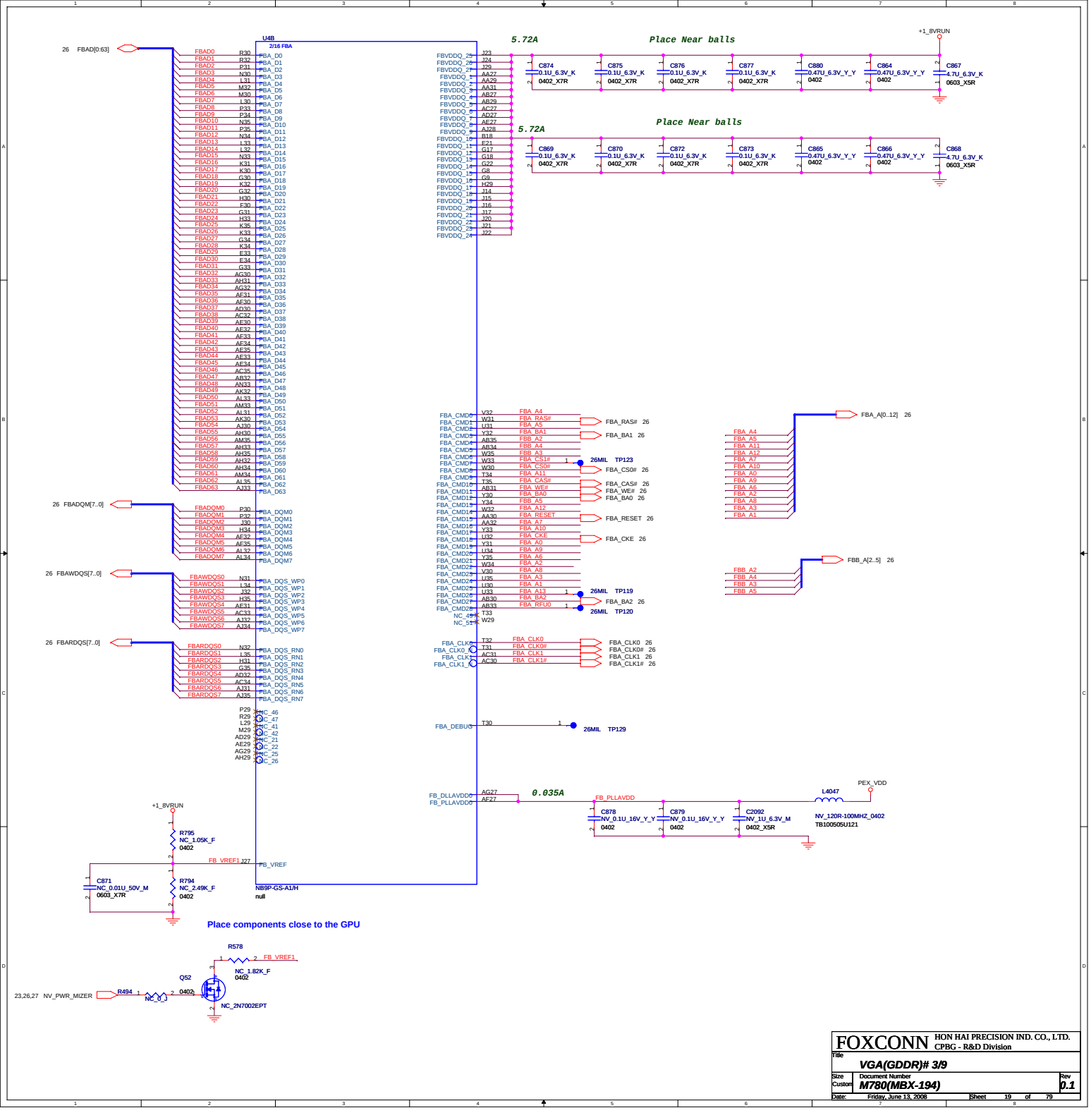
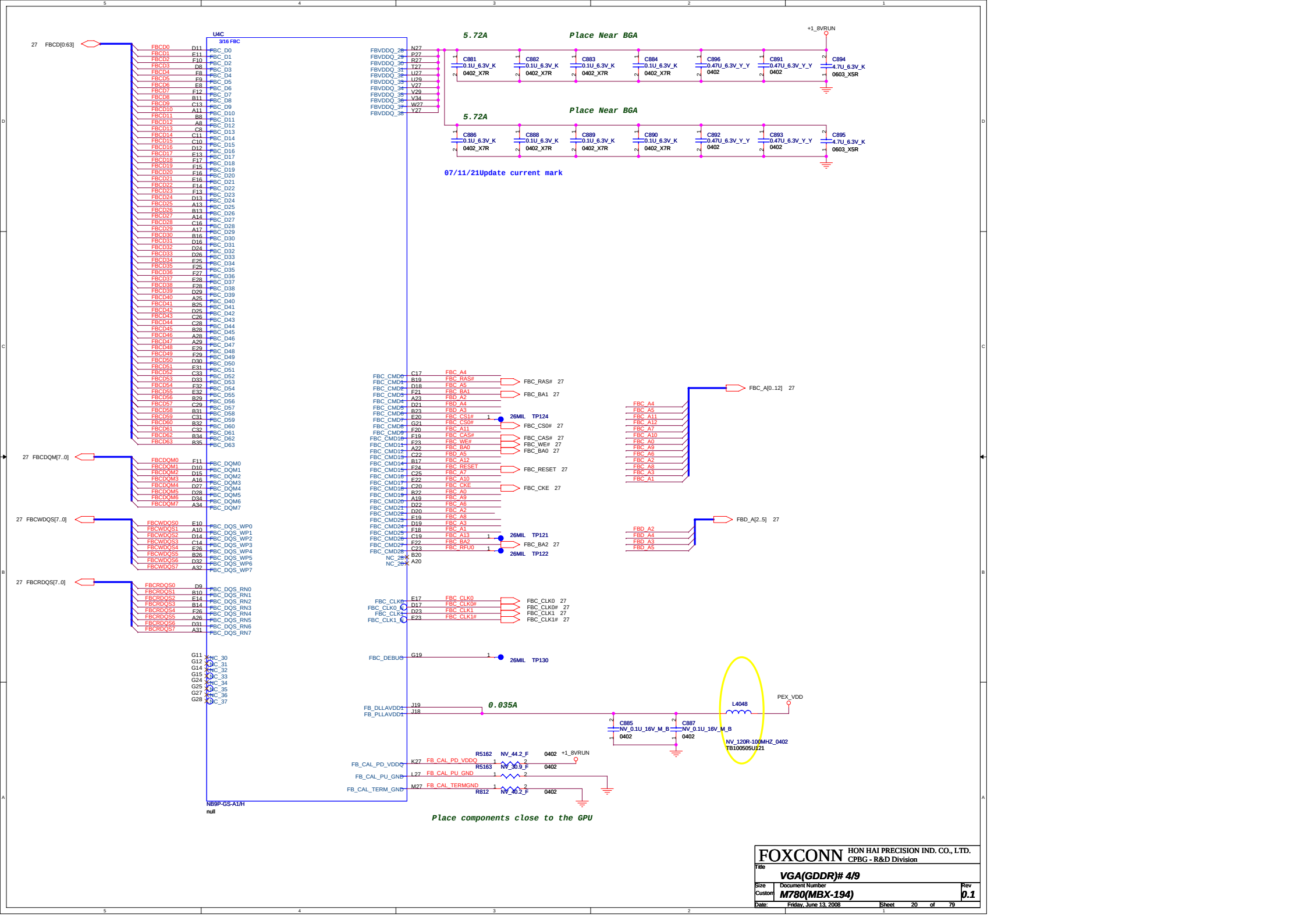
Title: *VGA (PCI-EXPRESS/STRAP) 2 OF 9*

Size: A3 | Document Number: *M780(MBX-194)* | Rev: *0.1*

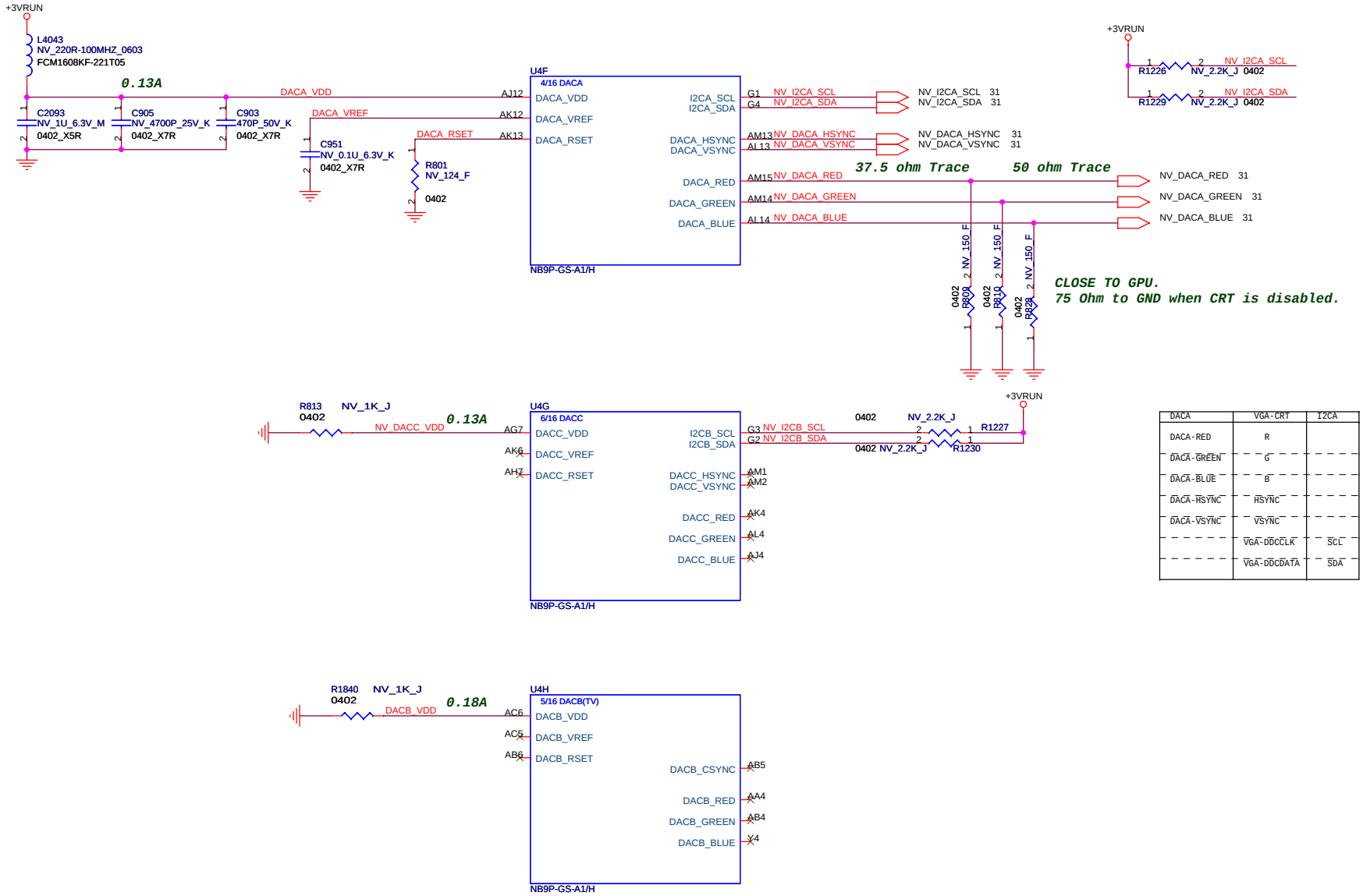
Date: Friday, June 13, 2008 | Sheet 18 of 79



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title	VGA(GDDR)# 3/9		
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1	
Date: Friday, June 13, 2008	Sheet 19 of 79		



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	VGA(GDDR)# 4/9	
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 20 of 79	



DACA	VGA-CRT	I2CA
DACA-RED	R	
DACA-GREEN	G	
DACA-BLUE	B	
DACA-HSYNC	HSYNC	
DACA-VSYNC	VSYNC	
	VGA-DDCCLK	SCL
	VGA-DDCDATA	SDA

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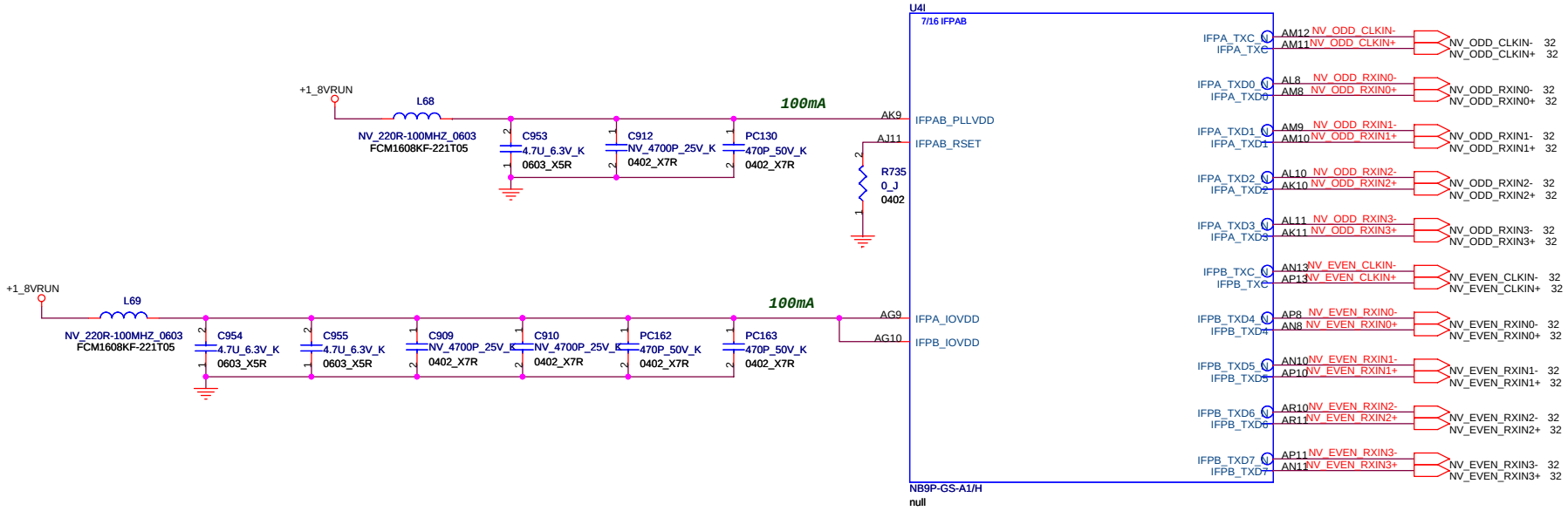
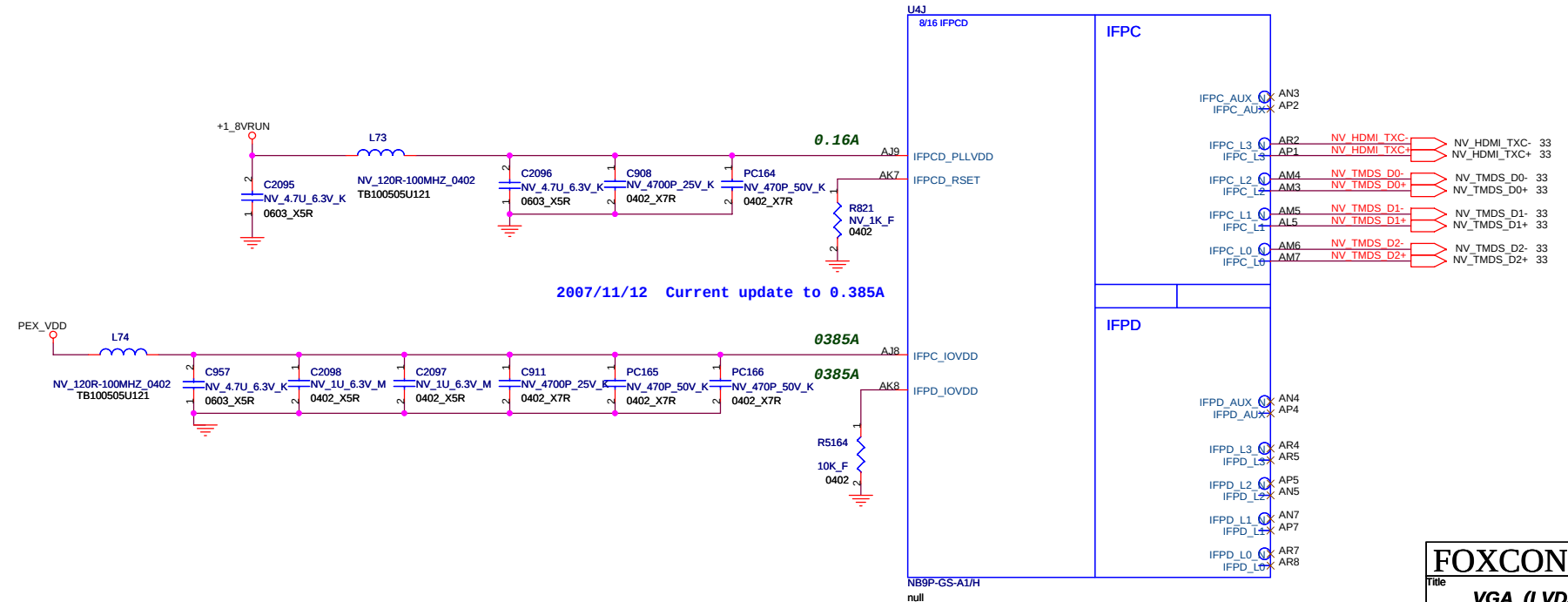
Title: VGA (CRT)5/9

Size: A3 | Document Number: M780(MBX-194) | Rev: 0.1

Date: Friday, June 13, 2008 | Sheet 21 of 79





FOXCONN HON HAI PRECISION IND. CO., LTD.
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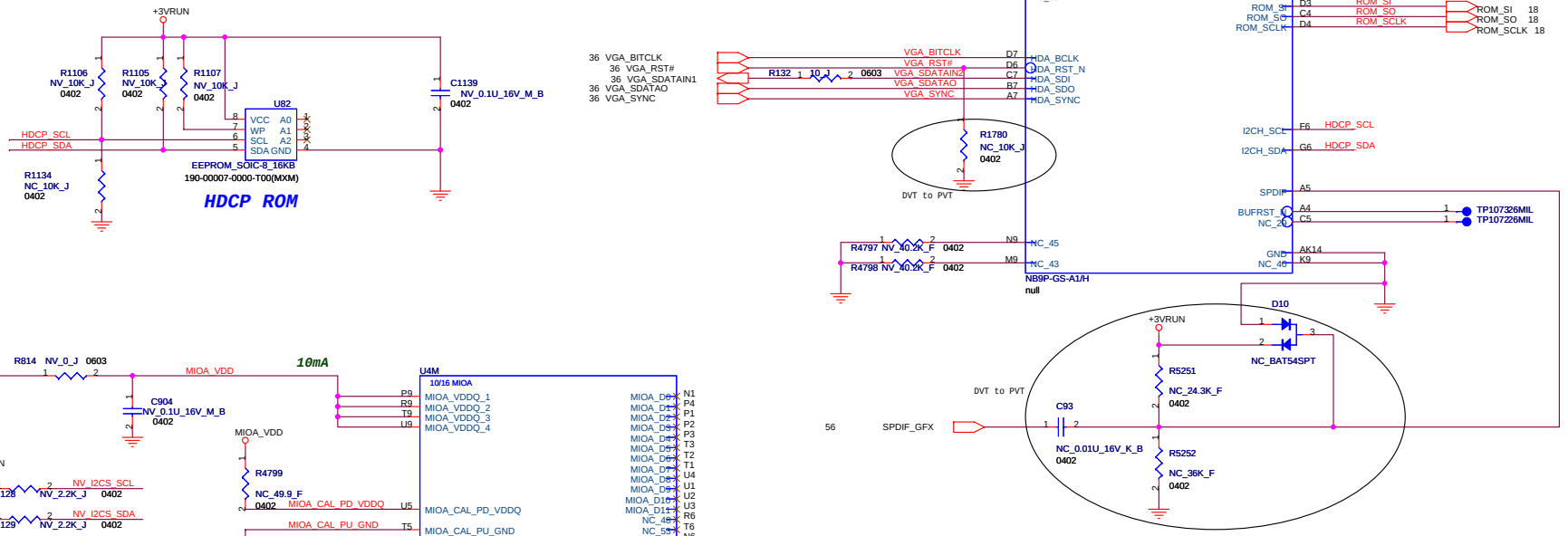
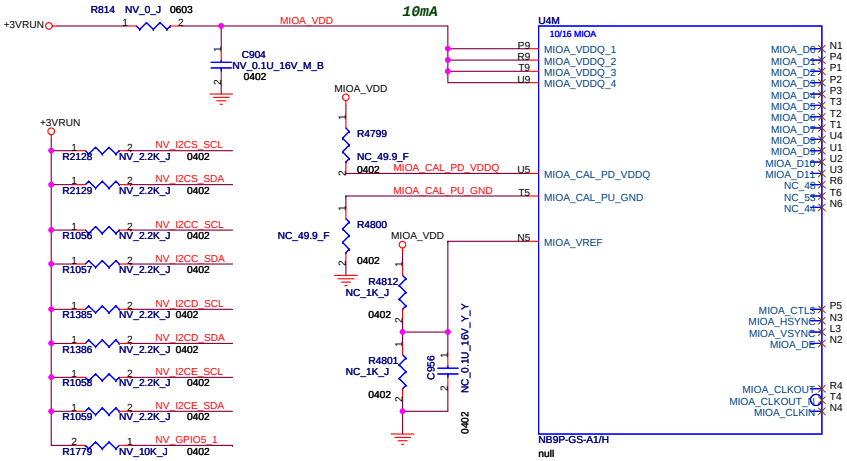
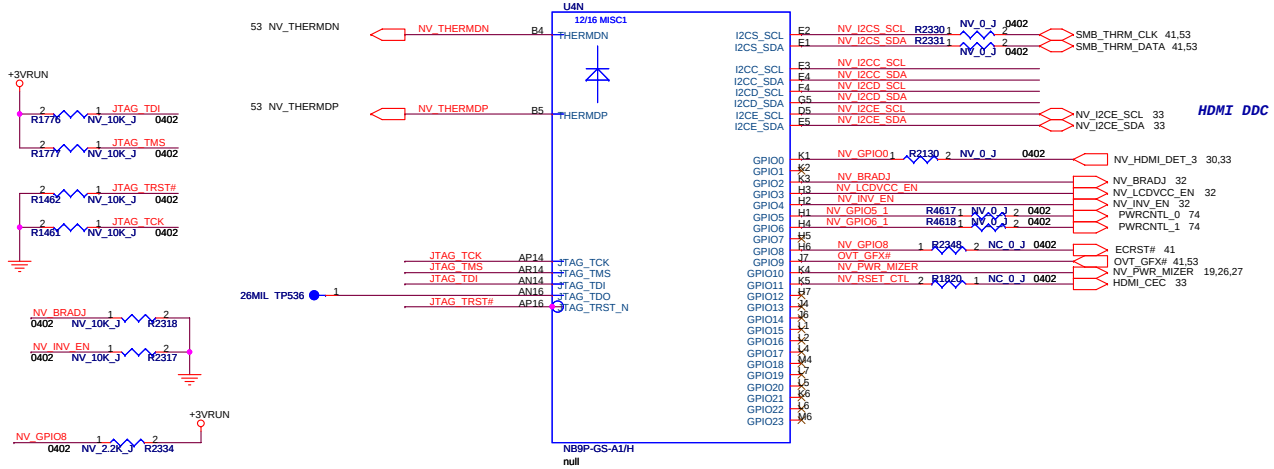
Title: VGA (LVDS/TMDS) 6/9

Size: A3 | Document Number: M780(MBX-194) | Rev: 0.1

Date: Friday, June 13, 2008 | Sheet 22 of 79







GPIO	I/O	Internal pull low	GPIO TABLE	
GPIO0	I	Yes	HDMI Hot Plug Detect 0(HPD0)	**Active High**
GPIO1	I	Yes		
GPIO2	O	Yes	LCD BL Brightness(LCD0_BL_PWM)	**Active High**
GPIO3	O	No	Panel Power(LCD0_VDD)	**Active High**
GPIO4	O	Yes	LCD Backlight enable(LCD0_BL_EN)	**Active High**
GPIO5	O	Yes	FOR NVDD 0.9V~1.17V	**Active High**
GPIO6	O	No	reserve for NVDD adjust.	
GPIO8	O	No	reserve for reset EC	
GPIO9	I	No	System Power Limit Alert Input	**Active Low**
GPIO10	O	No	Memory Vref switch(MEM_VREF)	**Active High**
GPIO11	I/O	No	HDMI CEC Function Backup	

SIGNAL	I/O	Description
I2CA_SCL I2CA_SDA	I/O	For CRT VGA I2C_Compatibal Bus Signals
I2CB_SCL I2CB_SDA	I/O	NC(for DVI I2C_Compatibal Bus Signals)
I2CC_SCL I2CC_SDA	I/O	NC(All Other I2C_Compatibal Bus Signals)
I2CD_SCL I2CD_SDA	I/O	NC(Notebook DVI I2C_Compatibal Bus Signals)
I2CE_SCL I2CE_SDA	I/O	Notebook DVI I2C_Compatibal Bus Signals
I2CS_SCL I2CS_SDA	I/O	For VGA thermial I2C_Compatibal Bus Signals. Support a direct interface to the internal temperature sensor

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Title: *VGA (XTAL/GPIO) 7/9*

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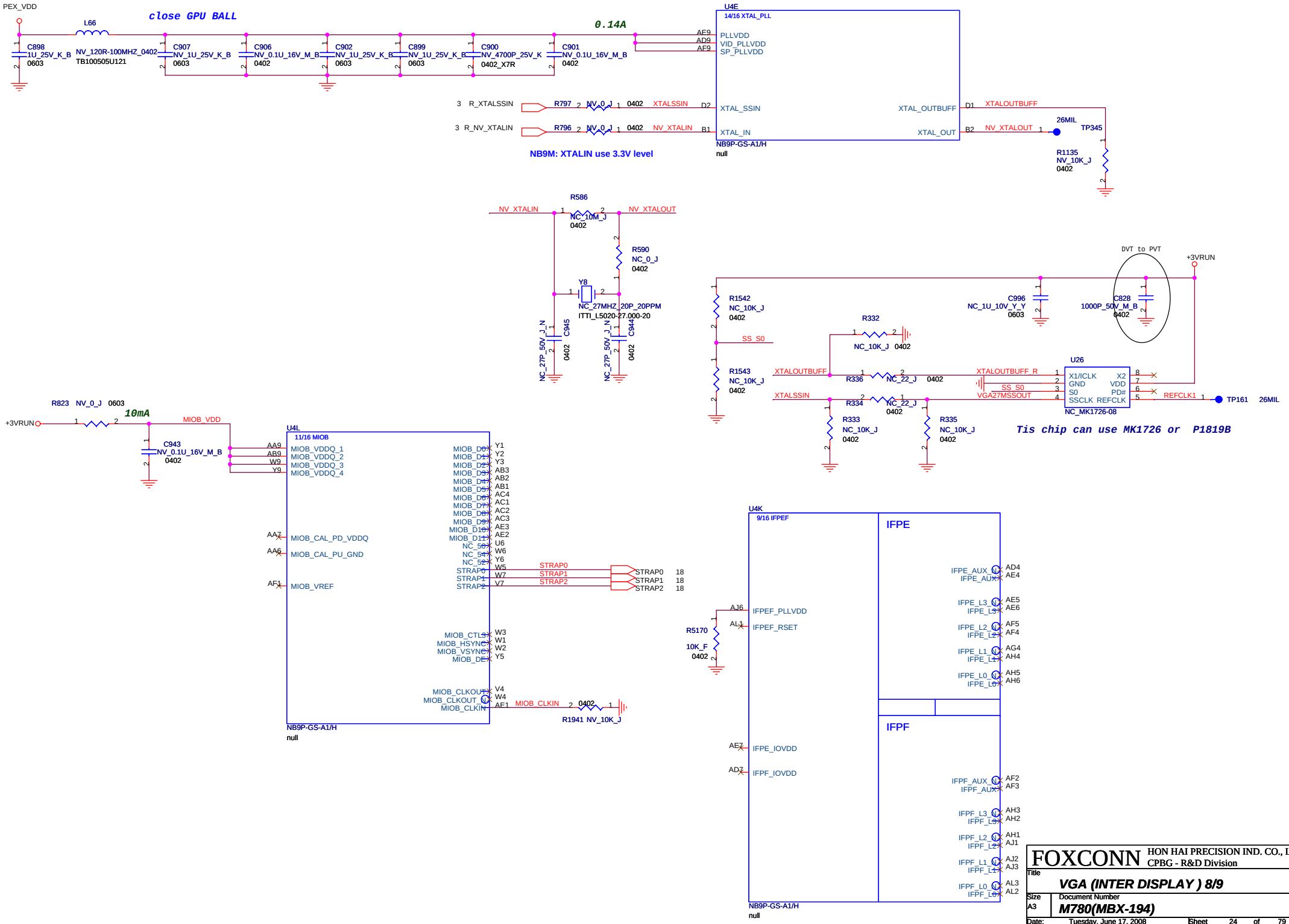

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	VGA (INTER DISPLAY) 8/9
Size	A3
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Date:	Tuesday, June 17, 2008
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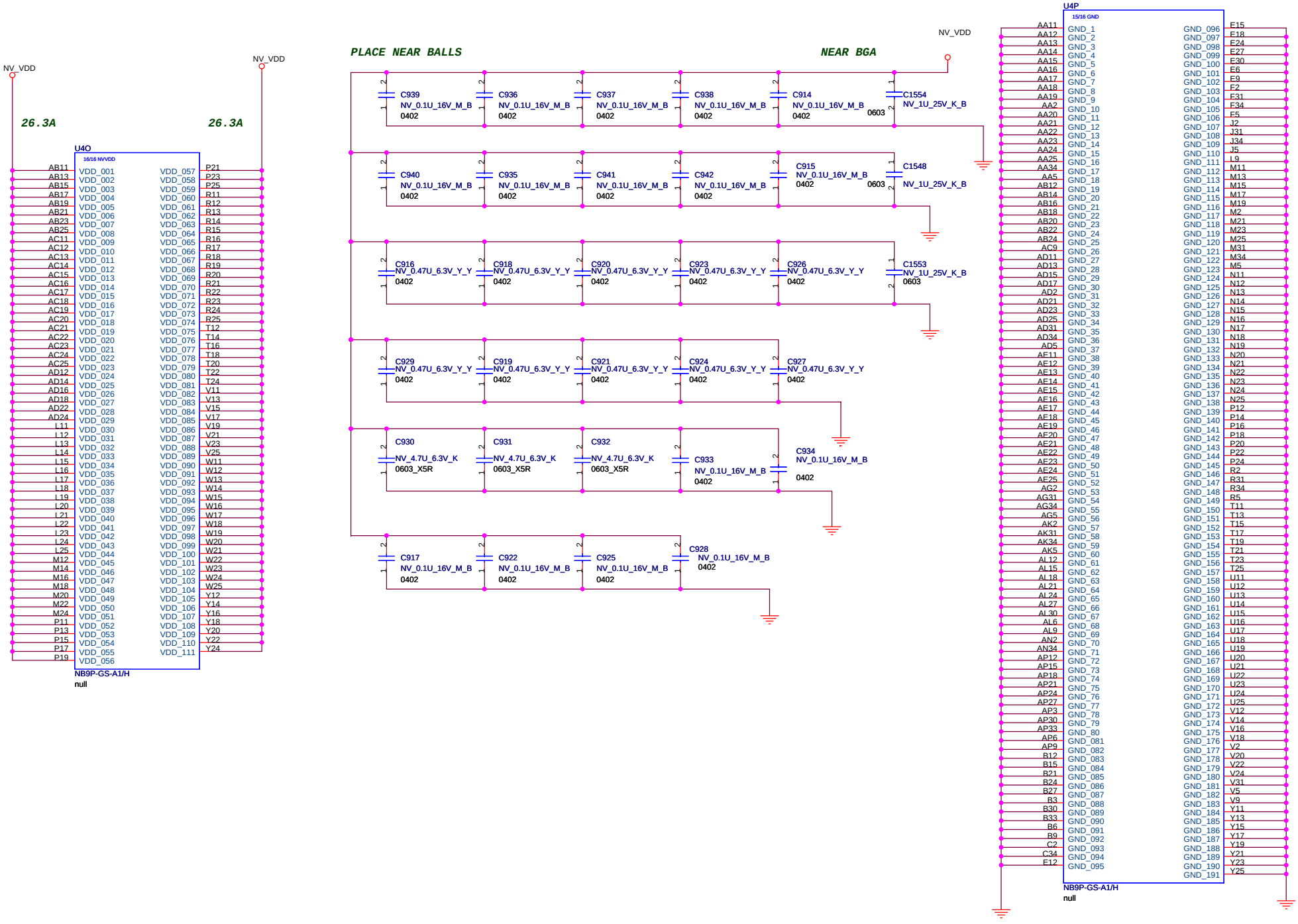
NV_VDD
26.3A
NV_VDD
26.3A
U4O
16/16 NVVDD
VDD_001 VDD_002 VDD_003 VDD_004 VDD_005 VDD_006 VDD_007 VDD_008 VDD_009 VDD_010 VDD_011 VDD_012 VDD_013 VDD_014 VDD_015 VDD_016 VDD_017 VDD_018 VDD_019 VDD_020 VDD_021 VDD_022 VDD_023 VDD_024 VDD_025 VDD_026 VDD_027 VDD_028 VDD_029 VDD_030 VDD_031 VDD_032 VDD_033 VDD_034 VDD_035 VDD_036 VDD_037 VDD_038 VDD_039 VDD_040 VDD_041 VDD_042 VDD_043 VDD_044 VDD_045 VDD_046 VDD_047 VDD_048 VDD_049 VDD_050 VDD_051 VDD_052 VDD_053 VDD_054 VDD_055 VDD_056
VDD_057 VDD_058 VDD_059 VDD_060 VDD_061 VDD_062 VDD_063 VDD_064 VDD_065 VDD_066 VDD_067 VDD_068 VDD_069 VDD_070 VDD_071 VDD_072 VDD_073 VDD_074 VDD_075 VDD_076 VDD_077 VDD_078 VDD_079 VDD_080 VDD_081 VDD_082 VDD_083 VDD_084 VDD_085 VDD_086 VDD_087 VDD_088 VDD_089 VDD_090 VDD_091 VDD_092 VDD_093 VDD_094 VDD_095 VDD_096 VDD_097 VDD_098 VDD_099 VDD_100 VDD_101 VDD_102 VDD_103 VDD_104 VDD_105 VDD_106 VDD_107 VDD_108 VDD_109 VDD_110 VDD_111
NB9P-GS-A1/H
null
PLACE NEAR BALLS
NEAR BGA
NV_VDD
C939 NV_0.1U_16V_M_B 0402
C936 NV_0.1U_16V_M_B 0402
C937 NV_0.1U_16V_M_B 0402
C938 NV_0.1U_16V_M_B 0402
C914 NV_0.1U_16V_M_B 0402
C1554 NV_1U_25V_K_B 0603
C940 NV_0.1U_16V_M_B 0402
C935 NV_0.1U_16V_M_B 0402
C941 NV_0.1U_16V_M_B 0402
C942 NV_0.1U_16V_M_B 0402
C915 NV_0.1U_16V_M_B 0402
C1548 NV_1U_25V_K_B 0603
C916 NV_0.47U_6.3V_Y_Y 0402
C918 NV_0.47U_6.3V_Y_Y 0402
C920 NV_0.47U_6.3V_Y_Y 0402
C923 NV_0.47U_6.3V_Y_Y 0402
C926 NV_0.47U_6.3V_Y_Y 0402
C1553 NV_1U_25V_K_B 0603
C929 NV_0.47U_6.3V_Y_Y 0402
C919 NV_0.47U_6.3V_Y_Y 0402
C921 NV_0.47U_6.3V_Y_Y 0402
C924 NV_0.47U_6.3V_Y_Y 0402
C927 NV_0.47U_6.3V_Y_Y 0402
C930 NV_4.7U_6.3V_K 0603_X5R
C931 NV_4.7U_6.3V_K 0603_X5R
C932 NV_4.7U_6.3V_K 0603_X5R
C933 NV_0.1U_16V_M_B 0402
C934 NV_0.1U_16V_M_B 0402
C917 NV_0.1U_16V_M_B 0402
C922 NV_0.1U_16V_M_B 0402
C925 NV_0.1U_16V_M_B 0402
C928 NV_0.1U_16V_M_B 0402
U4P
15/16 GND
AA11 AA12 AA13 AA14 AA15 AA16 AA17 AA18 AA19 AA2 AA20 AA21 AA22 AA23 AA24 AA25 AA34 AA5 AB12 AB14 AB16 AB18 AB20 AB22 AB24 AC9 AD11 AD13 AD15 AD17 AD2 AD21 AD23 AD25 AD31 AD34 AD5 AE11 AE12 AE13 AE14 AE15 AE16 AE17 AE18 AE19 AE20 AE21 AE22 AE23 AE24 AE25 AG2 AG31 AG34 AG5 AK2 AK31 AK34 AK5 AL12 AL15 AL18 AL21 AL24 AL27 AL30 AL6 AL9 AN2 AN34 AP12 AP15 AP18 AP21 AP24 AP27 AP3 AP30 AP33 AP6 AP9 B12 B15 B21 B24 B27 B3 B30 B33 B6 B9 C2 C34 E12
GND_1 GND_2 GND_3 GND_4 GND_5 GND_6 GND_7 GND_8 GND_9 GND_10 GND_11 GND_12 GND_13 GND_14 GND_15 GND_16 GND_17 GND_18 GND_19 GND_20 GND_21 GND_22 GND_23 GND_24 GND_25 GND_26 GND_27 GND_28 GND_29 GND_30 GND_31 GND_32 GND_33 GND_34 GND_35 GND_36 GND_37 GND_38 GND_39 GND_40 GND_41 GND_42 GND_43 GND_44 GND_45 GND_46 GND_47 GND_48 GND_49 GND_50 GND_51 GND_52 GND_53 GND_54 GND_55 GND_56 GND_57 GND_58 GND_59 GND_60 GND_61 GND_62 GND_63 GND_64 GND_65 GND_66 GND_67 GND_68 GND_69 GND_70 GND_71 GND_72 GND_73 GND_74 GND_75 GND_76 GND_77 GND_78 GND_79 GND_80 GND_081 GND_082 GND_083 GND_084 GND_085 GND_086 GND_087 GND_088 GND_089 GND_090 GND_091 GND_092 GND_093 GND_094 GND_095
GND_096 GND_097 GND_098 GND_099 GND_100 GND_101 GND_102 GND_103 GND_104 GND_105 GND_106 GND_107 GND_108 GND_109 GND_110 GND_111 GND_112 GND_113 GND_114 GND_115 GND_116 GND_117 GND_118 GND_119 GND_120 GND_121 GND_122 GND_123 GND_124 GND_125 GND_126 GND_127 GND_128 GND_129 GND_130 GND_131 GND_132 GND_133 GND_134 GND_135 GND_136 GND_137 GND_138 GND_139 GND_140 GND_141 GND_142 GND_143 GND_144 GND_145 GND_146 GND_147 GND_148 GND_149 GND_150 GND_151 GND_152 GND_153 GND_154 GND_155 GND_156 GND_157 GND_158 GND_159 GND_160 GND_161 GND_162 GND_163 GND_164 GND_165 GND_166 GND_167 GND_168 GND_169 GND_170 GND_171 GND_172 GND_173 GND_174 GND_175 GND_176 GND_177 GND_178 GND_179 GND_180 GND_181 GND_182 GND_183 GND_184 GND_185 GND_186 GND_187 GND_188 GND_189 GND_190 GND_191
E15 E18 E24 E27 E30 E6 E9 F2 F31 F34 F5 J2 J31 J34 J5 L9 M11 M13 M15 M17 M19 M2 M21 M23 M25 M31 M34 M5 N11 N12 N13 N14 N15 N16 N17 N18 N19 N20 N21 N22 N23 N24 N25 P12 P14 P16 P18 P20 P22 P24 R2 R31 R34 R5 T11 T13 T15 T17 T19 T21 T23 T25 U11 U12 U13 U14 U15 U16 U17 U18 U19 U20 U21 U22 U23 U24 U25 V12 V14 V16 V18 V2 V20 V22 V24 V31 V5 V9 Y11 Y13 Y15 Y17 Y19 Y21 Y23 Y25
NB9P-GS-A1/H
null
FOXCONN
HON HAI PRECISION IND. CO., LTD.
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Title
VGA(POWER/GROUND) 9/9
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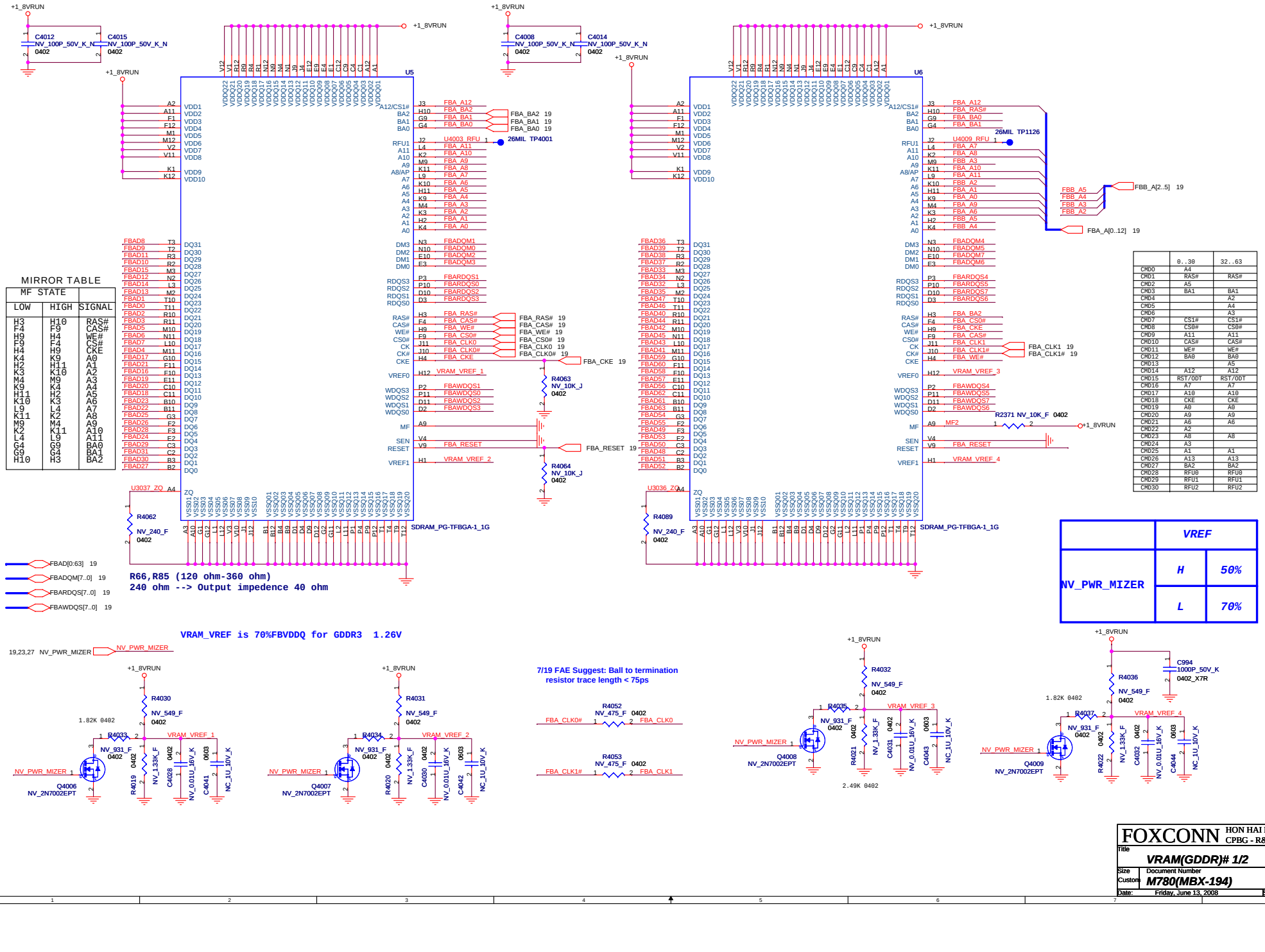

MIRROR TABLE

MF STATE		
LOW	HIGH	SIGNAL
H3	H10	RAS#
F4	F9	CAS#
H9	H4	WE#
F9	F4	CS#
H4	H9	CKE
K4	K9	A0
H2	H11	A1
K3	K10	A2
M4	M9	A3
K9	K4	A4
H11	H2	A5
K10	K3	A6
L9	L4	A7
K11	K2	A8
M9	M4	A9
K2	K11	A10
L4	L9	A11
G4	G9	BA0
G9	G4	BA1
H10	H3	BA2

	0..30	32..63
CMD0	A4	
CMD1	RAS#	RAS#
CMD2	A5	
CMD3	BA1	BA1
CMD4		A2
CMD5		A4
CMD6		A3
CMD7	CS1#	CS1#
CMD8	CS0#	CS0#
CMD9	A11	A11
CMD10	CAS#	CAS#
CMD11	WE#	WE#
CMD12	BA0	BA0
CMD13		A5
CMD14	A12	A12
CMD15	RST/ODT	RST/ODT
CMD16	A7	A7
CMD17	A10	A10
CMD18	CKE	CKE
CMD19	A8	A8
CMD20	A9	A9
CMD21	A6	A6
CMD22	A2	
CMD23	A8	A8
CMD24	A3	
CMD25	A1	A1
CMD26	A13	A13
CMD27	BA2	BA2
CMD28	RFU0	RFU0
CMD29	RFU1	RFU1
CMD30	RFU2	RFU2

NV_PWR_MIZER	VREF	
	H	50%
	L	70%

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Title: VRAM(GDDR)# 1/2

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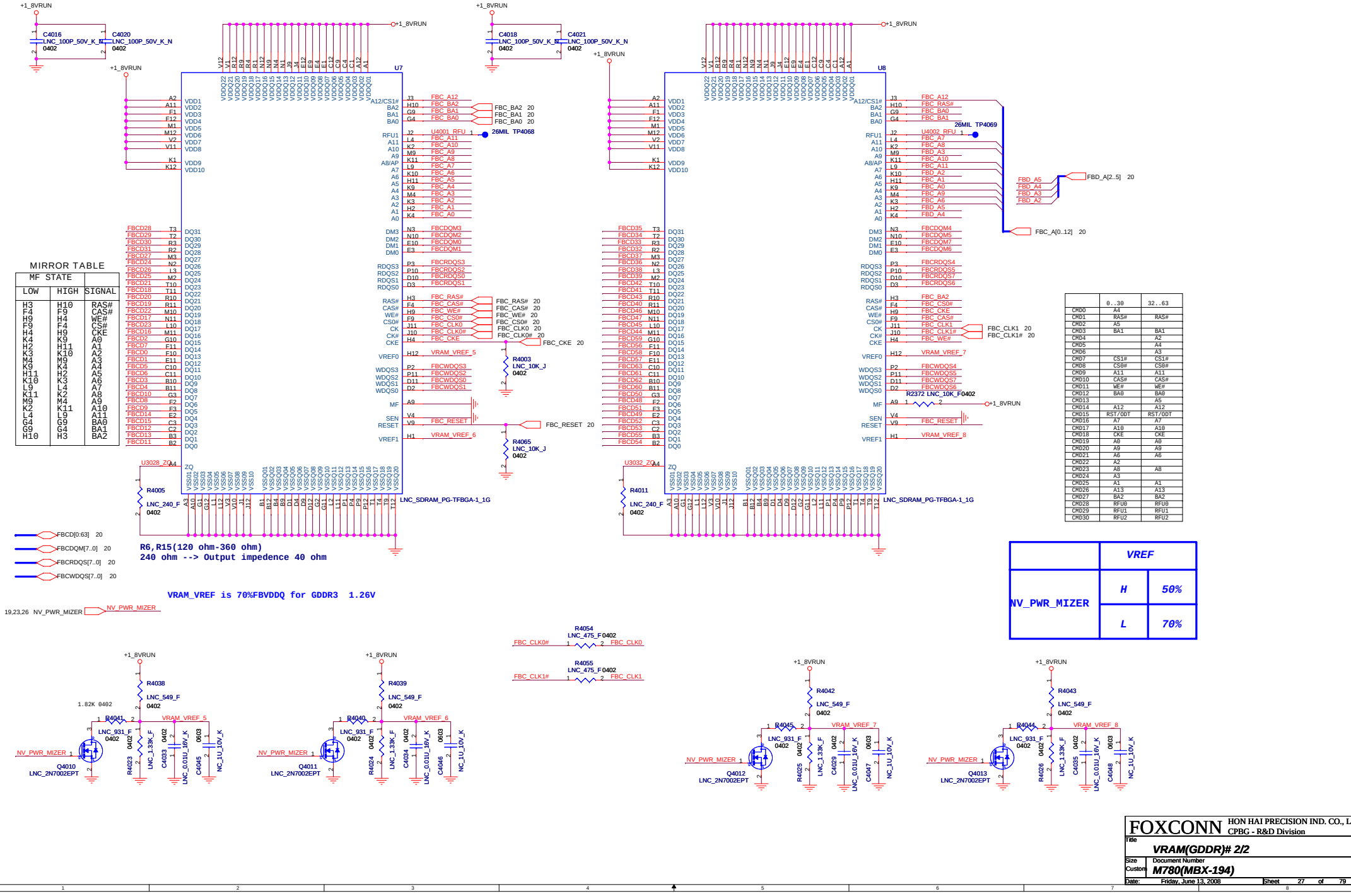
MIRROR TABLE
MF STATE
LOW HIGH SIGNAL
H3 H10 RAS#
F4 F9 CAS#
H9 F4 WE#
F9 H9 CS#
H4 K9 CKE
K4 K10 A0
H2 H11 A1
K3 K10 A2
M4 M9 A3
K9 K4 A4
H11 H2 A5
K10 K3 A6
L9 L4 A7
K11 K2 A8
M9 M4 A9
K2 K11 A10
L4 L9 A11
G4 G9 BA0
G9 G4 BA1
H10 H3 BA2
U7
U8
LNC_SDRAM_PG-TFBGA-1_1G
R6,R15(120 ohm-360 ohm)
240 ohm --> Output impedence 40 ohm
VRAM_VREF is 70%FBVDDQ for GDDR3 1.26V
NV_PWR_MIZER
H 50%
L 70%
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CPBG - R&D Division
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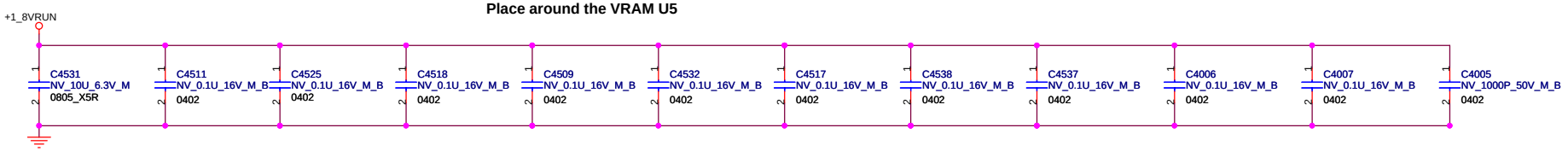
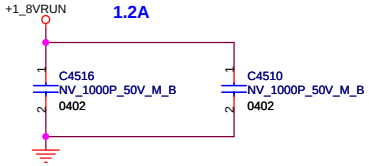
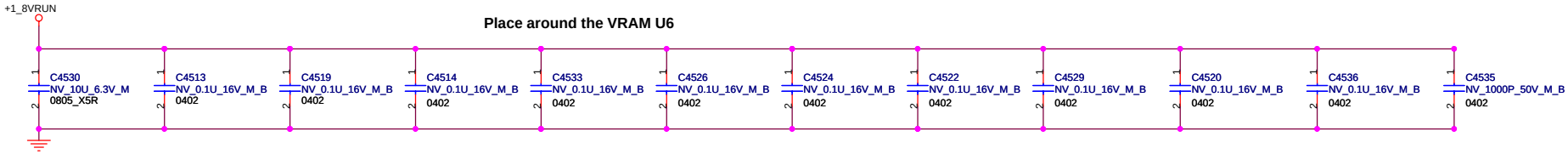
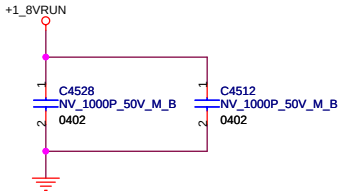
Place around the VRAM U5



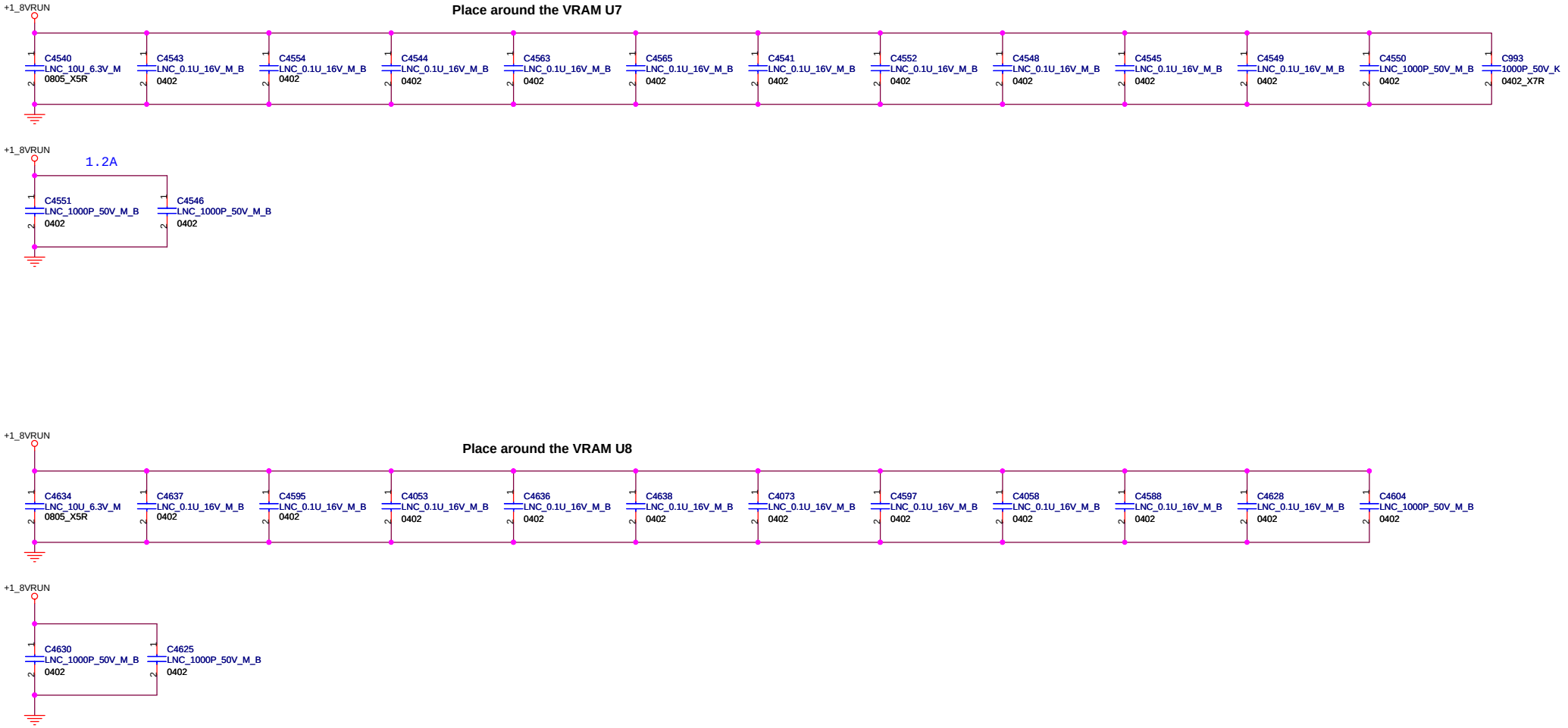


Place around the VRAM U6





FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	***VRAM (POWERBYPASS) 1 OF 2***	
Size A3	Document Number ***M780(MBX-194)***	Rev ***0.1***
Date: Friday, June 13, 2008	Sheet 28 of 79	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	***VRAM (POWERBYPASS) 2 OF 2***	
Size A3	Document Number ***M780(MBX-194)***	Rev ***0.1***
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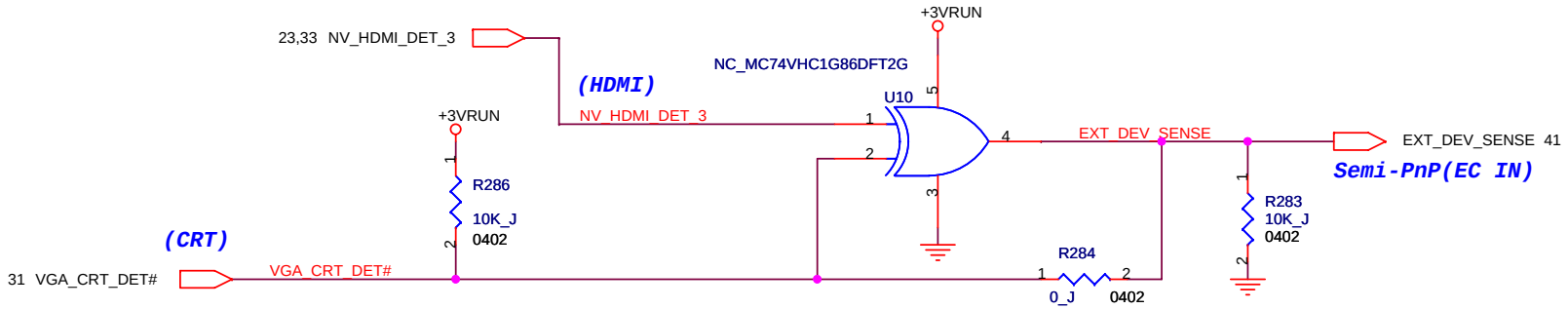
Semi-PnP Circuit



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: Semi-PnP		
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
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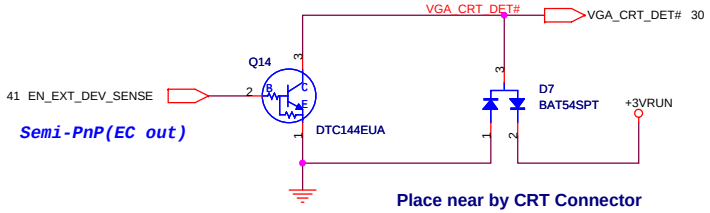
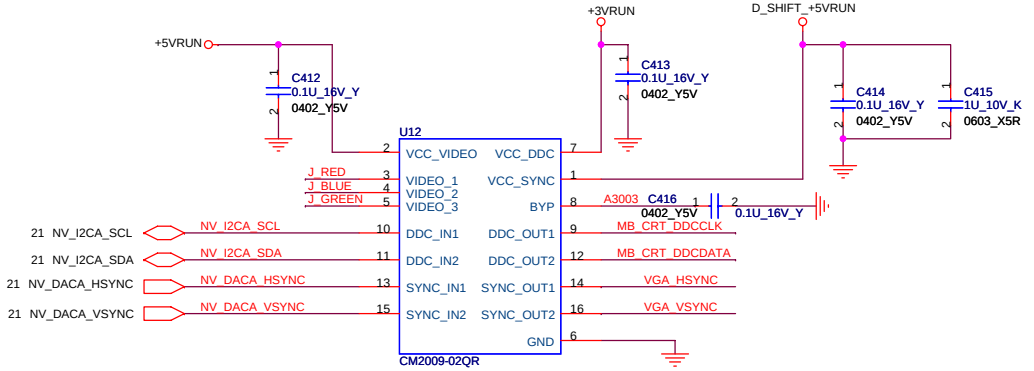
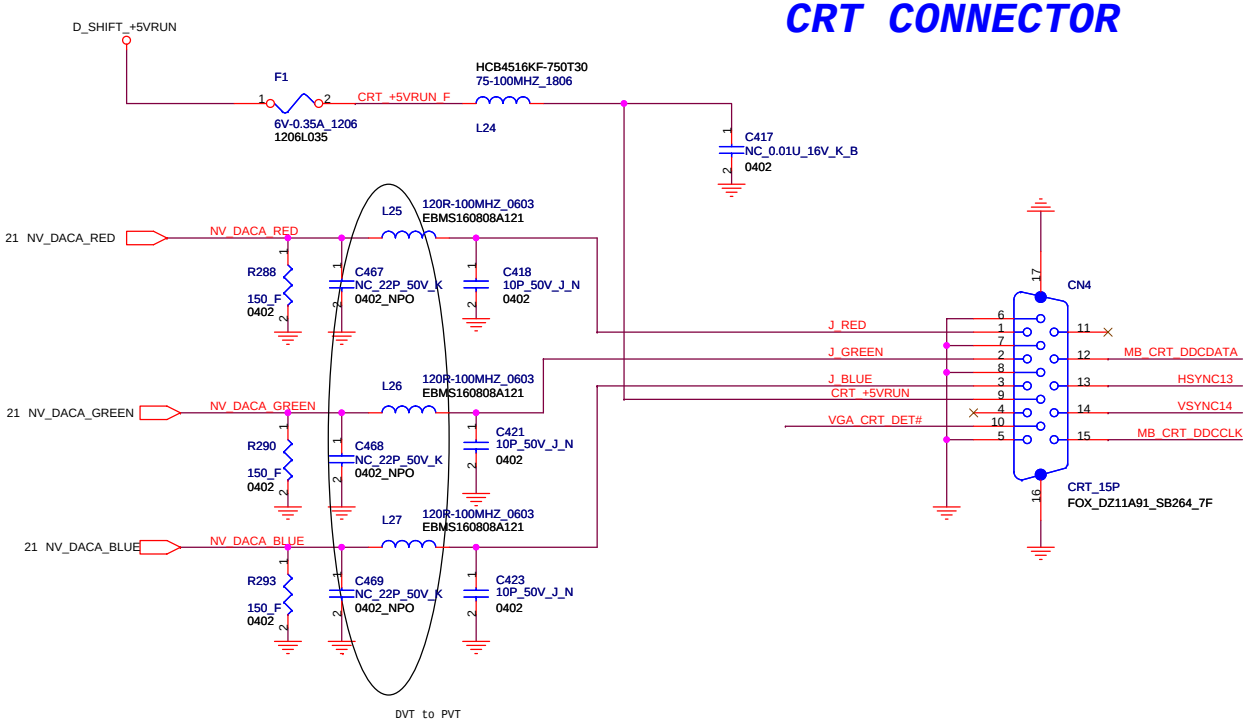
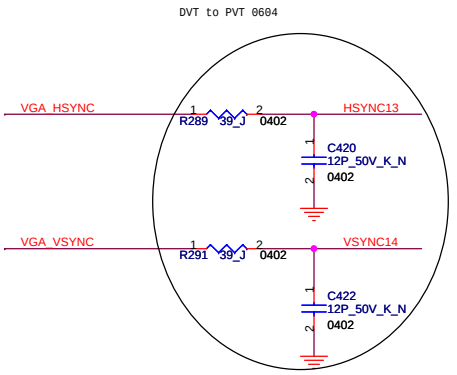
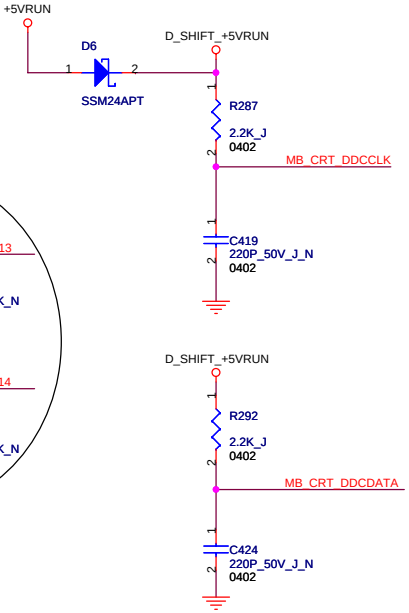
CRT CONNECTOR











FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: CRT		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
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BLU CONNECTOR

DVT to PVT

DCBATOUT

C472 NC_10U_25V_M 1206_X5R
C425 NC_0.1U_50V_K_B 0603
C426 1U_25V_K 0603_X5R
C427 0.1U_50V_K_B 0603

DCBATOUT

CN3

INV_ENABLE
INV_BRADJ
41,54 NV_LCD_CLK
41,54 NV_LCD_DATA
NV_LCD_CLK
NV_LCD_DATA

HEADER_12P
FOX_HS6212E

+3VRUN

U13

INV_EN_EC
23 NV_BRADJ
NV_BRADJ
74AHC1G08GW

R296 10K_J 0402

LVDS CONNECTOR

22 NV_ODD_RXIN0-
22 NV_ODD_RXIN0+
22 NV_ODD_RXIN1-
22 NV_ODD_RXIN1+
22 NV_ODD_RXIN2-
22 NV_ODD_RXIN2+
22 NV_ODD_CLKIN-
22 NV_ODD_CLKIN+
22 NV_ODD_RXIN3-
22 NV_ODD_RXIN3+
22 NV_EVEN_RXIN0-
22 NV_EVEN_RXIN0+
22 NV_EVEN_RXIN1-
22 NV_EVEN_RXIN1+
22 NV_EVEN_RXIN2-
22 NV_EVEN_RXIN2+
22 NV_EVEN_CLKIN-
22 NV_EVEN_CLKIN+
22 NV_EVEN_RXIN3-
22 NV_EVEN_RXIN3+

LCDVCC

CN6

FOX_GS12301-1011A-9F
FPC RECEPTCAL CONN_30P

U14

+3VRUN
41,54 LIDIN#
23 NV_INV_EN
LIDIN#
NV_INV_EN
74AHC1G08GW

U15

+3VRUN
37 INV_EN_EC
INV_EN_EC
NV_INV_EN1
INV_ENABLE
74AHC1G08GW

R298 10K_J 0402

Current limit is from 1.1A to 2.1A.

+3VRUN

C992 1000P_50V_K 0402_X7R
C249 4.7U_6.3V_K 0805_X5R

U16

IN1 OUT EN GND THERMAL PAD
IN5 IN4 IN3 IN2
G5281RC1U_V0.1

LCDVCC

C251 4.7U_10V_Y 0805_Y5V
C96 0.1U_16V_Y 0402_Y5V

C250 0.1U_16V_Y 0402_Y5V

23 NV_LCDVCC_EN
NV_LCDVCC_EN

R5234 100K_F 0402

LCDVCC

C428 4.7U_10V_Y_Y 0805
C429 0.1U_16V_Y_Y 0402
C430 0.1U_16V_Y_Y 0402

Place C650 close to CN3

PANEL ID

SW1

LCDID0 37
LCDID1 37
LCDID2 37
DIS_FAN_MON# 41

HDS404-E_SW-SLIDE

	DIS_FAN_MON#	LCDID2	LCDID1	LCDID0
Eagle1	1	0	0	1
Eagle2	1	0	1	0
Eagle3	1	0	1	1
DISABLE FAN LOCK FUNCTION	1	X	X	X

ON:0 , OFF:1

FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: *LVDS*

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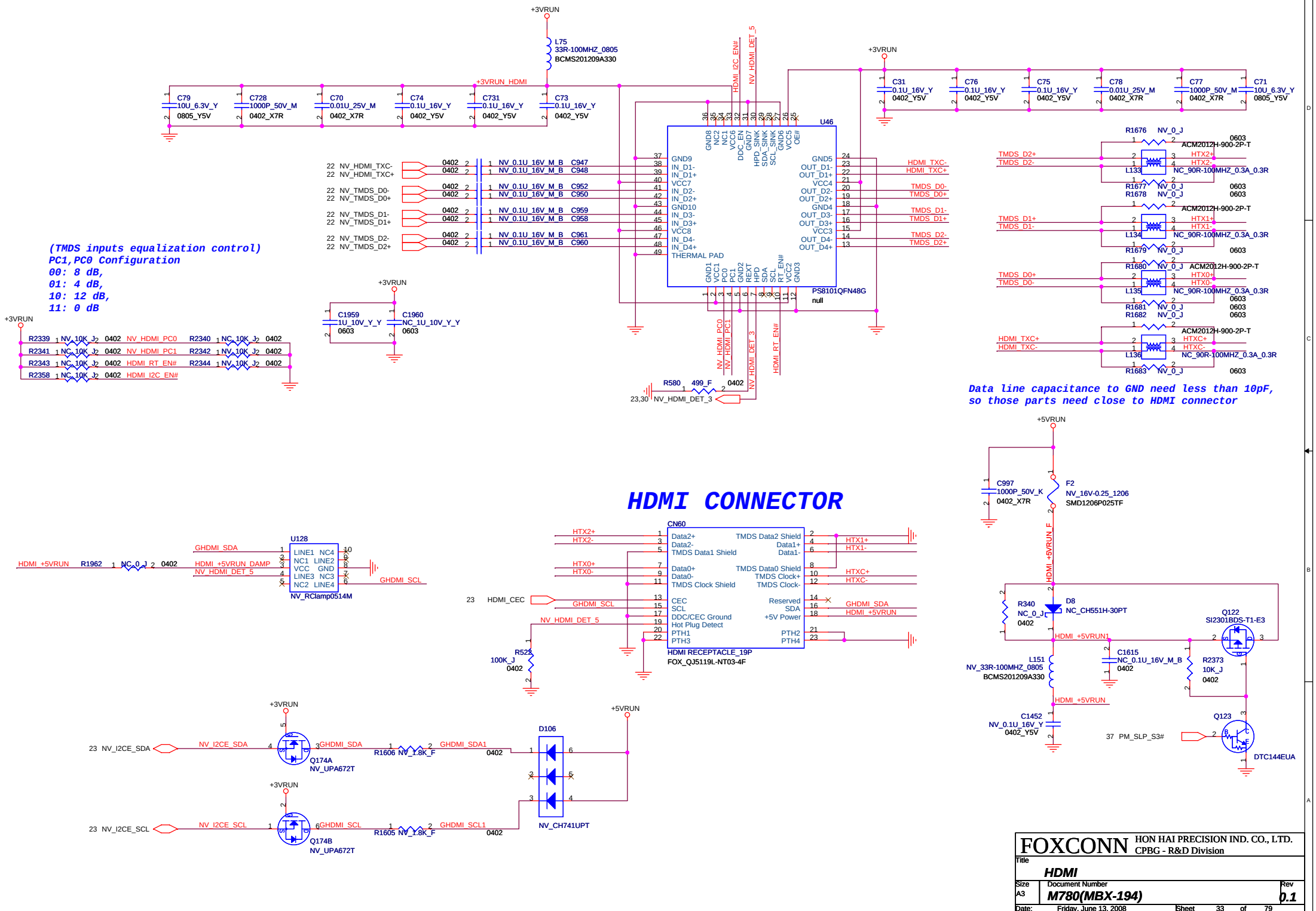
HDMI CONNECTOR
(TMDS inputs equalization control)
PC1,PC0 Configuration
00: 8 dB,
01: 4 dB,
10: 12 dB,
11: 0 dB
Data line capacitance to GND need less than 10pF, so those parts need close to HDMI connector
U46
PS8101QFN48G
null
U128
NV_RClamp0514M
CN60
HDMI RECEPTACLE_19P
FOX_QJ5119L-NT03-4F
Q174A
NV_UPA672T
Q174B
NV_UPA672T
D106
NV_CH741UPT
D8
NC_CH551H-30PT
Q122
SI2301BDS-T1-E3
Q123
DTC144EUA
L75
33R-100MHZ_0805
BCMS201209A330
L151
NV_33R-100MHZ_0805
BCMS201209A330
L133
L134
L135
L136
NC_90R-100MHZ_0.3A_0.3R
ACM2012H-900-2P-T
F2
NV_16V-0.25_1206
SMD1206P025TF
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
HDMI
Size
A3
Document Number
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0.1
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Friday, June 13, 2008
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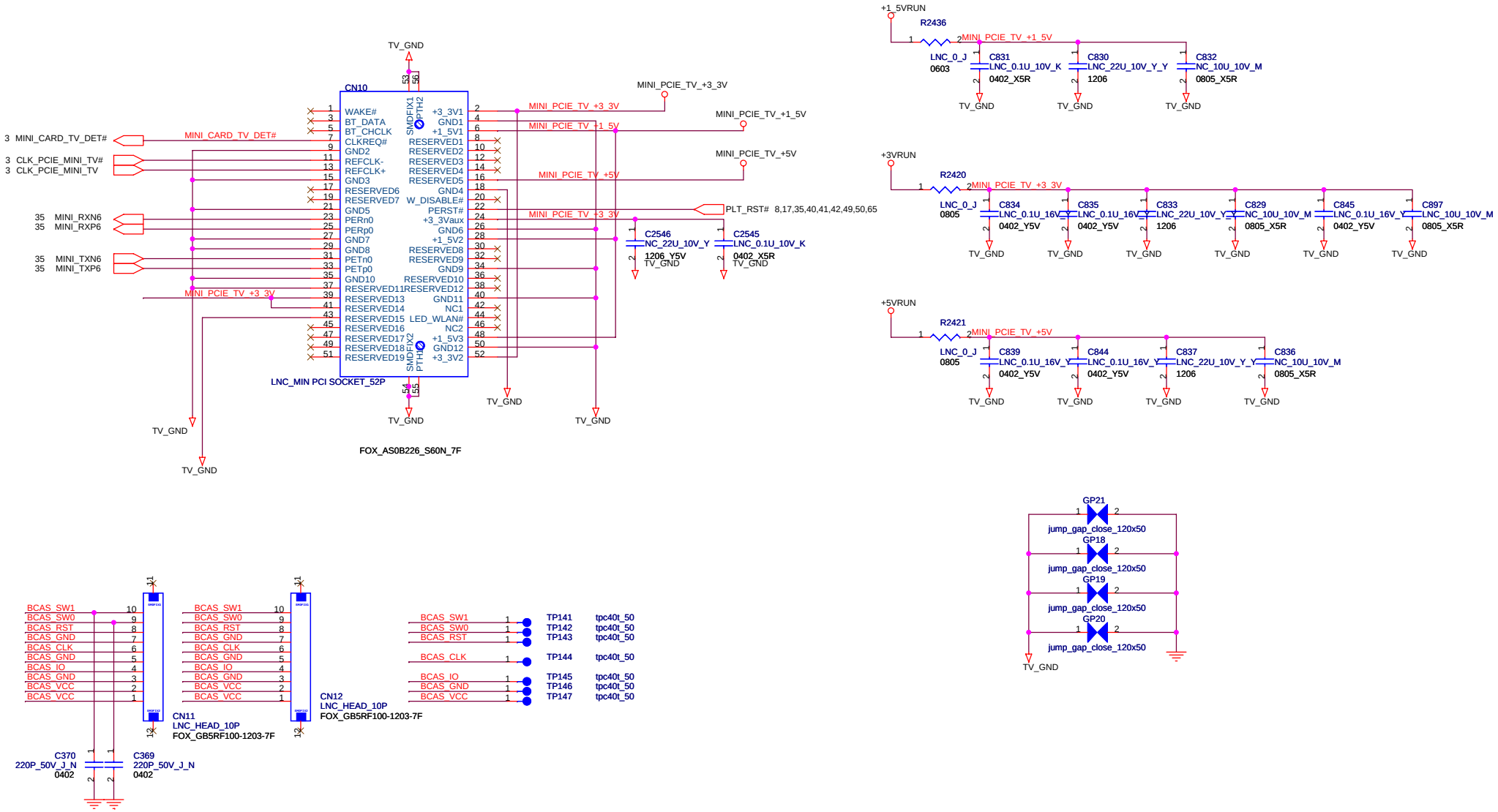

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	MINI-PCIE CONN(TV)
Size	A3
Document Number	M780(MBX-194)
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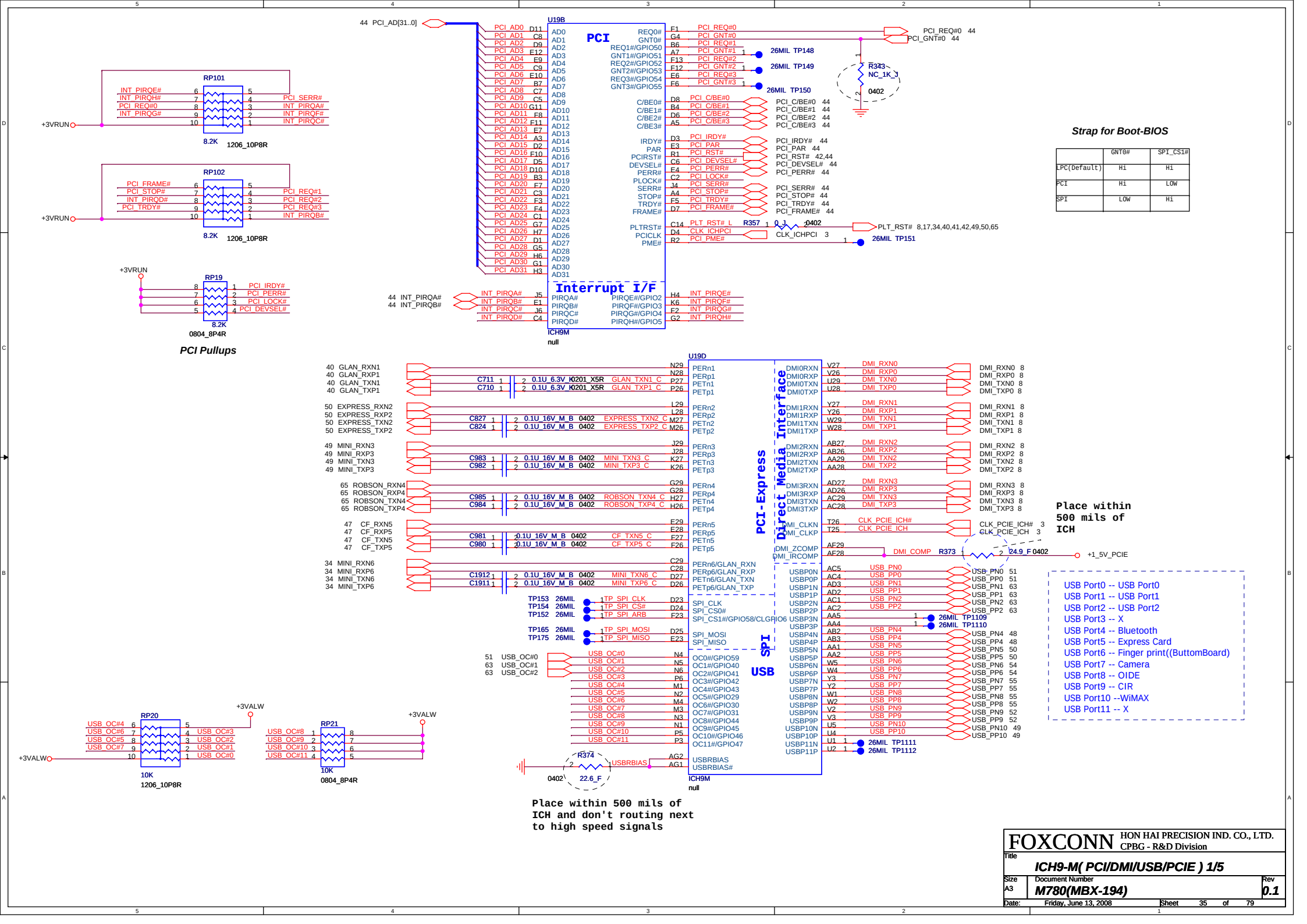
U19B
PCI
Interrupt I/F
ICH9M
null
RP101
RP102
RP19
8.2K
1206_10P8R
0804_8P4R
PCI Pullups
Strap for Boot-BIOS
GNT0#
SPI_CS1#
LPC(Default)
PCI
SPI
U19D
PCI-Express
Direct Media Interface
SPI
USB
RP20
RP21
10K
R374
22.6_F
R373
24.9_F
Place within 500 mils of ICH
Place within 500 mils of ICH and don't routing next to high speed signals
USB Port0 -- USB Port0
USB Port1 -- USB Port2
USB Port2 -- USB Port2
USB Port3 -- X
USB Port4 -- Bluetooth
USB Port5 -- Express Card
USB Port6 -- Finger print((ButtomBoard)
USB Port7 -- Camera
USB Port8 -- OIDE
USB Port9 -- CIR
USB Port10 --WiMAX
USB Port11 -- X
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH9-M(PCI/DMI/USB/PCIE) 1/5
M780(MBX-194)
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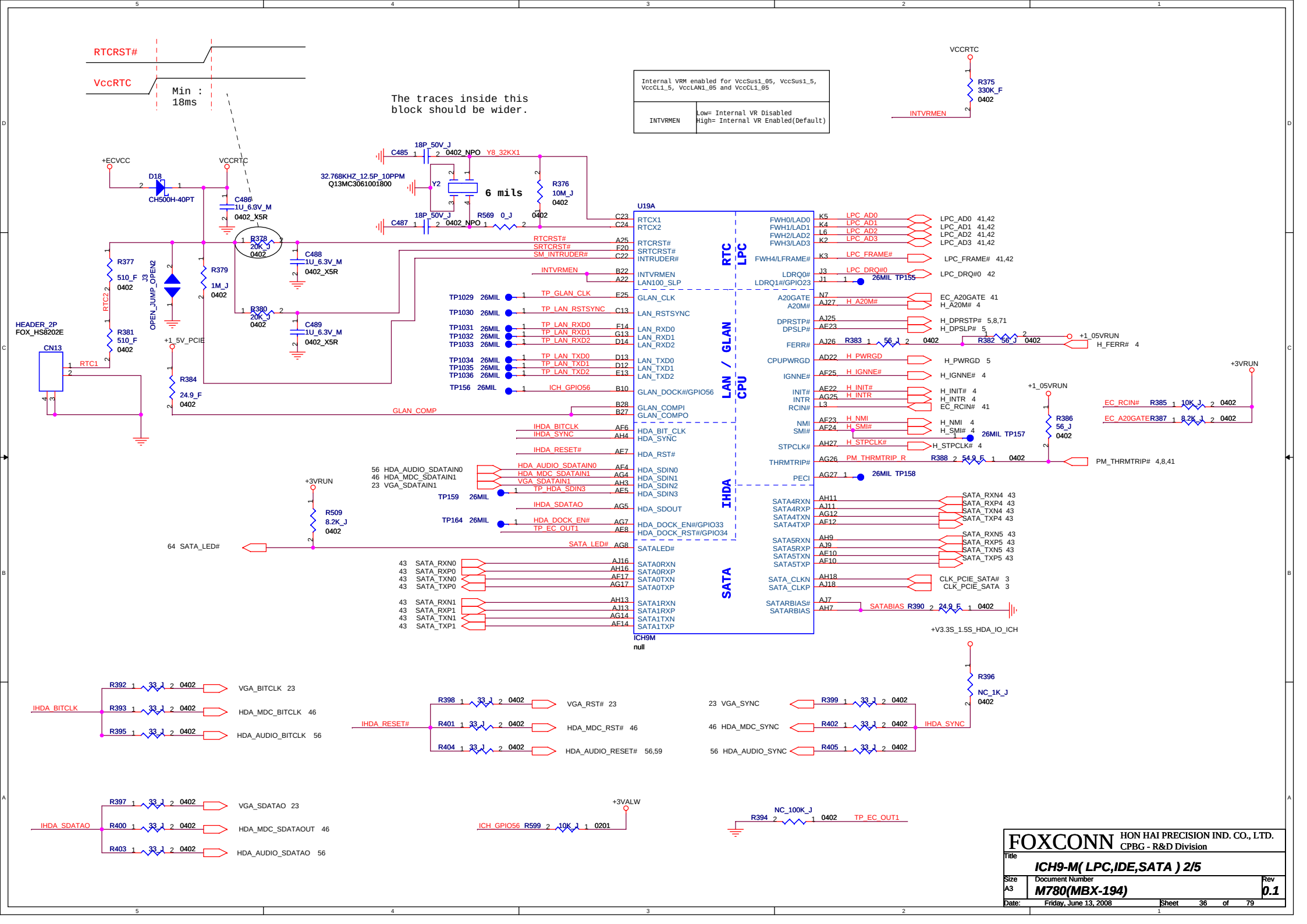
RTCRST#
VccRTC
Min : 18ms
The traces inside this block should be wider.
Internal VRM enabled for VccSus1_05, VccSus1_5, VccCL1_5, VccLAN1_05 and VccCL1_05
INTVRMEN
Low= Internal VR Disabled
High= Internal VR Enabled(Default)
VCCRTC
R375 330K_F 0402
INTVRMEN
+ECVCC
VCCRTC
D18
CH500H-40PT
C486 1U_6.3V_M 0402_X5R
C485 18P_50V_J 0402_NPO
Y8_32KX1
32.768KHZ_12.5P_10PPM
Q13MC3061001800
Y2
6 mils
C487 18P_50V_J 0402_NPO
R569 0_J 0402
R376 10M_J 0402
R378 20K_J 0402
R377 510_F 0402
R379 1M_J 0402
R380 20K_J 0402
C488 1U_6.3V_M 0402_X5R
C489 1U_6.3V_M 0402_X5R
J3 OPEN_JUMP_OPEN2
RTC2
HEADER_2P FOX_HS8202E
CN13
RTC1
R381 510_F 0402
+1_5V_PCIE
R384 24.9_F 0402
GLAN_COMP
U19A
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#
PECI
SATA4RXN
SATA4RXP
SATA4TXN
SATA4TXP
SATA5RXN
SATA5RXP
SATA5TXN
SATA5TXP
SATA_CLKN
SATA_CLKP
SATARBIAS#
SATARBIAS
LPC_AD0 41,42
LPC_AD1 41,42
LPC_AD2 41,42
LPC_AD3 41,42
LPC_FRAME# 41,42
LPC_DRQ#0 42
26MIL TP155
EC_A20GATE 41
H_A20M# 4
H_DPRSTP# 5,8,71
H_DPSLP# 5
H_FERR# 4
H_PWRGD 5
H_IGNNE# 4
H_INIT# 4
H_INTR 4
EC_RCIN# 41
H_NMI 4
H_SMI# 4
26MIL TP157
H_STPCLK# 4
PM_THRMTRIP# 4,8,41
26MIL TP158
SATA_RXN4 43
SATA_RXP4 43
SATA_TXN4 43
SATA_TXP4 43
SATA_RXN5 43
SATA_RXP5 43
SATA_TXN5 43
SATA_TXP5 43
CLK_PCIE_SATA# 3
CLK_PCIE_SATA 3
SATABIAS R390 24.9_F 0402
+V3.3S_1.5S_HDA_IO_ICH
R396 NC_1K_J 0402
+1_05VRUN
R386 56_J 0402
R383 56_J 0402
R382 56_J 0402
+3VRUN
EC_RCIN# R385 10K_J 0402
EC_A20GATE R387 8.2K_J 0402
TP1029 26MIL TP_GLAN_CLK
TP1030 26MIL TP_LAN_RSTSYNC
TP1031 26MIL TP_LAN_RXD0
TP1032 26MIL TP_LAN_RXD1
TP1033 26MIL TP_LAN_RXD2
TP1034 26MIL TP_LAN_TXD0
TP1035 26MIL TP_LAN_TXD1
TP1036 26MIL TP_LAN_TXD2
TP156 26MIL ICH_GPIO56
INTVRMEN
SRTCRST#
SM_INTRUDER#
56 HDA_AUDIO_SDATAIN0
46 HDA_MDC_SDATAIN1
23 VGA_SDATAIN1
HDA_AUDIO_SDATAIN0
HDA_MDC_SDATAIN1
VGA_SDATAIN1
TP_HDA_SDIN3
TP159 26MIL
IHDA_SDATAO
TP164 26MIL HDA_DOCK_EN#
TP_EC_OUT1
IHDA_BITCLK
IHDA_SYNC
IHDA_RESET#
+3VRUN
R509 8.2K_J 0402
64 SATA_LED#
SATA_LED#
43 SATA_RXN0
43 SATA_RXP0
43 SATA_TXN0
43 SATA_TXP0
43 SATA_RXN1
43 SATA_RXP1
43 SATA_TXN1
43 SATA_TXP1
IHDA_BITCLK
R392 33_J 0402 VGA_BITCLK 23
R393 33_J 0402 HDA_MDC_BITCLK 46
R395 33_J 0402 HDA_AUDIO_BITCLK 56
IHDA_RESET#
R398 33_J 0402 VGA_RST# 23
R401 33_J 0402 HDA_MDC_RST# 46
R404 33_J 0402 HDA_AUDIO_RESET# 56,59
23 VGA_SYNC
46 HDA_MDC_SYNC
56 HDA_AUDIO_SYNC
R399 33_J 0402
R402 33_J 0402
R405 33_J 0402
IHDA_SYNC
IHDA_SDATAO
R397 33_J 0402 VGA_SDATAO 23
R400 33_J 0402 HDA_MDC_SDATAOUT 46
R403 33_J 0402 HDA_AUDIO_SDATAO 56
+3VALW
ICH_GPIO56 R599 10K_J 0201
NC_100K_J
R394 0402 TP_EC_OUT1
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
ICH9-M(LPC,IDE,SATA) 2/5
Size A3
Document Number M780(MBX-194)
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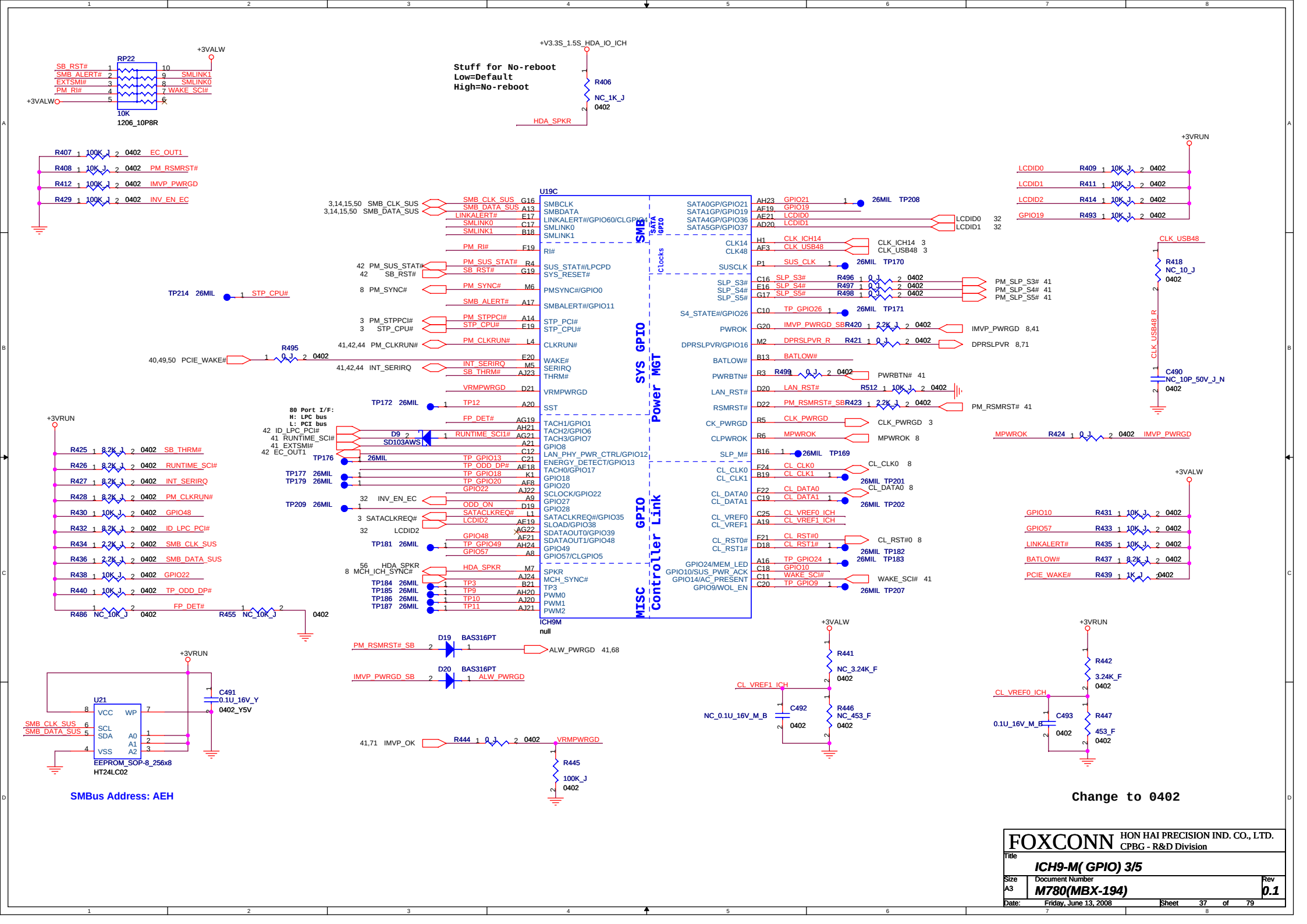
RP22
10K
1206_10P8R
Stuff for No-reboot
Low=Default
High=No-reboot
R406
NC_1K_J
0402
HDA_SPKR
+V3.3S_1.5S_HDA_IO_ICH
U19C
SMB
SATA GPIO
Clocks
SYS GPIO
Power MGT
GPIO
Controller Link
MISC
ICH9M
null
80 Port I/F:
H: LPC bus
L: PCI bus
D9
SD103AWS
D19
BAS316PT
D20
BAS316PT
U21
EEPROM_SOP-8_256x8
HT24LC02
SMBus Address: AEH
Change to 0402
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH9-M(GPIO) 3/5
M780(MBX-194)
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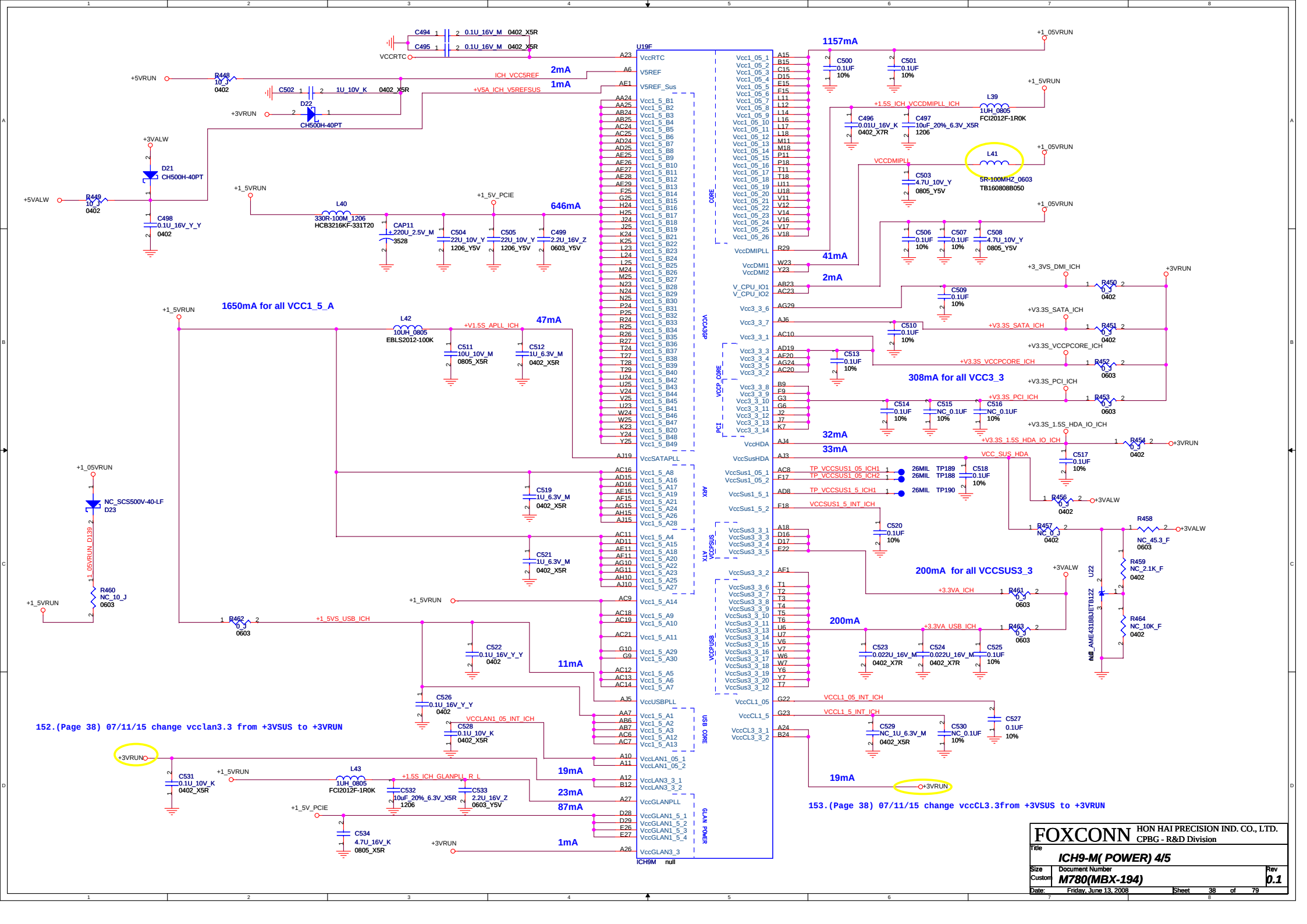
1650mA for all VCC1_5_A
1157mA
308mA for all VCC3_3
200mA for all VCCSUS3_3
152.(Page 38) 07/11/15 change vcclan3.3 from +3VSUS to +3VRUN
153.(Page 38) 07/11/15 change vccCL3.3from +3VSUS to +3VRUN
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH9-M(POWER) 4/5
M780(MBX-194)
0.1
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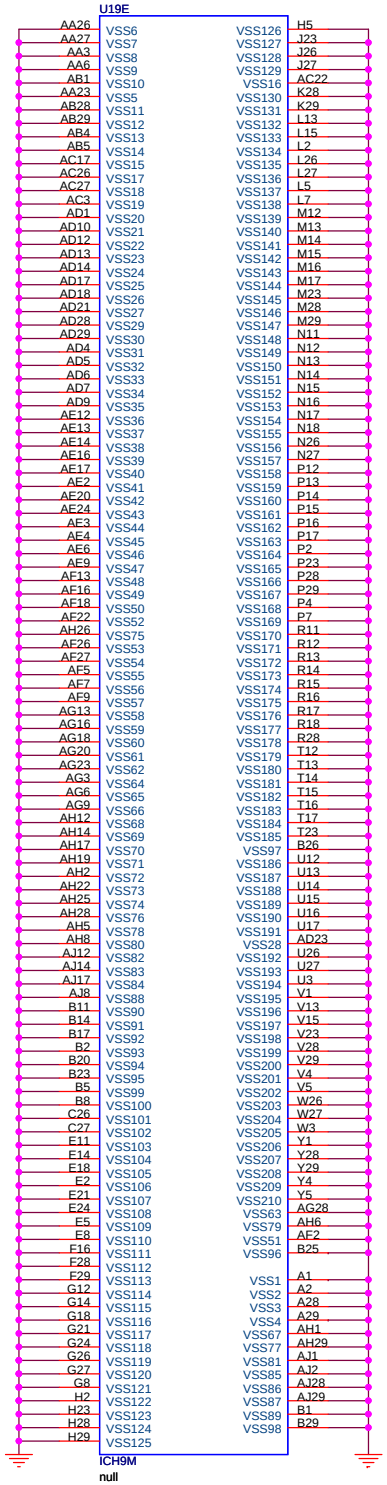

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	ICH9-M(GND) 5/5	
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
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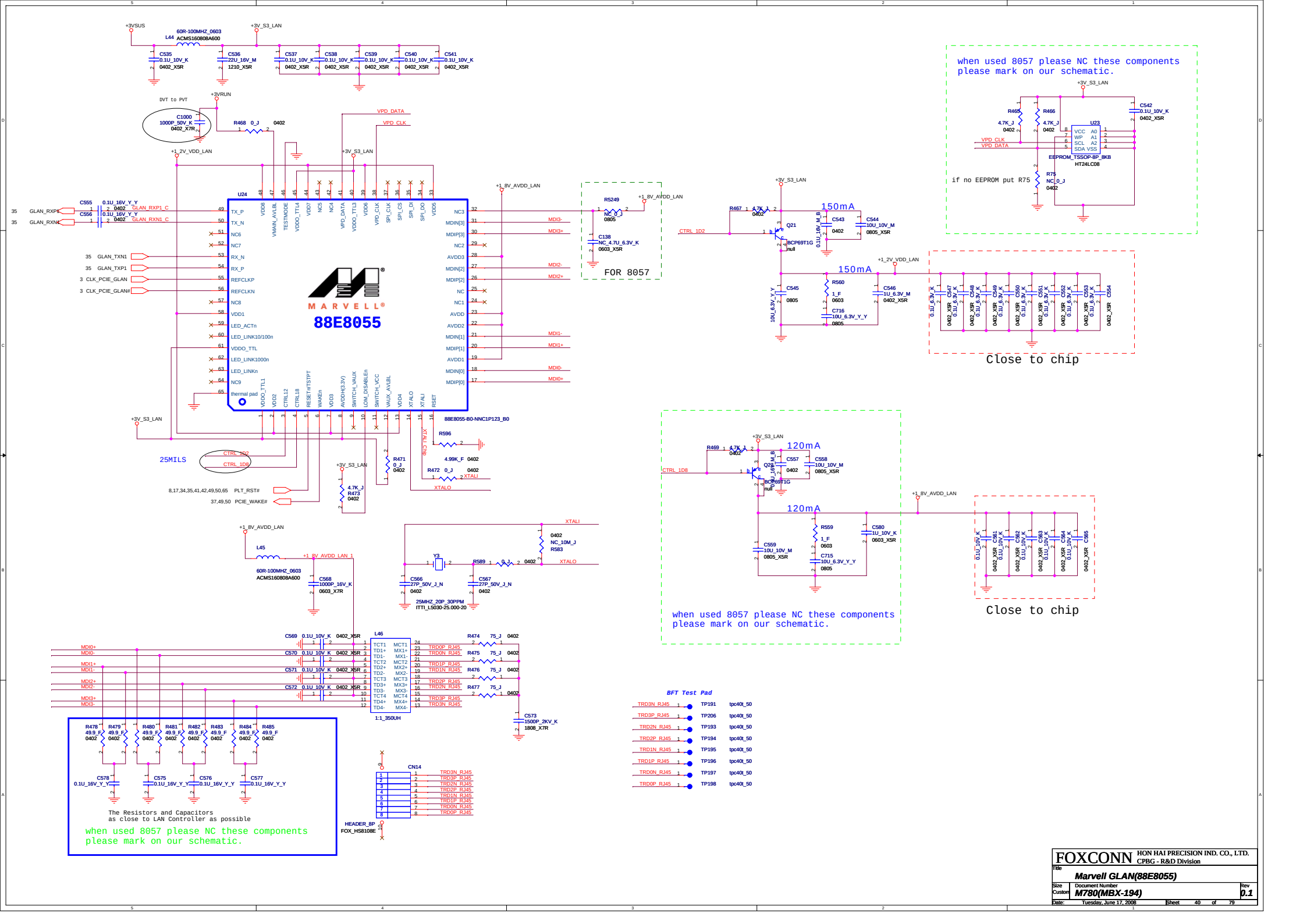

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	*Marvell GLAN(88E8055)*
Size / Custom	Document Number *M780(MBX-194)* Rev *0.1*
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DVT to PVT 0605

SMBUS Channel 2 — +3VALW — RP25 2.2K 0402_4P2R — CLK_SMB / DAT_SMB

SMBUS Channel 1 — +3VRUN — RP26 4.7K_J 0404 — SMB_THRM_CLK / SMB_THRM_DATA

+ECVCC — C699 0805 — C707 0402 — C710 0402 — C719 0402 — C721 0402 — C718 0402 — C708 0402 — 10U_6.3V_Y_T — 0.1U_16V_M_B

C722 0805 — C720 0402 — C717 0402 — 10U_6.3V_Y_T — 1U_6.3V_K_B — 0.1U_16V_M_B

+ECVCC — R487 4.7K_J 0402 — 42,54 PWRSW# — R488 110_J 0402 — C588 0.1U_16V_M_B 0402 — PWRSW#_R

CLK_KBCPCI — R516 NC_47_J 0402 — C592 NC_22P_50V_K_N 0402 — DVT to PVT

CN15 SMDFIX2 — SMDFIX1 — HEADER_32P — FOX_GB1SH320-1280-7F

U170A — WPCE775L_0DG — null

A/D: VREF; AD0/GPI90; AD1/GPI91; AD2/GPI92; AD3/GPI93; AD4/GPIO05; AD5/GPIO04; AD6/GPIO03; AD7/GPIO07

D/A: DA0/GPI94; DA1/GPI95; DA2/GPI96; DA3/GPI97

GPIO (wake-up capability): GPIO41; TCK/GPIO42; GPIO43/TMS; GPIO44/TDI; GPIO50/TDO; GPIO52/RDY#

GPIO (no wake-up capability): GPO82/TRIS#; GPO84/BADDR0

SER: SOUT_CR/GPO83/BADDR1; GPIO67/SIN_CR; GPIO06

FIR: GPIO72; GPIO71; GPIO70

LPC: LPCPD#/GPIO10; LRESET#; LCLK; LFRAME#; GPIO24; LAD0; LAD1; LAD2; LAD3; SERIRQ; CLKRUN#/GPIO11; KBRST#; GA20; ECSCI#/GPIO54; SMI#/GPIO65; PWUREQ#/GPIO67

SMB: SDA4/GPIO53; SCL4/GPIO47; SDA3/GPIO31; SCL3/GPIO23; SDA2/GPIO74; SCL2/GPIO73; SDA1/GPIO22; SCL1/GPIO17

SPI: SPI_DI/GPIO77; SPI_DO/GPO76/6SHBM; SPI_SCK/GPIO75; GPIO61

CIR: GPIO46/TRST#; GPIO34; GPIO16; GPIO30

FIR: GPIO72; GPIO71; GPIO70

EN_EXT_DEV_SENSE 31 — PLT_RST# 8,17,34,35,40,42,49,50,65 — CLK_KBCPCI 3 — LPC_FRAME# 36,42 — CLK_35001 72 — LPC_AD0 36,42 — LPC_AD1 36,42 — LPC_AD2 36,42 — LPC_AD3 36,42 — INT_SERIRQ 37,42,44 — PM_CLKRUN# 37,42,44 — EC_RCIN1# — EC_A20GATE1 — RUNTIME_SCI# 37 — EXTSMI# 37 — WAKE_SCI# 37

DAT_SMB_EXT — CLK_SMB_EXT — NV_LCD_DATA — NV_LCD_CLK — DAT_SMB — CLK_SMB — SMB_THRM_DATA 23,53 — SMB_THRM_CLK 23,53

SYSTEM_ID3 — RUN_ON2 — BT_ON — IMVP_OK 37,71

PM_RSMRST# — PM_RSMRST 37 — IMVP_PWRGD 8,37 — SUS_ON 70,72 — CAPLOCK_LED# — CAPLOCK_LED 54

SUS_PWRGD_10MS — OVT_GFX# 23,53 — OVT_EC# 4,53,71

TP: +5VRUN — RP23 10K 0404_4P2R — C91 0.01U_16V_K_B 0402 — DAT_TP / CLK_TP

LCD: +3VRUN — RP27 10K 0404_4P2R — NV_LCD_CLK / NV_LCD_DATA

DVT to PVT 0605 — +3VALW — RP24 10K 0404_4P2R — CLK_35001 / DAT_35001

SPI_ROM_SDI NC_8.2K_J R2523 — SPI_ROM_SDO NC_8.2K_J R2522 — SPI_ROM_CS# NC_8.2K_J R2525 — CLK_SMB_EXT R2524 — DAT_SMB_EXT R2526 — 8.2K_J 0402

BT_WLAN_SW# R502 — BT_PRS# R521 — 10K_J 0402

+3VSUS — C371 220P_50V_J_N 0402 — C1002 1000P_50V_K 0402_X7R — DVT to PVT

CF_REST_IC# R503 — CF_REST_CARD# R563 — XPR_INT# R526 — MM_IRQ# R564 — 10K_J 0402

C913 1000P_50V_K 0402_X7R

SW1_KB R567 — SW2_KB R566 — SW3_KB R568 — SW4_KB R565 — DIS_FAN_MON# R571 — 10K_J 0402

CF_IN# R572 — A1 R573 — A2 R574 — CF_PWR_ON# R575 — 10K_J 0402 — NC_10K_J

PM_SLP_S3# R504 — PM_SLP_S4# R505 — PM_SLP_S5# R506 — RUN_ON R507 — SUS_ON R508 — ALW_ON R510 — RUN_ON1 R511 — RUN_ON2 R513 — ODD_PWR_ON R519 — 100K_J 0402 — NC_4.7K_J

C723 1U_10V_K 0603_X5R

D17 SD103AWS — EC_RCIN1# — EC_RCIN# 36

D24 SD103AWS — EC_A20GATE1 — EC_A20GATE 36

+3VRUN — R1778 10K_J 0402 — C998 1000P_50V_K 0402_X7R — DVT to PVT — OVT_GFX1# — +ECVCC — R3025 10K_J 0402 — EXP_RST# — C2580 1U_10V_Y 0603_Y5V

R514 33K_J 0402 — 32KXCLKO — R515 20M_J 0603 — Y4 32.768KHZ_12.5P_10PPM Q13MC3061001800 — C590 18P_50V_J 0402_NPO — C591 18P_50V_J 0402_NPO — 32KXCLKI

32KXCLKI — 32KXCLKO — SYSTEM_ID2

SMBus Address: 3EH

CLK_SMB_EXT — DAT_SMB_EXT — C465 47P_50V_J_N 0402 — C466 47P_50V_J_N 0402

U159 — W83L604G — null

CLK_SMB_EXT — DAT_SMB_EXT — SW1_KB — SW2_KB — SW3_KB — SW4_KB — WLAN_EN — HW_POP_MUTE_EC — DIS_FAN_MON#

SCK — SDAT — LED0/GP10 — LED1/GP11 — LED2/GP12 — LED3/GP13 — VSS — GP20 — GP21 — GP22 — 3VDD — RST# — INT# — A0/GP17 — A1/GP16 — A2/GP15 — BEEP/GP14 — GP25 — GP24 — GP23

EXP_RST# — XPR_INT# — A1 — A2 — DDR_ALERT# — CF_REST_CARD# — CF_REST_IC# — CF_REQ_IN2#

CF_PWR_ON# 47 — DDR_ALERT# 8,53 — CF_REST_CARD# 47 — CF_REST_IC# 47 — CF_REQ_IN2# 3

LID Switch — +ECVCC — R489 100K_J 0402 — LIDIN#

(for touch sensor)

FAN1_PWM — SUSPEND_LED — POWER_LED — NUMLOCK_LED# — RUN_PWRGD — RUN_ON — EXT_DEV_SENSE — BT_PRS# — IMVP_VR_ON — ENCH&# — PM_SLP_S3# — PWRBTN# — R555 2.2K_J 0402 — MM_IRQ# — CF_IN# — PWRLIMIT# — SCRLOCK_LED# — DAT_TP — CLK_TP

U170B — WPCE775L_0DG — null

32KX1/32KCLKIN — 32KX2 — CLKOUT/GPIO55

A_PWM/GPIO15; B_PWM/GPIO21; C_PWM/GPIO13; D_PWM/GPIO32; E_PWM/GPIO45; F_PWM/GPIO40; G_PWM/GPIO66; H_PWM/GPIO33

TA1/GPIO56; TB1/GPIO14; TA2/GPIO20; TB2/GPIO01; TA3/GPIO51; TB3/GPIO36

PSDAT3/GPIO12; PSCLK3/GPIO25; PSDAT2/GPIO27; PSCLK2/GPIO26; PSDAT1/GPIO35; PSCLK1/GPIO37

KBC: KBSOUT0/JENK#; KBSOUT1/TCK; KBSOUT2/TMS; KBSOUT3/TDI; KBSOUT4/JENI#; KBSOUT5/TDO; KBSOUT6/RDY#; KBSOUT7; KBSOUT8; KBSOUT9; KBSOUT10; KBSOUT11; KBSOUT12/GPIO64; KBSOUT13/GPIO63; KBSOUT14/GPIO62; KBSOUT15/GPIO61/XOR_OUT; KBSOUT16/GPIO60; KBSOUT17/GPIO57

PS/2 FIU: F_SDI; F_SDO; F_CS0#; F_SCK

KBSIN0; KBSIN1; KBSIN2; KBSIN3; KBSIN4; KBSIN5; KBSIN6; KBSIN7

VCC_POR# — ECRST# — ECRST# 23

SPI_ROM_SDI — SPI_ROM_SDO — SPI_ROM_CS# R528 — SPI_ROM_CLK R562 — 22_J 0402

POWER ON / POWER OFF

CF_PWR_ON# — CF_REQ_IN2# — CF_REST_IC# — CF_REST_CARD#

+ECVCC — R520 4.7K_J 0402 — ECRST# — C594 NC_0.1U_16V_M_B 0402

Q23 ME2N7002E — PLT_RST#

+1.05VRUN — R532 2.2K 0402 — Q25 PMBS3904 — PM_THRMTRIP# — 4,8,36 PM_THRMTRIP#

M780 Model System ID definition

	H	N	L(32M)
SysID0	1	0	1
SysID1	1	1	0
SysID2	0	0	0
SysID3	0	0	0

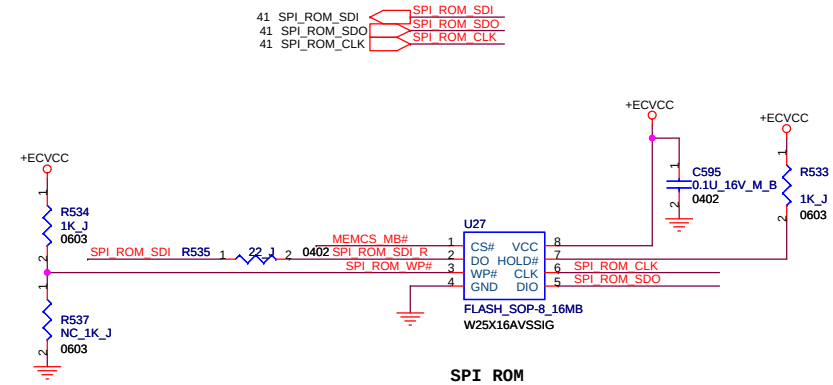
+ECVCC — NV9L32_100K_J — NV9L_100K_J — NV9HM_100K_J — NC_100K_J — R785 — R2277 — R790 — R792 — R791 — R787 — SYSTEM_ID0 — SYSTEM_ID1 — SYSTEM_ID2 — SYSTEM_ID3 — R789 — R793 — R788 — 100K_J — NC_100K_J — 0402

FOXCONN — HON HAI PRECISION IND. CO., LTD. — CPBG - R&D Division

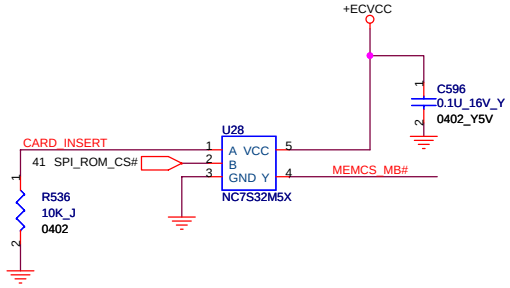
Title: EC+KBC(WPC8775L)

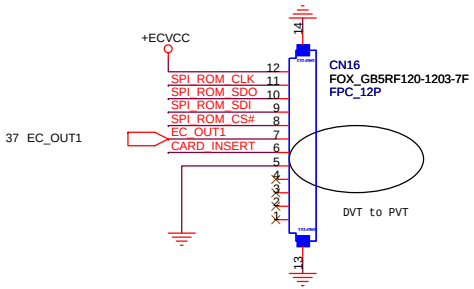
Size: Custom — Document Number: M780(MBX-194) — Rev: 0.1

Date: Sunday, June 29, 2008 — Sheet 41 of 79

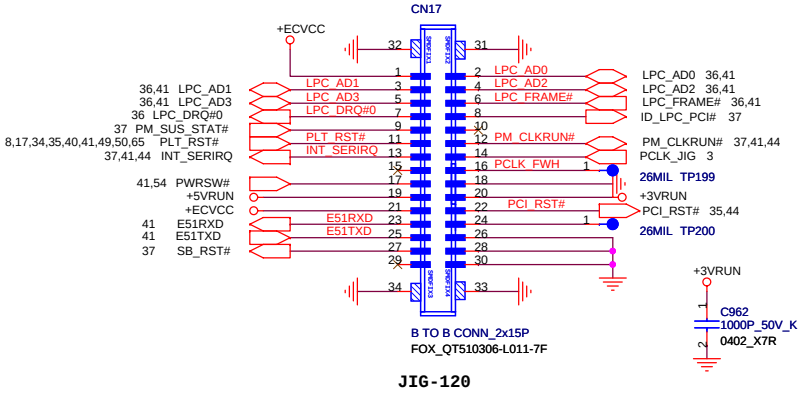


SPI ROM

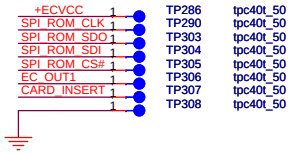




EXTERNAL SPI ROM INTERFACE

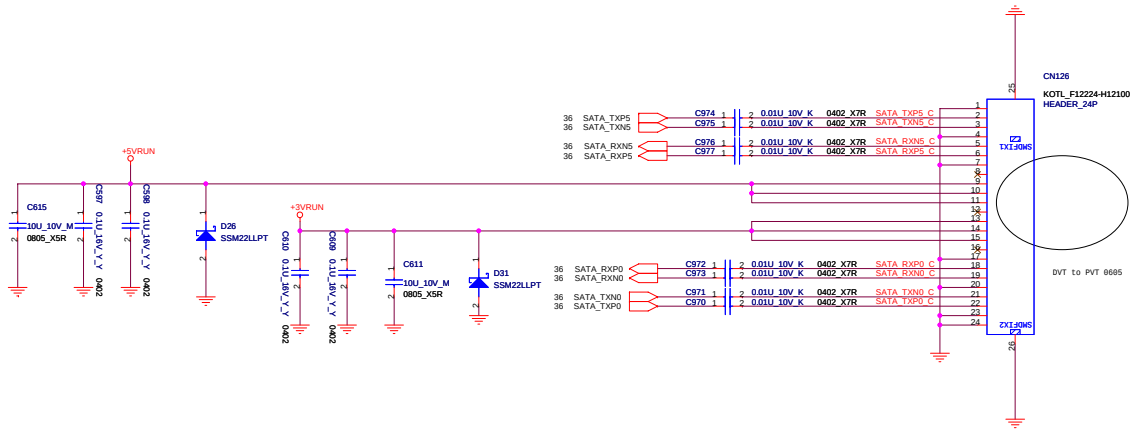


JIG-120

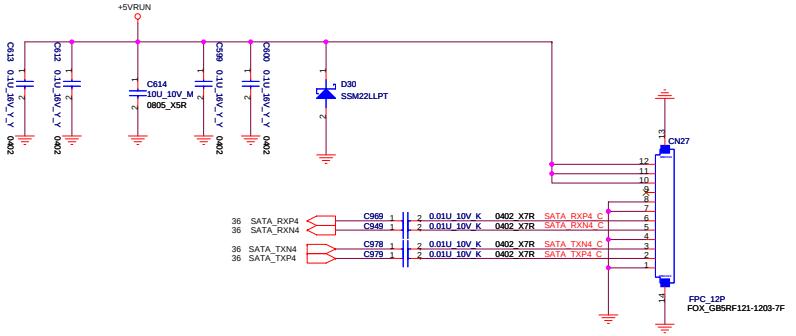


FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *Flash ROM/SPI*		
Size: A3	Document Number: *M780(MBX-194)*	Rev: *0.1*
Date: Wednesday, June 25, 2008	Sheet 42 of 79	

SATA HDD CONN(FPC)

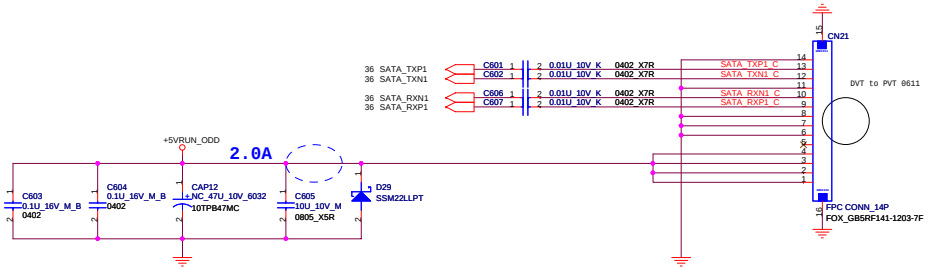


SATA HDD CONN1(FPC)

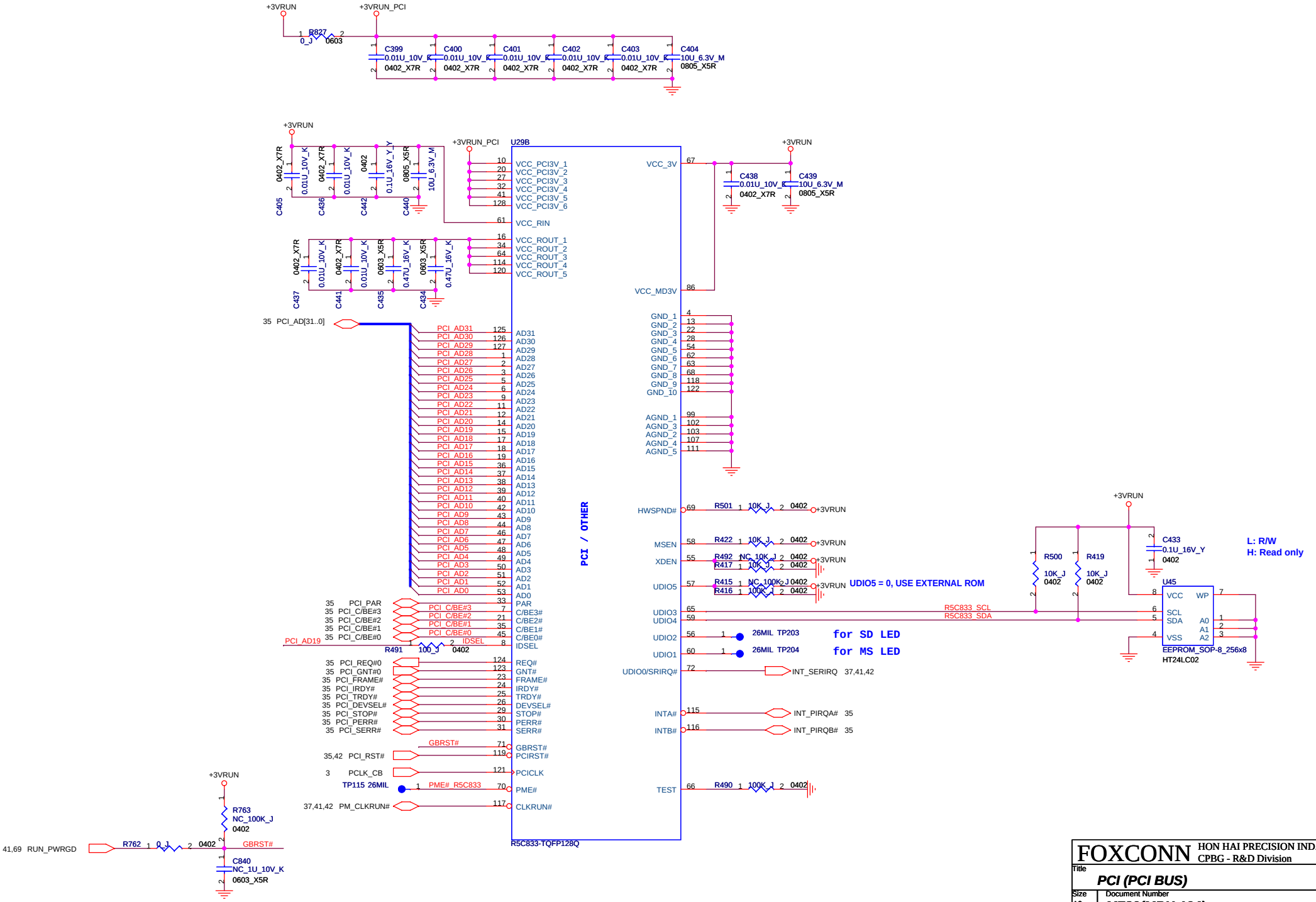


SATA0 : HDD or SSD (just connect to 24 Pin connector)
SATA1 : ODD (fixed)
SATA4 : HDD.(fixed for Single HDD connector)
SATA5 : SSD.(just connect to 24 Pin connector)

SATA ODD CONN(FPC)



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: SATA HDD/CD-ROM		
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 43 of 79	

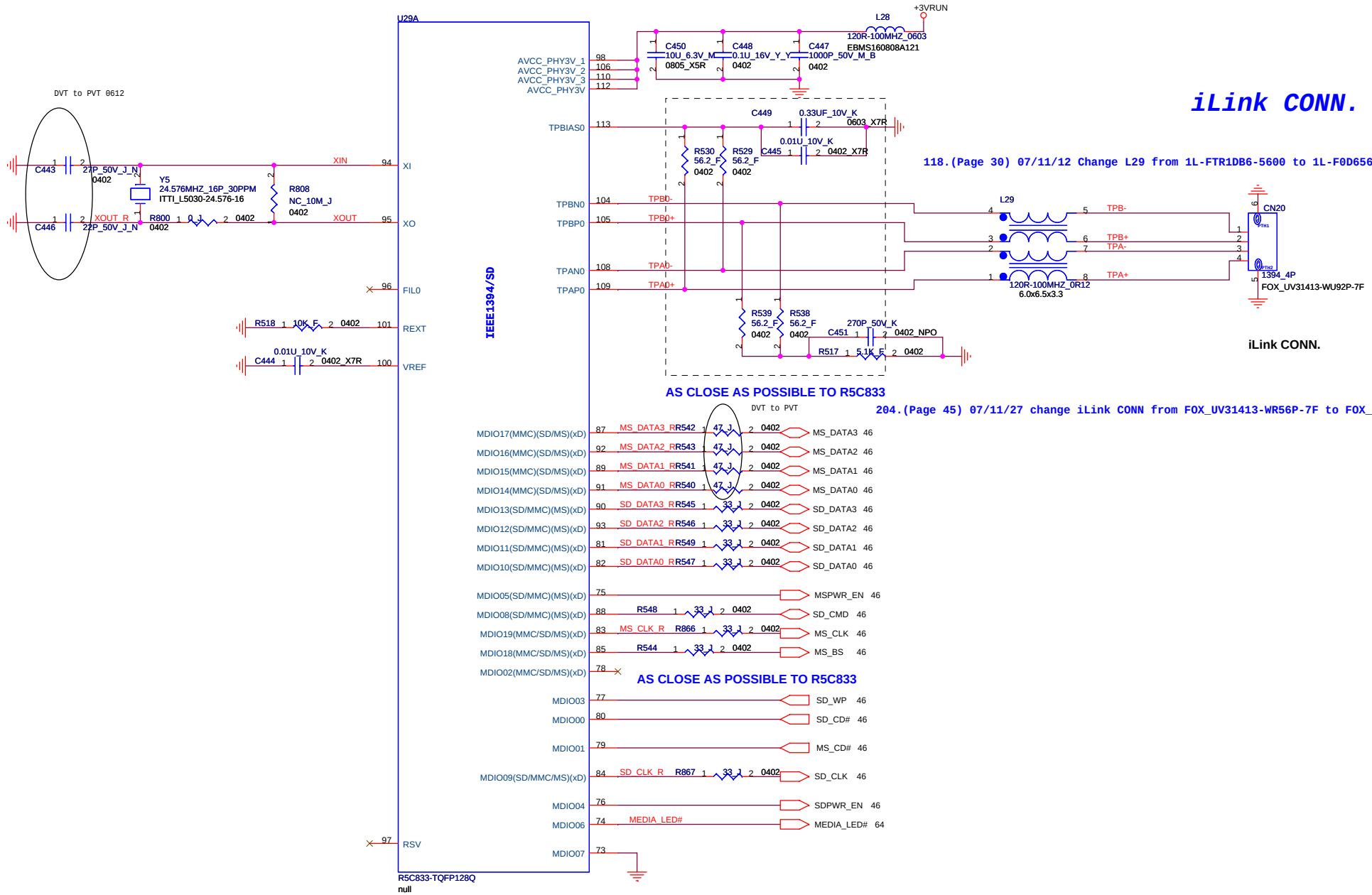


FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: PCI (PCI BUS)

Size: A3 | Document Number: M780(MBX-194) | Rev: 0.1

Date: Friday, June 13, 2008 | Sheet 44 of 79



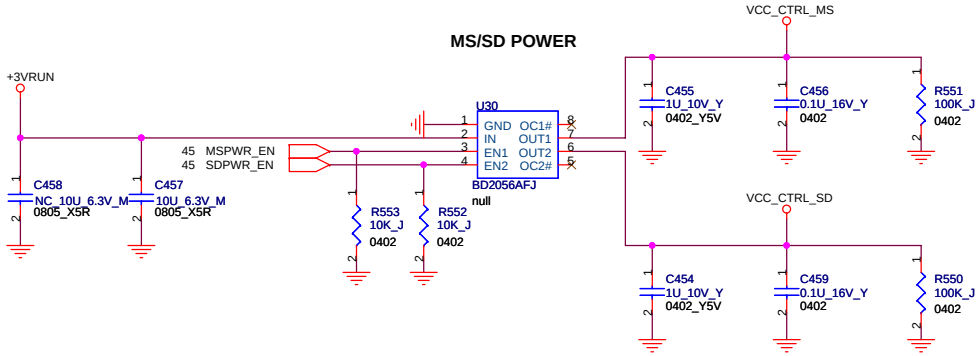
iLink CONN.

118.(Page 30) 07/11/12 Change L29 from 1L-FTR1DB6-5600 to 1L-F0D6560-TE00.

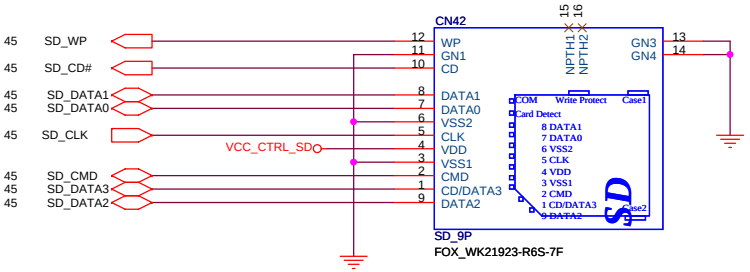
iLink CONN.

204.(Page 45) 07/11/27 change iLink CONN from FOX_UV31413-WR56P-7F to FOX_UV31413-WZ03P-7F.

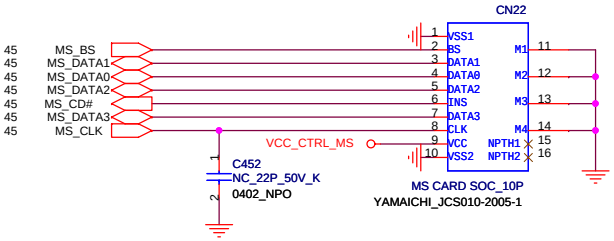
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	PCI (ILINK)	
Size A3	Document Number M780(MBX-194)	Rev 0.1
Date: Sunday, June 29, 2008	Sheet 45 of 79	

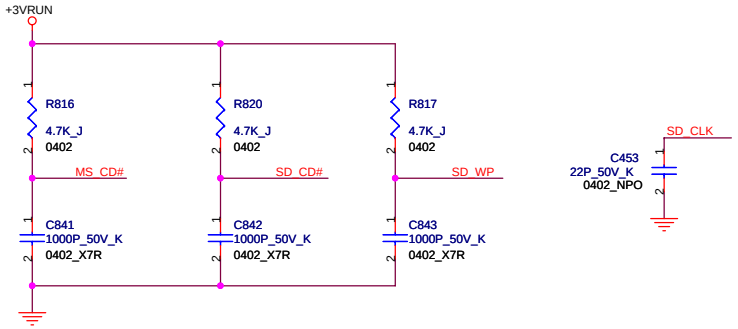


SD CONN.

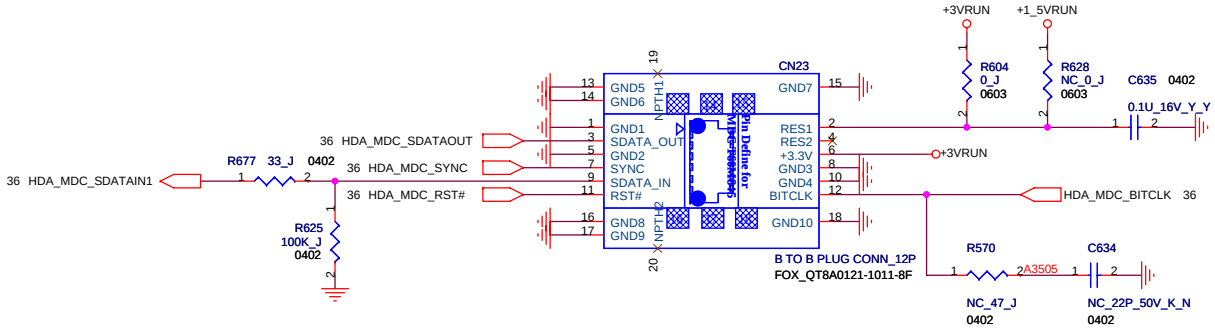


MS STD/DUO CONN.

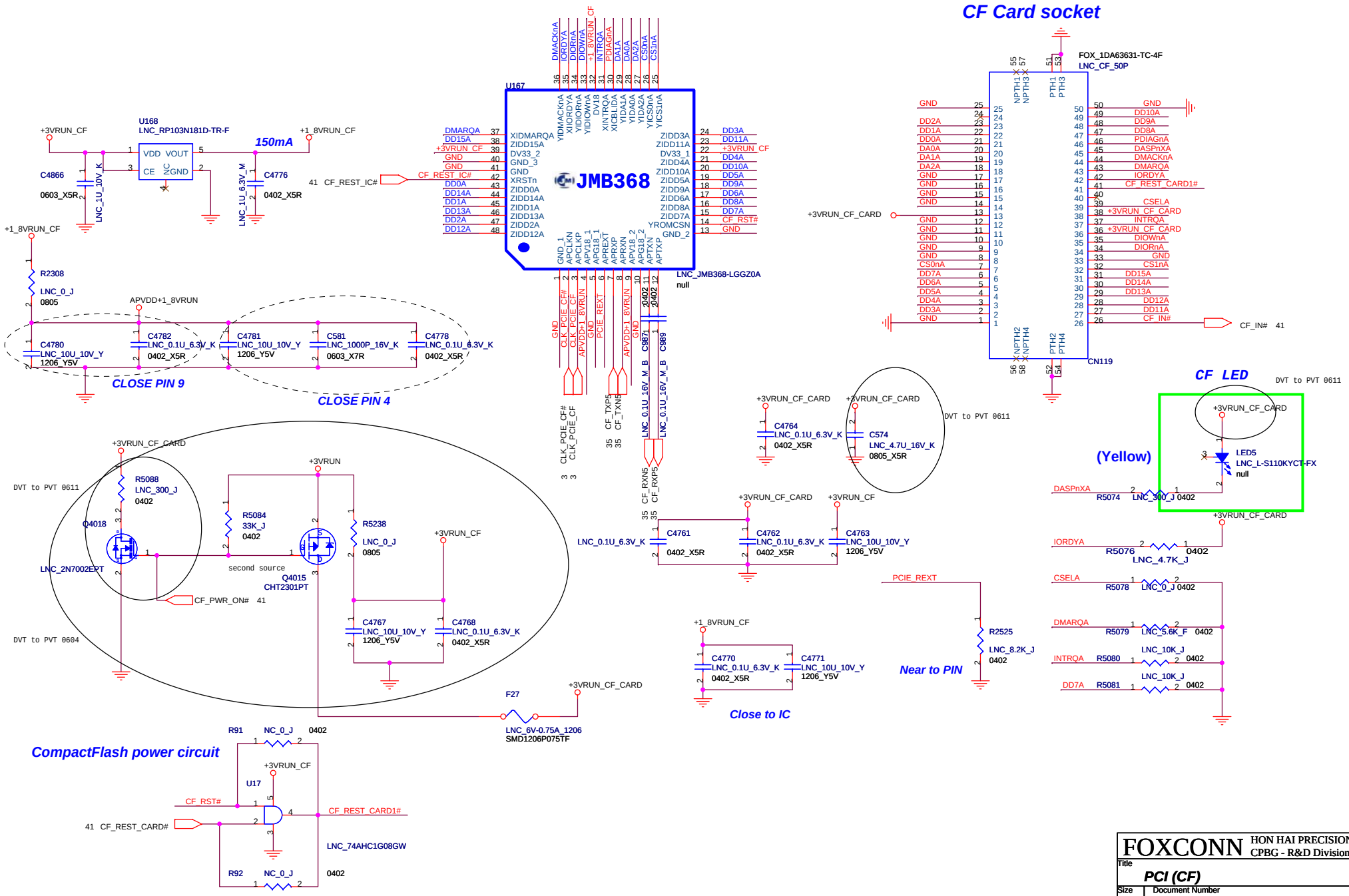




MDC CONN.

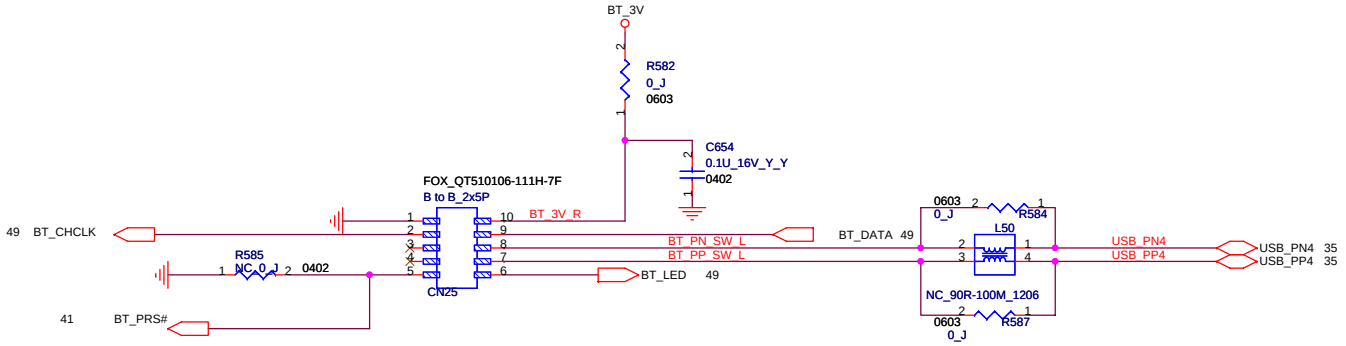


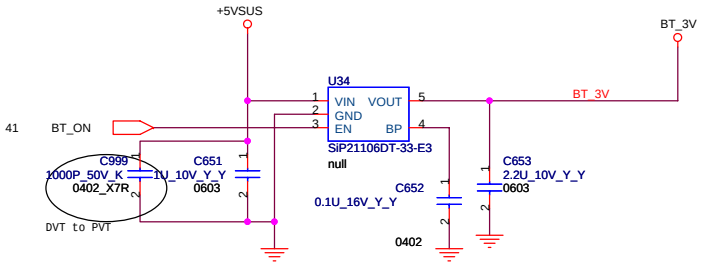
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title	PCI (MS-DUO/MDC)		
Size A3	Document Number M780(MBX-194)		Rev 0.1
Date: Friday, June 27, 2008	Sheet 46 of 79		



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	PCI (CF)	
Size A3	Document Number M780(MBX-194)	Rev 0.1
Date: Friday, June 13, 2008	Sheet 47 of 79	

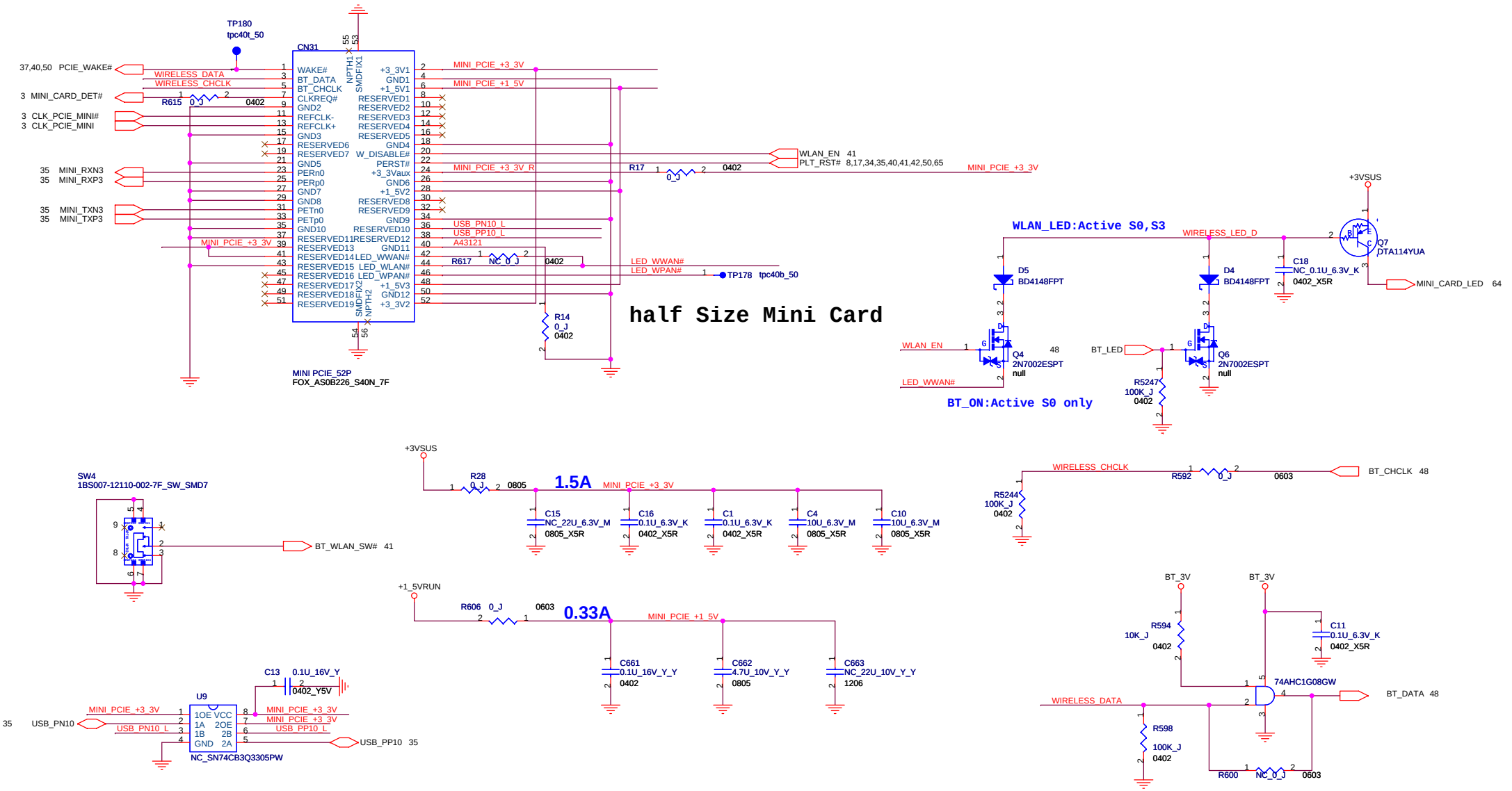
Bluetooth connector





FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: Bluetooth		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
Date: Tuesday, June 17, 2008	Sheet 48 of 79	

Mini-PCIE Card connector(WLA)

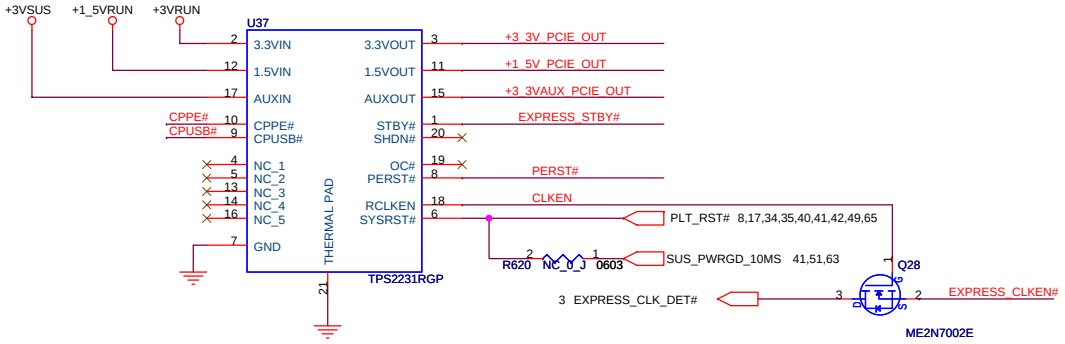


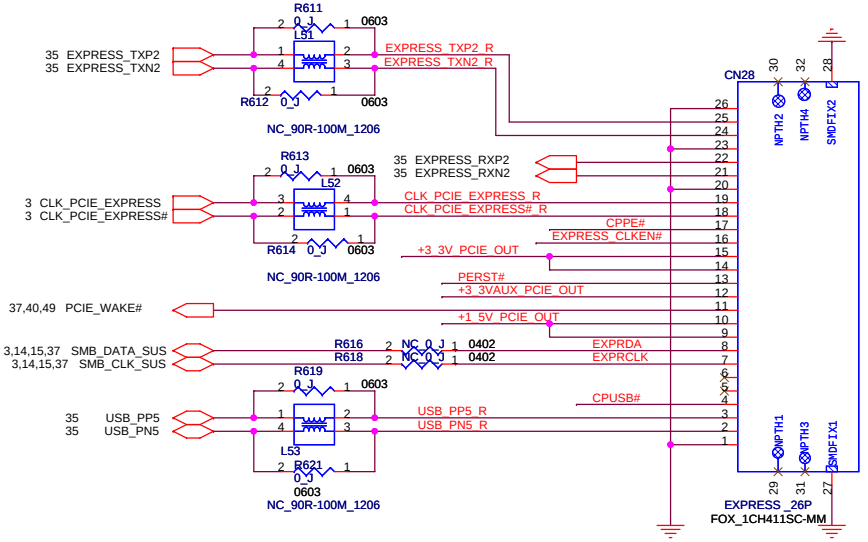
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	Mini-PCIE Card(WLA)	
Size A3	Document Number M780(MBX-194)	Rev 0.1
Date: Friday, June 13, 2008	Sheet 49 of 79	

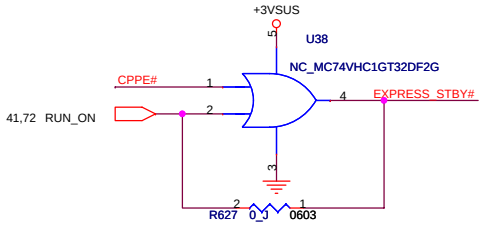
EXPRESS Card Slot

VOLTAGE INPUTS(1)			LOGIC INPUTS			VOLTAGE OUTPUTS(2)			MODE(3)
AUXIN	3.3VIN	1.5VIN	$\overline{SHDN}$	$\overline{STBY}$	$\overline{CP}$ (4)	AUXOUT	3.3VOUT	1.5VOUT	
Off	x	x	x	x	x	Off	Off	Off	OFF
On	x	x	0	x	x	GND	GND	GND	Shutdown
On	x	x	1	x	1	GND	GND	GND	No Card
On	On	On	1	0	0	On	Off	Off	Standby
On	On	On	1	1	0	On	On	On	Card Inserted

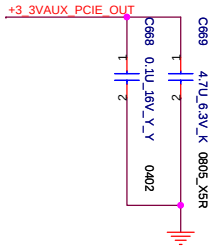
+1_5V=>0.65A
+3_3VAux=>0.275A
+3_3V=>1.3A



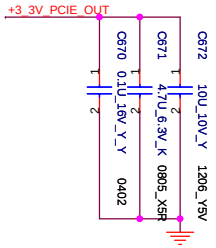




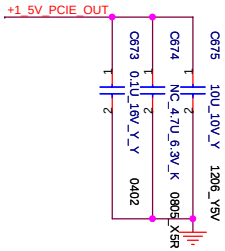
Supply Max 275mA

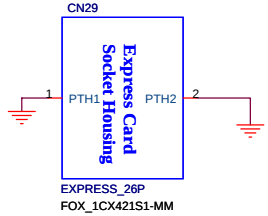


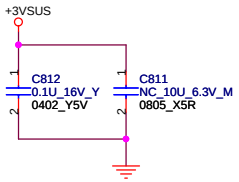
Supply Max 1300mA

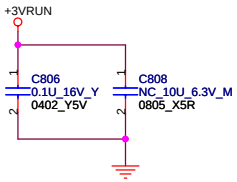


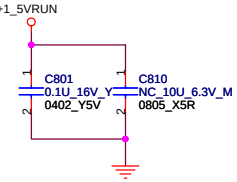
Supply Max 650mA











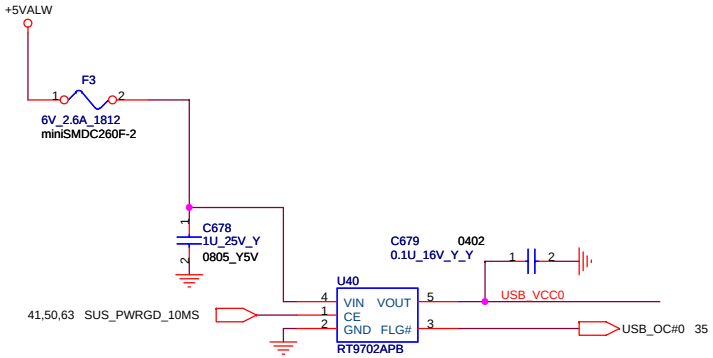
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

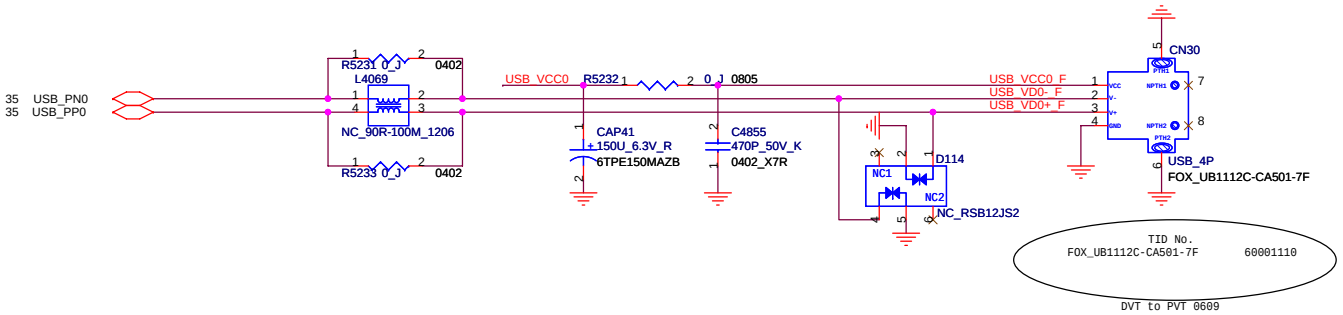
Title: **EXPRESS CARD**

Size: A3 | Document Number: **M780(MBX-194)** | Rev: **0.1**

Date: Friday, June 13, 2008 | Sheet 50 of 79

USB connector *1



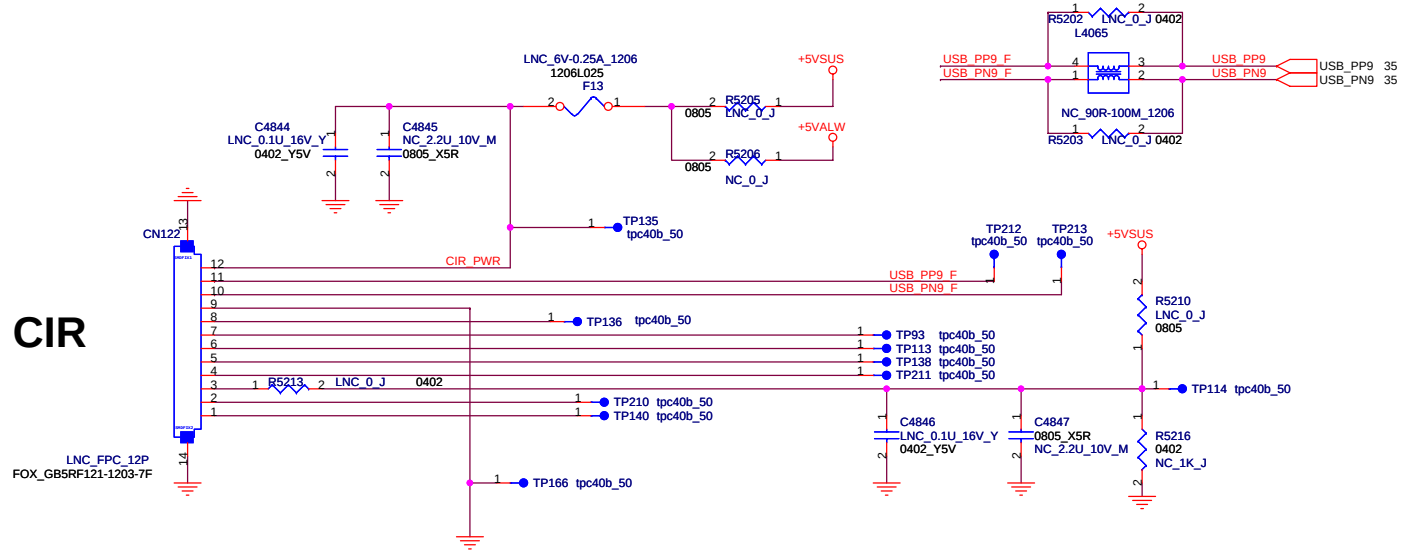


135.(Page 51) 07/11/12 remove U41 power switch to 41 pag.

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *USB2.0*		
Size: A3	Document Number: *M780(MBX-194)*	Rev: *0.1*
Date: Monday, June 16, 2008	Sheet 51 of 79	

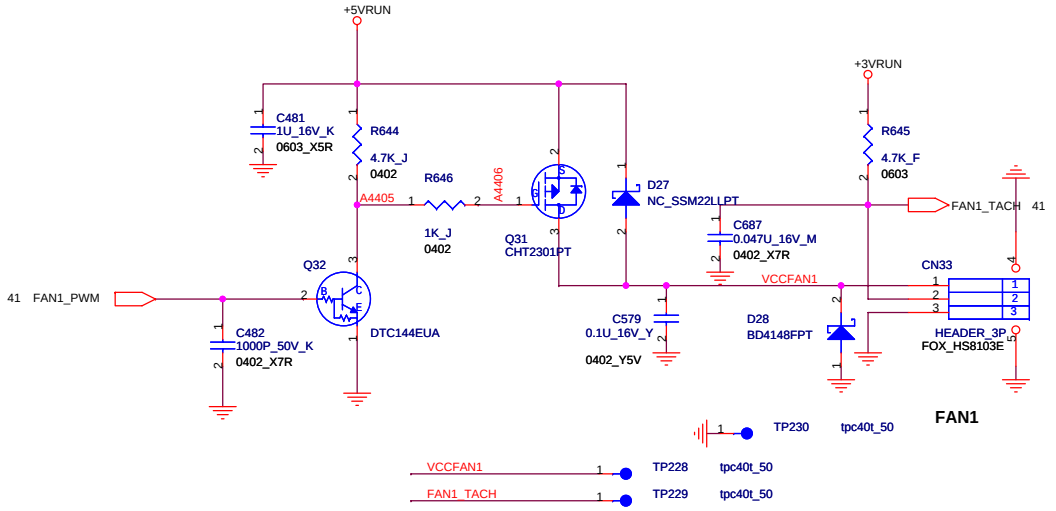
IR Rreceiver connector

CIR

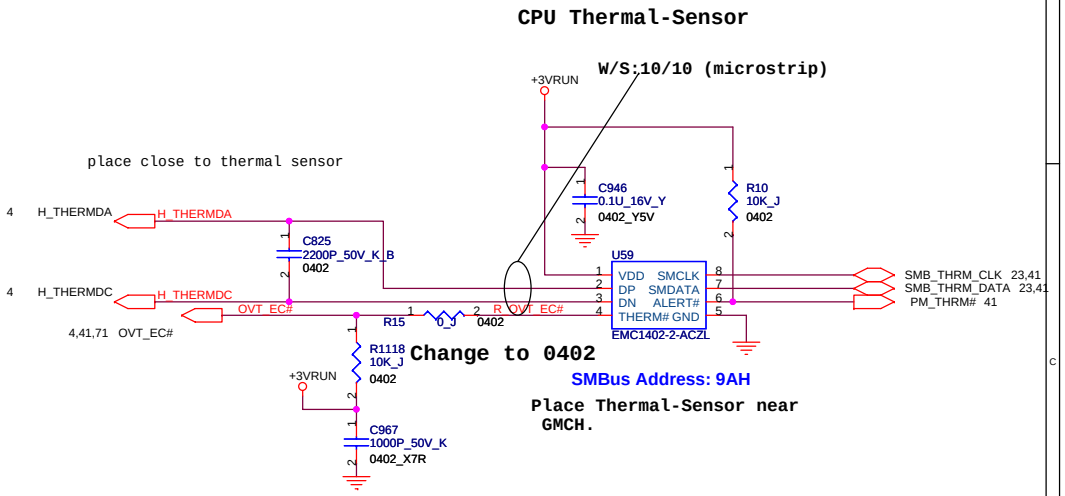


FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *CIR Reciver*		
Size: A3	Document Number: *M780(MBX-194)*	Rev: *0.1*
Date: Friday, June 13, 2008	Sheet 52 of 79	

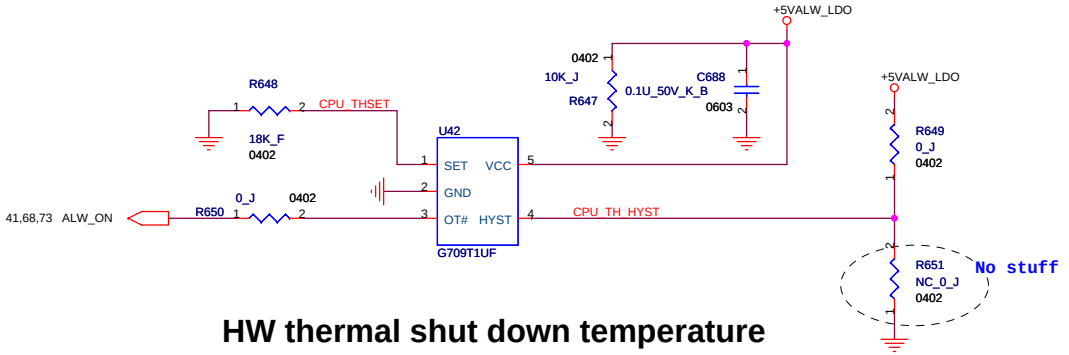
FAN circuit



CPU Thermal-Sensor

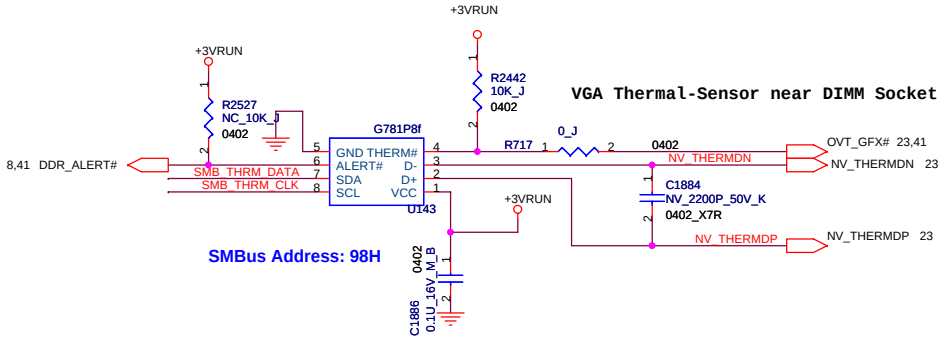


HW THERMAL PROTECTION



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

VGA Thermal-Sensor



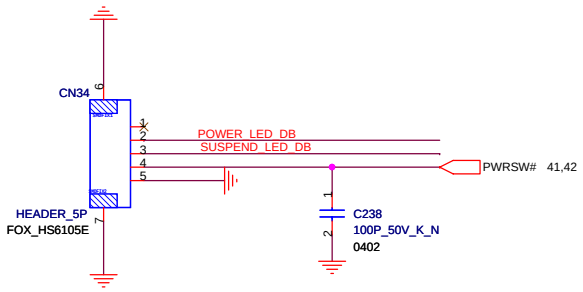
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: FAN / HW THERMAL PROTECTION

Size: A3 | Document Number: M780(MBX-194) | Rev: 0.1

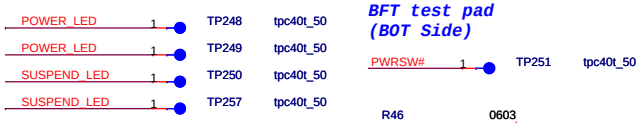
Date: Friday, June 13, 2008 | Sheet 53 of 79

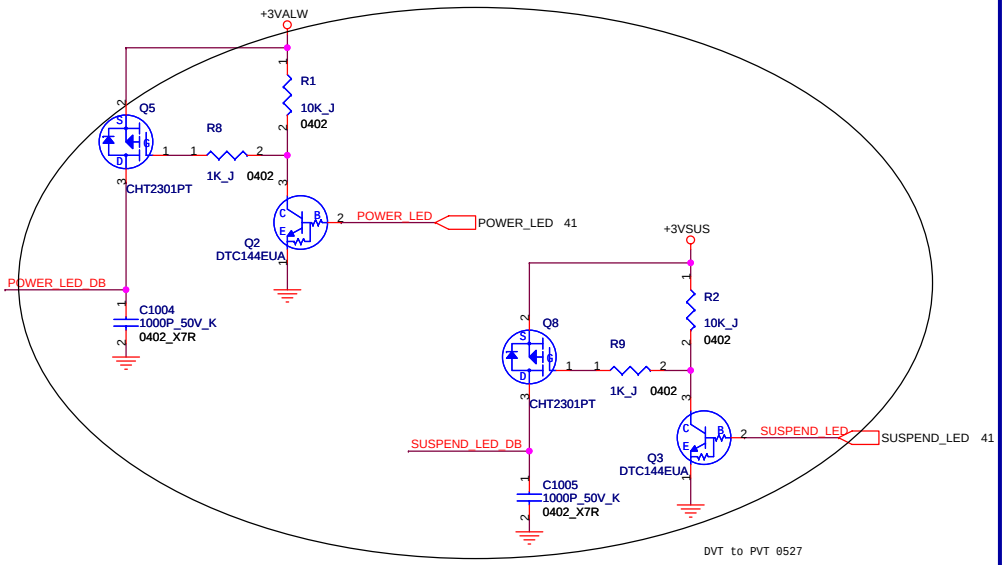
To Power Button Board Connector



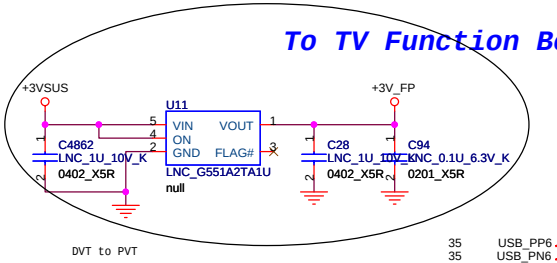
BFT test pad (TOP Side)

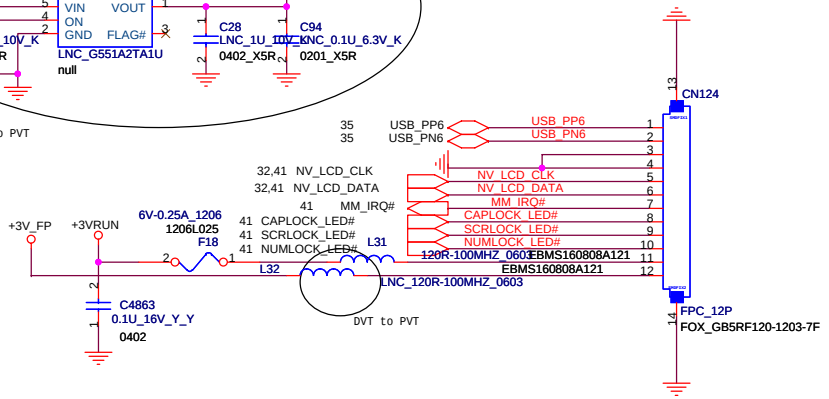
BFT test pad (BOT Side)



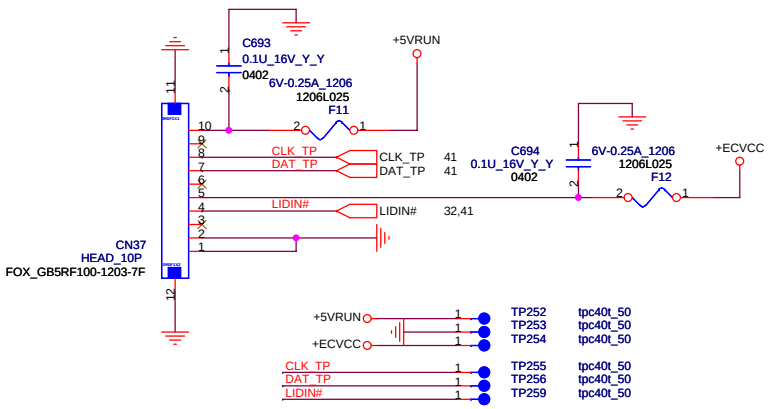


To TV Function Board Connector (FFC)





To Touch Pad Board Connector (FFC)



FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: **POWER+ FP+ T/P+LED CONNECTOR**

Size	Document Number	Rev
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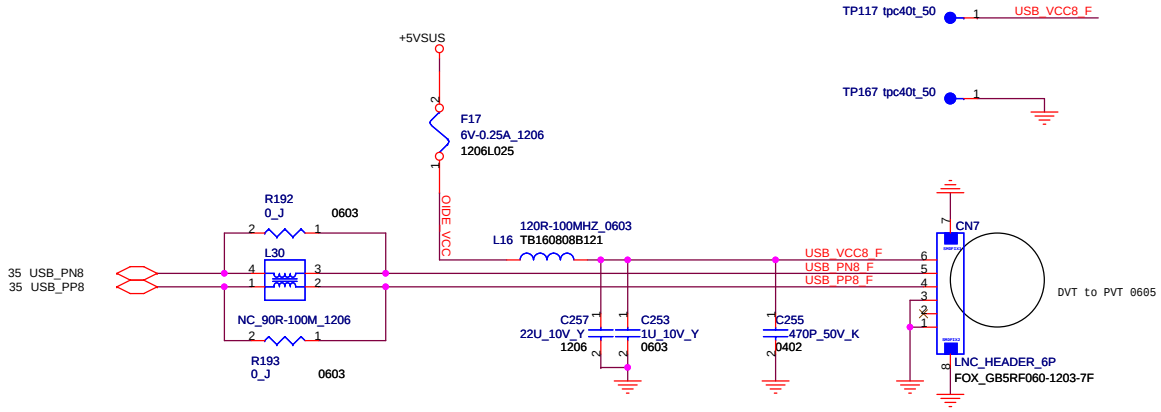
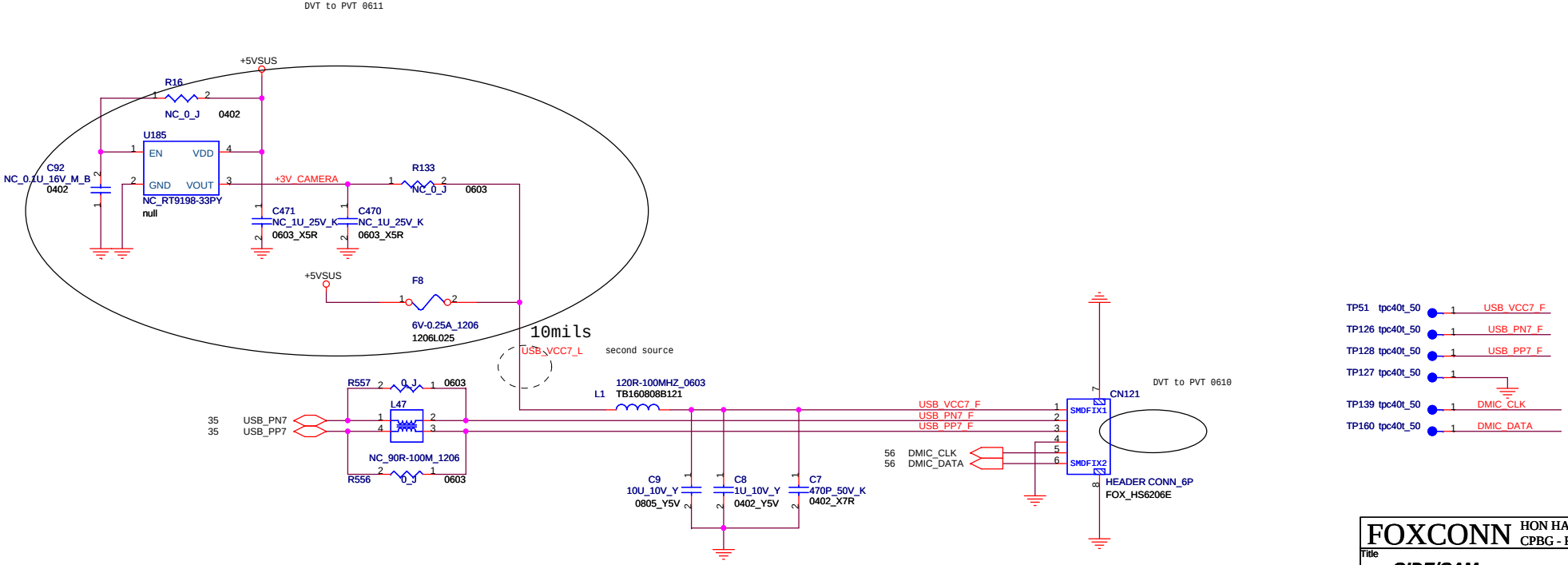
Date: Friday, June 27, 2008 Sheet 54 of 79

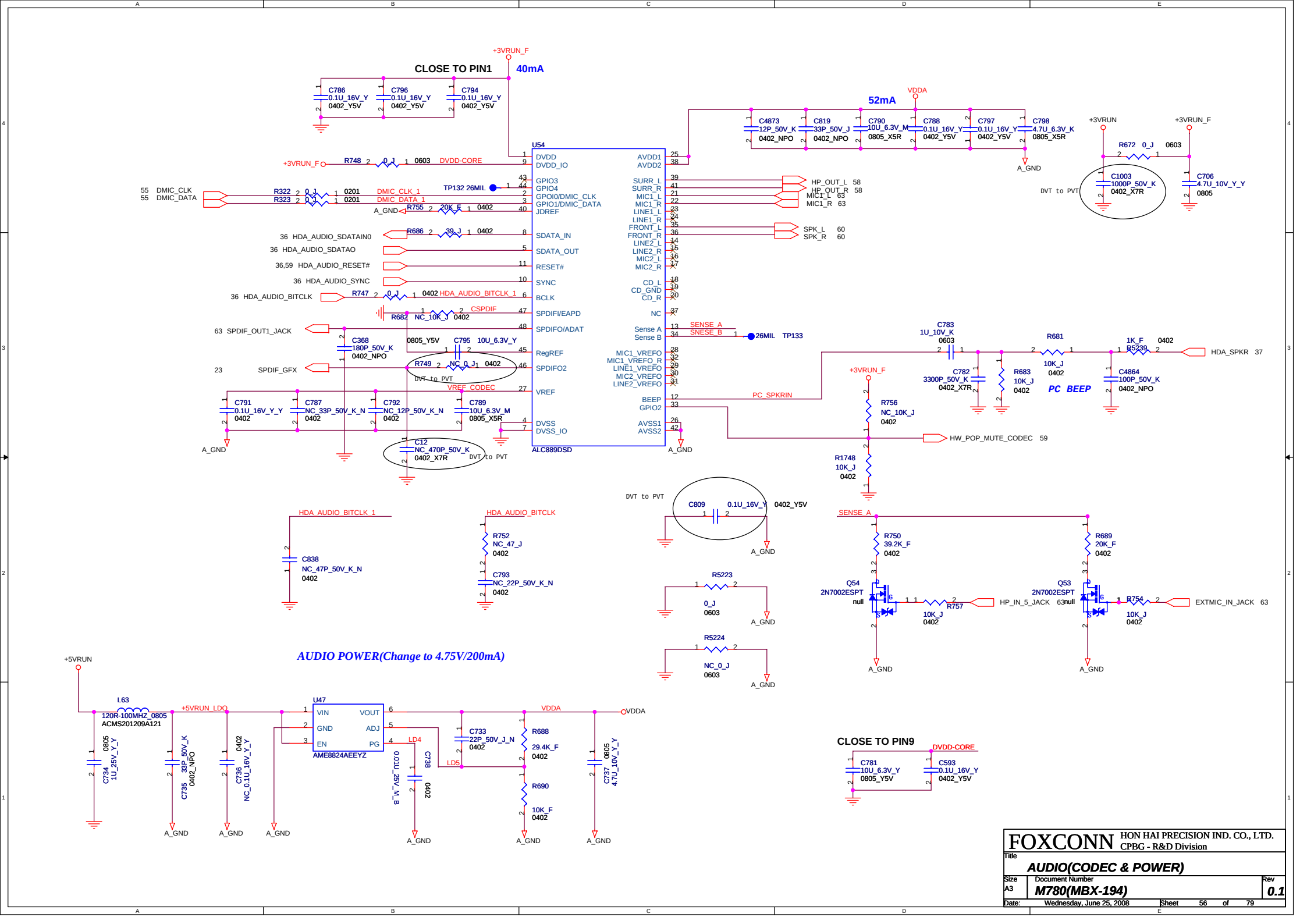
OIDE Connector



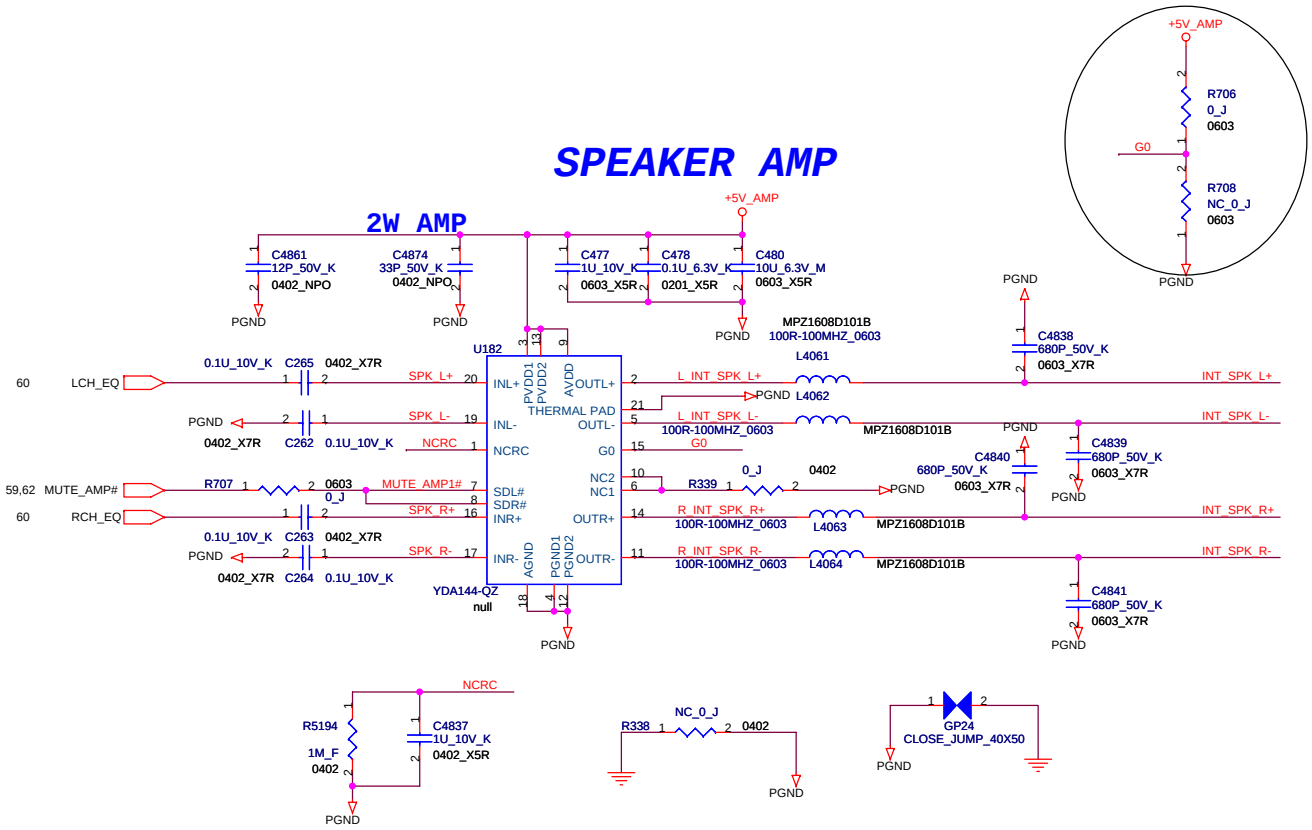
CAMERA +MIC CONN.



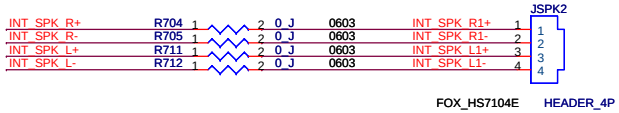
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: OIDE/CAM		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 55 of 79	


+3VRUN_F
CLOSE TO PIN1
40mA
C786 0.1U_16V_Y 0402_Y5V
C796 0.1U_16V_Y 0402_Y5V
C794 0.1U_16V_Y 0402_Y5V
U54
ALC889DSD
DVDD
DVDD_IO
GPIO3
GPIO4
GPOI0/DMIC_CLK
GPIO1/DMIC_DATA
JDREF
SDATA_IN
SDATA_OUT
RESET#
SYNC
BCLK
SPDIFI/EAPD
SPDIFO/ADAT
RegREF
SPDIFO2
VREF
DVSS
DVSS_IO
AVDD1
AVDD2
SURR_L
SURR_R
MIC1_L
MIC1_R
LINE1_L
LINE1_R
FRONT_L
FRONT_R
LINE2_L
LINE2_R
MIC2_L
MIC2_R
CD_L
CD_GND
CD_R
NC
Sense A
Sense B
MIC1_VREFO
MIC1_VREFO_R
LINE1_VREFO
MIC2_VREFO
LINE2_VREFO
BEEP
GPIO2
AVSS1
AVSS2
A_GND
R748 0_J 0603 DVDD-CORE
TP132 26MIL
R322 0_J 0201 DMIC_CLK_1
R323 0_J 0201 DMIC_DATA_1
R755 20K_F 0402
R686 39_J 0402
R747 0_J 0402 HDA_AUDIO_BITCLK_1
R682 NC_10K_J 0402 CSPDIF
C368 180P_50V_K 0402_NPO
C795 10U_6.3V_Y 0805_Y5V
R749 NC_0_J 0402
C791 0.1U_16V_Y_Y 0402
C787 NC_33P_50V_K_N 0402
C792 NC_12P_50V_K_N 0402
C789 10U_6.3V_M 0805_X5R
C12 NC_470P_50V_K 0402_X7R
DVT to PVT
VREF_CODEC
SENSE_A
SNESE_B
26MIL TP133
PC_SPKRIN
HW_POP_MUTE_CODEC 59
55 DMIC_CLK
55 DMIC_DATA
36 HDA_AUDIO_SDATAIN0
36 HDA_AUDIO_SDATAO
36,59 HDA_AUDIO_RESET#
36 HDA_AUDIO_SYNC
36 HDA_AUDIO_BITCLK
63 SPDIF_OUT1_JACK
23 SPDIF_GFX
VDDA
52mA
C4873 12P_50V_K 0402_NPO
C819 33P_50V_J 0402_NPO
C790 10U_6.3V_M 0805_X5R
C788 0.1U_16V_Y 0402_Y5V
C797 0.1U_16V_Y 0402_Y5V
C798 4.7U_6.3V_K 0805_X5R
HP_OUT_L 58
HP_OUT_R 58
MIC1_L 63
MIC1_R 63
SPK_L 60
SPK_R 60
+3VRUN
+3VRUN_F
R672 0_J 0603
C1003 1000P_50V_K 0402_X7R
C706 4.7U_10V_Y_Y 0805
DVT to PVT
C783 1U_10V_K 0603
R681 10K_J 0402
1K_F 0402
R5239
C782 3300P_50V_K 0402_X7R
R683 10K_J 0402
C4864 100P_50V_K 0402_NPO
PC BEEP
HDA_SPKR 37
R756 NC_10K_J 0402
R1748 10K_J 0402
C809 0.1U_16V_Y 0402_Y5V
HDA_AUDIO_BITCLK_1
HDA_AUDIO_BITCLK
C838 NC_47P_50V_K_N 0402
R752 NC_47_J 0402
C793 NC_22P_50V_K_N 0402
R5223 0_J 0603
R5224 NC_0_J 0603
SENSE_A
R750 39.2K_F 0402
R689 20K_F 0402
Q54 2N7002ESPT
Q53 2N7002ESPT
R757 10K_J 0402
R754 10K_J 0402
HP_IN_5_JACK 63
EXTMIC_IN_JACK 63
AUDIO POWER(Change to 4.75V/200mA)
+5VRUN
L63 120R-100MHZ_0805 ACMS201209A121
+5VRUN_LDO
U47 AME8824AEEYZ
VIN
GND
EN
VOUT
ADJ
PG
LD4
LD5
VDDA
C734 1U_25V_Y_Y 0805
C735 33P_50V_K 0402_NPO
C736 NC_0.1U_16V_Y_Y 0402
C738 0.01U_25V_M_B 0402
C733 22P_50V_J_N 0402
R688 29.4K_F 0402
R690 10K_F 0402
C737 4.7U_10V_Y_Y 0805
CLOSE TO PIN9
DVDD-CORE
C781 10U_6.3V_Y 0805_Y5V
C593 0.1U_16V_Y 0402_Y5V
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
AUDIO(CODEC & POWER)
Size A3
Document Number M780(MBX-194)
Rev 0.1
Date: Wednesday, June 25, 2008
Sheet 56 of 79

SPEAKER AMP



INTERNAL SPEAKER Connector

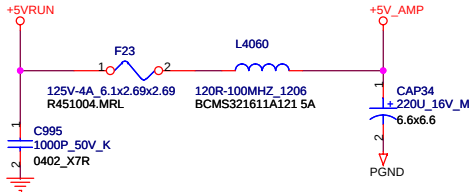


(20mil) ***BFT Test Pad***

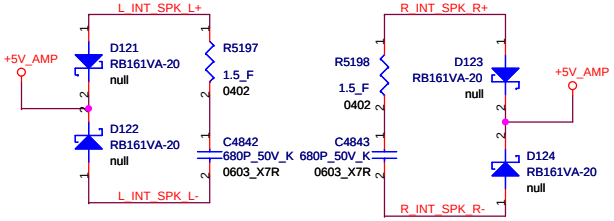
GAIN

External adjustable	Adjustable range from 12db to 18db
Fixed	Pull high=18db Pull low=12db

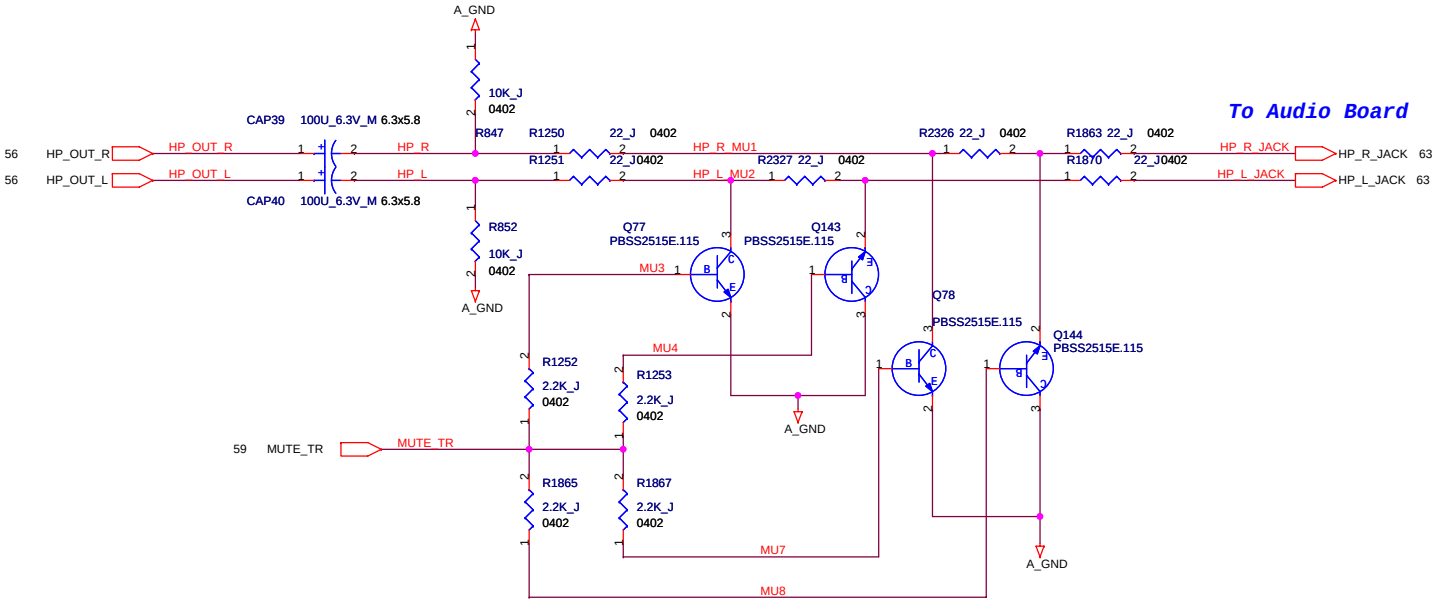
SPEAKER POWER



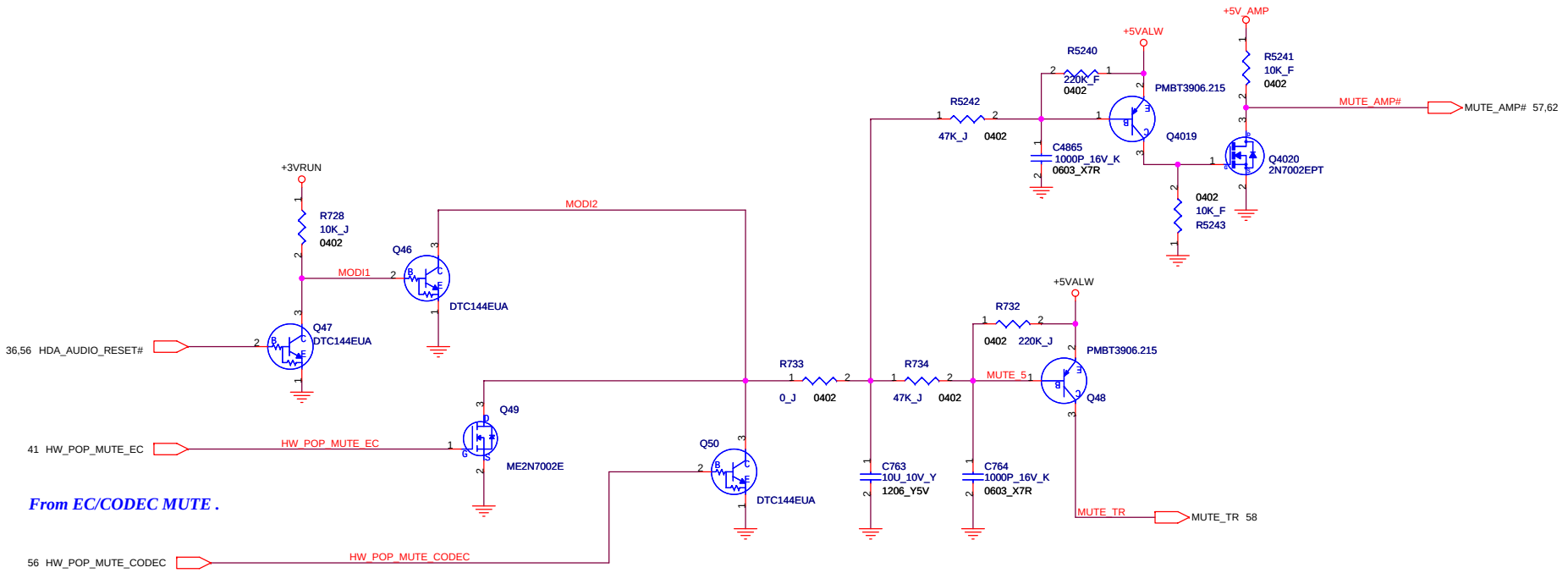
Close to Amp



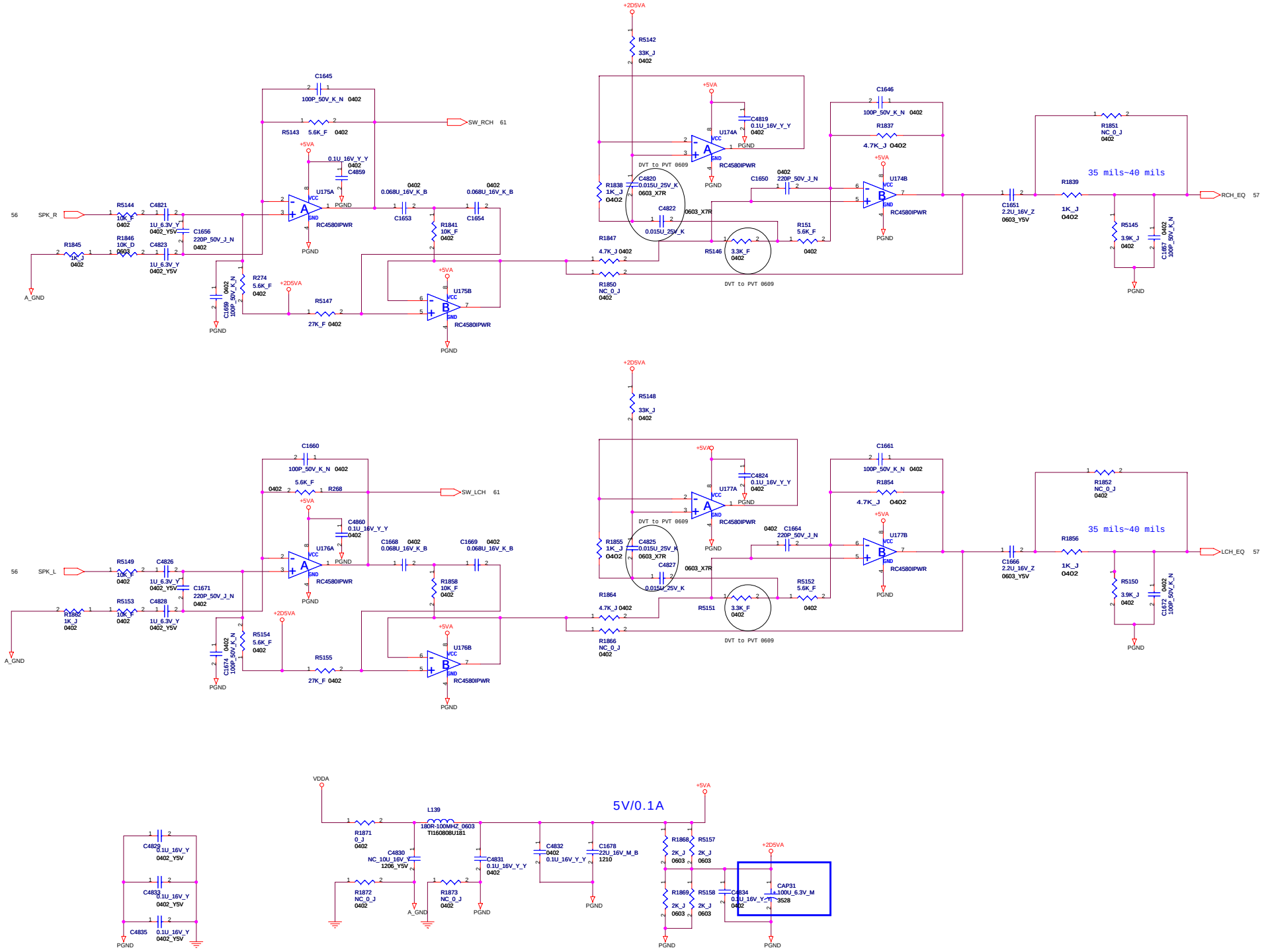
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	AUDIO(AMP & SPK)	
Size A3	Document Number M780(MBX-194)	Rev 0.1
Date: Friday, June 13, 2008	Sheet 57 of 79	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: AUDIO (HP)		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 58 of 79	



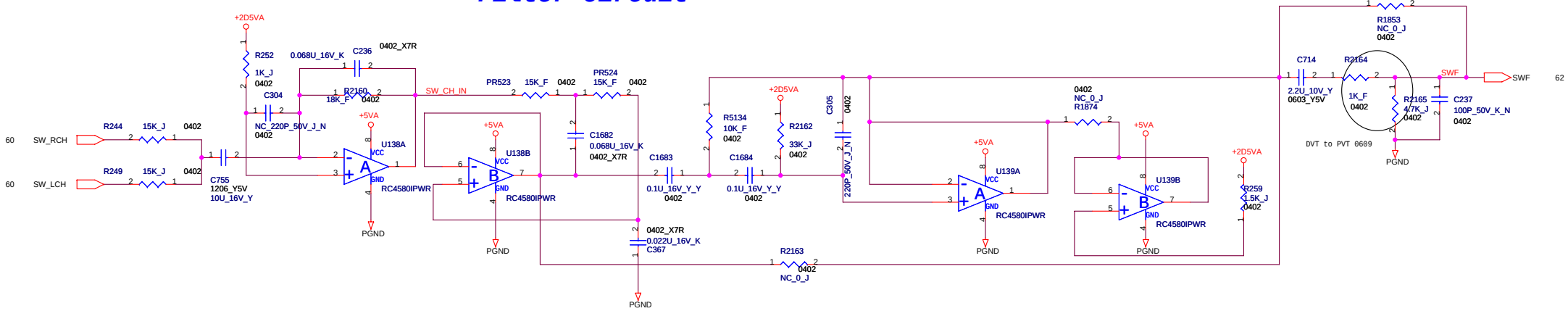
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: AUDIO (MUTE)		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 59 of 79	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	AUDIO(EQ)
Size: Custom	Document Number: M780(MBX-194)
Rev	0.1
Date: Friday, June 13, 2008	Sheet 60 of 79

Vendor recommendation not use for
1) Input impedance
As described in the datasheet (P5),match input impedance at IN+ and IN-.
We are afraid of pop noise on this board.
Current SWF impedance is too big, so we recommend to reduce SWF output impedance.
Does R2164,R2165 and C237 Circuit need?

Filter Circuit

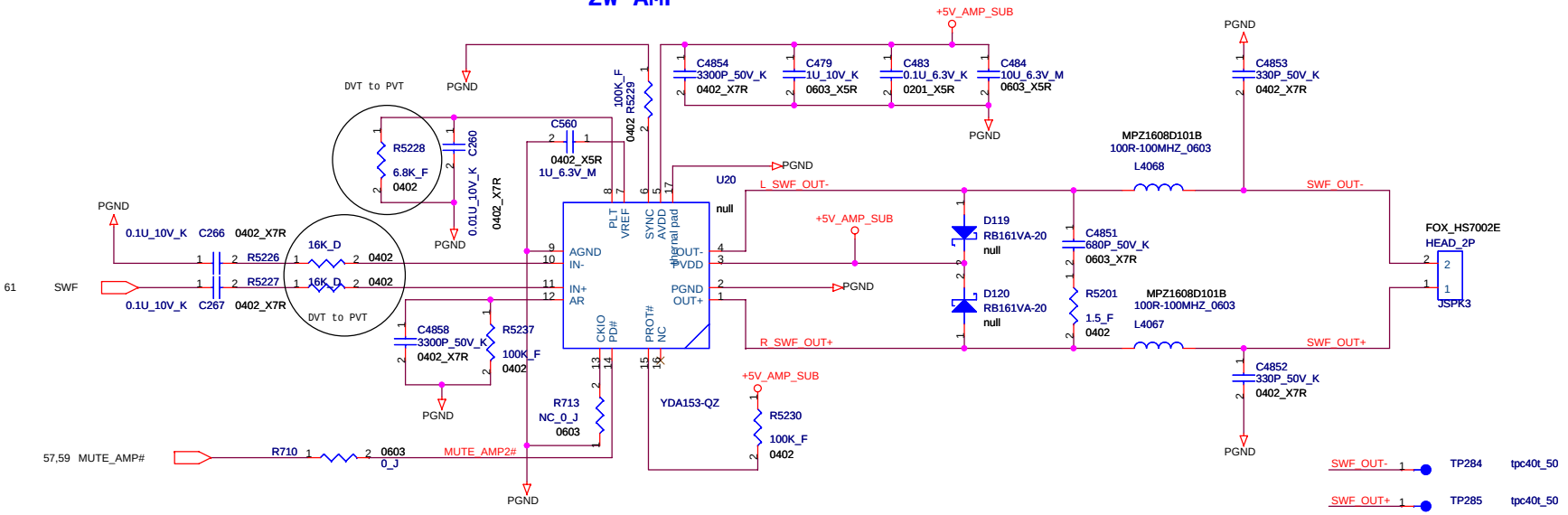


FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: Filter Circuit		
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 61 of 79	

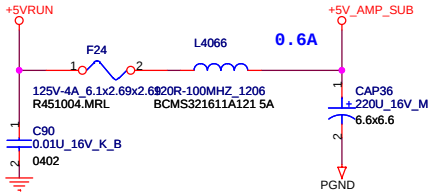
SUB_WOOFER AMP

C479,C484
Locate them close to PVDD pin

2W AMP

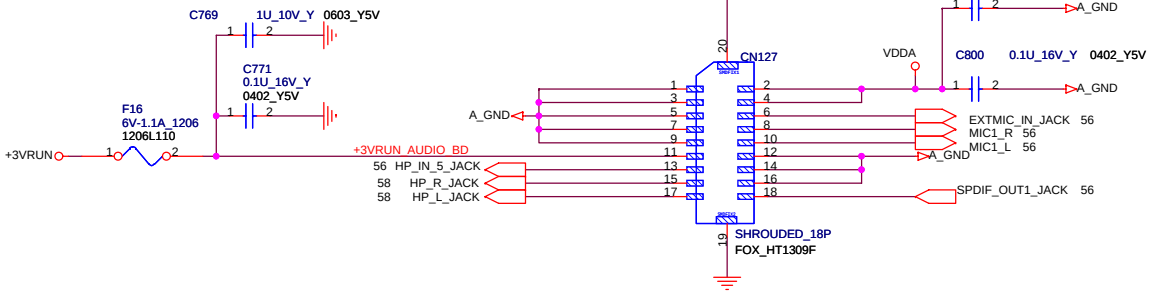


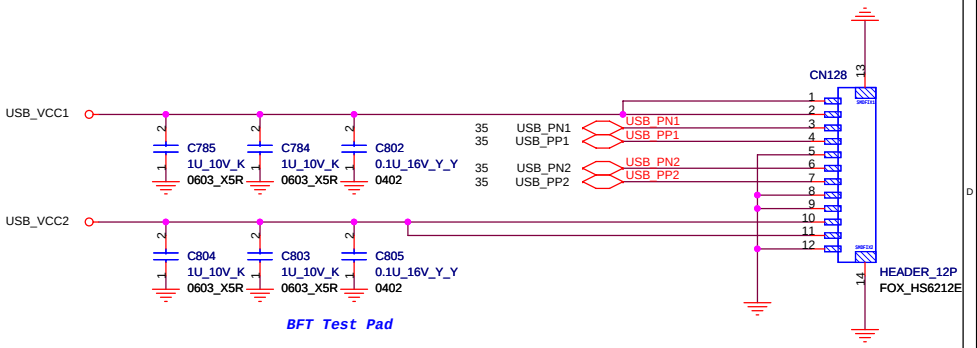
SUB_WOOFER POWER

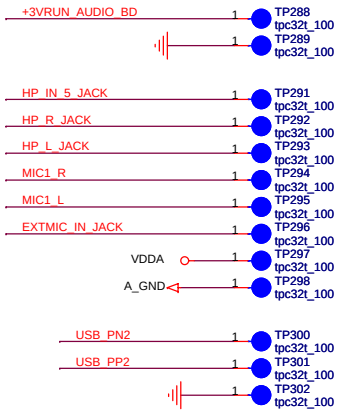


FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title	AUDIO(Subwoofer AMP)		
Size A3	Document Number M780(MBX-194)		Rev 0.1
Date: Friday, June 27, 2008	Sheet 62 of 79		

Audio Board connector

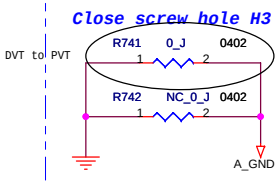




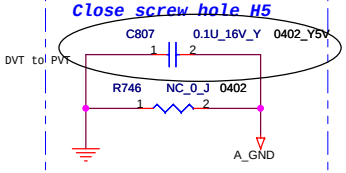


Backup two jumper resistors for bridge between GND and A_GND

Close screw hole H3

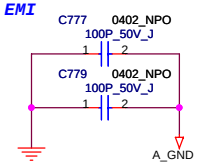


Close screw hole H5

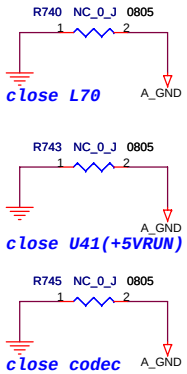


Isolate screw hole H4, and add EMI/ESD solution

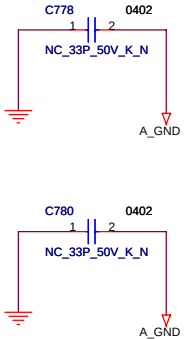
EMI

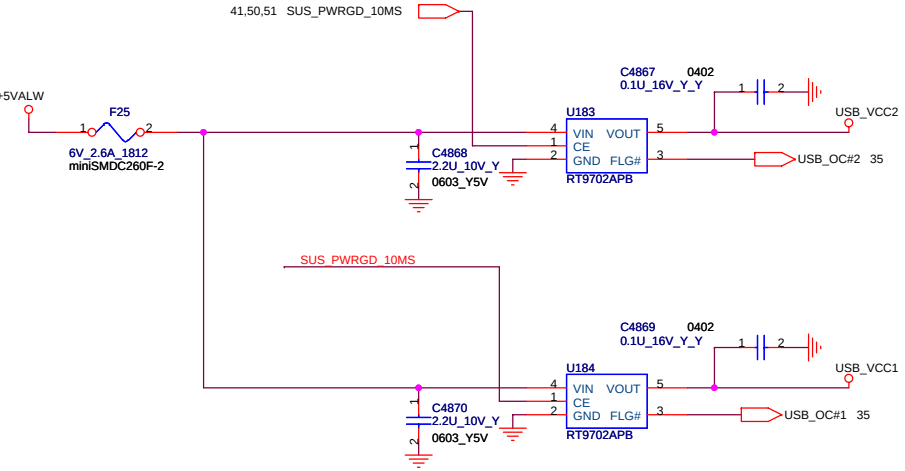


Add jumper resistor for Return patch



Original EMI back up solution to continue with MS20(bridge between GND and A_GND)

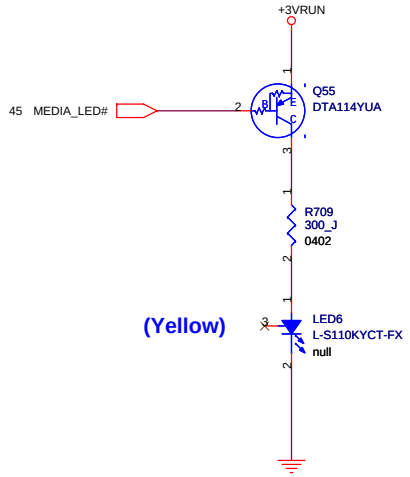




FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

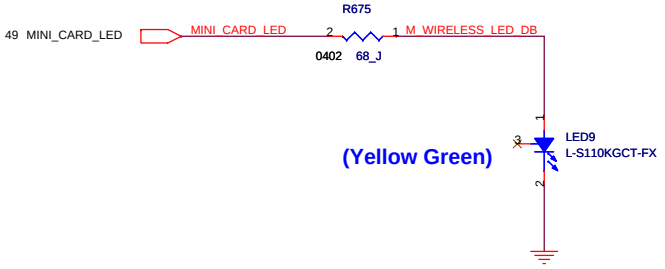
Title: Audio Board conn		
Size: A3	Document Number: M780(MBX-194)	Rev: 0.1
Date: Wednesday, June 25, 2008	Sheet 63 of 79	

MS/SD LED



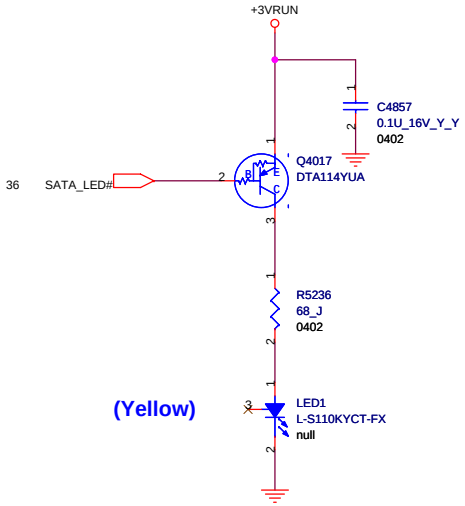
230.(Page 64) 07/12/05 Change MS/SD LED control signal share one LED

WLAN/BLUETOOTH LED

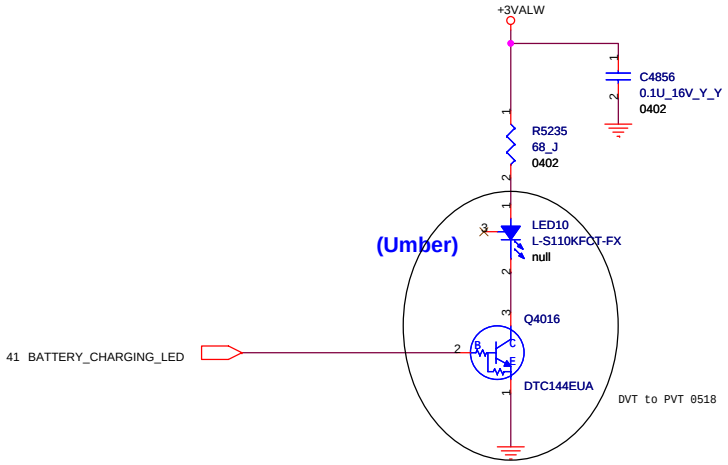


232.(Page 64) 07/12/05 Change Wirless/BluetoothLED control signal share one LED

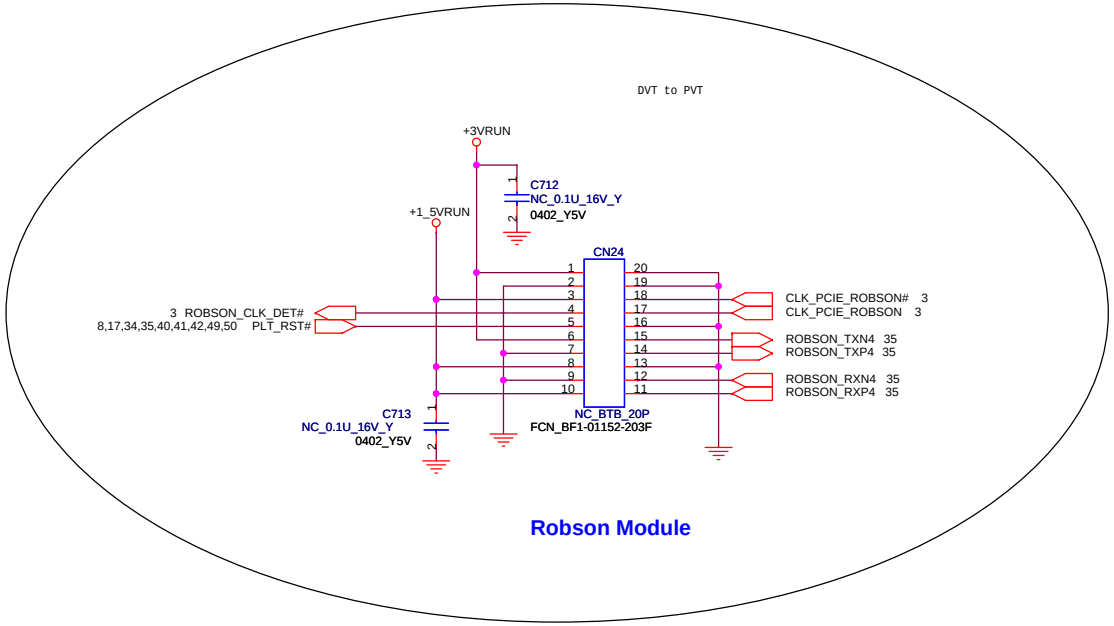
HDD/ODD LED



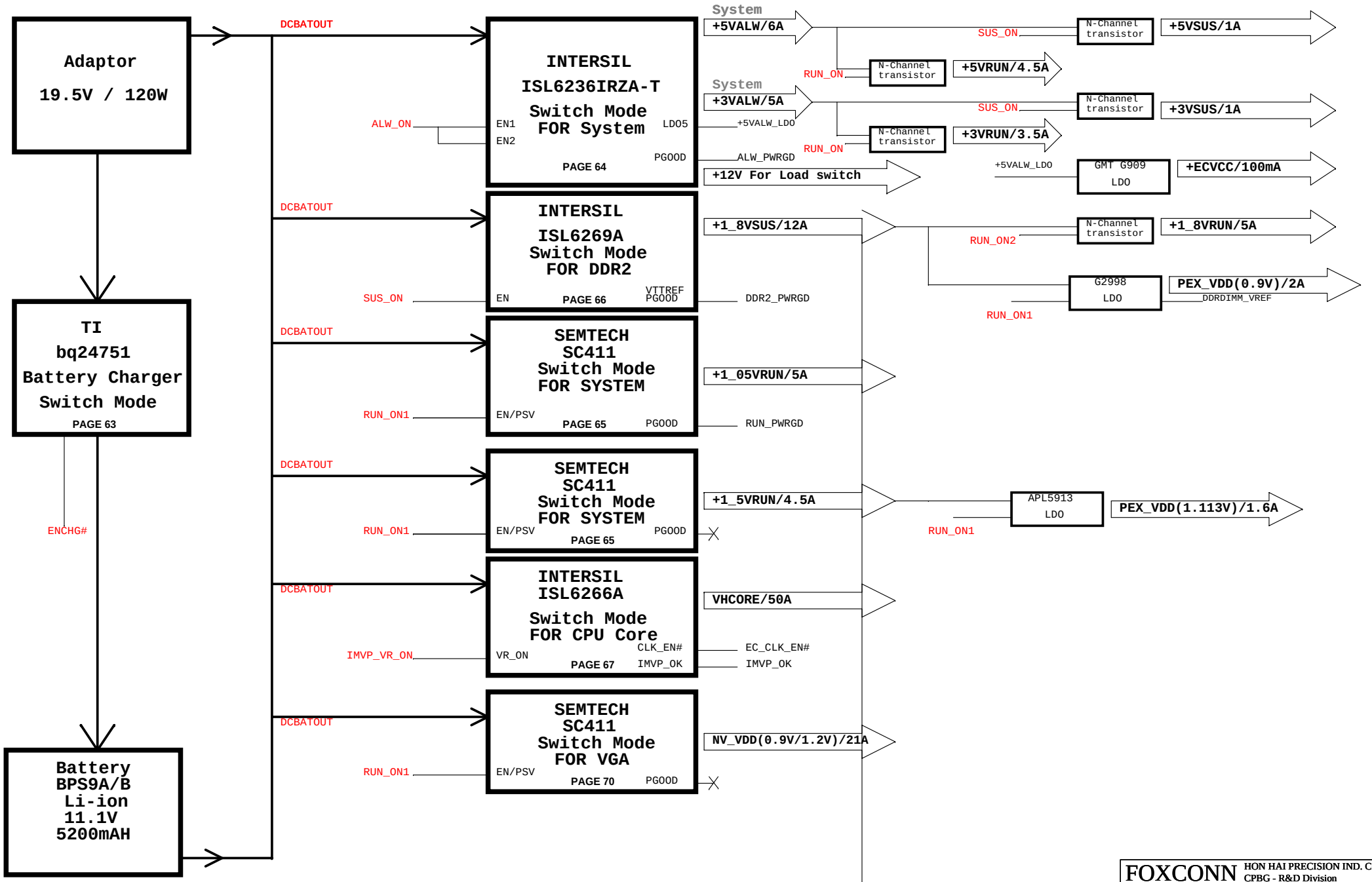
Charge LED



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	LED status	
Size A3	Document Number M780(MBX-194)	Rev 0.1
Date: Friday, June 13, 2008	Sheet 64 of 79	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: ***Robson1.6 Connector***		
Size: A3	Document Number: ***M780(MBX-194)***	Rev: ***0.1***
Date: Wednesday, June 25, 2008	Sheet 65 of 79	

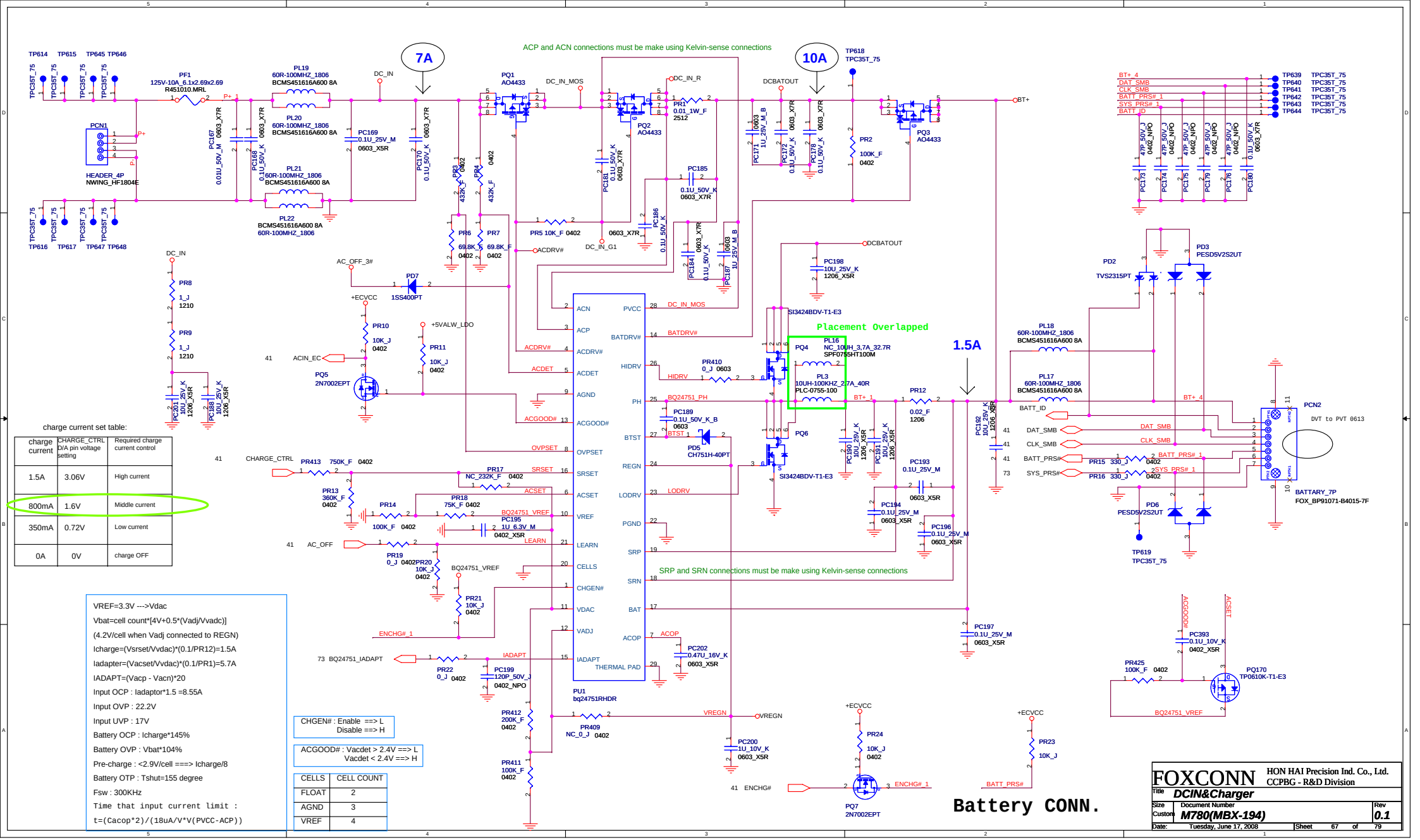


FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: *Power Design Diagram*

Size	Document Number	Rev
Custom	*M780(MBX-194)*	*0.1*

Date: Friday, June 13, 2008 Sheet 66 of 79


ACP and ACN connections must be make using Kelvin-sense connections
7A
10A
1.5A
Placement Overlapped
SRP and SRN connections must be make using Kelvin-sense connections
PU1
bq24751RHDR
THERMAL PAD
PF1
125V-10A_6.1x2.69x2.69
R451010.MRL
PCN1
HEADER_4P
NWING_HF1804E
PCN2
DVT to PVT 0613
BATTARY_7P
FOX_BP91071-B4015-7F
PQ1
AO4433
PQ2
AO4433
PQ3
AO4433
PQ4
PQ5
2N7002EPT
PQ6
PQ7
2N7002EPT
PQ170
TP0610K-T1-E3
PD2
TVS2315PT
PD3
PESD5V2S2UT
PD5
CH751H-40PT
PD6
PESD5V2S2UT
PD7
1SS400PT
SI3424BDV-T1-E3
PL3
10UH-100KHZ_2.7A_40R
PLC-0755-100
PL16
NC_10UH_3.7A_32.7R
SPF0755HT100M
PL17
60R-100MHZ_1806
BCMS451616A600 8A
PL18
60R-100MHZ_1806
BCMS451616A600 8A
PL19
60R-100MHZ_1806
BCMS451616A600 8A
PL20
60R-100MHZ_1806
BCMS451616A600 8A
PL21
60R-100MHZ_1806
BCMS451616A600 8A
PL22
BCMS451616A600 8A
60R-100MHZ_1806
DC_IN
DC_IN_MOS
DC_IN_R
DC_IN_G1
DCBATOUT
BT+
ACDRV#
ACIN_EC
ACDET
ACGOOD#
OVPSET
CHARGE_CTRL
SRSET
ACSET
BQ24751_VREF
AC_OFF
LEARN
CELLS
CHGEN#
VDAC
VADJ
IADAPT
ACOP
SRP
SRN
BAT
PVCC
BATDRV#
HIDRV
PH
BTST
REGN
LODRV
PGND
VREGN
ENCHG#_1
BQ24751_IADAPT
BQ24751_PH
BATT_ID
DAT_SMB
CLK_SMB
BATT_PRS#
SYS_PRS#
+ECVCC
+5VALW_LDO
AC_OFF_3#
charge current set table:
charge current
CHARGE_CTRL D/A pin voltage setting
Required charge current control
1.5A
3.06V
High current
800mA
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)]
(4.2V/cell when Vadj connected to REGN)
Icharge=(Vsrset/Vvdac)*(0.1/PR12)=1.5A
Iadapter=(Vacset/Vvdac)*(0.1/PR1)=5.7A
IADAPT=(Vacp - Vacn)*20
Input OCP : Iadaptor*1.5 =8.55A
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
Time that input current limit :
t=(Cacop*2)/(18uA/V*V(PVCC-ACP))
CHGEN# : Enable ==> L
Disable ==> H
ACGOOD# : Vacdet > 2.4V ==> L
Vacdet < 2.4V ==> H
CELLS
CELL COUNT
FLOAT
2
AGND
3
VREF
4
Battery CONN.
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
DCIN&Charger
Size
Custom
Document Number
M780(MBX-194)
Rev
0.1
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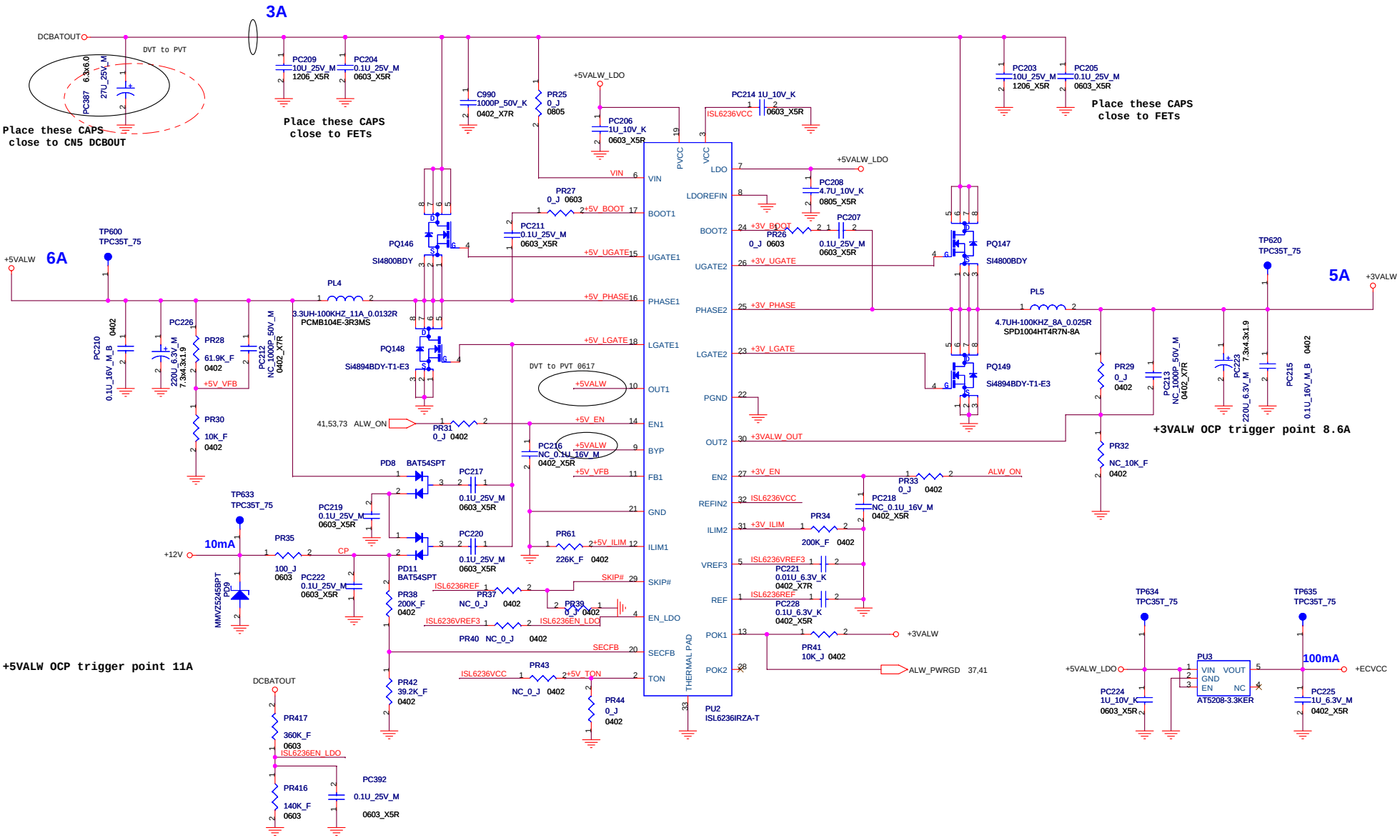
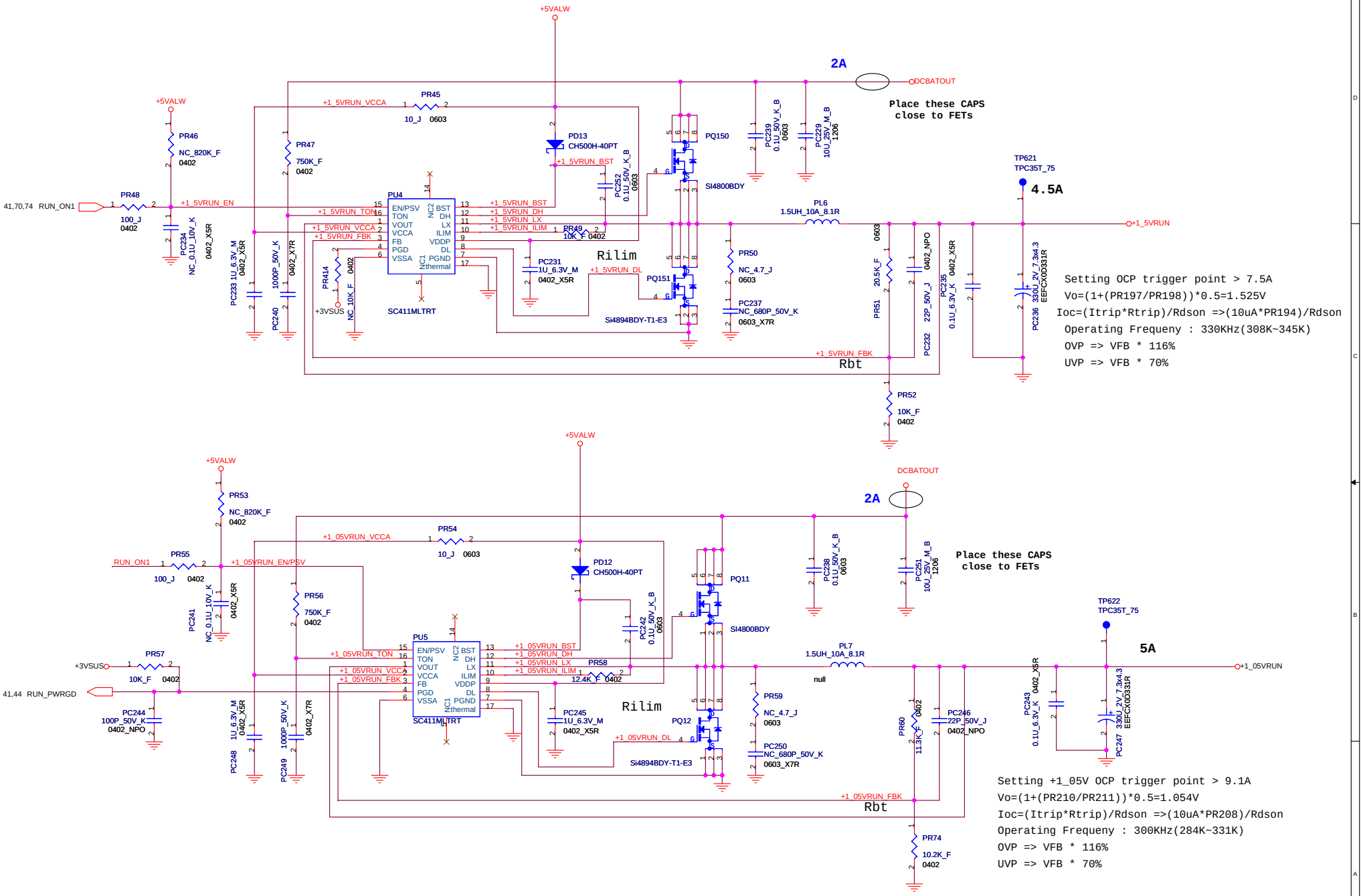


TON	Operating Frequence (+5VALW/+3VALW)
VCC	200KHz/300KHz
REF(OPEN)	400KHz/300KHz
GND	400KHz/500KHz

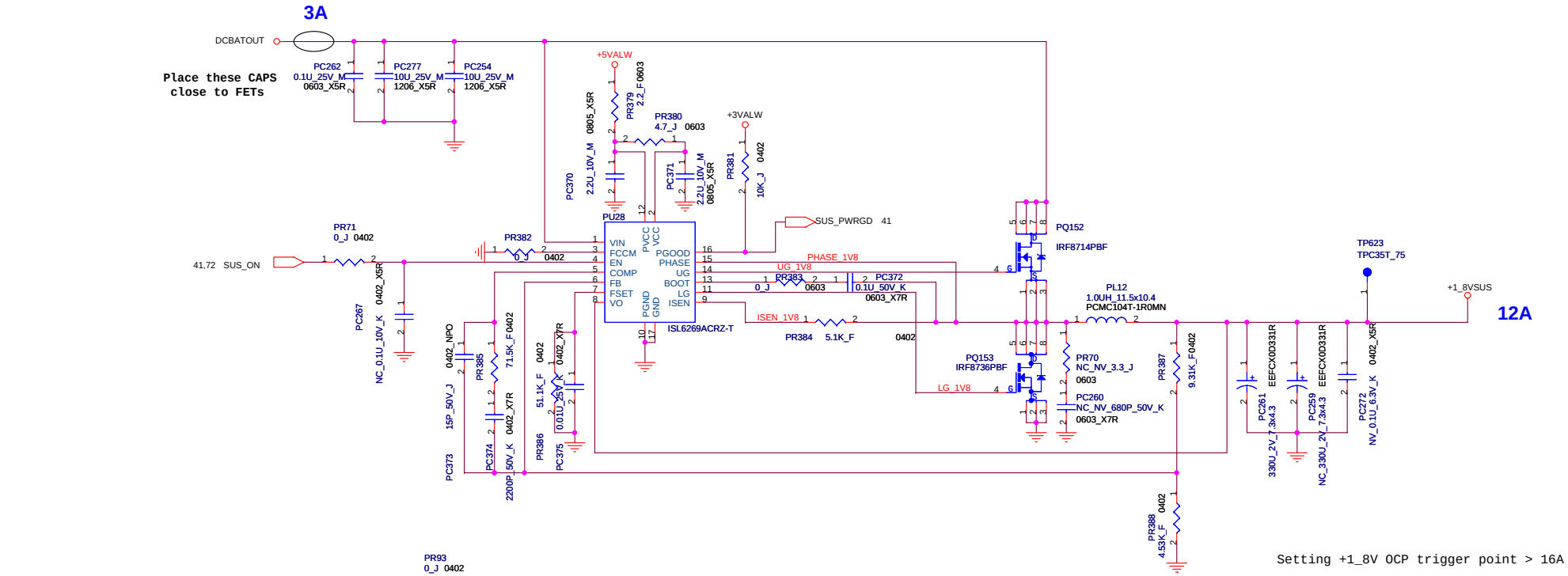
SKIP#	Operating Mode
GND	Pulse-Skipping
REF	Ultrasonic-Skip
VCC	PWM

L=VOUT(VIN-VOUT)/(VIN*f*LIR*ILOAD(MAX))
Rocp=(Iocp-Iripple/2)*(10*Rds(on))/5u
+5VALW=((PR28/PR30)+1)*VFB1

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	SYS Power (+3_3V/+5V)	
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Tuesday, July 01, 2008	Sheet 68 of 79	

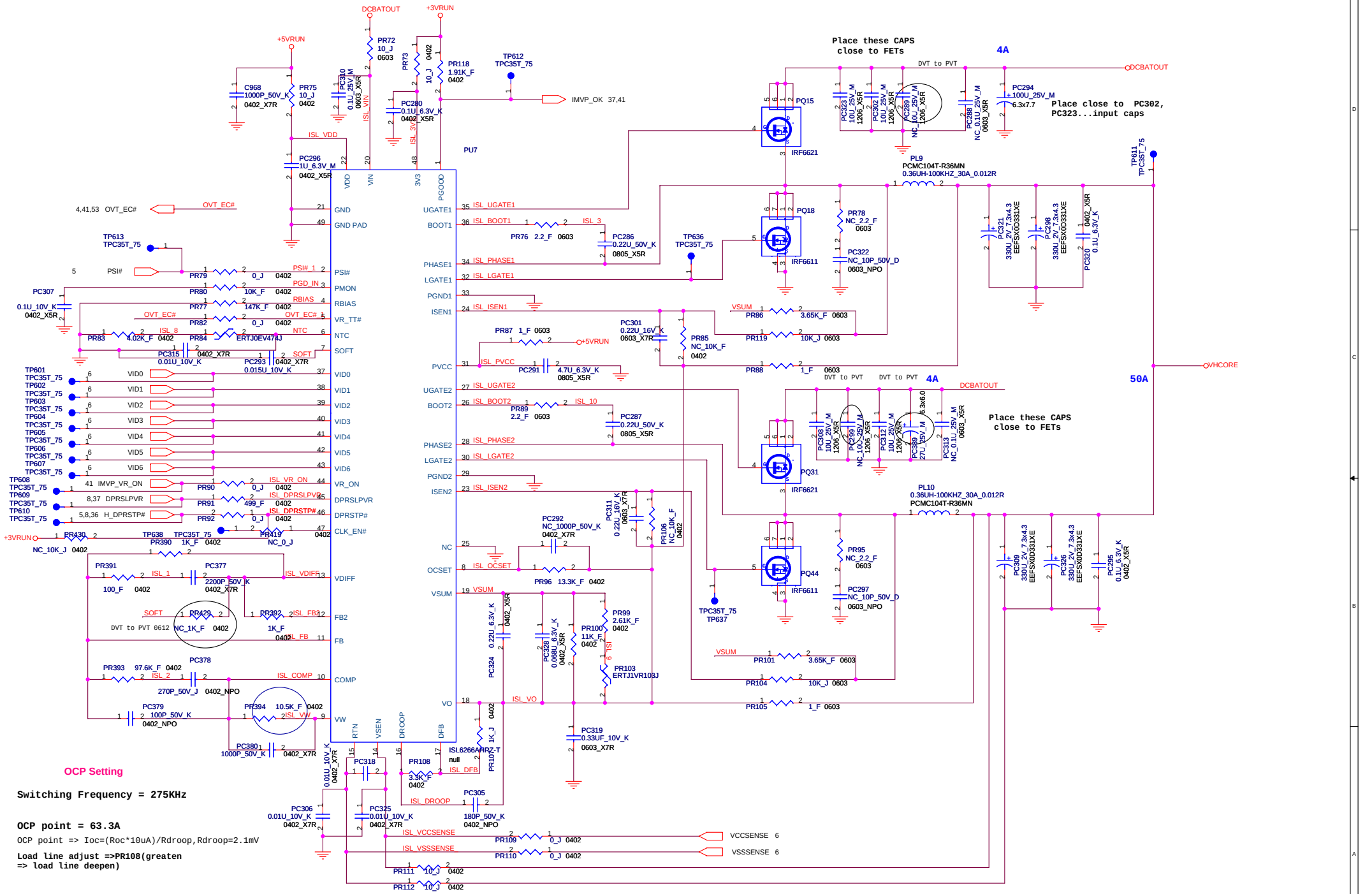


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	SYS Power(+1_5V/+1_05V)	
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Tuesday, June 17, 2008	Sheet 69 of 79	



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

Title	DDR2 Power(+1_8V/+0_9V)	
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
Date: Friday, June 13, 2008	Sheet 70 of 79	


Place these CAPS close to FETs
4A
DVT to PVT
DCBATOUT
Place close to PC302, PC323...input caps
PU7
IRF6621
IRF6611
PL9
PCMC104T-R36MN
0.36UH-100KHZ_30A_0.012R
PL10
VHCORE
50A
Place these CAPS close to FETs
OCP Setting
Switching Frequency = 275KHz
OCP point = 63.3A
OCP point => Ioc=(Roc*10uA)/Rdroop,Rdroop=2.1mV
Load line adjust =>PR108(greaten => load line deepen)
ISL6266AHRZ-T
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
CPU_Vcore---ISL6266A
M780(MBX-194)
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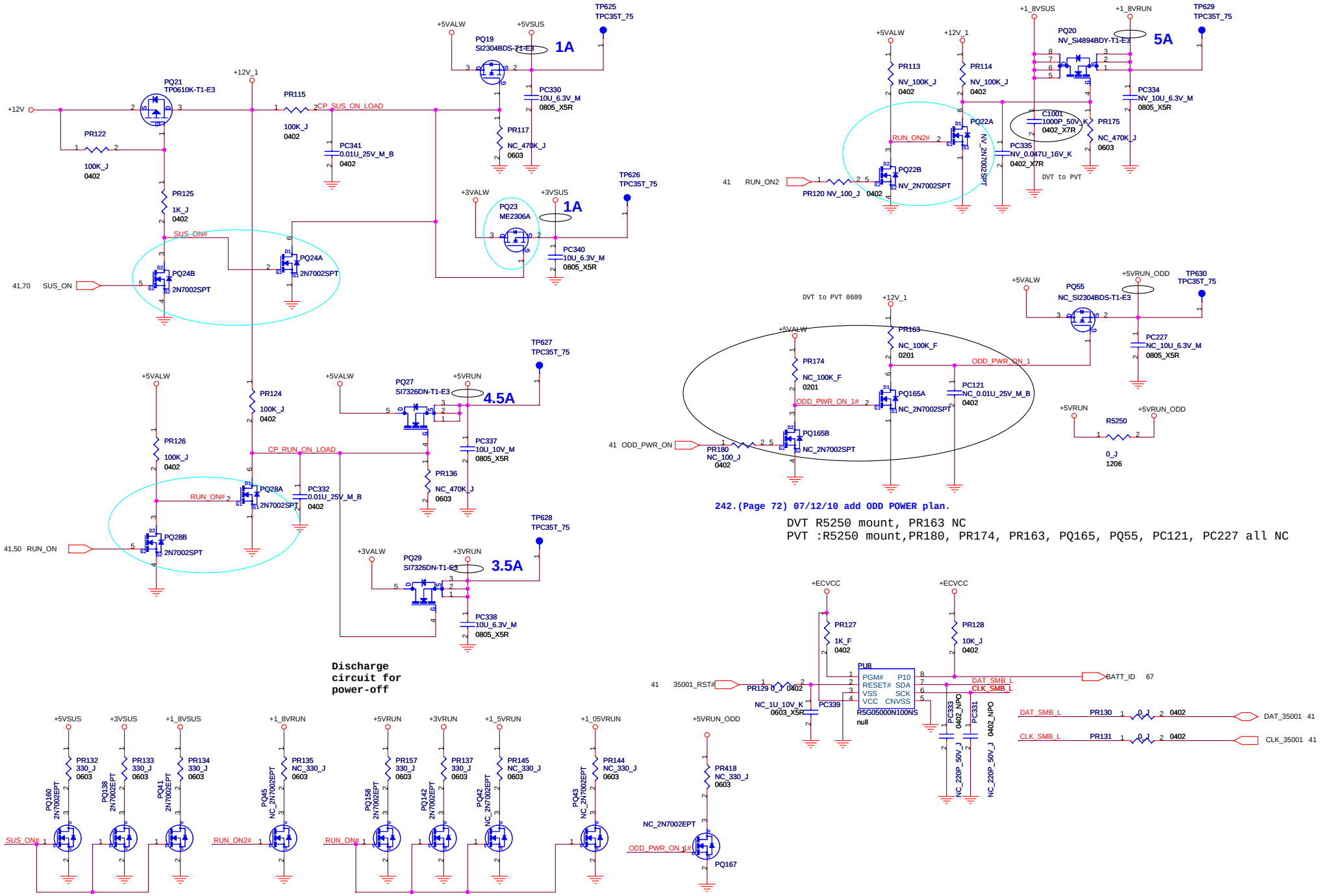

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: Others power plan		
Size: Custom	Document Number: M780(MBX-194)	Rev: 0.1
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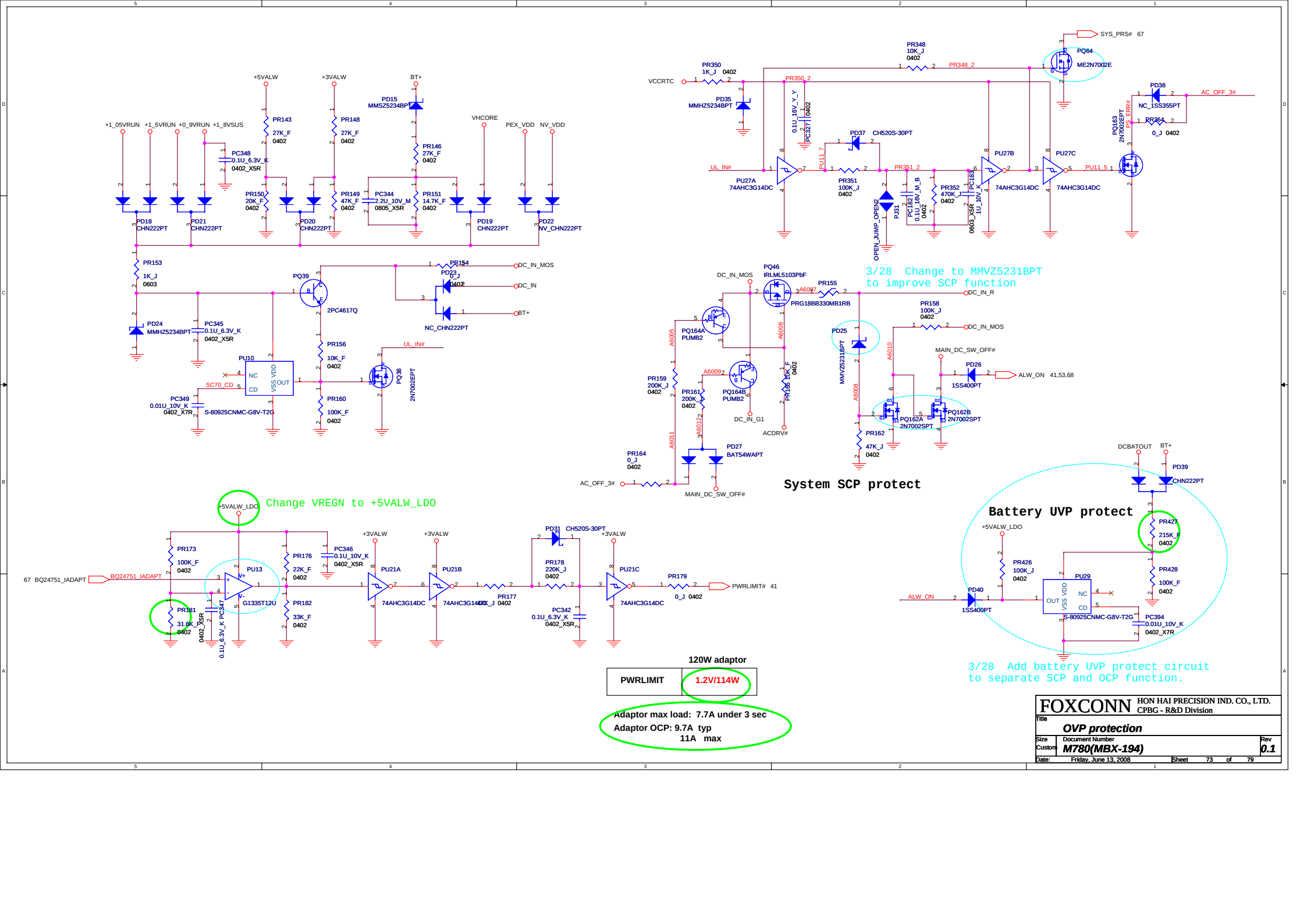
+1_05VRUN +1_5VRUN +0_9VRUN +1_8VSUS
+5VALW
+3VALW
BT+
VHCORE
PEX_VDD NV_VDD
PR143 27K_F 0402
PR148 27K_F 0402
PR146 27K_F 0402
PD15 MMSZ5234BPT
PC348 0.1U_6.3V_K 0402_X5R
PR150 20K_F 0402
PR149 47K_F 0402
PC344 2.2U_10V_M 0805_X5R
PR151 14.7K_F 0402
PD18 CHN222PT
PD21 CHN222PT
PD20 CHN222PT
PD19 CHN222PT
PD22 NV_CHN222PT
PR153 1K_J 0603
PQ39 2PC4617Q
PR154 0_J 0402
PD23 CHN222PT
NC_CHN222PT
DC_IN_MOS
DC_IN
BT+
PD24 MMHZ5234BPT
PC345 0.1U_6.3V_K 0402_X5R
PU10 S-80925CNMC-G8V-T2G
SC70_CD
PC349 0.01U_10V_K 0402_X7R
PR156 10K_F 0402
PR160 100K_F 0402
UL_IN#
PQ38 2N7002EPT
SYS_PRS# 67
PR348 10K_J 0402
PR350 1K_J 0402
PQ64 ME2N7002E
VCCRTC
PD35 MMHZ5234BPT
PR348_2
PR350_2
PC327 0.1U_16V_Y_Y 0402
PD37 CH520S-30PT
PU11_7
UL_IN#
PU27A 74AHC3G14DC
PR351 100K_J 0402
PR351_2
OPEN_JUMP_OPEN2
PJ31
PC182 0.1U_16V_M_B 0402
PR352 470K_J 0402
PC183 1U_10V_K 0603_X5R
PU27B 74AHC3G14DC
PU27C 74AHC3G14DC
PU11_5
PQ63 2N7002EPT
PD38 NC_1SS355PT
AC_OFF_3#
PS_ERR#
PR264 0_J 0402
PQ163 2N7002EPT
DC_IN_MOS
PQ46 IRLML5103PbF
PR155
DC_IN_R
PRG18BB330MB1RB
PQ164A PUMB2
A6005
A6006
PR158 100K_J 0402
DC_IN_MOS
PD25 MMVZ5231BPT
3/28 Change to MMVZ5231BPT to improve SCP function
A6010
MAIN_DC_SW_OFF#
PD26 1SS400PT
ALW_ON 41,53,68
PR159 200K_J 0402
PR161 200K_J 0402
PQ164B PUMB2
A6009
DC_IN_G1
PR165 10K_F 0402
ACDRV#
A6008
PQ162A 2N7002SPT
PQ162B 2N7002SPT
PR162 47K_J 0402
A6012
A6011
PR164 0_J 0402
AC_OFF_3#
PD27 BAT54WAPT
MAIN_DC_SW_OFF#
System SCP protect
+5VALW_LDO
Change VREGN to +5VALW_LDO
PR173 100K_F 0402
67 BQ24751_IADAPT
BQ24751_IADAPT
PU13 G1335T12U
PR176 22K_F 0402
PC346 0.1U_10V_K 0402_X5R
PR182 33K_F 0402
PR181 31.6K_F 0402
PC347 0.1U_6.3V_K 0402_X5R
PU21A 74AHC3G14DC
PU21B 74AHC3G14DC
PR177 0_J 0402
PD31 CH520S-30PT
PR178 220K_J 0402
PC342 0.1U_6.3V_K 0402_X5R
PU21C 74AHC3G14DC
PR179 0_J 0402
PWRLIMIT# 41
120W adaptor
PWRLIMIT 1.2V/114W
Adaptor max load: 7.7A under 3 sec
Adaptor OCP: 9.7A typ
11A max
DCBATOUT
BT+
PD39 CHN222PT
Battery UVP protect
+5VALW_LDO
PR427 215K_F 0402
PR426 100K_J 0402
PR428 100K_F 0402
ALW_ON
PD40 1SS400PT
PU29 S-80925CNMC-G8V-T2G
PC394 0.01U_10V_K 0402_X7R
3/28 Add battery UVP protect circuit to separate SCP and OCP function.
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
OVP protection
Size Custom
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TABLE(01/08)

NB9P	I/O	Inter pull low			PR402: 23.2K_1%_0402,1R-0002322-F200 PR272: 61.9K_1%_0402,1R-0006192-F200
GPU Voltage			1.05V	0.9V	
PWRCNTL_0	O	Yes	H	L	

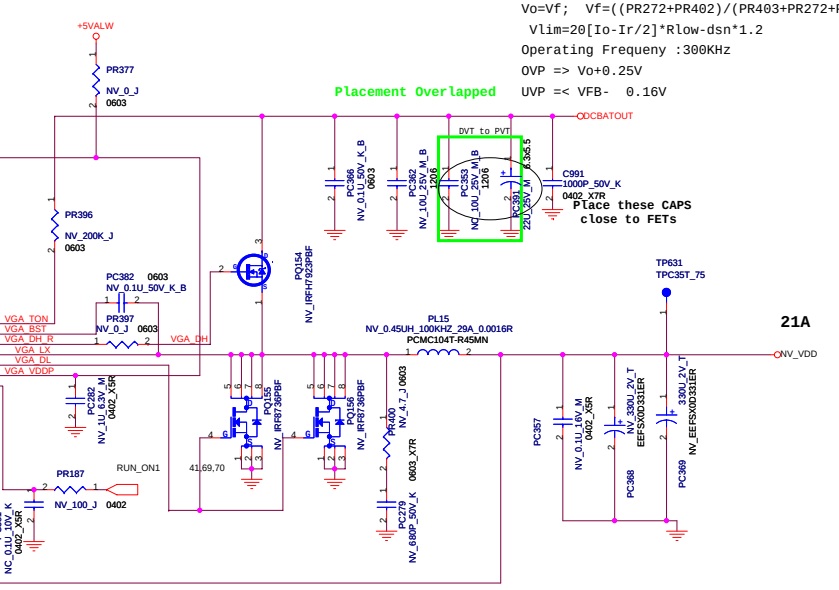
NB9M	I/O	Inter pull low			PR423: 29.4K_1%_0402,1R-0002942-F200 PR424: 39.2K_1%_0402,1R-0003922-F200
GPU Voltage			1.17V	0.9V	
PWRCNTL_0	O	Yes	H	L	

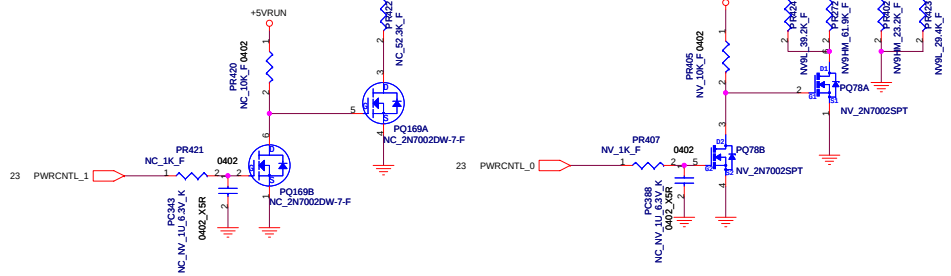
Setting current limit trigger point >25A
Vo=Vf; Vf=((PR272+PR402)/(PR403+PR272+PR402))*2
Vlim=20[Io-Ir/2]*Rlow-dsn*1.2
Operating Frequeny :300KHz
OVP => Vo+0.25V
UVP =< VFB- 0.16V

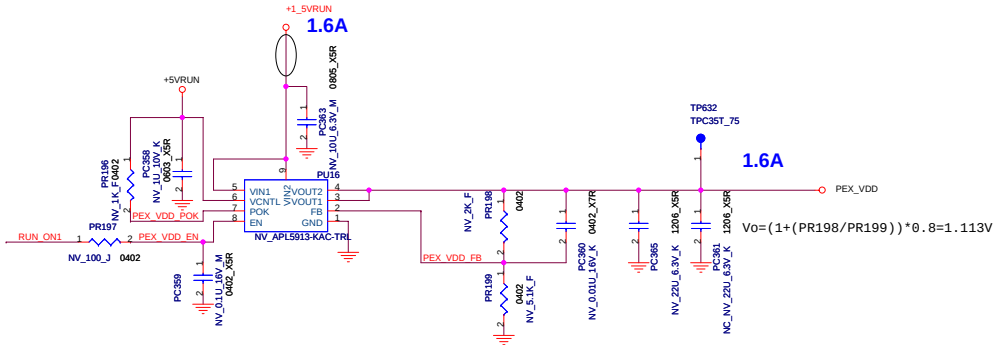
Placement Overlapped

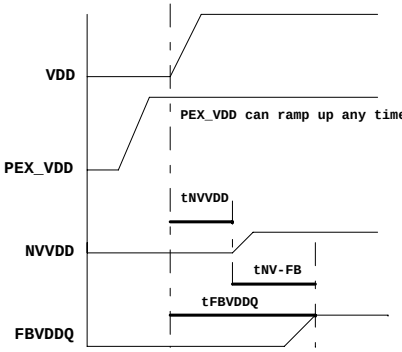
Place these CAPS close to FETs

21A









Recommended Power sequencing order

The ramp time for any rail must be more than 40 us
NVVDD<=VDD(3.3V+0.5V)
FBVDDQ<=VDD(3.3V+0.5V)

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division		
Title	VGA_Power(+1.1V/+1_2V)		
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HOLE(TOP SIDE)

Type 1

K

H35 hole_tbrc413x354d98

H36 hole_tbr492x354d98n

H37 hole_tbr492x354d98

Type 2

H32 hole_tbsh354x453d98

H33 hole_shape_tbr492x354d98

H34 hole_tbr492x354d98

Type 2

H28 hole_tc217bc217d47

H29 hole_tc217bc217d47

H30 hole_tc217bc217d47

TV_GND

H31 hole_tc217bc217d47

TV_GND

Type 3

H27 hole_tr492x354bc354d98

Type 4

H25 hole_tc354bc354d98

H26 hole_tc354bc354d98

DVT to PVT 0617

PAD1 pad_smdc236

PAD2 pad_smdc236

Type 5

H24 hole_t315x472b413x354d98

Type 6

H22 hole_c98d98n

Robason Hole

H51 hole_tc217bc217d130_bp

H50 hole_tc217bc217d130_bp

DVT to PVT

PAD3 pad_smd1299x79

DVT to PVT 0518

LABLE1

AMI-APTIO

HOLE(BUTTOM SIDE)

Type 2

H41 hole_tc217bc217d130

H42 hole_tc217bc217d130

Type 3

H43 hole_tc236bc236d126

H44 hole_tc236bc236d126

Type 4

E

H45 hole_tc236bc315d98

Type CPU

H7 hole_c158d158n

H8 hole_c158d158n

H9 hole_c158d158n

H10 hole_c158d158n

H52 hole_odo98x118n

H53 hole_odo98x118n

H46 hole_tc217bc217d47

H47 hole_tc217bc217d47

H48 hole_tc217bc217d130

DVT to PVT 0611

H49 hole_shape_tbr492x354d98

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	HOLE & BOSS	
Size A3	Document Number M780(MBX-194)	Rev 0.1
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M780 EVT Change History

1.(Page 37) 07/08/21 As ICH9 LAN_RST# need to pull low to GND,Add 10K to GND.
2.(Page 41) 07/08/21 Change EC Ping38(RUN ON2) pull low value from 100K to 4.7k.
3.(Page 38) 07/08/29 Dut to HDA bus is changed to 1.5V level, HDA_CODEC_RST# signal is not able to turn on MOSFET "Q47", so changed to 3V for HDA Power Plane.
4.(Page 61) 07/09/07 finger print solution update (UPEK cost down)
5.(Page 57) 07/09/07 Change Codec from CXD9872AKDNBEC3XR to ALC889S for Audio solution.
6.(Page 57) 07/09/07 Change resistor of codec BEEP (R683) to 10k depend on W(V^2/R).
7.(Page 57) 07/09/15 Change thermal sensor(U59) to 15-EMC1402-0000.
8.(Page2) 07/09/19 Lid interface mark "PS2" change to placed at T/P block.
9.(Page 33) 07/09/19 delete all "CA" marking of components.
10.(Page 55) 07/09/19 remove D-MIC to CAM path and clear D-MIC circuit.
11.(Page 23) 07/09/19 delete PLVDD plane for all.
12.(Page 41) 07/09/26 Change EC from WPC8763L to WPCE775L for EMI issue.
13.(Page 48) 07/09/26 Change BT Power switch from Si9183DT-33-T1-E3 to SiP21106DT-33-E3 for EOL.
14.(Page 44-47) 07/09/26 Change PCI Card reader from PCI8412 to R5C833 for CF card soultion.

POWER Change History

15.(Page 64) 07/09/28 Change PQ6 IR7904 to PQ146/PQ148:SI4800B/SI4894 ==>component cost down
16.(Page 64) 07/09/28 Change PL4 from 3.3U(CY) to 4.7U(AOL)==>component cost down
17.(Page 64) 07/09/28 Change PQ9 IR7904 to PQ147/PQ149:SI4800B/SI4894==>component cost down
18.(Page 64) 07/09/28 Change PL5 from 3.3U(CY) to 4.7U(AOL)==>component cost down
19.(Page 64) 07/09/28 Change PU2 AGND to PGND
20.(Page 65) 07/09/28 Change PQ10 IR7904 to PQ150/PQ151:SI4800B/SI4894==>component cost down
21.(Page 65) 07/09/28 Change PL7 from 1.0U(CY) to 1.5U(CY) for improve efficiency
22.(Page 65) 07/09/28 Change Pc247 from 330U(EEFSX) to 330U(EEFCX) ==>component cost down
23.(Page 65) 07/09/28 delete PC230==> cost down
24.(Page 65) 07/09/28 Change PU4,PU5 from AGND to PGND
25.(Page 66) 07/09/28 Change DDR solution FROM TPS5116 to ISL6269A+G2998F11U ==>cost down
26.(Page 67) 07/09/28 Change CPU PWM IC PU7 from ISL6262A to ISL6266A,and PR390 from 1.82k to 1k,PR391 from 453 to 400,PC316 from470P TO 2200P,PR398 from NC to 1k,PR393 from 182k to 97.6k,PC379from 120P to 100P,PR394 from6.81k to 8.25k.
27.(Page 67) 07/09/28 Change PU7 AGND to PGND
28.(Page 68) 07/09/28 Change PQ27 SI4800B to SI7362DN
29.(Page 70) 07/09/28 Change PU15 TPS5117 to PU19 SC411 solution for TPS5117 light loading bug
30.(Page 70) 07/09/28 Change PU16 from APL5912 to APL5913==> cost down
31.(Page 65) 07/09/29 Change PL6 from 1.5U(CY) to 1.5U(AOL)==>component cost down
32.(Page 64/65/66/70) 07/09/29 Change PC210/PC215/PC235/PC243/PC256/PC357 from 0.1U_0402_Y5V to 0.1U_0402_X5R_6.3V due to power regulator output filter cap temperature chateractor tolerance.
33.(Page 70) 07/09/29 Add PR407,PR408 0_0402 for remote sense detect
34.(Page 63) 07/09/29 Add PR410: 0_0603,reserve for EMI.
36.(Page 63) 07/09/29 channge to program charger voltage ; add PR412: 191K, PR411: 100k ,reserve PR409
35.(Page 63) 07/09/29 channge charger current setting to DAC input ; add PR413:750K,change PR13 from 100k to 499k,delete PR17: 232K
37.(Page 65) 07/09/29 reserve PR414 for 1.5V power good pull high resistor.
38.(Page 65) 07/09/29 change 1.05V power good pull high power from +3Vrun to +3Vsus ==>design issue
39.(Page 65) 07/10/03 delete PC253==> cost down
40.(Page 65) 07/10/03 Change PQ11/PQ12 FDS8880/FDS8896 to SI4800B/SI4894==>component cost down
41.(Page 65) 07/10/03 Change PL7 from 1.5U(CY) to 1.5U(DELTA)==>component cost down
42.(Page 65) 07/10/03 Change PL6 from 1.5U(AOL) to 1.5U(DELTA)==>component cost down
43.(Page 68) 07/10/03 Change PQ29 FDS8880 to SI7362DN
44.(Page 68) 07/10/03 Change PQ20 FDS8896 to SI4894
45.(Page 63) 07/10/03 Change PD2 from PESD15VS2UT to SMD15C because PESD15VS2UT have shortage issue
46.(Page 51) 07/10/05 Change USB Power Plane from +5VSUS to +5VALW.
47.(Page 3) 07/10/05 Update R2087 Pull High to +3VRUN.
48.(Page 3) 07/10/05 Change resistor(1947) to unstuff.
49.(Page 64) 07/09/29 reserve PC387:ECCAP:100U(NC);PC388POSCAP:15U(NC) near CN5 DCBOUTfor NOISE debug
50.(Page 3) 07/10/08 Change CLK gen from ICS9LPRS365 to ICS9LPRS392.
51.(Page 3) 07/10/24 Change CLK gen from ICS9LPRS392 to SL28648LFXC for cost down.
52.(Page 60) 07/10/24 Add Subwooder circuit for MOR side request.
53.(Page 60) 07/10/24 Add Robson2 circuit for MOR side request.
54.(Page 41) 07/10/24 Change GPIO Expander from W83L603G to IW83L604G.
55.(Page 41) 07/10/24 Update EC(Pin define)for M760 Project.
56.(Page 47) 07/10/24 Add C987,C989 for design rule.
57.(Page 60) 07/10/24 Add TV tuner power sequence request need two GPIO pin controller time (RUN_ON_TV1,RUN_ON_TV2) for TV team.
58.(Page 47) 07/10/24 Add two GPIO pin(CF_REQ_IN1#,CF_REST) controll reset (JMB368 and CF Card) for CF time request.
59.(Page 18) 07/10/26 updated the circuit Strapping portion for NVDIA.
60.(Page 23) 07/10/26 updated the circuit Strapping portion for NVDIA.
61.(Page 24) 07/10/26 updated the circuit Strapping portion for NVDIA.
62.(Page 3) 07/10/26 updated BLOCK DIAGRAM for AUDIO function.
63.(Page 32) 07/10/29 updated LVDS Pin define.
64.(Page 33) 07/10/29 delete GAMMA function for MOR side request.
65.(Page 3) 07/10/30 delete R3017 for CF solution.
66.(Page 35) 07/10/30 updated USB function define for ICH9 USB Port.
67.(Page 34) 07/10/30 delete USB_PN11,USB_PN11 pin for TV tuner function.
68.(Page 3) 07/10/30 updated BLOCK DIAGRAM for AUDIO function.
69.(Page 32) 07/10/30 add NV_ODD_RXIN3-,NV_ODD_RXIN3+,NV_EVEN_RXIN3-,NV_EVEN_RXIN3+,for LVDS Pin define.
70.(Page 42) 07/10/31 Change U27 Flash ROM from 13-W25X80V-7000(8M) to 13-W25X16V-7000(16M).
71.(Page 30) 07/11/1 Remove S-OUT Circuit according to MOR side information.
72.(Page 18) 07/11/06 Update VGA Portion.
ROM_SI should follow below memory strap setting
RAM_CFG[3:0] Config FB Bus Width Definitions
0000 64-bit Reserved
0001 16Mx32 GDDR3 - 136 ball 64-bit Qimonda
0010 16Mx32 GDDR3 - 136 ball 64-bit Hynix
0011 16Mx32 GDDR3 - 136 ball 64-bit Samsung
0100 64-bit Reserved
0101 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Qimonda
0110 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Hynix
0111 32Mx32 GDDR3 - 136 ball - monolithic 64-bit Samsung
73.(Page 18) 07/11/06 Change ROM_SO to 5Kohm pull up to 3.3V
74.(Page 18) 07/11/06 Change ROM_SCLK to 15Kohm pull down to GND.
75.(Page 18) 07/11/06 Change Strap0 to 5K pull ulp to 3.3V
76.(Page 19) 07/11/06 Change Components for FBVref switch can be NC(R794,R795,C871,R578,R494 and Q52)
77.(Page 19) 07/11/06 FBA_Debug just reserve a TP.
78.(Page 20) 07/11/06 FBC_Debug just reserve a TP.
79.(Page 20) 07/11/06 According to PUN update for FBCAL_PD_VDDQ is 44.2Ω, FBCAL_PU_GND is 30.9Ω, FB_CAL_TERM_GND is 40Ω
80.(Page 22) 07/11/06 delete bead L70 for IFPAB_PLLVDD.
81.(Page 22) 07/11/06 delete bead L71 for IFPAB_IOVDD.
82.(Page 22) 07/11/06 delete bL72 for IFPCD_PLLVDD.
83.(Page 22) 07/11/06 add 10Kohm pull to GND for IFPD_IOVDD.
84.(Page 23) 07/11/06 Change R4799,R4800,R4812,R4801 and C956 to NC.
85.(Page 23) 07/11/06 delete R1775,R815 for VGA portion.
86.(Page 24) 07/11/06 Add IFPEF_PLLVDD to 10Kohm pull to GND.
87.(Page 24) 07/11/06 delete R4808,R4809,R4810,R4811 and C958 are not required.
88.(Page 24) 07/11/06 Change R4799,R4800,R4812,R4801 to NC.
89.(Page 26) 07/11/06 Change R4052 and R4103 to 475 ohm.
90.(Page 27) 07/11/06 Change R4594 and R4580 to 475 ohm.
91.(Page 41) 07/11/06 add GPIO PIN LVDS_CLK,LVDS_DATA,for LCD information.
92.(Page 55) 07/11/06 combined Camera & D-MIC for MOR requestion.
93.(Page 47) 07/11/06 add GPIO PIN CF_REST_IC#,CF_REST_CARD# for CF timeing.
94.(Page 34) 07/11/06 delete Mini Streo Jack,S-Video IN for MOR requestion.
95.(Page 41) 07/11/06 updated EC GPIO pin table for EC team requestion.
96.(Page 12) 07/11/06 updated VCC Power portion for yellow mark.
97.(Page 32) 07/11/07 Change U16 from G5488B2P1U to G5281RC1U by the comment from MOR side.
98.(Page 1) 07/11/12 updated Index page.
99.(Page 2) 07/11/12 updated Block diagram for HDMI and HDD mark.
100.(Page 3) 07/11/12 change CLK gen Power Plan.
101.(Page 3) 07/11/12 delete Clk gen damp resistor PR27~PR35.
101.(Page 3) 07/11/12 delete Clk gen damp resistor PR27~PR35.
102.(Page 8) 07/11/12 Change R206 from 511 ohm to 499 ohm for CRB.
103.(Page 8) 07/11/12 Change R5217 from 200 ohm 1%
104.(Page 18) 07/11/12 Add R5219 and R5221 for Hinex Strap.
105.(Page 22) 07/11/12 Change IFPAB_RSET to NC for NVIDA .
106.(Page 22) 07/11/12 2007/11/12 Update IFPC_IOVDD 0.385A
107.(Page 23) 07/11/12 2007/11/12 Update GPIO Table for NVDD 1.15V~1.2V.
107.(Page 23) 07/11/12 2007/11/12 Update I2C_ present status.
108.(Page 23) 07/11/12 Change GPIO1,GPIO7 and GPIO12~23 to NC for NVIDA .
109.(Page 30) 07/11/12 Change U10 from NC to populate.
110.(Page 30) 07/11/12 Change R284 from populateto NC
111.(Page 33) 07/11/12 Delete R2193,R2194 R1940,C1616,U136 for Cost down evaluation
112.(Page 34) 07/11/12 Change Ground from TV_GND1 to TV_GND.
113.(Page 40) 07/11/12 Add R559,R560,C715,C716 and Marvell.
114.(Page 40) 07/11/12 Change R596 from 4.86k to 4.99k
115.(Page 43) 07/11/12 Add C611 and D26 for STAT Power setting.
116.(Page 44) 07/11/12 Change R492 from populate to NC.
117.(Page 44) 07/11/12 Change R417 from NC to populate.
118.(Page 45) 07/11/12 Change L29 from 1L-FTR1DB6-5600 to 1L-F0D6560-TE00.
119.(Page 46) 07/11/12 Change R816,R820,R817 from populate to NC.
120.(Page 46) 07/11/12 Add R625 to Ground for design spec.
121.(Page 46) 07/11/12 Reverse +1_5VRUN Power plane for HDA Spec.
122.(Page 47) 07/11/12 Change R2525 from 8.2k to 6.8k
123.(Page 48) 07/11/12 Delete R601,Q26,R588,R597
124.(Page 49) 07/11/12 Add CN1 connector for full size Mini Card.
125.(Page 49) 07/11/12 Update pin define for wirless card spec.
126.(Page 49) 07/11/12 Change R593 from populate to NC.
127.(Page 49) 07/11/12 Add U9 for wriless and usb power switch.
128.(Page 49) 07/11/12 delete +3V_RUN power.
129.(Page 49) 07/11/12 delete R597.
130.(Page 49) 07/11/12 Add C10.
131.(Page 50) 07/11/12 Change U37 from TPS2231PW to TPS2231RGP for Cost down.
132.(Page 50) 07/11/12 delete R622,R630,R623,R629,C664,C665.
133.(Page 50) 07/11/12 Update power plan.
134.(Page 50) 07/11/12 delete Constant-voltage +1_5VSUS Circuit.
135.(Page 51) 07/11/12 remove U41 power switch to Function board.
136.(Page 53) 07/11/12 Add C481,C482,C579 for stable voltage.
137.(Page 53) 07/11/12 Change Q31 from MMC2301 to CHT2301PT.
138.(Page 53) 07/11/12 Change D27 from populate to NC.
139.(Page 57) 07/11/12 delete C732 for doulb part.
140.(Page 57) 07/11/12 Change C785,C784,C705 to R5222,R5223,R5224.
141.(Page 47) 07/11/12 Delete U169 (flash)for CF solution.
142.(Page 62) 07/11/13 Change sub_woofer amp to YAMAHA(YDA153A)
143.(Page 47) 07/11/13 Update HP circuit
144.(Page 47) 07/11/14 Add Audio Power(+12VRUN)PU6 for EQ power.
145.(Page 41) 07/11/14 Add GPIO pin (RUN_ON_A) for AUDIO power(EQ circuit) require.
146.(Page 41) 07/11/14 Change GPIO pin Net(EN_EXT_DEV_SENSE,BT_PRS#) for EC team require.
147.(Page 11) 07/11/14 Change R133 from populate to NC for system hang up soon when system boot up.
148.(Page 11) 07/11/14 Connect VCCD_QDAC to 1.5V RUN for Intel require.
149.(Page 32) 07/11/15 Change Net(NV_LCDVCC_EN#) to NV_LCDVCC_EN
150.(Page 36) 07/11/15 Add Net(ICH_GPIO56) pull high(10K ohm) to +3VALW.
151.(Page 36) 07/11/15 Change R375 from 332k to 330k.
152.(Page 38) 07/11/15 change vcclan3.3 from +3VSUS to +3VRUN
153.(Page 38) 07/11/15 change vccCL3.3from +3VSUS to +3VRUN
154.(Page 54) 07/11/15 Change EXPRESS CARD Connector(CN28),(CN29) for design require.
155.(Page 54) 07/11/16 Add CN123,CN124 for Design require
156.(Page 47) 07/11/16 Change U168 from GMT to RICOH
157.(Page 34) 07/11/19 Change Ground TV power sequence.
158.(Page 58) 07/11/19 Change CAP34 from 100u to 220u for Mor request.
159.(Page 62) 07/11/19 Change CAP35 from 100u to 220u for MOR request.
160.(Page 57) 07/11/20 Change Net(HP_IN) to HP_IN#.
161.(Page 26) 07/11/20 Change R4030,R4031,R4032,R4036,change from"1.05K"to"549 ohm"for NVIDA CRB.
162.(Page 27) 07/11/20 Change R4038,R4039,R4042,R4043 change from"1.05K" to "549 ohm" for NVIDA CRB.
163.(Page 26) 07/11/20 Change R4033,R4034,R4035,R4037,change from"1.82K"to"931 ohm" for NVIDA CRB.
164.(Page 27) 07/11/20 Change R4041,R4040,R4045,R4044 change from"1.82K" to "931 ohm" for NVIDA CRB.
165.(Page 26) 07/11/20 Change R4019,R4020,R4021,R4022, change from"2.49K"to"1.33K" for NVIDA CRB.
166.(Page 26) 07/11/20 Change R4019,R4020,R4021,R4022, change from"2.49K" to "1.33K" for NVIDA CRB.
167.(Page 61) 07/11/20 Change EQ Circuit Power plane .
168.(Page 61) 07/11/20 Delete U178 for MOR side require.
169.(Page 61) 07/11/20 Add filter circuit on SW_RCH and SW_LCH for MOR side require.
170.(Page 63) 07/11/20 DDelete SW_LCH signal to PGND for Mor side require.
171.(Page 57) 07/11/20 Delete SNESE_B (Cap to AGND) for Vendor suggestion
172.(Page 57) 07/11/20 Delete Cap and keep in NC for Keep floating .
173.(Page 57) 07/11/20 Add 10uF to Digital GND for Vendor suggestion.
174.(Page 57) 07/11/21 Change Net(HP_IN) to HP_5_JACK for Audio portion.
175.(Page 60) 07/11/21 Add U181 for logic accuracy.
176.(Page 32) 07/11/21 Change CN5 from FOX_HSB106E to HS8212 for MOR request.
177.(Page 48) 07/11/21 Delete Bus switch(U35) for MOR side request.
178.(Page 49) 07/11/21 Delete Controll Link bus to ICH9 side for MOR side request.
179.(Page 49) 07/11/21 Add C4784(10u) for MOR side request.
180.(Page 49) 07/11/21 delete R597,R595 for MOR side request.
181.(Page 49) 07/11/21 delete CN27 for MOR side request.
182.(Page 60) 07/11/23 Update Mute circuit for time not synchronize from vendor suggestion.
183.(Page 46) 07/11/23 Chang R816,R820,R817 from NC to populate for MOR request.

POWER Change History

184.(Page 68) 7/11/22 change PR13 from 499K to 360K for charge current set table change.
185.(Page 68) 07/11/22 change PR412 from 191K to 200K for charge voltage set .
186.(Page 68) 07/11/22 delete PD4 200K for leakage current issue .
187.(Page 68) 07/11/22 add 2nd source SPF0755H.
188.(Page 69) 07/11/22 delete PR44 because the 3V/5V pwm F change from 400k/500k to 400k/300k
189.(Page 72) 07/11/22 change PC319 from 0.22u to 0.33u
190.(Page 75) 07/11/22 change PR187 from 100 to 51K,add PR415: 200K, for setting PU19 only working in PWM mode.
191.(Page 75) 07/11/22 delete reserve schematic:PR403,PR405,PC385,PQ156,PR402
192.(Page 75) 07/11/22 change PR404 from NC to 10K,PR406 from 0 to 1k ,PC386 from NC to 1u for NV_VDD softstart
193.(Page 75) 07/11/22 change PC290 from22P to 100P for NV_VDD change smoothly
194.(Page 69) 07/11/22 change PL4 from4.7U to 3.3U ,PR61 from 162k to 300K for increasing +5v power burger and OCP setting to 11A.
195.(Page 69) 07/11/22 change PR34 from 162k to 255K for OCP setting to 8.9A.
196.(Page 70) 07/11/22 change PR58 from 8.2k to 16.2K for OCP setting to 9.1A.
197.(Page 70) 07/11/22 change PR49 from 8.2k to 12.7K for OCP setting to 7.5A.
198.(Page 71) 07/11/22 change PQ152 from fds8880 to IRF8714,PQ153 from FDS8896 to IRF8736 for increasing power efficiency.
199.(Page 75) 07/11/22 change PQ154 from SI7686DP to IR7923,PQ155 from SI7336 to IRF8736,add PQ156:IRF8736 ,change PL15 from 1.0UH to 0.56UH for NB9P power budget upgrad to 21A

EE Change History

200.(Page 41) 07/11/27 change Power plane from +5VSUS to +5VRUN
201.(Page 51) 07/11/27 change Power plane from +5VSUS to +5VALW
202.(Page 64) 07/11/27 change Power plane from +5VSUS to +5VALW
203.(Page 53) 07/11/27 change Power plane from +5VSUS to +5VRUN
204.(Page 45) 07/11/27 change iLink CONN from FOX_UV31413-WR56P-7F to FOX_UV31413-WZ03P-7F.
205.(Page 31) 07/11/27 change CRT CONN from DZ11A91-NB205-4F to FOX_DZ11A91-SB281-4F.
206.(Page 14) 07/11/27 change DDR2 CONN(CN1) from FOX_AS0A426-N5SN-7F to FOX_AS0A426_N2RN_7F
207.(Page 15) 07/11/27 change DDR2 CONN(CN2) from FOX_AS0A426_N4RC_4F to FOX_AS0A426_NARN_7F
208.(Page 43) 07/11/27 change ODD CONN(CN21) from FOX_LN27137-D001-9F to FOX_GB5RF120-1200-7F
209.(Page 34) 07/11/27 change TV CONN(CN10) from FOXCONN_AS0B226-S52N-7F to FOX_AS0B226_S60N_7F
210.(Page 53) 07/11/27 change FAN CONN(CN33) from FOX_HS8104E to FOX_HS8103E
211.(Page 32) 07/11/27 change FAN CONN(CN33) from FOX_HS8212Eto FOX_HS8112E
212.(Page 56) 07/11/27 delete logo LED circuit.
213.(Page 32) 07/11/27 add pull low resistor 100k to ground.
214.(Page 9) 07/11/28 Change PCIE Capactior size from 0402 to 0201
215.(Page 18) 07/11/28 Change PCIE Capactior size from 0402 to 0201
216.(Page 64) 07/11/28 delete CAPLOCK_LED#,SCRLOCK_LED#,NUMLOCK_LED# and remove to LED BOARD.
217.(Page 43) 07/11/28 Add STAT HDD Connector for ME request.
218.(Page 43) 07/11/28 Change STAT HDD Connector for ME request.
219.(Page 41) 07/11/28 Add Expander SMBus Pull H to +ECVCC.
220.(Page 41) 07/11/28 Add Net (NV_LCD_CLK/DAT) Pull H to +3VRUN
221.(Page 41) 07/11/28 Change R2523,R2522,R2518 to NC.
222.(Page 41) 07/11/28 Change SYSTEM ID Pull H to +ECVCC.
223.(Page 41) 07/11/28 Remove SYSTEMID0 for Logo LED removing.
224.(Page 59) 07/11/28 All plane chage to ALW.
225.(Page 59) 07/11/29 Change Q47,Q49 due to the BJT internal resistor and EC outpout level concern. for the purpose to avoid system hang up when Boot and abnoraml RST.plz change Q47 & Q49 to the same components as M760.
226.(Page 75) 07/11/30 Add PC391 25V_27U reserve PC362/PC353 for decreasing Audio noise.
227.(Page 69) 07/11/30 Change PC387 to 25V_27U.
228.(Page 63) 07/12/05 Change CN123 from FOX_QT510206-2001-9F to FOX_HT1215F.
229.(Page 52) 07/12/05 Change CN122 from FOX_QT510206-2001-9F to FOX_GB5RF120-1200-7F.
230.(Page 64) 07/12/05 Change MS/SD LED control signal share one LED
231.(Page 64) 07/12/05 Change HDD/ODD LED control signal share one LED
232.(Page 64) 07/12/05 Change Wirless/BluetoothLED control signal share one LED
233.(Page 64) 07/12/05 Delete bluetooth Net BT_PIO#.
234.(Page 43) 07/12/05 Delete ODD Net ODD_DP#.
235.(Page 53) 07/12/06 Change thermal sensior U59 to G7801P81U.
236.(Page 49) 07/12/06 Change WiA Conn CN31 to FOX_AS0B226_S40N_7F.
237.(Page 50) 07/12/07 Change EXPRESSConn CN29 to FOX_1CX421S1-MM.
238.(Page 57) 07/12/07 Change Audio Conn JSPK1 to FOX_HS7108E.
239.(Page 62) 07/12/07 Change Audio Conn JSPK3 to FOX_HS7102E.
240.(Page 50) 07/12/10 Change EXPRESSConn CN28 to FOX_1CH411SC-MM.
241.(Page 33) 07/12/10 Change HDMIConn CN60 to FOX_QJ5119L-NT03-4F.
242.(Page 72) 07/12/10 add ODD POWER plan.
243.(Page 47) 07/12/12 add R5238 for MOR side request.
244.(Page 47) 07/12/12 Change Net CF_PWR to CF_IN# for timing issue.
245.(Page 52) 07/12/14 Reverse Power Plan for MOR side request.
246.(Page 67) 07/12/21 ADD PL17,PL18 8A bead for BATT
247.(Page 59) 07/12/21 Change Q46 to PDTC144EU for MOR side require.
248.(Page 59) 07/12/21 change from +3VALW to +3VRUN.
249.(Page 60) 07/12/21 delete R1848 for MOR side require.
250.(Page 60) 07/12/21 delete R1849 for MOR side require.
251.(Page 43) 07/12/21 Add R5208 ,R5207 for SSD power .
252.(Page 60) 07/12/21 delete R5156 for MOR side require.
253.(Page 60) 07/12/21 Change R5143 to 5.6k for MOR side require.
254.(Page 60) 07/12/21 Change R274 to 5.6k for MOR side require.
255.(Page 60) 07/12/21 Change R268 to 5.6k for MOR side require.
256.(Page 60) 07/12/21 Change R5154 to 5.6k for MOR side require.
257.(Page 60) 07/12/21 change C4820,C4822,C4825,C4827 from 0.047u to 0.068u/50V.
258.(Page 60) 07/12/21 delete +5VRUN ,and change R1871 from NC to 0 ohm.
259.(Page 61) 07/12/21 change R252 from 10k ohm to 1k ohm.
260.(Page 61) 07/12/21 change C236 from 0.1u/16V to 0.068u/16V.
261.(Page 61) 07/12/21 change C1682 from 0.22u/10V to 0.068u/16V.
262.(Page 61) 07/12/21 change C1683 from 0.22u/10V to 0.1u/16V.
263.(Page 61) 07/12/21 change change C367 from 0.068u/16V to 0.047u/16V.
264.(Page 61) 07/12/21 change R2162 from 39k ohm to 33k ohm.
265.(Page 61) 07/12/21 change C1684 from 0.22u/10V to 0.1u/16V.
266.(Page 61) 07/12/21 change R2164 from 3.3k ohm to 1k ohm.
267.(Page 61) 07/12/21 change L4068,L4067 from PBY201209T to MPZ1608D101B(TDK).
268.(Page 61) 07/12/21 change U138,U139 from NJM4565V to RC4580IPWR.
269.(Page 63) 07/12/23 Add fuse F16
270.(Page 74) 07/12/24 Change PC391 from 27u_25V to 22u_25V ,add PC362 MLCC10U_25V for decreasing input ESR
271.(Page 69) 07/12/24 Change PR49 from 12.7K to 12.4K ,add PR58 from 16.2k to 15.4k for cutting in 2nd source in DVT
272.(Page 61) 07/12/25 add R5239,C4864 for mor side require.
273.(Page 59) 07/12/25 add Mute_AMP# circuit modification for mor side require.
274.(Page 23) 07/12/25 Change L66,L73,L74 to TB100505U121
275.(Page 67) 07/12/25 Delete common choke to 4*BEAD PL19,PL20,PL21,PL22 because height limit
276.(Page 40) 07/12/25 Change Connection from GND_TR to normal Ground.
277.(Page 40) 07/12/25 Delet C574 and R486
278.(Page 59) 07/12/25 Change R5240 to 220k
279.(Page 74) 08/01/04 FOR NB9P: PR403 to 20k,PR402:23.2K,PR272=61.9K
280.(Page 74) 08/01/04 FOR NB8M: PR403 to 20k,PR402:29.4K,PR272=160K
281.(Page 74) 08/01/04 FOR NB8M/9P: ADD PQ78,PQ169,PR422:52.3K_0402_1%,PR420:10K_0402,PR421:1K_0402
282.(Page 70) 08/01/04 CHANGE PR384 to 5.1k for OCP margin
283.(Page 70) 08/01/05 CHANGE PU3 from G909-330T1U to AT5208 for decreasing inrushing current
284.(Page 68) 08/01/05 ADD PC392 :0.1U_25V
285.(Page 67) 08/01/05 ADD delete (reserve PD4)
286.(Page 74) 08/01/05 For NB9M NV voltage modified,change PR402 to 29.4k_1%_0402,PR272_1%_0402 to 39.2k_1%_0402 ,PR420/PR422/PQ168/PR
287.(Page 63) 08/01/08 Please remove these 2 fuses.F25 & U183/184 are enough for USB VBus current limiting.

FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title: History(EVT to MP)
Size: Custom | Document Number: M780(MBX-194) | Rev: 0.1
Date: Friday, June 13, 2008 | Sheet 76 of 79

EVT TO DVT

Page 20 .Add power source for FB_DLLAVDD1 & FB_PLLAVDD1

Page 61. change R2164 from 1K to 2.7K for MOR request

Page 57. change SPK AMP Gain setting to 18dB for MOR request

Page 48,49. change BT LED control signal source from BT module directly

Page 32,41. Use SW1 one pin to disable Fan monitor function

Page 54. F11,F12,F18,F19 change from 350mA to 250mA

Page 59. Change Q4019 pin 2 from +3VALW to +5VALW

Page 37. Change EC_OUT1 pin to GPIO12

Page 41. Add R572,R573,R574 pull low

Page 61. R259 NC

Page 41. Add C465,C466 47pF pull low

Page 24. Add R586,R590 for MOR request.

Page 3. Add R5248 in series for MCH_CLK_REQ#.

Page 47. Add F27 Poly switch for CF card protection.

Page 37. Add D9 diode for RUNTIME_SCI# leakage.

Page 41. Add D17,D24 for EC_RCIN#,EC_A20GATE leakage.

Page 23. Add R1779 for PWRCNTL_0 pull high.

Page 37. Add R455 for Finger print Detect.

Page 60,63. Remove C4830,R740,R743,R745 for MOR request.

Page 33. Add R340,Q122,R2373,Q123 for HDMI drop issue.

Page 3. Add C820 ,C821 for Robson CLK to match rising and falling time spec.

Page 52. Add F13 for CIR FFC protection.

Page 40. Add R75 ,R5249,C138 for 8057 used

Page 49. Remove C18,add R617 for MOR request.

Page 41. Add C913 for EMI.

Page 42. Add C962 for EMI.

Page 53. Add C967 for EMI.

Page 71. Add C968 for EMI.

Page 68. Add C990 for EMI.

Page 74. Add C991 for EMI.

Page 32. Add C992 for EMI.

Page 56. Add C368 for TV .

Page 60. change C4820,C4822,C4825,C4827 to 0.047U
R5146,R5151 to 1.8k R151,R5152 t o5.6k

Page 61. change R244,R249 to15k R2160 to 18k, PR523,PR524 to 15k, C367 to 0.022U, R2164 to 1.8k.

Page 31. Add C467,C468,C469 for EMI.

Page 46. Mount C453 for EMI.

Page 41. Add R575 for CF always power on.

Page 37. Remove R455,R486 for FP_DET#,change by BIOS detect.

Page 6. add C88,C89 for MOR request.

Page 72. add R5250 for MOR request.

Page 34. add C370,C369 for EMI

Page 41. add C371 for EMI

Page 29. add C993 for EMI

Page 26. add C994 for EMI

Page 41. change charge LED to high active.

Page 57. add C995 for EMI.

Page 33. add C997 for EMI.

Page 62. add C90 for EMI.

Page 41. add C91 for EMI.

Page 54. add C238 for EMI.

Page 47. add U17 ,R91,R92 for CF solution.

Page 73. change PR181 from 34k to 31.6k for changing power limit from 118W to 114W

DVT to PVT

Page 64(LED_Status) .charging LED logic change
Page 75(HOLE & BOSS) .Add AMI label on M/BD
Page 31(CRT) .change VSYNC and HSYNC resistor and capacitor for SI test fail.
Page 54(Daughter Board Conn) .change PWR and Suspend LED logic same as M760 for more brightness.
Page 47(PCI CF) .separate CF controller power and card power for hot-plug issue.

Page .change NV9P,9M ,HDCP KEY HH P/N

Page 17(VGA (PCI-E) 1/9) .L4049 change vendor

Page 41(EC+KBC (WPCE775L) .change RP24,RP25 to +3VALW
Page 67(DCIN&Charger) .Delete PJ1 and PJ2
Page 68(SYS Power (+3_3V/+5V) .Delete PJ3 and PJ4
Page 69(SYS Power(+1_5V/+1_05V) .Delete PJ7 and PJ8
Page 70(DDR2 Power(+1_8V/+0_9V) .Delete PJ10 and PJ13
Page 71(CPU_Vcore---ISL6266A) .Delete PJ12
Page 74(VGA Power(0.9V/+1_05V) .Delete PJ15,PJ16,PJ17

Page 43(SATA HDD/CD-ROM) .change CN126 to KOTL
Page 3(CLOCK GEN (SL28648BLC) .U123 change HH P/N
Page 18(VGA (PCI-E BUS)Strap 2/9) .add samsung VRAM strap pin
Page 55(OIDE/CAM) .change OIDE connector to LNC PVT 0605.pdf

Page 60(AUDIO(EQ) .C4820,C4822,C4825,C4827; Change from 0.047μ/50V to 0.015μ/25V,R5146,R5151; Change from 1.8k to 3.3k
Page 61(AVD20 (Filter Circuit) .R2164 change to 1k,R2165 change to 4.7k
Page 72(Others power plan) .R5250 mount,PR180, PR174, PR163, PQ165, PQ55, PC121, PC227 all NC
Page 51(USB 2.0) .add USB connector TID No.

Page 55(OIDE/CAM) .change camera connector for easy to unplug.

Page 43(SATA HDD/CD-ROM) .change ODD connector to 14 pin
Page 75(HOLE & BOSS) .change H48 to PTH type
Page 55(OIDE/CAM) .reserve 3.3V for camera module.
Page 47(PCI CF) .change discharge circuit for CF card power,add 4.7U for CF card power ,change CF card LED power source.
Page 45(PCI (ILINK) .change Y5 capacitor for accuracy.
Page 71(CPU_Vcore---ISL6266A) .PR429 NC
Page 67(DCIN&Charger) .PCN2 add two pillars to fix position for our prodution line smoothly. PVT 0613.pdf

Page 1(index) .change HH P/N

Page 75(HOLE & BOSS) .add two PAD for ME request
Page 68(SYS Power (+3_3V/+5V) .PU2 Pin9 ,pin10 connect from +5VALW_PWM to +5VALW PVT 0617.pdf

Page 41(EC+KBC (WPCE775L) .mount R516,C592 for EMI
Page 24(VGA (INTER DISPLAY) 8/9) .mount C828 for EMI
Page 41(EC+KBC (WPCE775L) .add C998 for EMI
Page 48(bluetooth) .add C999 for EMI
Page 40(Marvell GLAN(88E8055) .add C1000 for EMI
Page 72(Others power plan) .add C1001 for EMI
Page 41(EC+KBC (WPCE775L) .add C1002 for EMI
Page 56(AUDIO(CODEC & POWER) .add C1003 for EMI
Page 54(Daughter Board Conn) .add C1004,C1005 for EMI
Page 54(Daughter Board Conn) .add L31,L32 for EMI

Page 23(VGA (XTAL/GPIO) 7/9) . reserve D10,R5251,R5252,C93,R1780 for HDMI Audio issue.
Page 56(AUDIO(CODEC & POWER) . reserve R749,C12 for HDMI Audio issue.

Page 63(Audio BOARD conn) . mount R741,change R744 to C807 0.1u for EMI

Page 56(AUDIO(CODEC & POWER) .change R5222 to C809 0.1uf for EMI.

Page 42(AUDIO(Flash ROM/SPI) .CN16 change from 1200 to 1203 for EOL issue.

Page 65(Robson 1.7 Connector) .remove CN24,C712,C713 for Robson no used.
Page 65(AUDIO (SUBWOOFER AMP).change R5228 from 68k to 6.8k for MOR request.
Page 75(HOLE & BOSS) .Add PAD 3 for ME request.
Page 75(LVDS) .reserve C472 for invertor power PVT 0625.pdf

Page 31(CRT) .change L25,L26,L27 to 120R bead,C467,C468,C469 to NC.

Page 62(AUDIO (SUBWOOFER AMP) .change R5226,R5227 to 0.5% resistors

Page 54(Daughter Board Conn) .add U11 for finger print protection. PVT 0627.pdf

Page 71(CPU_Vcore---ISL6266A) .PC389 NC,PC299,PC289 mount for solid cap issue.
Page 68(SYS Power (+3_3V/+5V) .PC387 NC for solid cap issue
Page 74(VGA Power(0.9V/+1_05V) .PC391 NC,PC353 mount for solid cap issue.
Page 32(LVDS) .Add C472 for solid cap issue.
Page 45(PCI (ILINK) .change R540~R543 to 47 ohm for MS overshoot and undershoot issue.
Page 41(EC+KBC (WPCE775L) .R516,C592 NC for signal quality.
Page 3(CLOCK GEN (SL28648BLC) .change R767 to 47 ohm for EMI issue. PVT 0629.pdf

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