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P. Leader	Check by	Design by

PCB P/N:

1P-0065102-80SA - FUBAI

1P-0065201-80SA - NANYA

1P-0065503-80SA - HANNSTAR

Project Code & Schematics Subject: MS60-L Main Board

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

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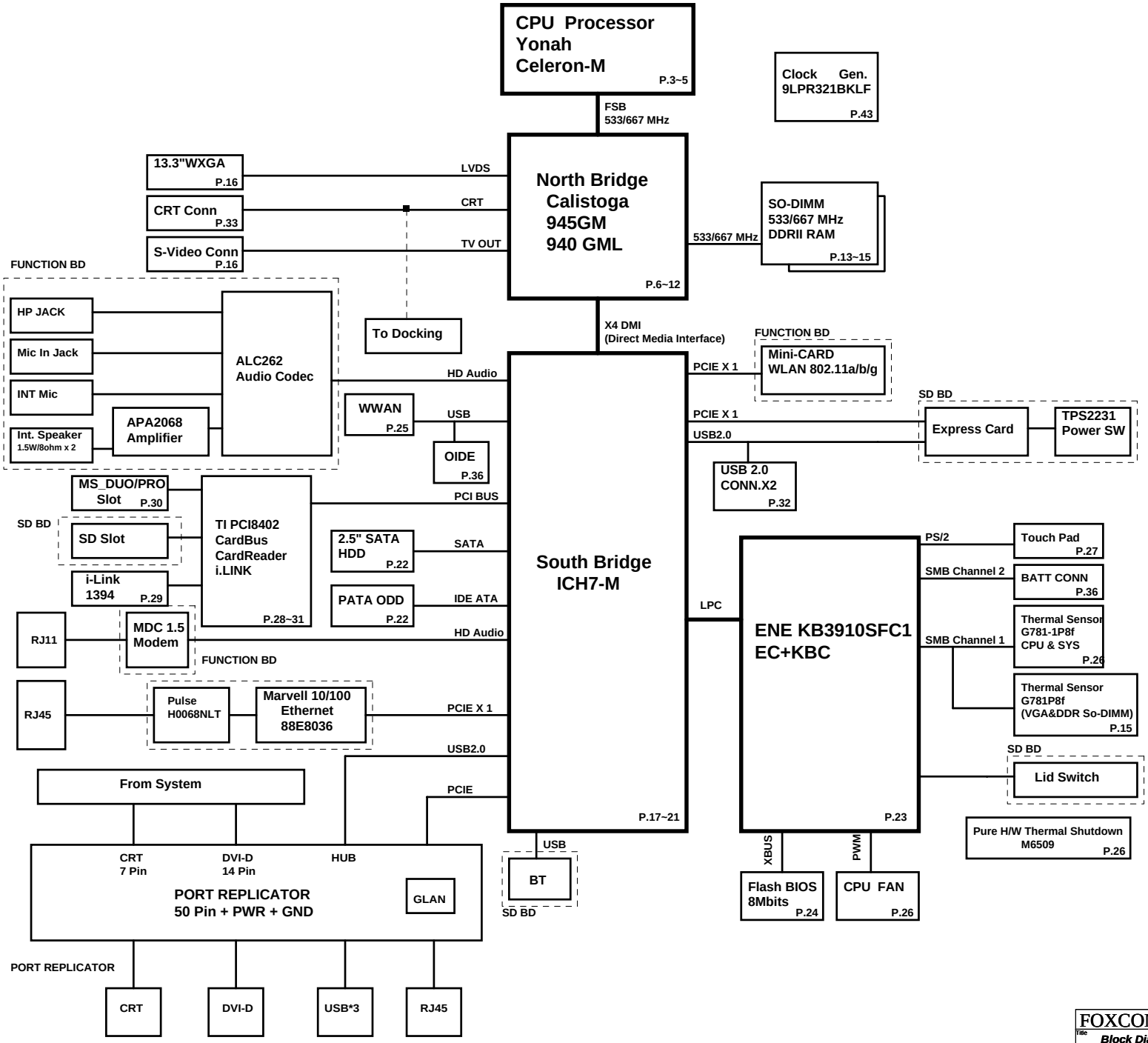
MS60 (CALISTOGA GM Block Diagram)



SYSTEM DC/DC
MAX8734 P.37

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

SYSTEM DC/DC
MAX8743 P.38

INPUTS	OUTPUTS
DCBATOUT	+1_5VRUN +1_05VRUN

SC486 P.42

DCBATOUT	+1_8V_S3_SUS +0_9VRUN

CPU DC/DC
ISL6262 P.39

INPUTS	OUTPUTS
DCBATOUT	VHCORE

AMP DC/DC
MAX1616 P.40

INPUTS	OUTPUTS
DCBATOUT	+8VRUN

MAXIM CHARGER
MAX1909 P.36

INPUTS	OUTPUTS
AD+	BT+ DCBATOUT

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Title: *Block Diagram (All)*

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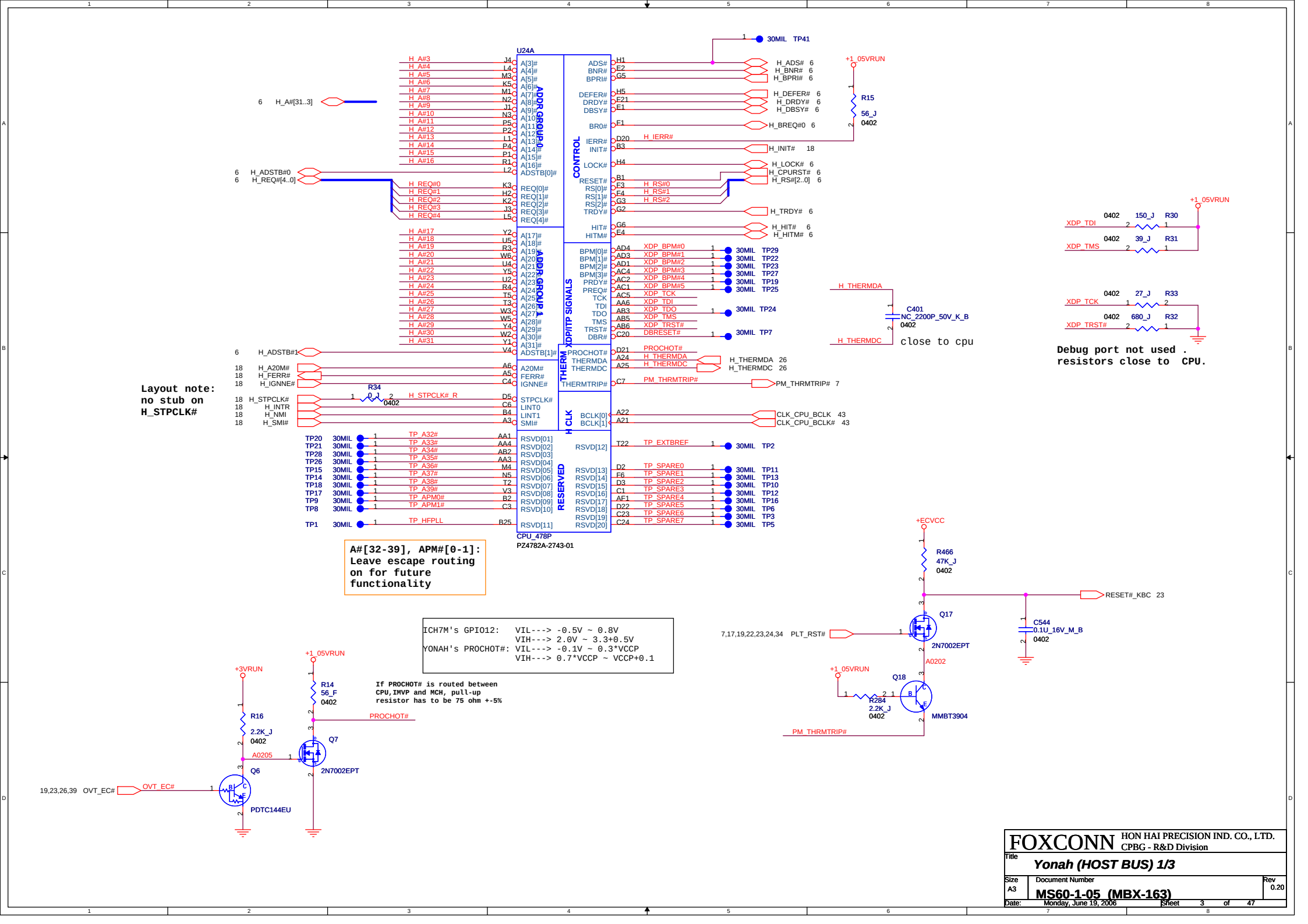
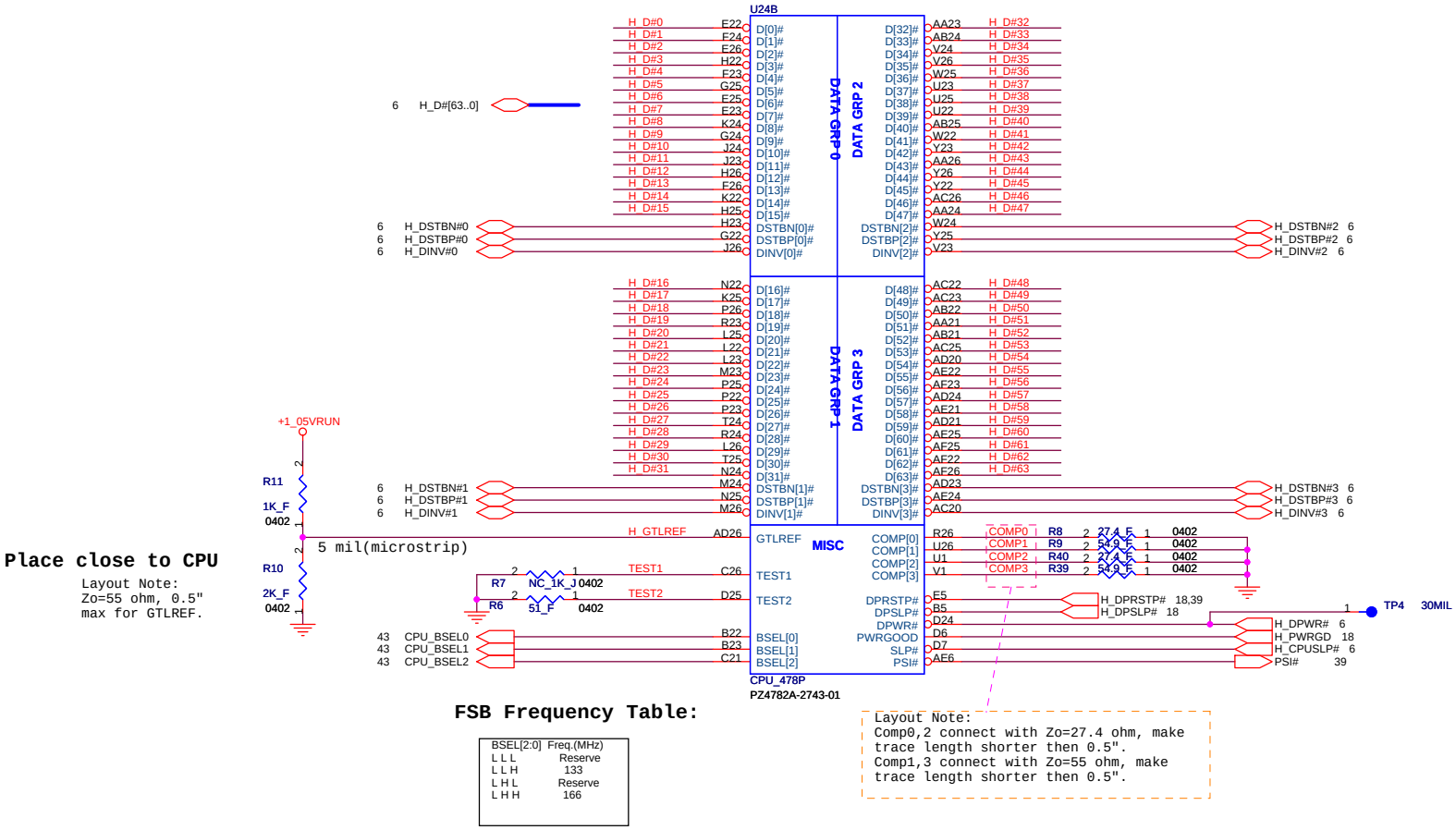

U24A
CPU_478P
PZ4782A-2743-01
ADDR GROUP 0
ADDR GROUP 1
CONTROL
XDP/ITP SIGNALS
THERM
H CLK
RESERVED
Layout note:
no stub on
H_STPCLK#
A#[32-39], APM#[0-1]:
Leave escape routing
on for future
functionality
ICH7M's GPIO12: VIL---> -0.5V ~ 0.8V
VIH---> 2.0V ~ 3.3+0.5V
YONAH's PROCHOT#: VIL---> -0.1V ~ 0.3*VCCP
VIH---> 0.7*VCCP ~ VCCP+0.1
If PROCHOT# is routed between
CPU,IMVP and MCH, pull-up
resistor has to be 75 ohm +-5%
close to cpu
Debug port not used .
resistors close to CPU.
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Yonah (HOST BUS) 1/3
MS60-1-05 (MBX-163)
Monday, June 19, 2006



Place close to CPU

Layout Note:
Zo=55 ohm, 0.5"
max for GTLREF.

FSB Frequency Table:

BSEL[2:0]	Freq.(MHz)
L L L	Reserve
L L H	133
L H L	Reserve
L H H	166

Layout Note:
Comp0,2 connect with Zo=27.4 ohm, make trace length shorter then 0.5".
Comp1,3 connect with Zo=55 ohm, make trace length shorter then 0.5".

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Title: *Yonah (HOST BUS) 2/3*

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

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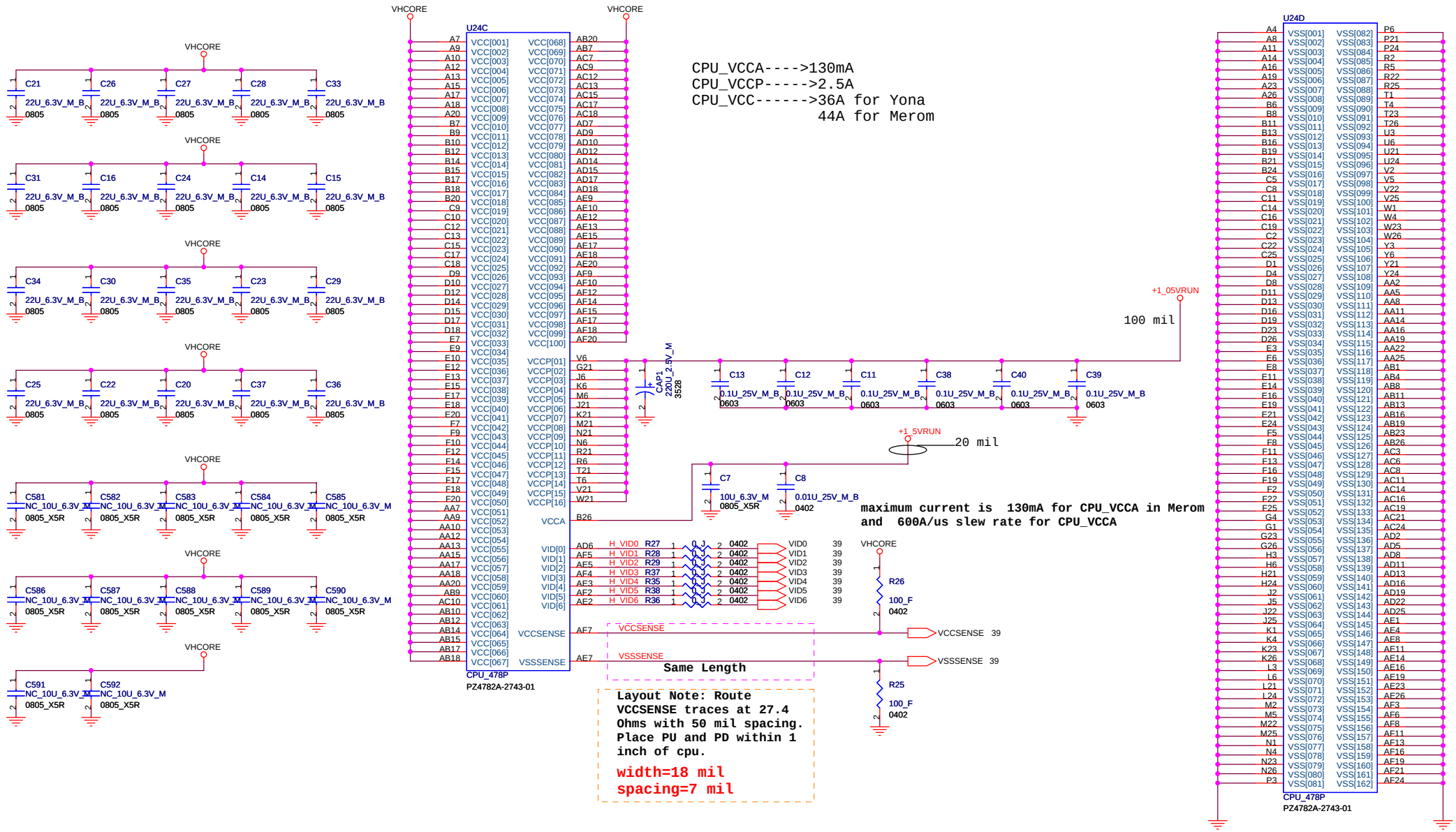

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	Yonah (POWER/GROUND) 3/3
Size A3	Document Number MS60-1-05 (MBX-163) Rev 0.20
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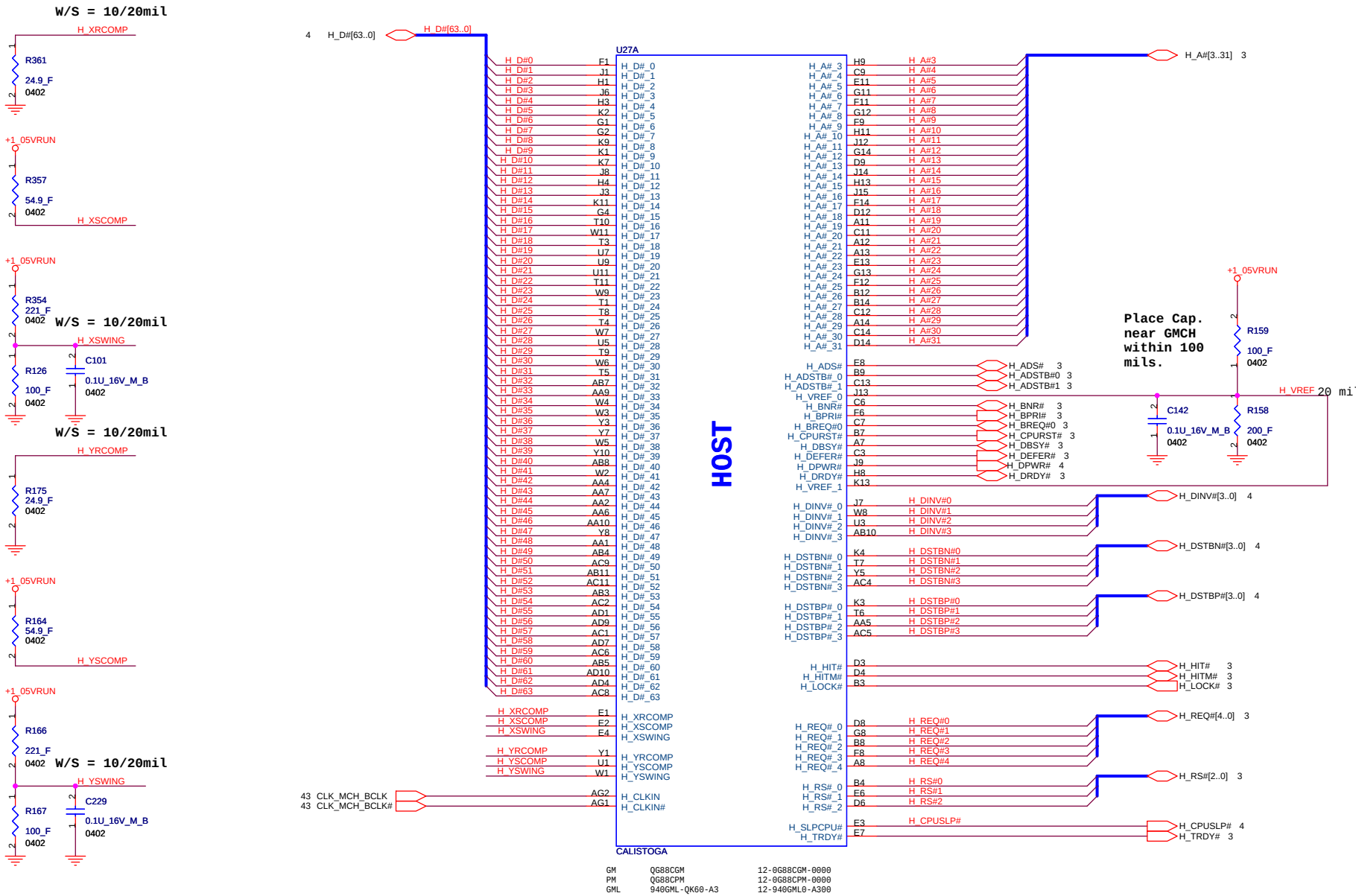

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	CALISTOHA (HOST)	
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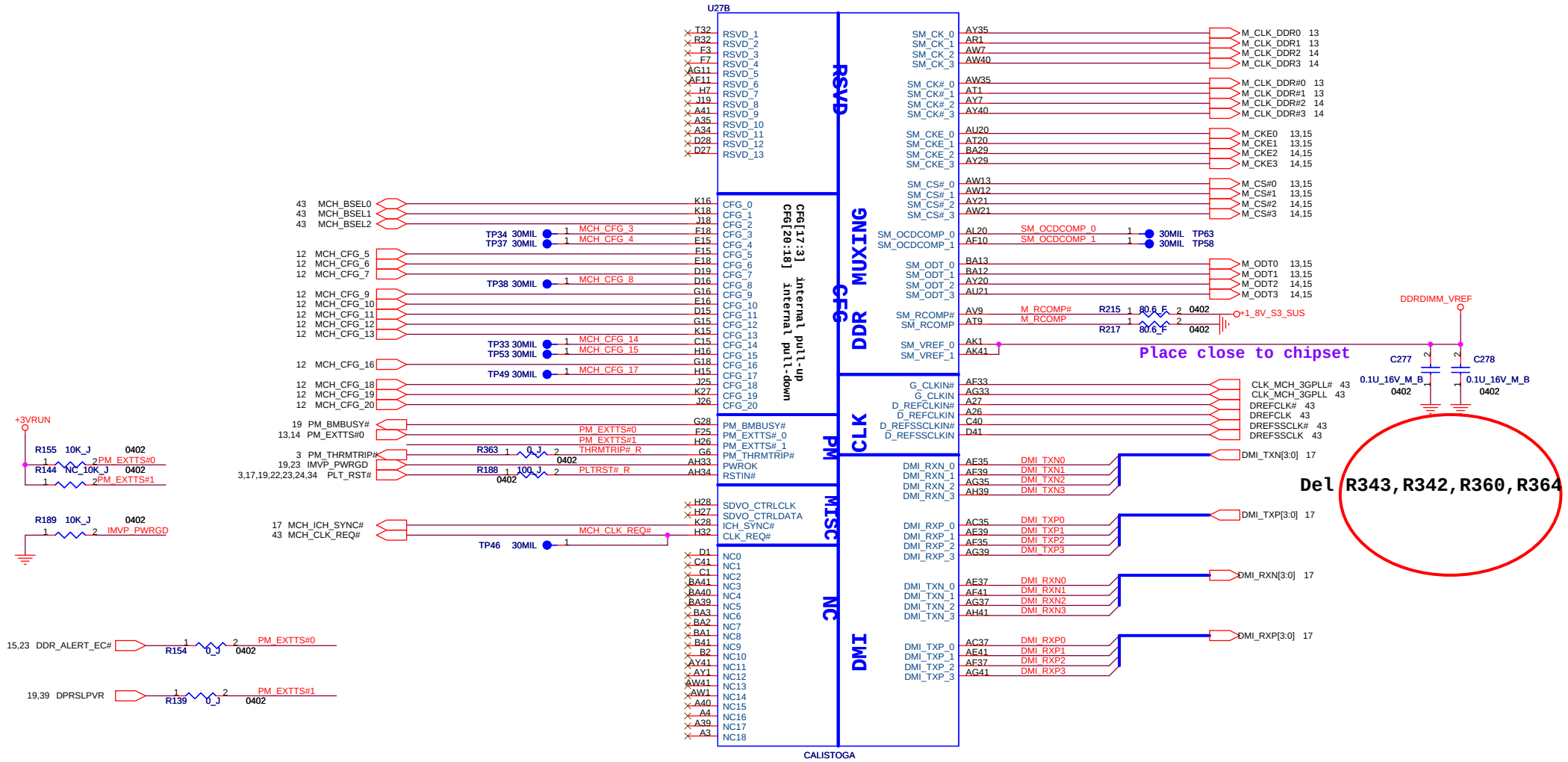

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	CALISTOGA (DMI) 2 of 7
Size	A3
Document Number	MS60-1-05 (MBX-163)
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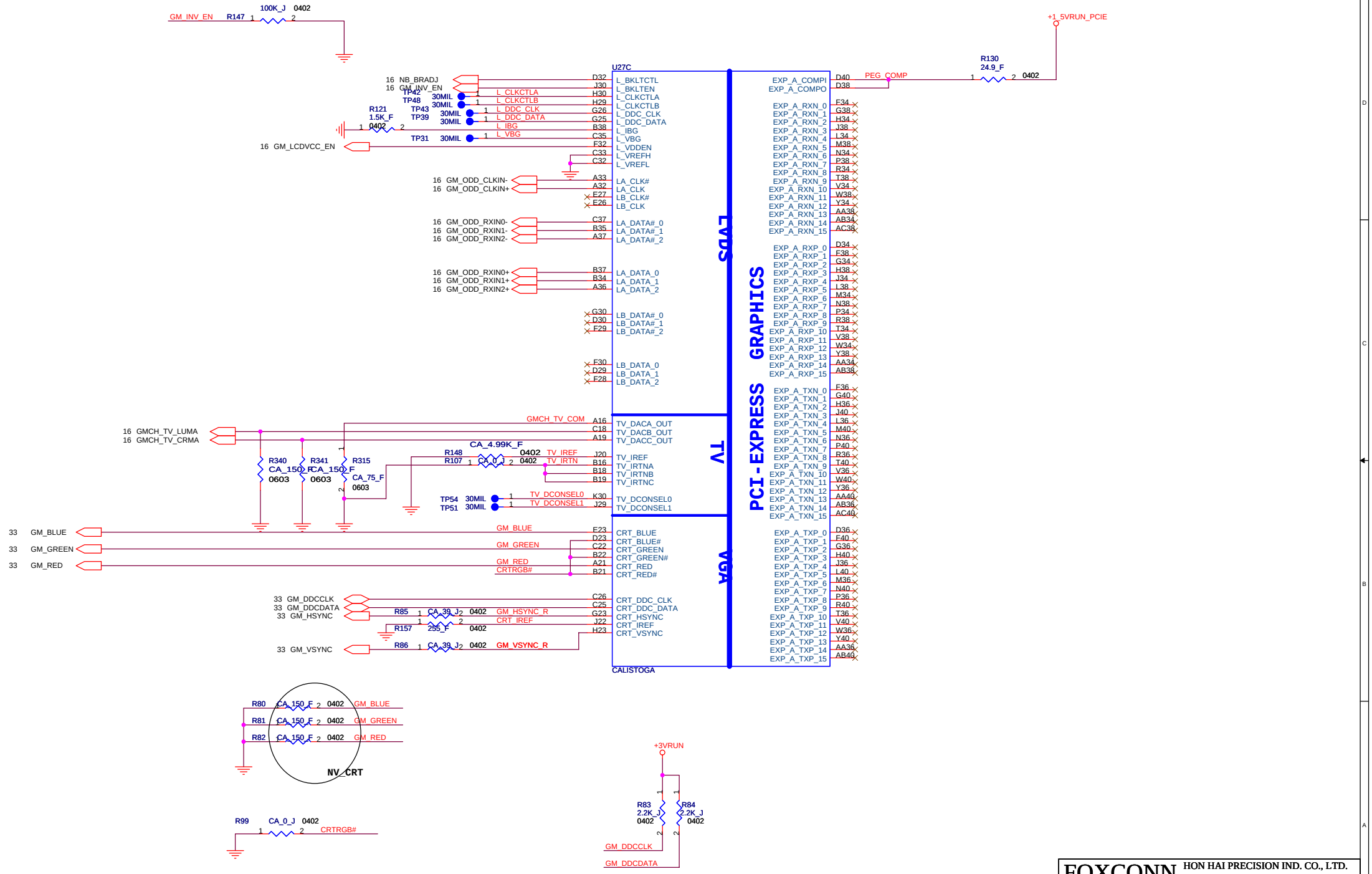

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	CALISTOGA (DMI) 3 of 7	
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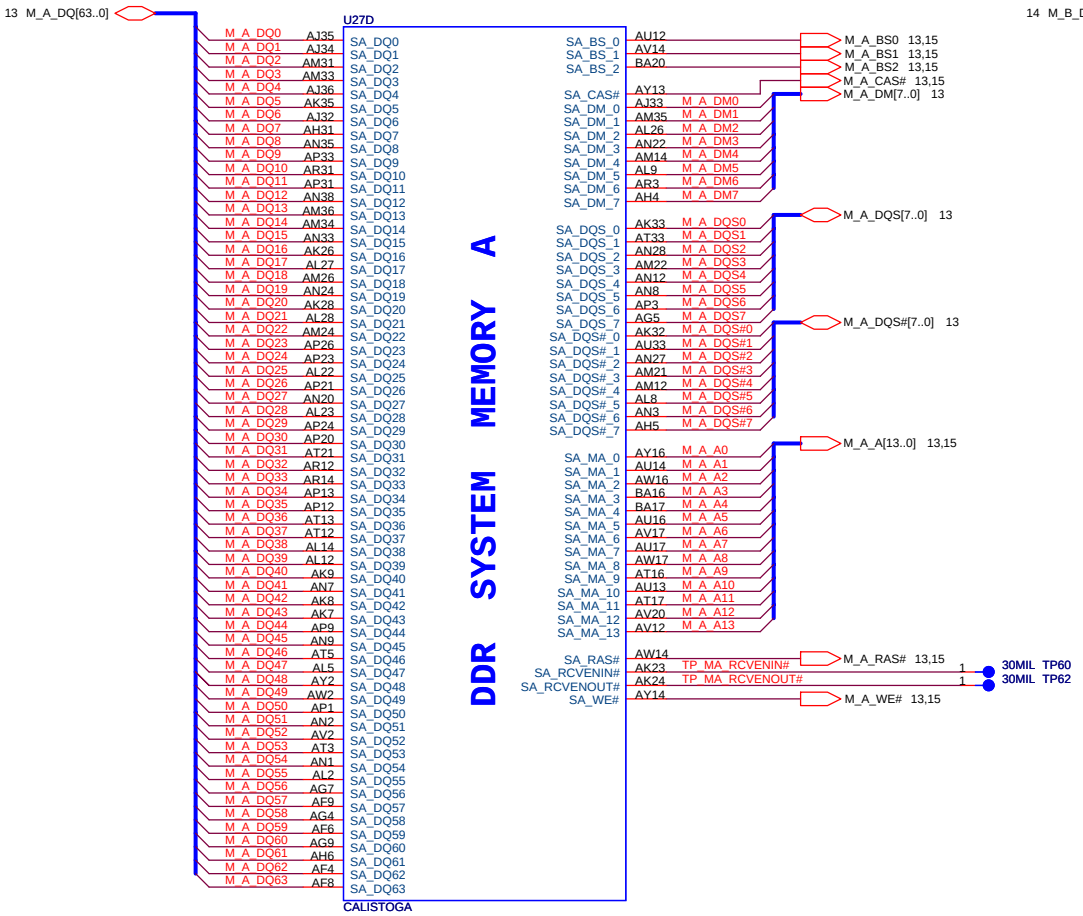

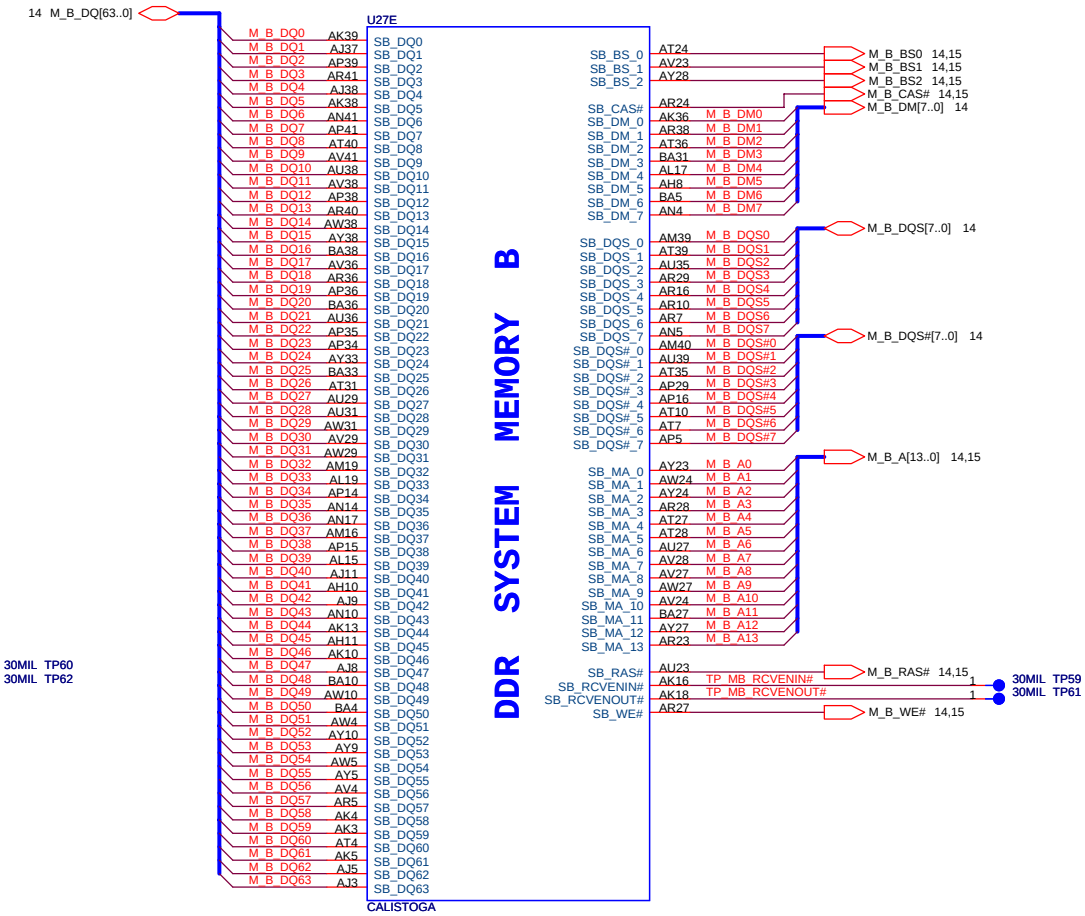

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	CALISTOGA (DDRII) 4 of 7	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
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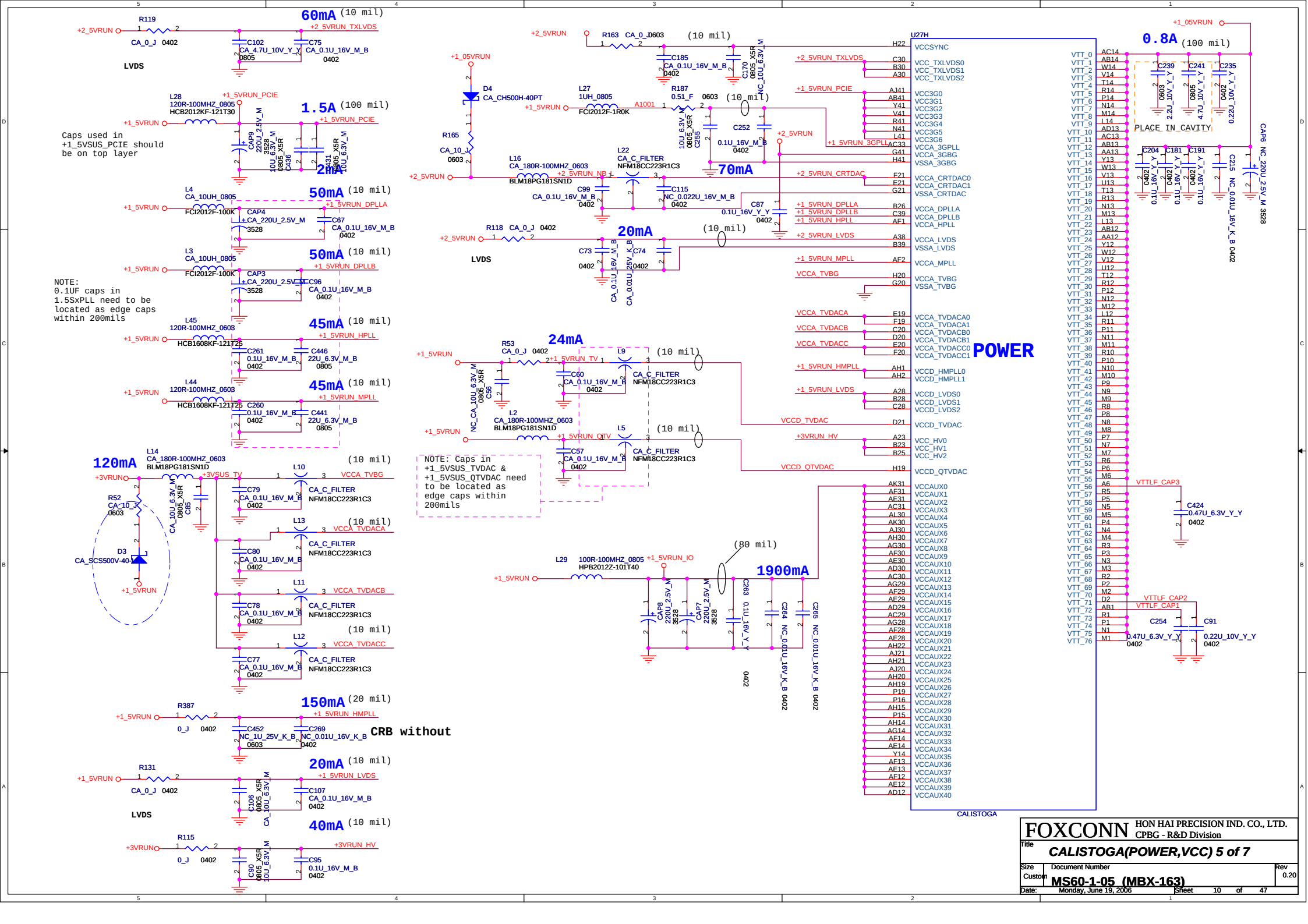
60mA (10 mil)
R119
+2_5VRUN
CA_0_J 0402
C102
CA_4.7U_10V_Y_Y
0805
C75
CA_0.1U_16V_M_B
0402
+2_5VRUN_TXLVDS
LVDS
1.5A (100 mil)
L28
120R-100MHZ_0805
HCB2012KF-121T30
+1_5VRUN_PCIE
+1_5VRUN
CAP9
220U_2.5V_M
3528
C436
10U_6.3V_M
0805_X5R
C431
10U_6.3V_M
0805_X5R
Caps used in
+1_5VSUS_PCIE should
be on top layer
2mA
50mA (10 mil)
L4
CA_10UH_0805
FCI2012F-100K
CAP4
CA_220U_2.5V_M
3528
C67
CA_0.1U_16V_M_B
0402
+1_5VRUN_DPLLA
50mA (10 mil)
L3
CA_10UH_0805
FCI2012F-100K
CAP3
CA_220U_2.5V_M
3528
C96
CA_0.1U_16V_M_B
0402
+1_5VRUN_DPLLB
NOTE:
0.1UF caps in
1.5SxPLL need to be
located as edge caps
within 200mils
45mA (10 mil)
L45
120R-100MHZ_0603
HCB1608KF-121T25
C261
0.1U_16V_M_B
0402
C446
22U_6.3V_M_B
0805
+1_5VRUN_HPLL
45mA (10 mil)
L44
120R-100MHZ_0603
HCB1608KF-121T25
C260
0.1U_16V_M_B
0402
C441
22U_6.3V_M_B
0805
+1_5VRUN_MPLL
120mA
L14
CA_180R-100MHZ_0603
BLM18PG181SN1D
(10 mil)
+3VRUN
+3VSUS_TV
R52
CA_10_J
0603
D3
CA_SCS500V-40-T_J
CA_10U_6.3V_M
0805_X5R
C85
L10
VCCA_TVBG
C79
CA_0.1U_16V_M_B
0402
CA_C_FILTER
NFM18CC223R1C3
L13
VCCA_TVDACA
C80
CA_0.1U_16V_M_B
0402
L11
VCCA_TVDACB
C78
CA_0.1U_16V_M_B
0402
L12
VCCA_TVDACC
C77
CA_0.1U_16V_M_B
0402
150mA (20 mil)
R387
0_J 0402
+1_5VRUN_HMPLL
C452
NC_1U_25V_K_B
0603
C269
NC_0.01U_16V_K_B
0402
CRB without
20mA (10 mil)
R131
CA_0_J 0402
+1_5VRUN_LVDS
C106
0805_X5R
CA_10U_6.3V_M
C107
CA_0.1U_16V_M_B
0402
40mA (10 mil)
R115
0_J 0402
+3VRUN_HV
C90
0805_X5R
10U_6.3V_M
C95
0.1U_16V_M_B
0402
R163 CA_0_J 0603
(10 mil)
C185
CA_0.1U_16V_M_B
0402
C170
0805_X5R
NC_10U_6.3V_M
+1_05VRUN
D4
CA_CH500H-40PT
L27
1UH_0805
FCI2012F-1R0K
A1001
R187
0.51_F 0603
(10 mil)
R165
CA_10_J
0603
C255
10U_6.3V_M
0805_X5R
C252
0.1U_16V_M_B
0402
+2_5VRUN
70mA
L16
CA_180R-100MHZ_0603
BLM18PG181SN1D
+2_5VRUN_NB
L22
CA_C_FILTER
NFM18CC223R1C3
C99
CA_0.1U_16V_M_B
0402
C115
NC_0.022U_16V_M_B
0402
C87
0.1U_16V_Y_Y
0402
R118 CA_0_J 0402
20mA
(10 mil)
LVDS
C73
CA_0.1U_16V_M_B
0402
C74
CA_0.01U_25V_K_B
0402
24mA
R53
CA_0_J 0402
+1_5VRUN_TV
L9
CA_C_FILTER
NFM18CC223R1C3
C60
CA_0.1U_16V_M_B
0402
NC_CA_10U_6.3V_M
0805_X5R
C56
L2
CA_180R-100MHZ_0603
BLM18PG181SN1D
+1_5VRUN_QTV
L5
CA_C_FILTER
NFM18CC223R1C3
C57
CA_0.1U_16V_M_B
0402
NOTE: Caps in
+1_5VSUS_TVDAC &
+1_5VSUS_QTVDAC need
to be located as
edge caps within
200mils
L29
100R-100MHZ_0805
HPB2012Z-101T40
+1_5VRUN_IO
(80 mil)
1900mA
CAP8
220U_2.5V_M
3528
CAP7
220U_2.5V_M
3528
C263
0.1U_16V_Y_Y
0402
C264
NC_0.01U_16V_K_B
0402
C265
NC_0.01U_16V_K_B
0402
U27H
VCCSYNC
VCC_TXLVDS0
VCC_TXLVDS1
VCC_TXLVDS2
VCC3G0
VCC3G1
VCC3G2
VCC3G3
VCC3G4
VCC3G5
VCC3G6
VCCA_3GPLL
VCCA_3GBG
VSSA_3GBG
VCCA_CRTDAC0
VCCA_CRTDAC1
VSSA_CRTDAC
VCCA_DPLLA
VCCA_DPLLB
VCCA_HPLL
VCCA_LVDS
VSSA_LVDS
VCCA_MPLL
VCCA_TVBG
VSSA_TVBG
VCCA_TVDACA0
VCCA_TVDACA1
VCCA_TVDACB0
VCCA_TVDACB1
VCCA_TVDACC0
VCCA_TVDACC1
VCCD_HMPLL0
VCCD_HMPLL1
VCCD_LVDS0
VCCD_LVDS1
VCCD_LVDS2
VCCD_TVDAC
VCC_HV0
VCC_HV1
VCC_HV2
VCCD_QTVDAC
VCCAUX0
VCCAUX1
VCCAUX2
VCCAUX3
VCCAUX4
VCCAUX5
VCCAUX6
VCCAUX7
VCCAUX8
VCCAUX9
VCCAUX10
VCCAUX11
VCCAUX12
VCCAUX13
VCCAUX14
VCCAUX15
VCCAUX16
VCCAUX17
VCCAUX18
VCCAUX19
VCCAUX20
VCCAUX21
VCCAUX22
VCCAUX23
VCCAUX24
VCCAUX25
VCCAUX26
VCCAUX27
VCCAUX28
VCCAUX29
VCCAUX30
VCCAUX31
VCCAUX32
VCCAUX33
VCCAUX34
VCCAUX35
VCCAUX36
VCCAUX37
VCCAUX38
VCCAUX39
VCCAUX40
+2_5VRUN_TXLVDS
+1_5VRUN_PCIE
+1_5VRUN_3GPLL
+2_5VRUN_CRTDAC
+1_5VRUN_DPLLA
+1_5VRUN_DPLLB
+1_5VRUN_HPLL
+2_5VRUN_LVDS
+1_5VRUN_MPLL
VCCA_TVDACA
VCCA_TVDACB
VCCA_TVDACC
+1_5VRUN_HMPLL
+1_5VRUN_LVDS
VCCD_TVDAC
+3VRUN_HV
VCCD_QTVDAC
POWER
CALISTOGA
0.8A (100 mil)
+1_05VRUN
VTT_0
VTT_1
VTT_2
VTT_3
VTT_4
VTT_5
VTT_6
VTT_7
VTT_8
VTT_9
VTT_10
VTT_11
VTT_12
VTT_13
VTT_14
VTT_15
VTT_16
VTT_17
VTT_18
VTT_19
VTT_20
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VTT_67
VTT_68
VTT_69
VTT_70
VTT_71
VTT_72
VTT_73
VTT_74
VTT_75
VTT_76
C239
2.2U_10V_Y_Y
0603
C241
4.7U_10V_Y_Y
0805
C235
1U_Y_10V
0402
PLACE_IN_CAVITY
C204
C181
C191
0.1U_16V_Y_Y
0402
C215
NC_0.01U_16V_K_B
0402
CAP6 NC_220U_2.5V_M 3528
VTTLF_CAP3
C424
0.47U_6.3V_Y_Y
0402
VTTLF_CAP2
VTTLF_CAP1
C254
0.47U_6.3V_Y_Y
0402
C91
0.22U_10V_Y_Y
0402
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HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
CALISTOGA(POWER,VCC) 5 of 7
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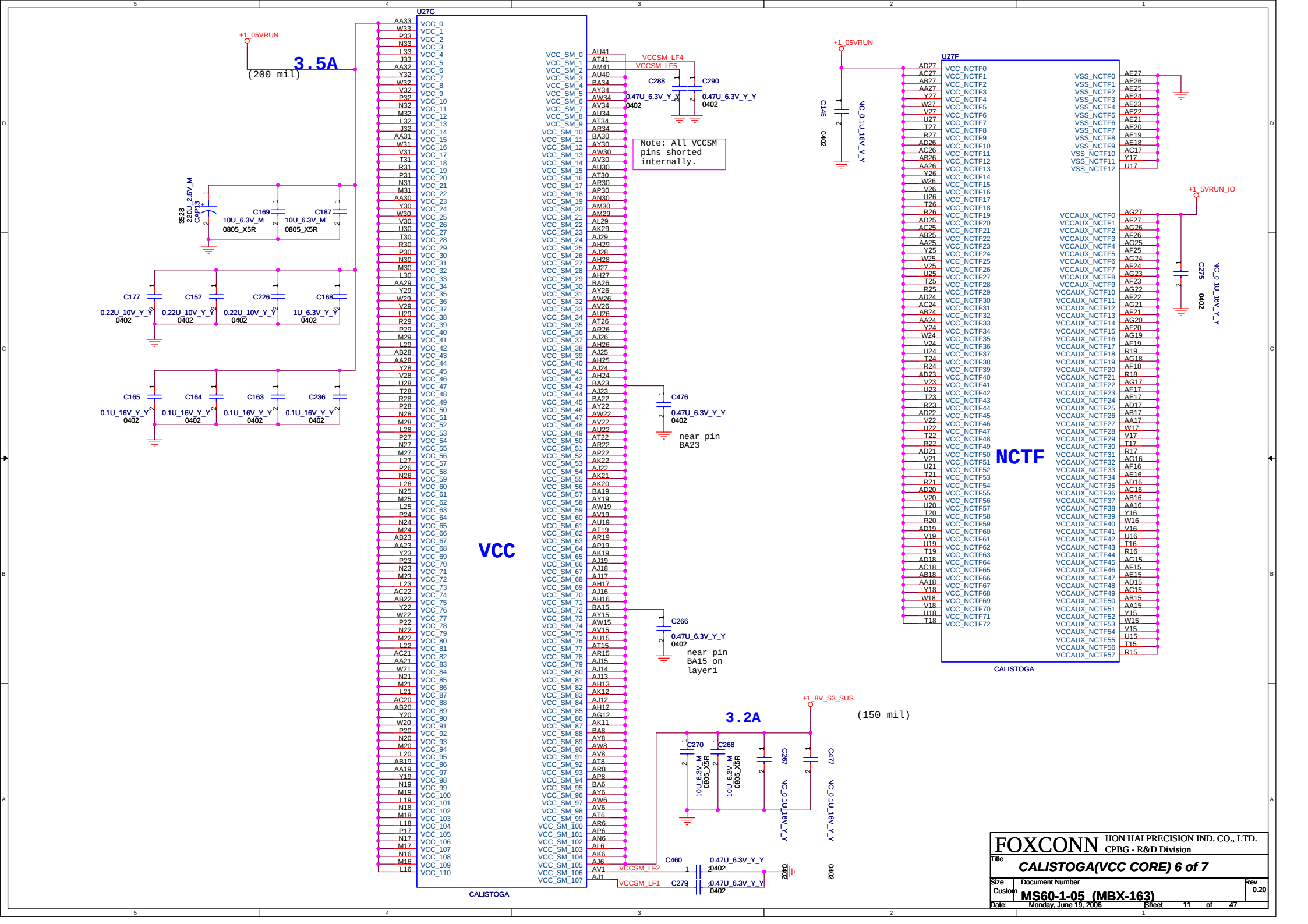

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	CALISTOGA(VCC CORE) 6 of 7
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7 MCH_CFG_5 — 30MIL TP45

MCH_CFG_5	Low = DMIx2 High = DMIx4

7 MCH_CFG_6 — 30MIL TP40

MCH_CFG_6	Low = Moby Dick High = Calistoga

DDR2 select (default high)

7 MCH_CFG_7 — 30MIL TP36

MCH_CFG_7 (CPU Strap)	Low = RSVD High = Mobile Yonah processor

7 MCH_CFG_9 — R153 NC_2.2K_J 0402

MCH_CFG_9 (PCIE Graphics Lane)	Low = Reverse Lane High = Normal operation

For layout convenience

7 MCH_CFG_10 — 30MIL TP35

MCH_CFG_10 (HOST PLL VCC SELECT)	Low = RESERVED High = MOBILITY

7 MCH_CFG_11 — R128 NC_2.2K_J 0402

MCH_CFG_11 (PSB 4x CLK ENABLE)	Low = Reserved High= Calistoga

7 MCH_CFG_12 — 30MIL TP47
7 MCH_CFG_13 — 30MIL TP55

MCH_CFG_[13:12] (XOR/ALLZ)	00=Partial Clock Gating Disable 01=XOR Mode Enable 10=All-Z Mode Enable 11=Normal Operation(Default)

7 MCH_CFG_16 — 30MIL TP44

MCH_CFG_16 (FSB Dynamic ODT)	Low = Dynamic ODT Disabled High = Dynamic ODT Enable

MCH_CFG_18 (VCC_CORE Select)	Low = 1.05V(default) High = 1.5V

+3VRUN — R156 NC_2.2K_J 0402 — 7 MCH_CFG_18

MCH_CFG_19 (DMI LANE REVERSAL)	Low = Normal(default) High = LANES REVERSED

+3VRUN — R151 NC_2.2K_J 0402 — 7 MCH_CFG_19

MCH_CFG_20 (PCIe Backward Interpoerability mode)	Low = Only SDVO or PCIE x1 is operational (defaults)) High = SDVO and PCIE x1 are operating simultaneously via the PEG port

7 MCH_CFG_20 — 30MIL TP52

Layout Noe:
Location of all MCH_CFG strap resistors needs to be close to trace to minimize stub

Check CALISTOGA version , after A2 version , if systec can't boot up then NC the pull low R

U27I

VSS

CALISTOGA

U27J

VSS

CALISTOGA

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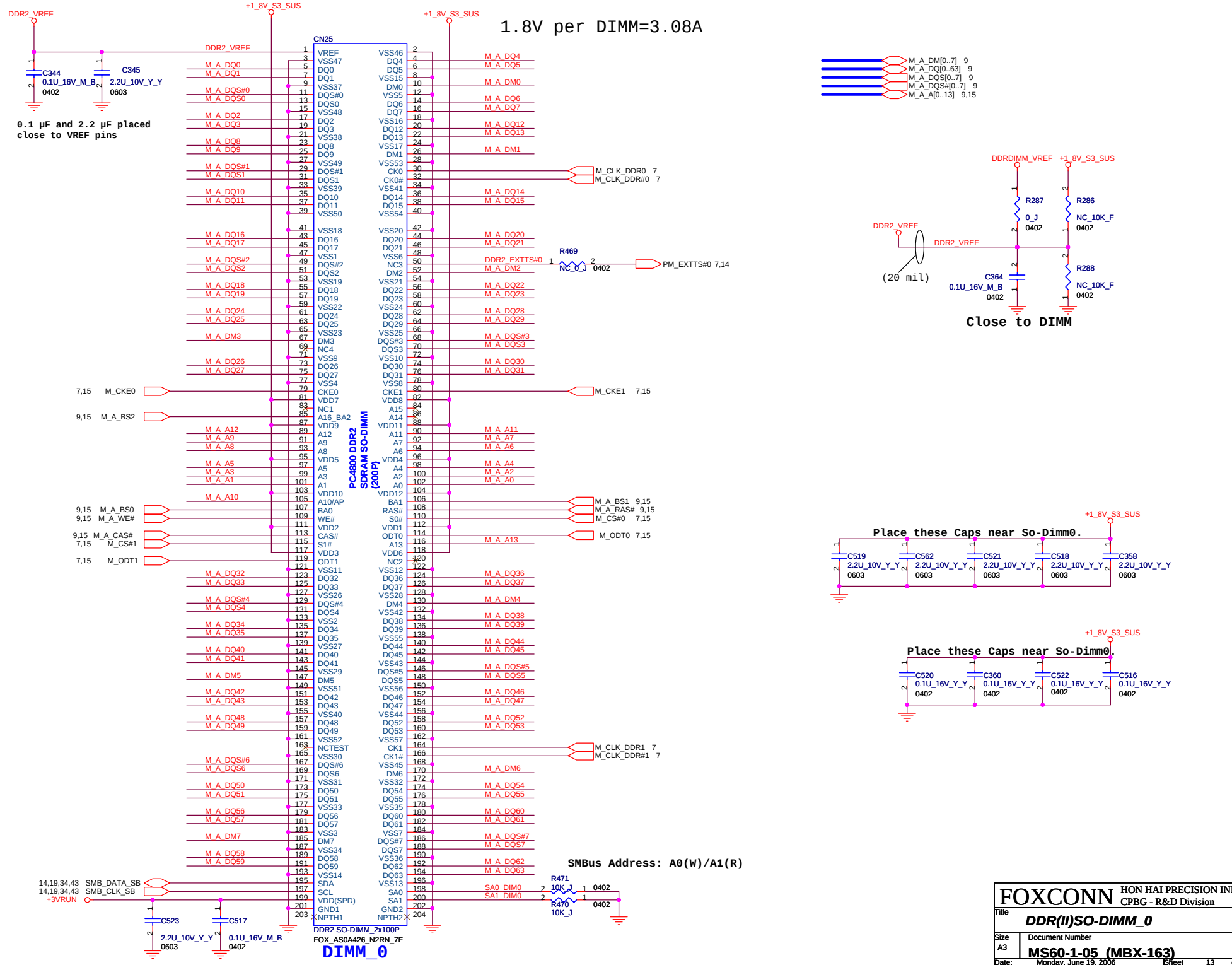
CPBG - R&D Division

Title: CALISTOGA(VSS) 7 of 7

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 12 of 47



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

Title: DDR(II)SO-DIMM_0

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 13 of 47

DDR2_VREF

C363 0.1U_16V_M_B 0402

C362 2.2U_10V_Y_Y 0603

0.1 µF and 2.2 µF placed close to VREF pins

+1_8V_S3_SUS

+1_8V_S3_SUS

1.8V per DIMM=3.08A

CN26

1	VREF	VSS46	2
3	VSS47	DQ4	4
5	DQ0	DQ5	6
7	DQ1	VSS15	8
9	VSS37	DM0	10
11	DQS#0	VSS5	12
13	DQS0	DQ6	14
15	VSS48	DQ7	16
17	DQ2	VSS16	18
19	DQ3	DQ12	20
21	VSS38	DQ13	22
23	DQ8	VSS17	24
25	DQ9	DM1	26
27	VSS49	VSS53	28
29	DQS#1	CK0	30
31	DQS1	CK0#	32
33	VSS39	VSS41	34
35	DQ10	DQ14	36
37	DQ11	DQ15	38
39	VSS50	VSS54	40
41	VSS18	VSS20	42
43	DQ16	DQ20	44
45	DQ17	DQ21	46
47	VSS1	VSS6	48
49	DQS#2	NC3	50
51	DQS2	DM2	52
53	VSS19	VSS21	54
55	DQ18	DQ22	56
57	DQ19	DQ23	58
59	VSS22	VSS24	60
61	DQ24	DQ28	62
63	DQ25	DQ29	64
65	VSS23	VSS25	66
67	DM3	DQS#3	68
69	NC4	DQS3	70
71	VSS9	VSS10	72
73	DQ26	DQ30	74
75	DQ27	DQ31	76
77	VSS4	VSS8	78
79	CKE0	CKE1	80
81	VDD7	VDD8	82
83	NC1	A15	84
85	A16_BA2	A14	86
87	VDD9	VDD11	88
89	A12	A11	90
91	A9	A7	92
93	A8	A6	94
95	VDD5	VDD4	96
97	A5	A4	98
99	A3	A2	100
101	A1	A0	102
103	VDD10	VDD12	104
105	A10/AP	BA1	106
107	BA0	RAS#	108
109	WE#	S0#	110
111	VDD2	VDD1	112
113	CAS#	ODT0	114
115	S1#	A13	116
117	VDD3	VDD6	118
119	ODT1	NC2	120
121	VSS11	VSS12	122
123	DQ32	DQ36	124
125	DQ33	DQ37	126
127	VSS26	VSS28	128
129	DQS#4	DM4	130
131	DQS4	VSS42	132
133	VSS2	DQ38	134
135	DQ34	DQ39	136
137	DQ35	VSS55	138
139	VSS27	DQ44	140
141	DQ40	DQ45	142
143	DQ41	VSS43	144
145	VSS29	DQS#5	146
147	DM5	DQS5	148
149	VSS51	VSS56	150
151	DQ42	DQ46	152
153	DQ43	DQ47	154
155	VSS40	VSS44	156
157	DQ48	DQ52	158
159	DQ49	DQ53	160
161	VSS52	VSS57	162
163	NCTEST	CK1	164
165	VSS30	CK1#	166
167	DQS#6	VSS45	168
169	DQS6	DM6	170
171	VSS31	VSS32	172
173	DQ50	DQ54	174
175	DQ51	DQ55	176
177	VSS33	VSS35	178
179	DQ56	DQ60	180
181	DQ57	DQ61	182
183	VSS3	VSS7	184
185	DM7	DQS#7	186
187	VSS34	DQS7	188
189	DQ58	VSS36	190
191	DQ59	DQ62	192
193	VSS14	DQ63	194
195	SDA	VSS13	196
197	SCL	SA0	198
199	VDD(SPD)	SA1	200
201	GND1	GND2	202
203	NPTH1	NPTH2	204

PC4800 DDR2 SDRAM SO-DIMM (200P)

DDR2 SO-DIMM_2x100P

FOX_AS0A426_NARN_7F

DIMM_1

M_B_DQ0 M_B_DQ1 M_B_DQS#0 M_B_DQS0 M_B_DQ2 M_B_DQ3 M_B_DQ8 M_B_DQ9 M_B_DQS#1 M_B_DQS1 M_B_DQ10 M_B_DQ11 M_B_DQ16 M_B_DQ17 M_B_DQS#2 M_B_DQS2 M_B_DQ18 M_B_DQ19 M_B_DQ24 M_B_DQ25 M_B_DM3 M_B_DQ26 M_B_DQ27

7,15 M_CKE2

9,15 M_B_BS2

M_B_A12 M_B_A9 M_B_A8 M_B_A5 M_B_A3 M_B_A1 M_B_A10

9,15 M_B_BS0

9,15 M_B_WE#

9,15 M_B_CAS#

7,15 M_CS#3

7,15 M_ODT3

M_B_DQ32 M_B_DQ33 M_B_DQS#4 M_B_DQS4 M_B_DQ34 M_B_DQ35 M_B_DQ40 M_B_DQ41 M_B_DM5 M_B_DQ42 M_B_DQ43 M_B_DQ48 M_B_DQ49 M_B_DQS#6 M_B_DQS6 M_B_DQ50 M_B_DQ51 M_B_DQ56 M_B_DQ57 M_B_DM7 M_B_DQ58 M_B_DQ59

13,19,34,43 SMB_DATA_SB

13,19,34,43 SMB_CLK_SB

+3VRUN

C365 2.2U_10V_Y_Y 0603

C372 0.1U_16V_M_B 0402

M_B_DQ4 M_B_DQ5 M_B_DQ0 M_B_DQ6 M_B_DQ7 M_B_DQ12 M_B_DQ13 M_B_DM1

M_CLK_DDR3 7

M_CLK_DDR#3 7

M_B_DQ14 M_B_DQ15 M_B_DQ20 M_B_DQ21

R509 NC_0_J 0402

PM_EXTTS#0_DIMM2 1

PM_EXTTS#0 7,13

M_B_DM2 M_B_DQ22 M_B_DQ23 M_B_DQ28 M_B_DQ29 M_B_DQS#3 M_B_DQS3 M_B_DQ30 M_B_DQ31

M_CKE3 7,15

M_B_A11 M_B_A7 M_B_A6 M_B_A4 M_B_A2 M_B_A0

M_B_BS1 9,15

M_B_RAS# 9,15

M_CS#2 7,15

M_ODT2 7,15

M_B_A13

9.2mm

M_B_DQ36 M_B_DQ37 M_B_DM4 M_B_DQ38 M_B_DQ39 M_B_DQ44 M_B_DQ45 M_B_DQS#5 M_B_DQS5 M_B_DQ46 M_B_DQ47 M_B_DQ52 M_B_DQ53

M_CLK_DDR2 7

M_CLK_DDR#2 7

M_B_DM6 M_B_DQ54 M_B_DQ55 M_B_DQ60 M_B_DQ61 M_B_DQS#7 M_B_DQS7 M_B_DQ62 M_B_DQ63

SA0_DIM1

SA1_DIM1

R508 10K_J 0402

R507 10K_J 0402

+3VRUN

SMBus Address: A4(W)/A5(R)

M_B_DM[0..7] 9

M_B_DQ[0..63] 9

M_B_DQS[0..7] 9

M_B_DQS#[0..7] 9

M_B_A[0..13] 9,15

Place these Caps near So-Dimm1.

+1_8V_S3_SUS

C359 2.2U_10V_Y_Y 0603

C357 2.2U_10V_Y_Y 0603

C376 2.2U_10V_Y_Y 0603

C563 2.2U_10V_Y_Y 0603

C377 2.2U_10V_Y_Y 0603

Place these Caps near So-Dimm1.

+1_8V_S3_SUS

C564 0.1U_16V_Y_Y 0402

C375 0.1U_16V_Y_Y 0402

C378 0.1U_16V_Y_Y 0402

C374 0.1U_16V_Y_Y 0402

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

Title: ***DDR(II)SO-DIMM_1***

Size: Custom | Document Number: **MS60-1-05 (MBX-163)** | Rev: 0.20

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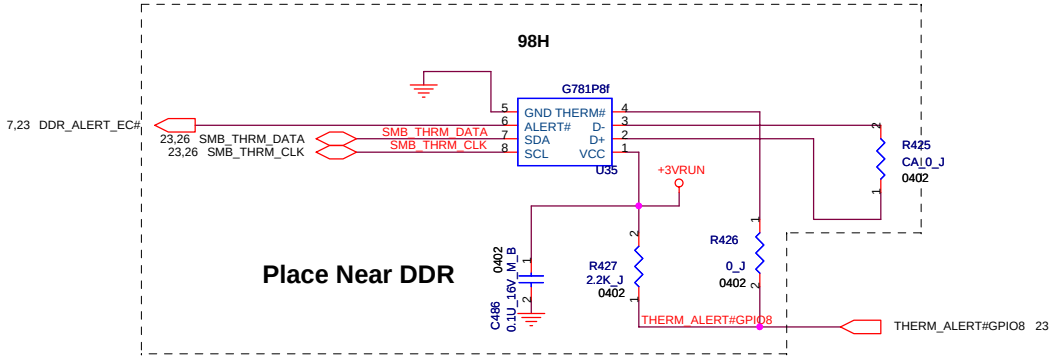
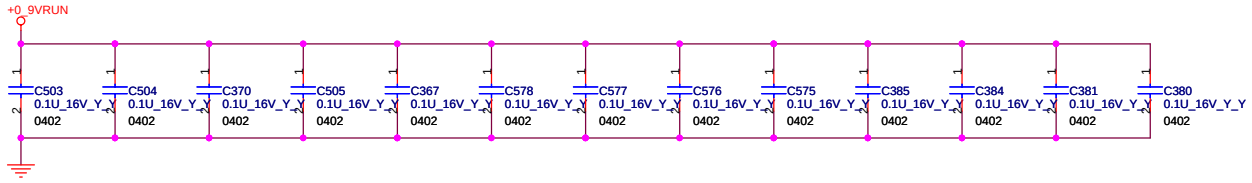
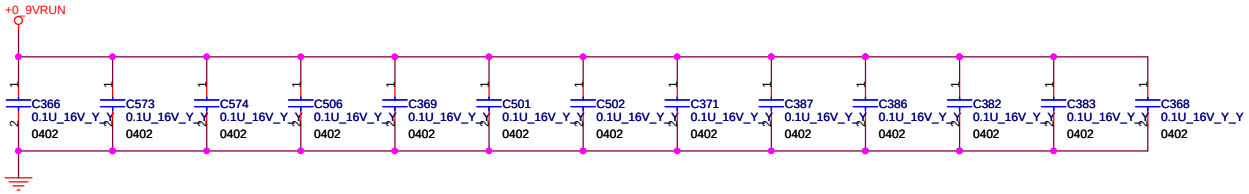


9,13 M_A_A[0..13]

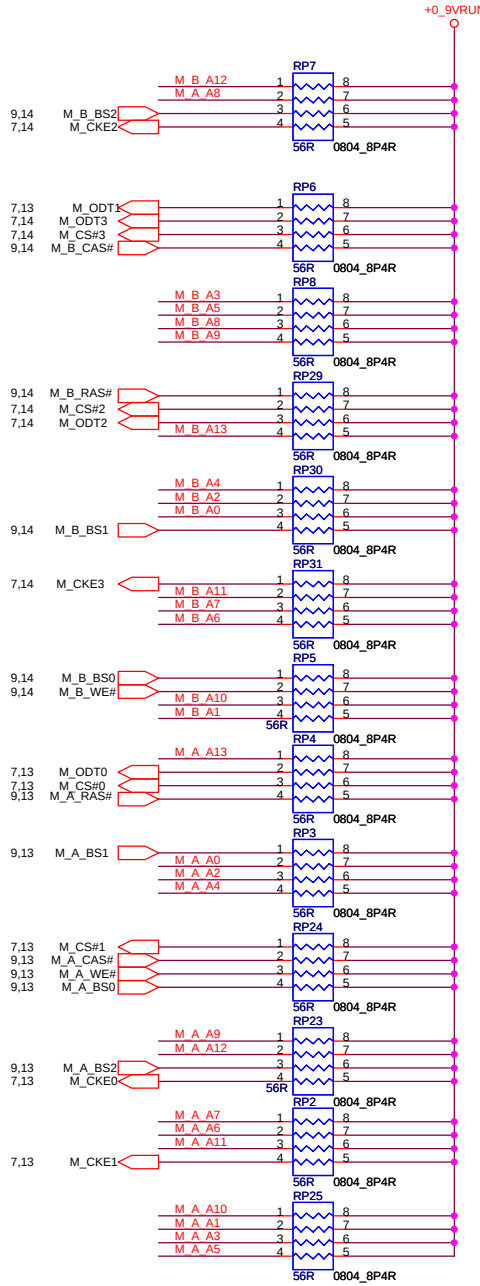
9,14 M_B_A[0..13]



Layout note: Place 1 cap close to every 1 R-pack terminated to +0_9VRUN



Layout note: Place 1 cap close to every 1 R-pack terminated to +0_9VRUN



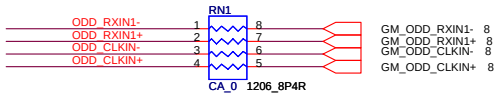
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

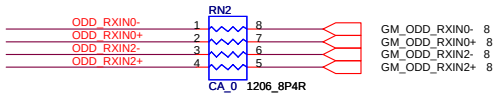
Title: ***DDR(II)Termination***

Size	Document Number	Rev
A3	MS60-1-05 (MBX-163)	0.20

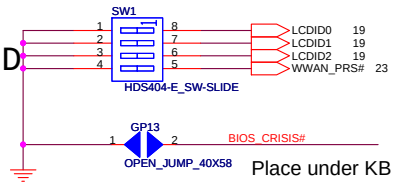
Date: Monday, June 19, 2006 Sheet 15 of 47

LVDS

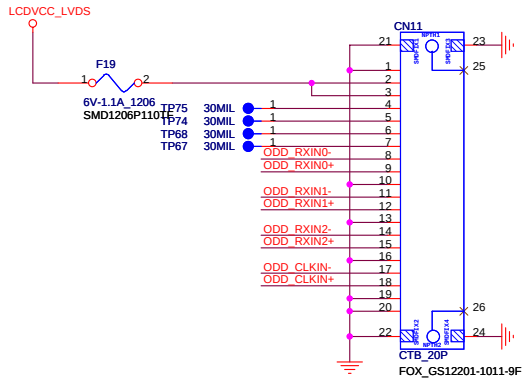




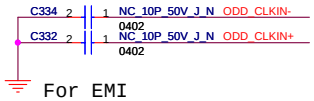
PANEL ID



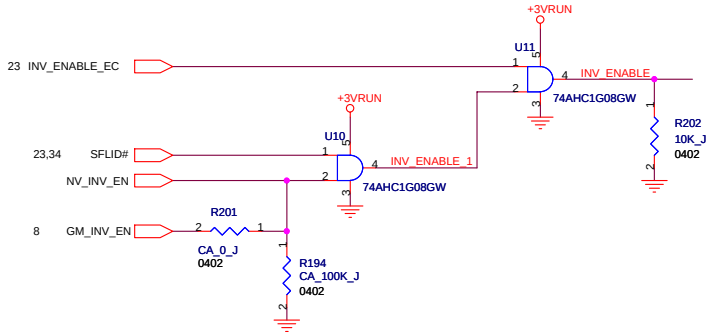
Size	13.3" wide		
Vendor	AUO	SHARP	
Type			
Panel ID Check[2..0]	001	010	



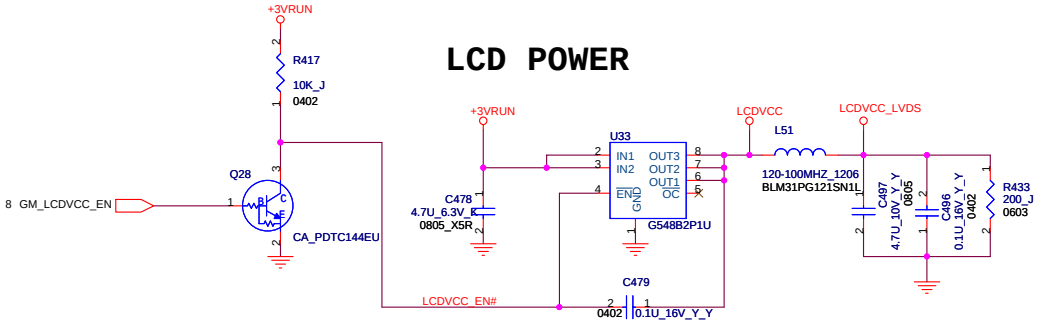
LVDS CONNECTOR

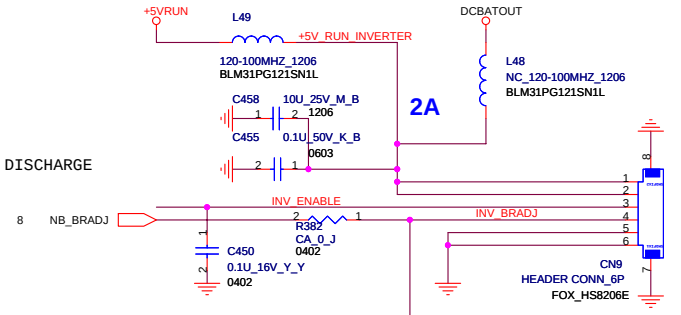


For EMI

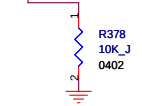


LCD POWER

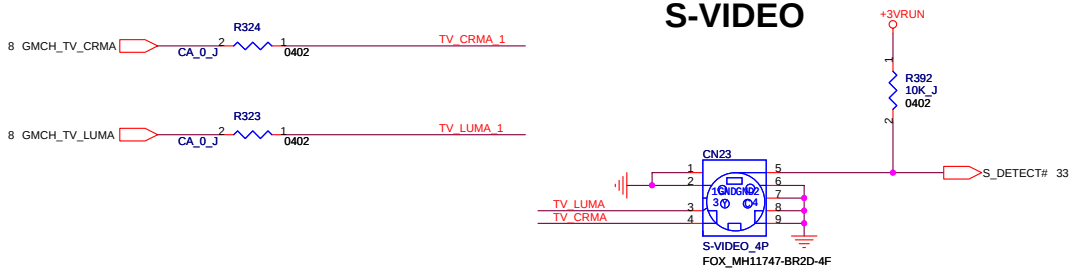


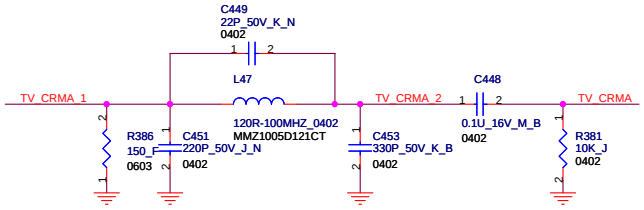


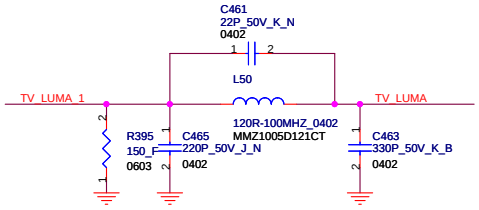
INVERTER CONNECTOR



S-VIDEO







FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	LVDS / S_VIDEO	
Size: Custom	Document Number: MS60-1-05 (MBX-163)	Rev: 0.20
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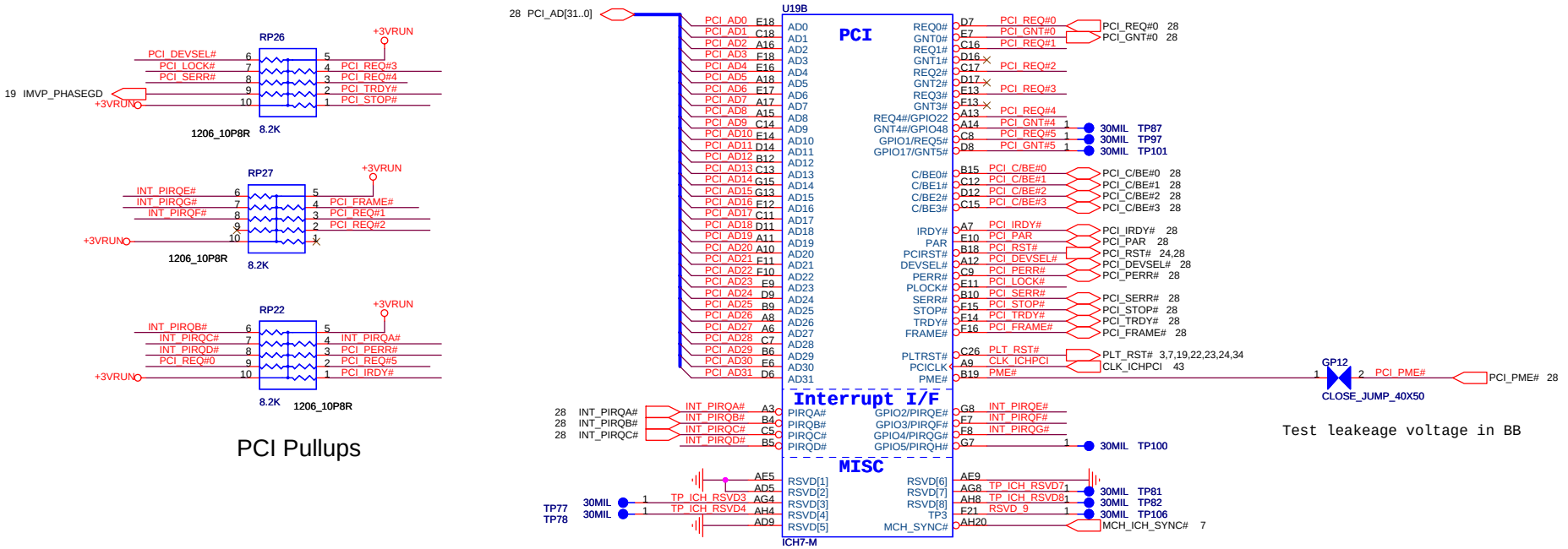

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	ICH7-M(PCI/DMI/USB/PCIE) 1/5	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
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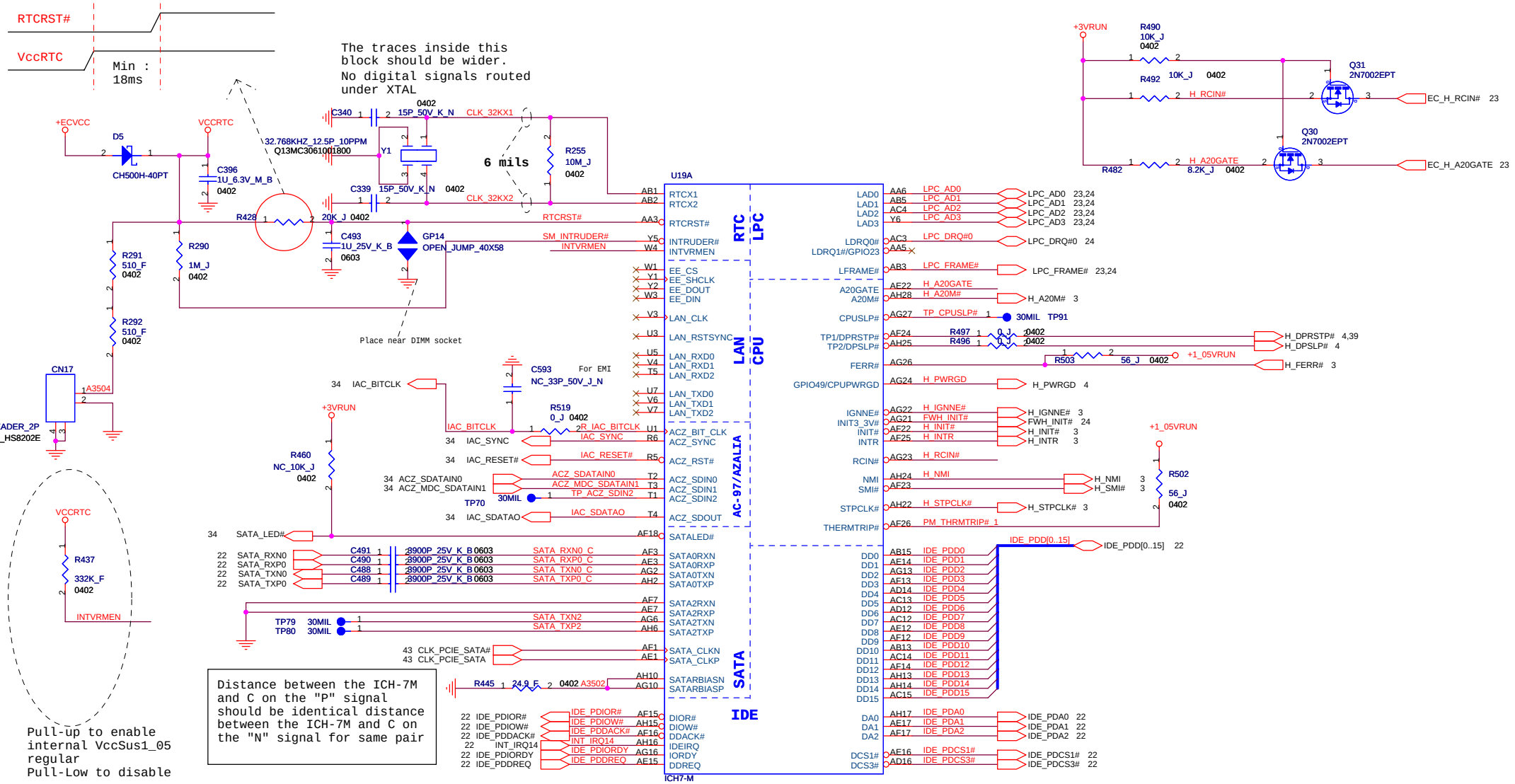

FOXCONN	HON HAI PRECISION IND. CO., LTD.	
	CPBG - R&D Division	
Title	*ICH7-M(LPC,IDE,SATA) 2/5*	
Size A3	Document Number **MS60-1-05 (MBX-163)**	Rev 0.20
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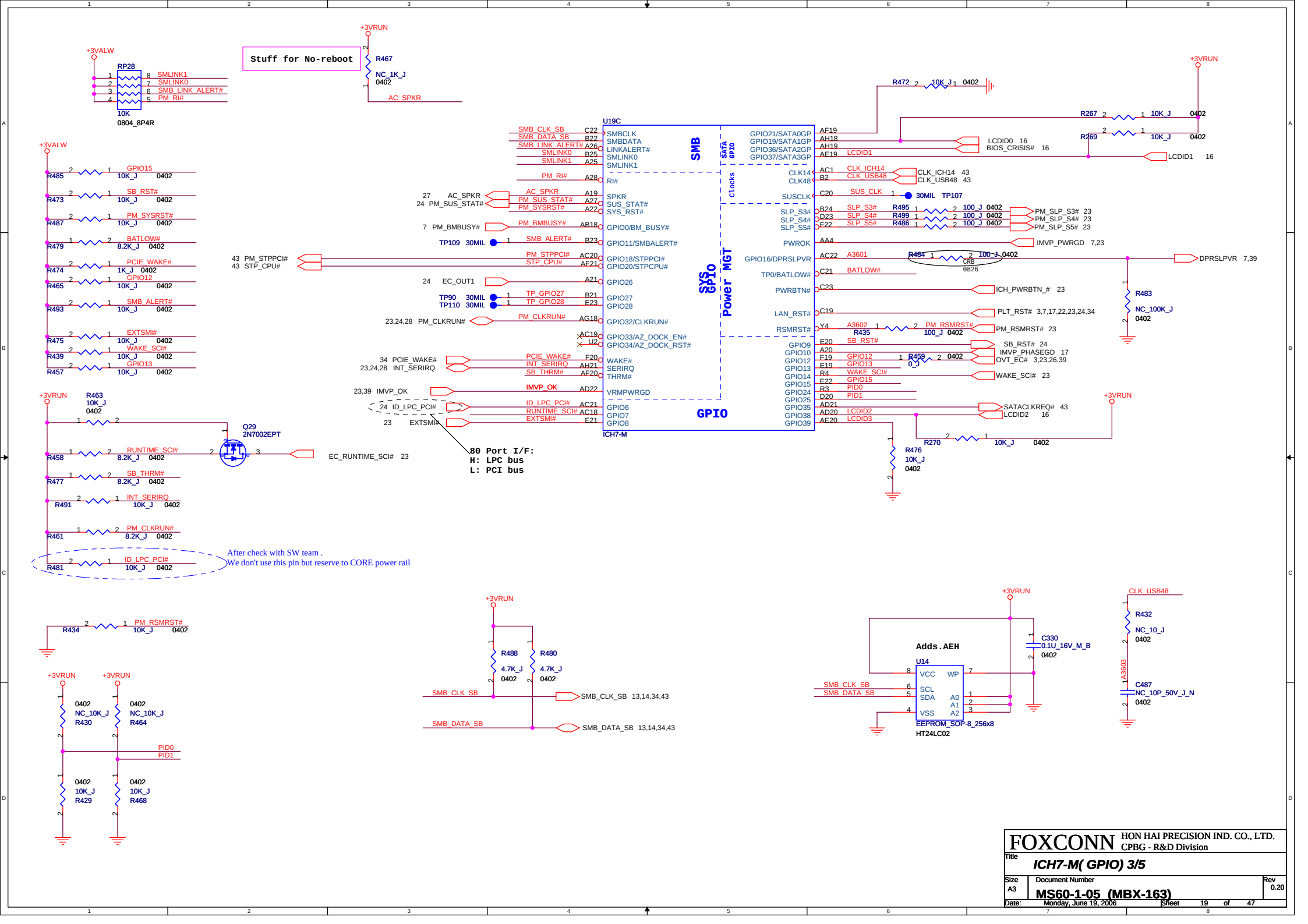
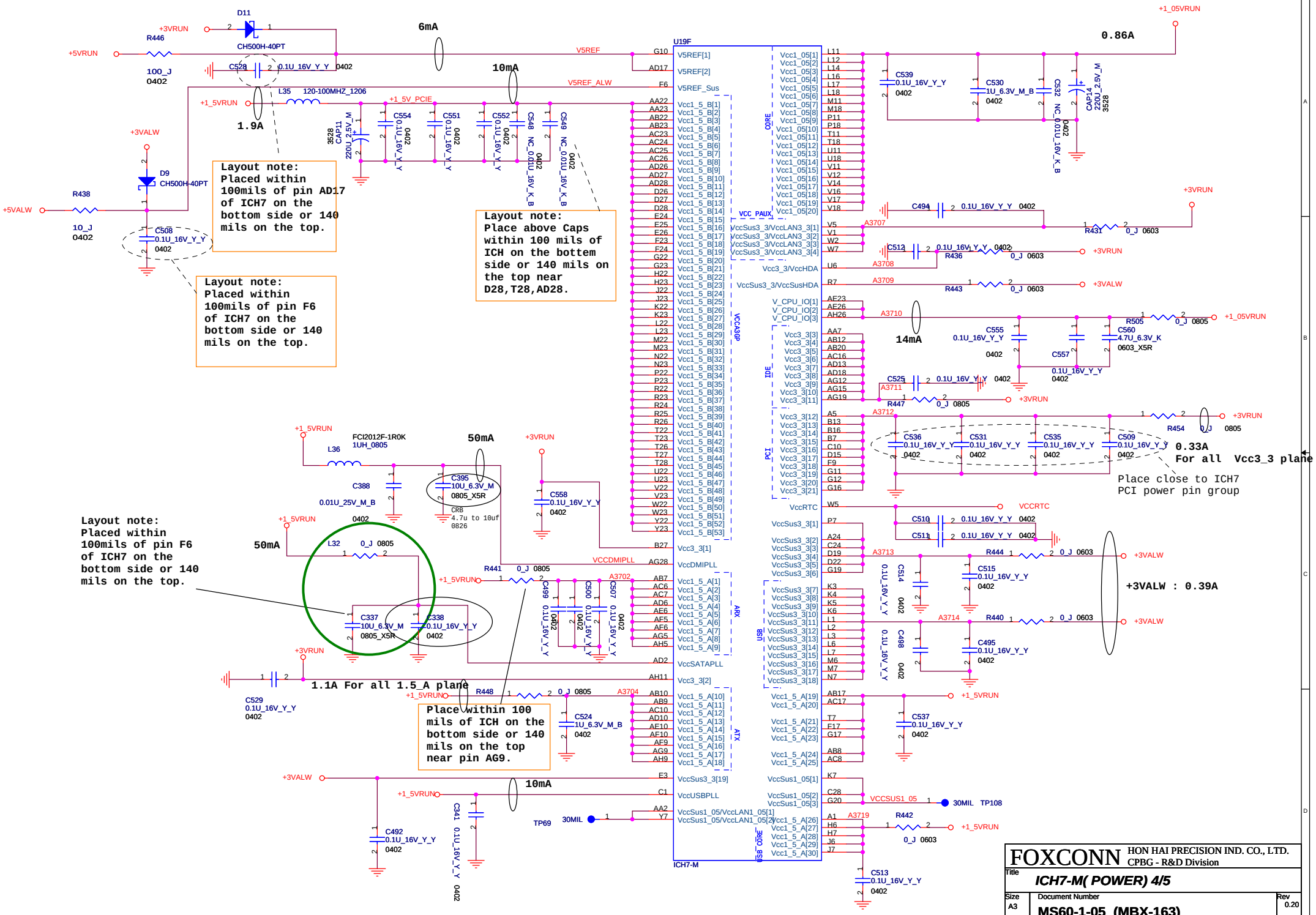


FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	*ICH7-M(GPIO) 3/5*
Size A3	Document Number **MS60-1-05 (MBX-163)** Rev 0.20
Date: Monday, June 19, 2006	Sheet 19 of 47


Layout note: Placed within 100mils of pin AD17 of ICH7 on the bottom side or 140 mils on the top.
Layout note: Place above Caps within 100 mils of ICH on the bottem side or 140 mils on the top near D28,T28,AD28.
Layout note: Placed within 100mils of pin F6 of ICH7 on the bottom side or 140 mils on the top.
Layout note: Placed within 100mils of pin F6 of ICH7 on the bottom side or 140 mils on the top.
Place within 100 mils of ICH on the bottom side or 140 mils on the top near pin AG9.
1.1A For all 1.5_A plane
0.33A For all Vcc3_3 plane
Place close to ICH7 PCI power pin group
+3VALW : 0.39A
0.86A
14mA
50mA
10mA
6mA
1.9A
ICH7-M
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH7-M(POWER) 4/5
MS60-1-05 (MBX-163)
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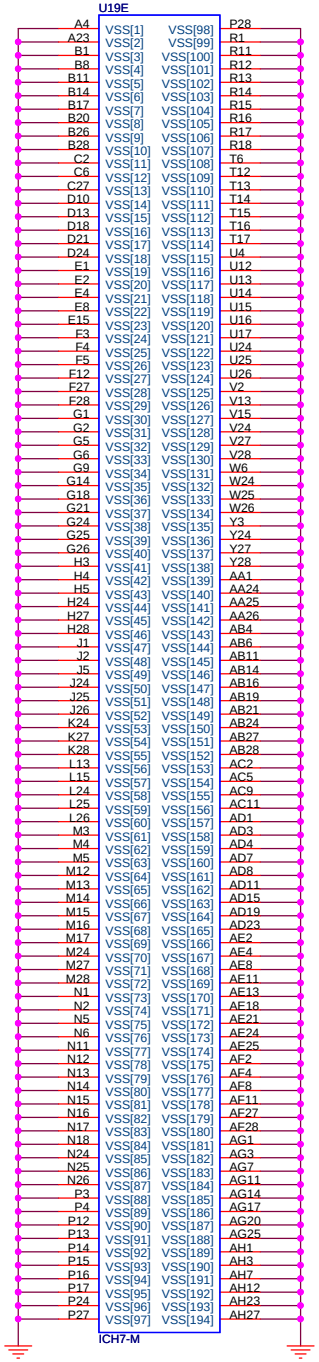

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	*ICH7-M(GND) 5/5*	
Size A3	Document Number **MS60-1-05 (MBX-163)**	Rev 0.20
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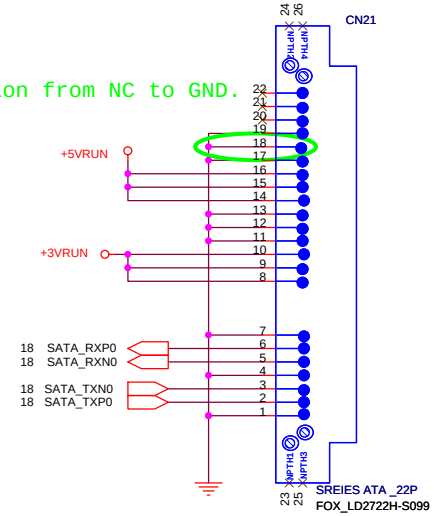
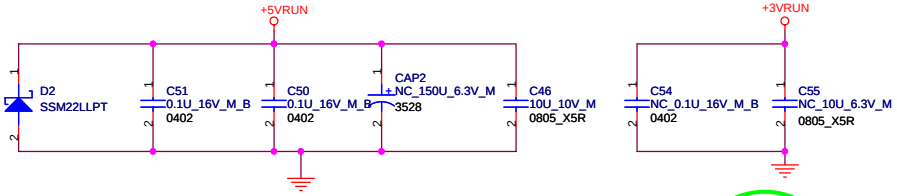
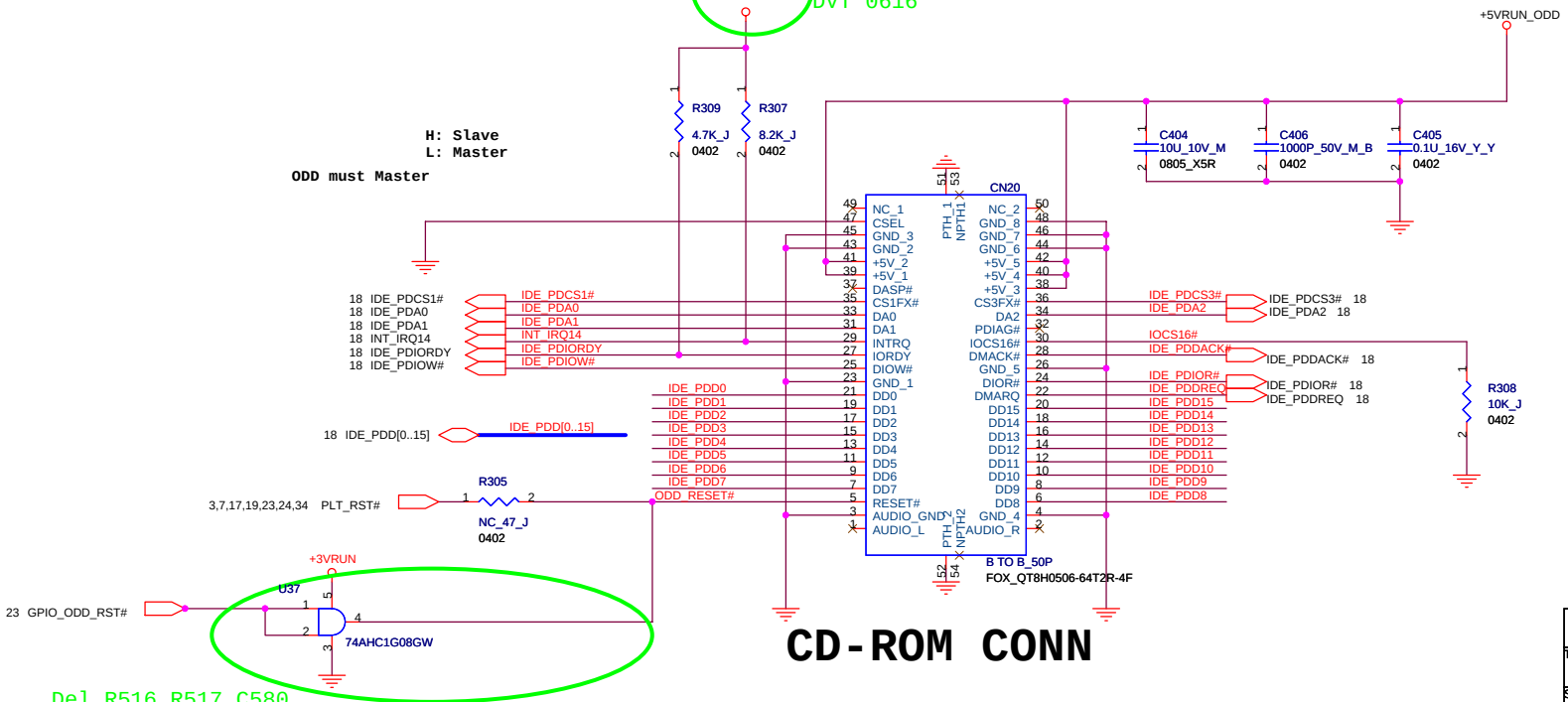
SATA HDD CONN

CN21's pin18 change connection from NC to GND.
DVT 0616





Change from +3VRUN to +3VRUN_ODD
DVT 0616



CD-ROM CONN

Del R516,R517,C580
DVT 0615

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	SATA HDD/CD-ROM	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
Date: Monday, June 19, 2006	Sheet 22 of 47	

Consider short FB after BB test.

M-ID	0	1	2	3	4	5	
MS60-L	1	0	1	1	1	0	940GML
MS60-H	0	1	1	1	1	0	945PM
MS60-M	1	1	1	1	1	0	945GM

M-ID 5: 0- MS60 and the following MS60 type
1- MS70 and the following MS70 type
M-ID 2~4: 1- Reserved
M-ID 1: 0- Intel 940 series
1- Intel 945 series
M-ID 0: 0- External Gfx.
1- Internal Gfx.

change R244 connection form ''ALW_ON'' to ''ALW_ON_1'' DVT 0615

PORT_DET# change from pin81 to pin176 TP85 change from pin176 to pin81 DVT 0616

Add R521 DVT 0615

Add VISTA_SUPPORT# for Vista. DVT 0616

Add GPIO_ODD_RST# for ODD reset. DVT 0615

MODEL ID check with software define

FOR EMI

Title	EC+KBC
Size / Custom	Document Number: MS60-1-05 (MBX-163)
Rev	0.20
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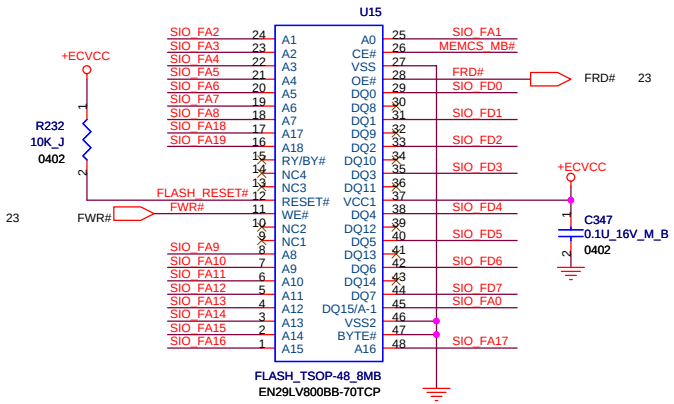
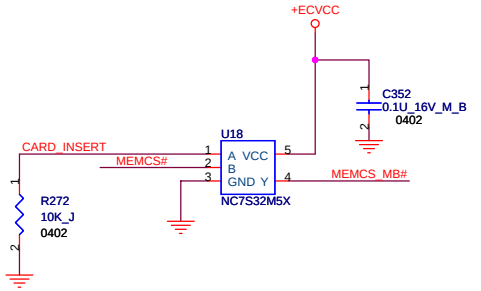
FOXCONN — HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division

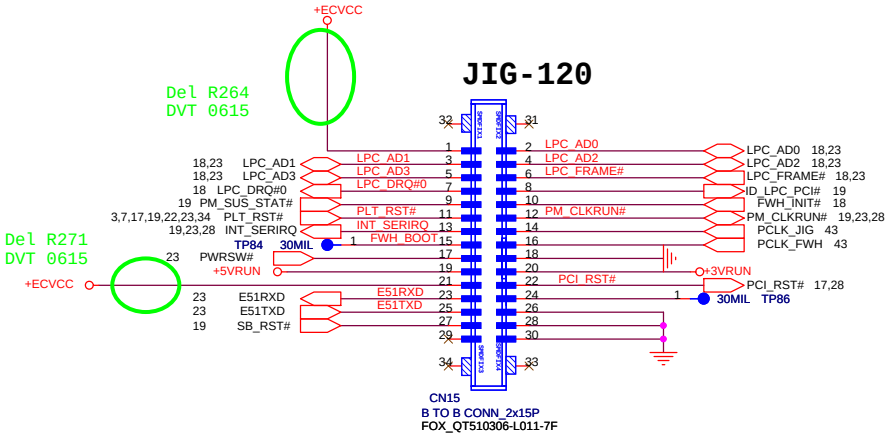
23 SIO_FA[19..0]

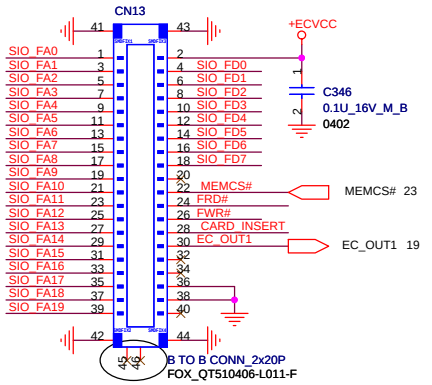
23 SIO_FD[7..0]



BIOS ROM







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

Title: *Flash ROM/X-Bus CONN*

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

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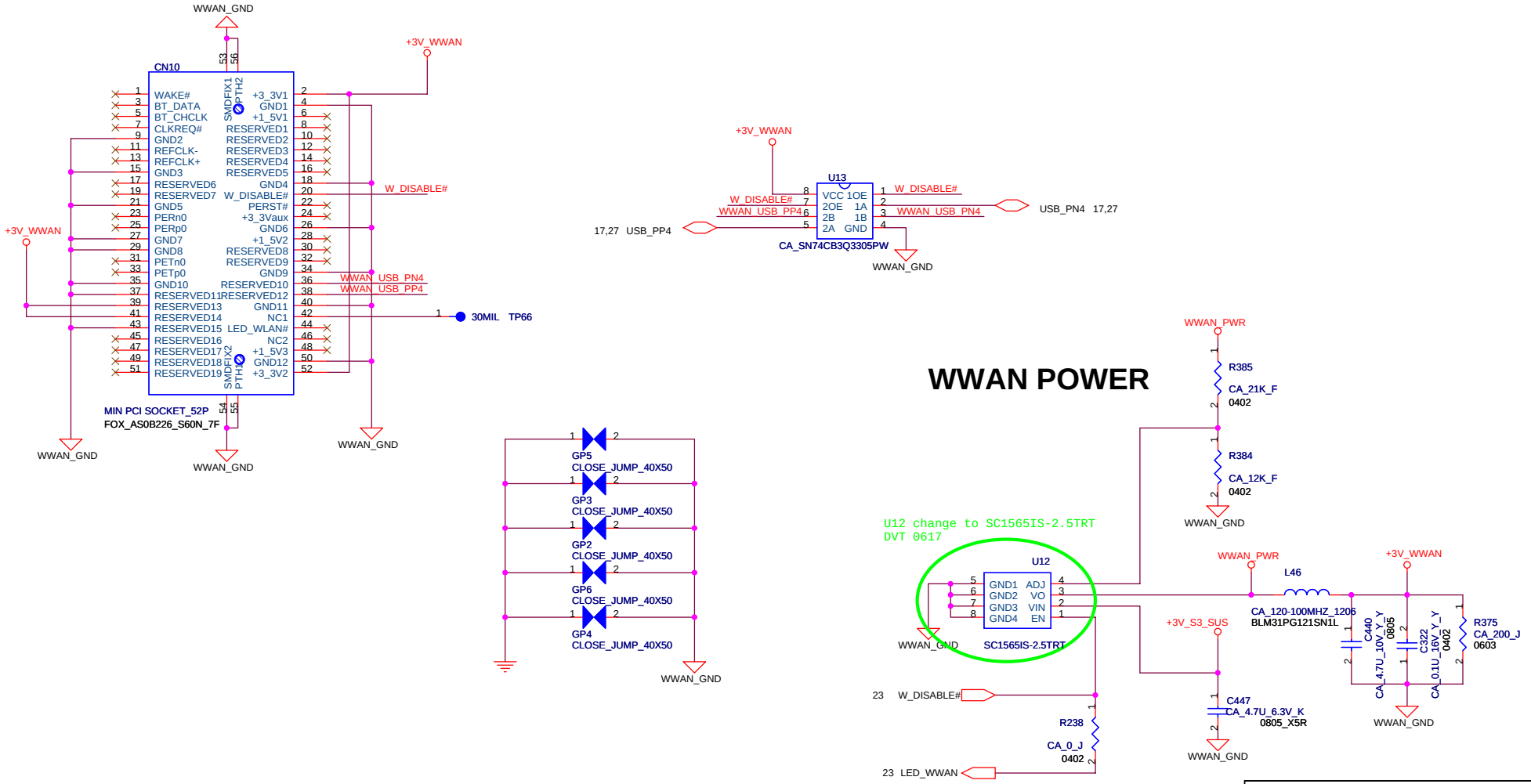

FOXCONN HON HAI PRECISION IND. CO., LTD.
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Title: WWAN

Size	Document Number	Rev
Custom	MS60-1-05_(MBX-163)	0.20

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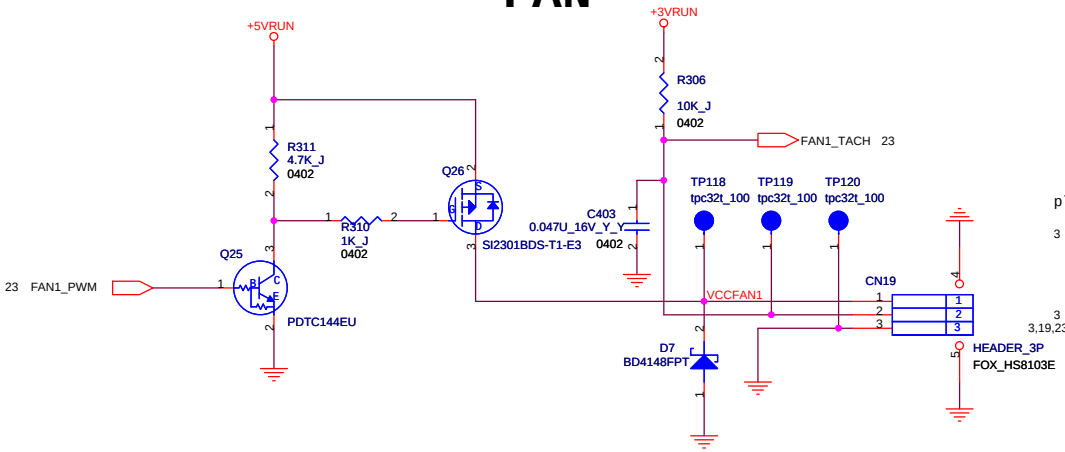
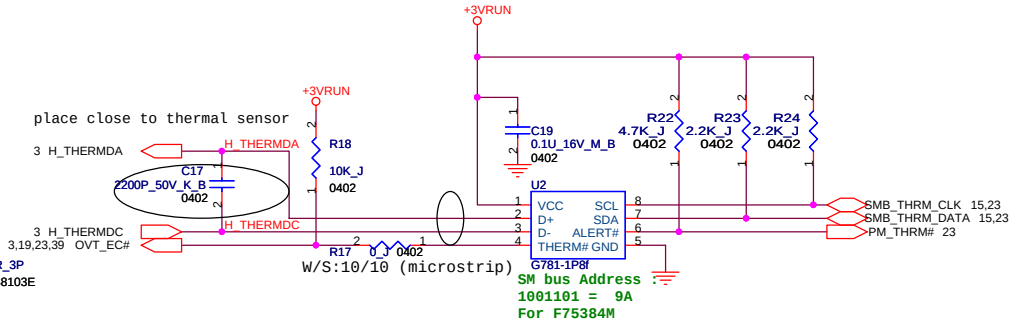
FAN

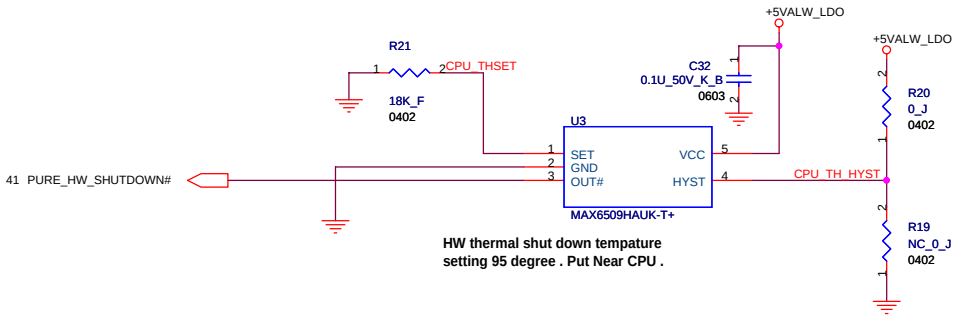


CPU SENSOR



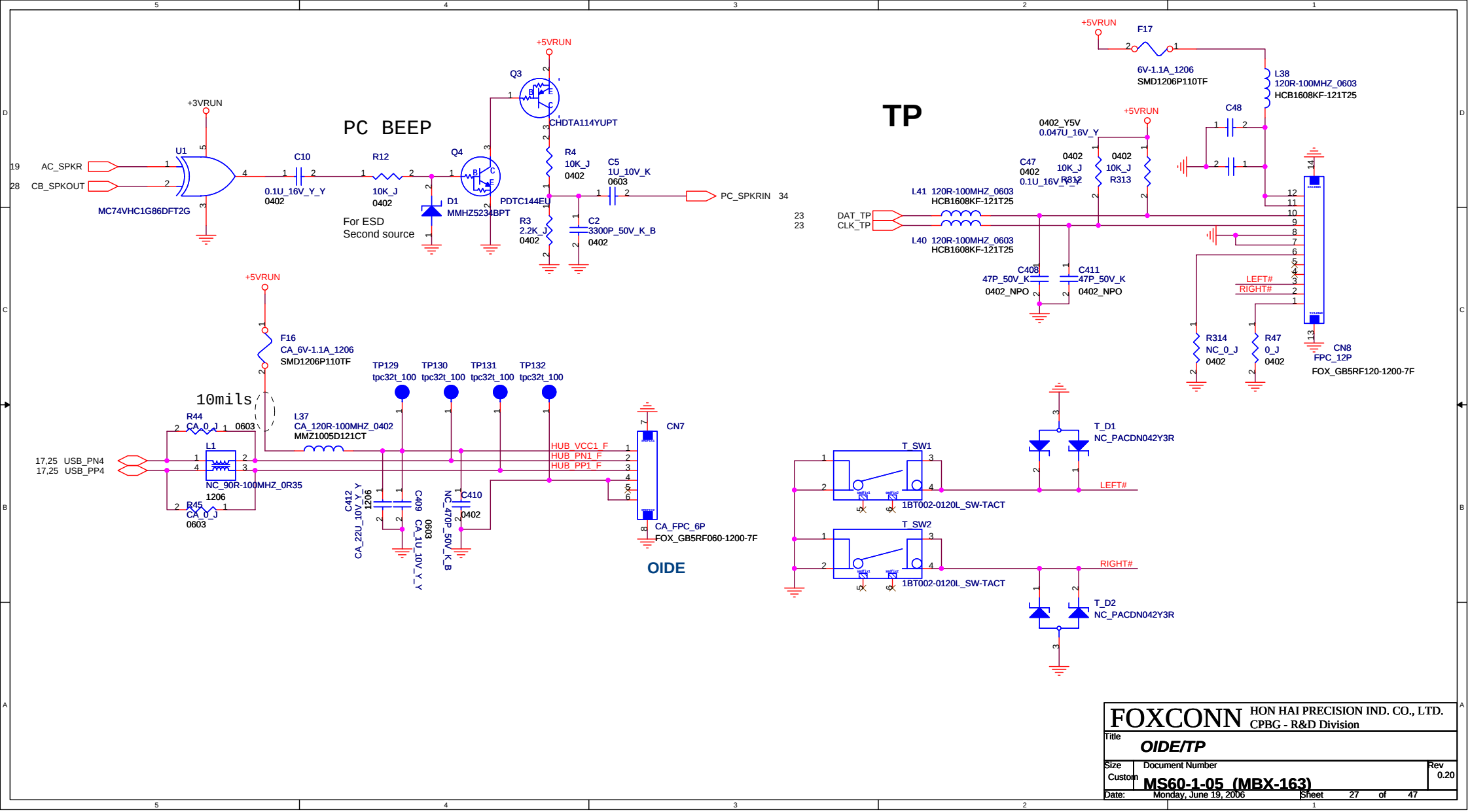
Place Thermal-Sensor near CPU & GMCH.

HW THERMAL PROTECTION

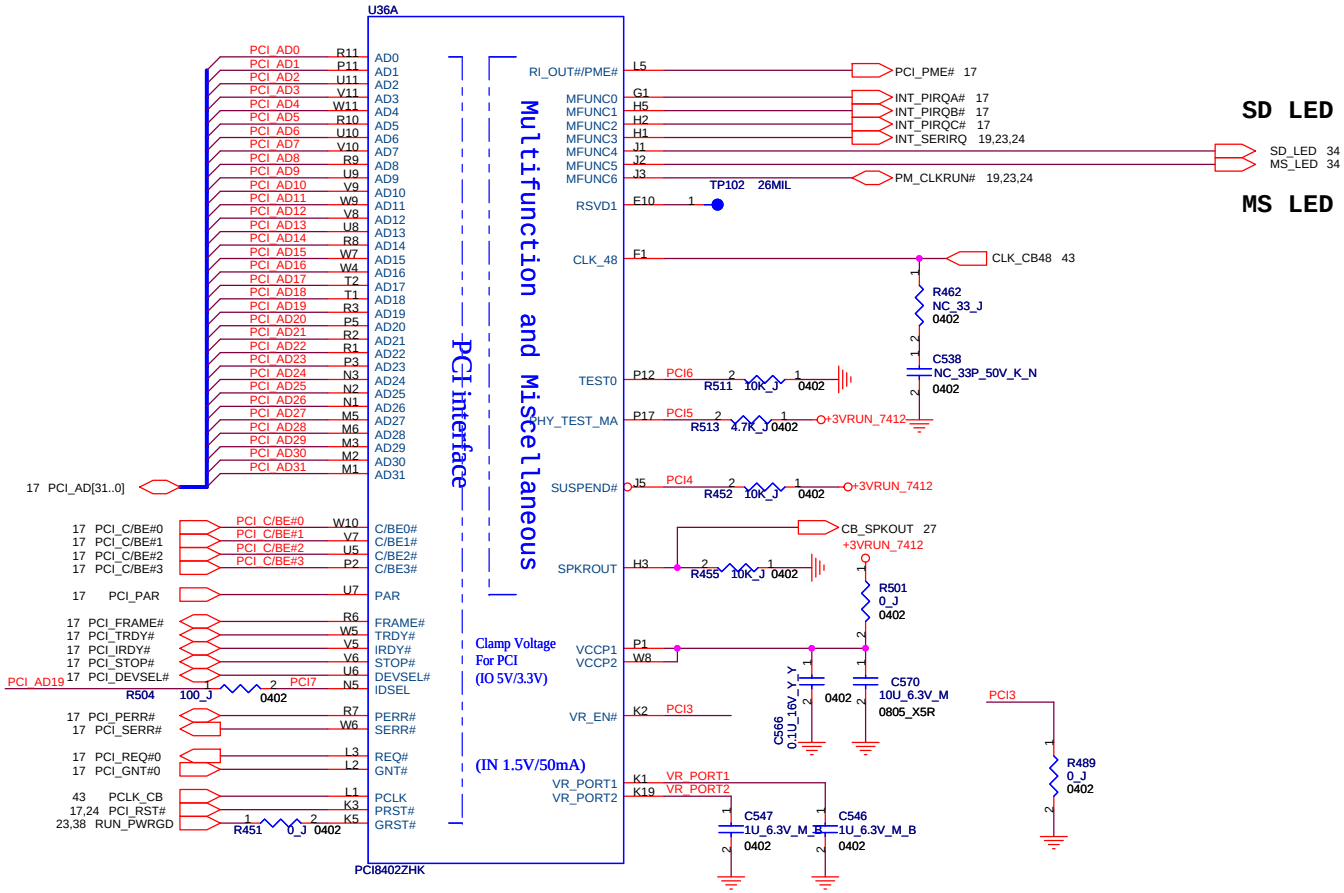


HW thermal shut down tempature setting 95 degree . Put Near CPU .

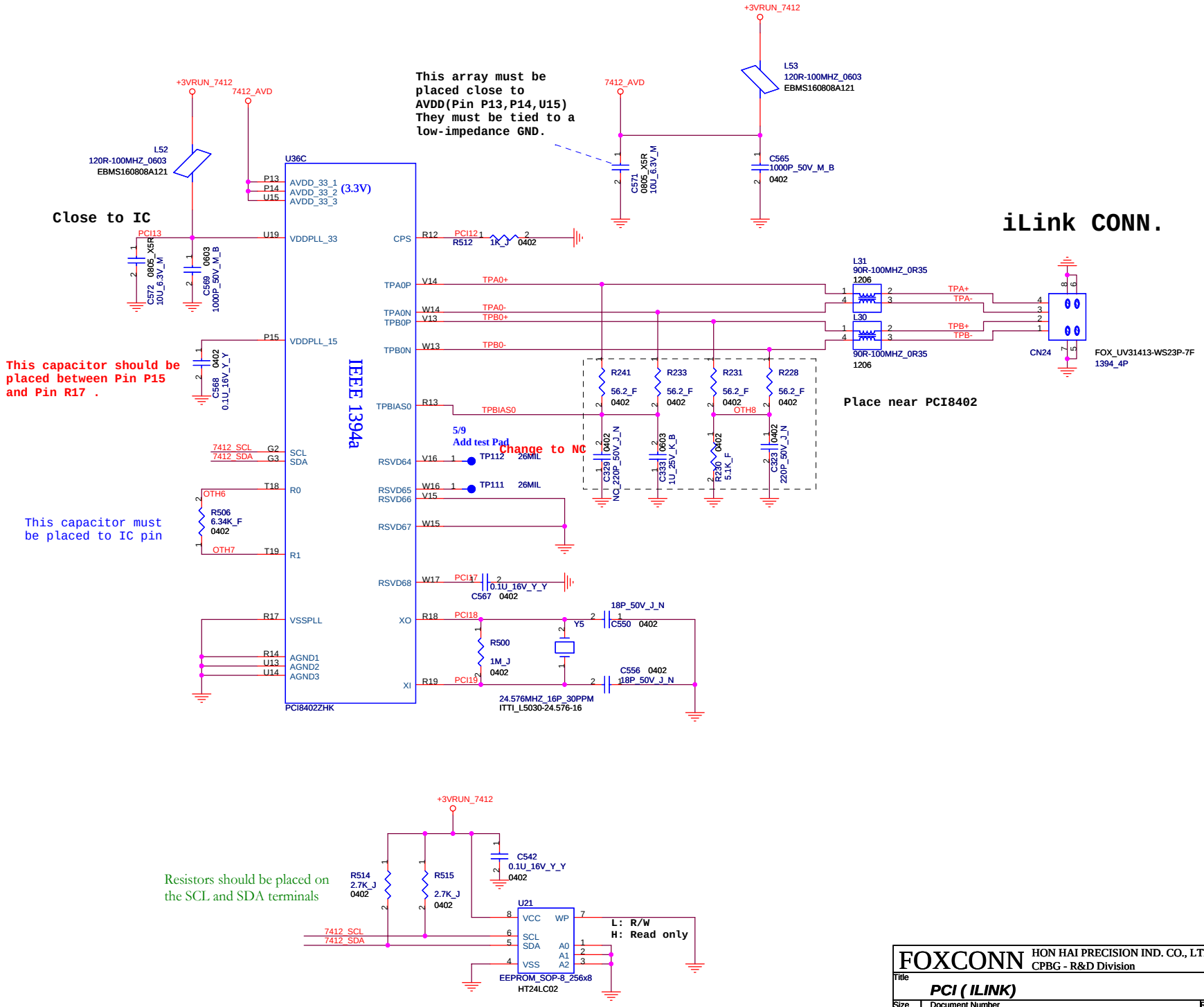
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	FAN/HW THERMAL PROTECT	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
Date: Monday, June 19, 2006	Sheet 26 of 47	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	*OIDE/TP*	
Size: Custom	Document Number: MS60-1-05 (MBX-163)	Rev: 0.20
Date: Monday, June 19, 2006	Sheet 27 of 47	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title: PCI (PCI BUS)			
Size: A3	Document Number: MS60-1-05 (MBX-163)		Rev: 0.20
Date: Monday, June 19, 2006	Sheet 28 of 47		


This array must be placed close to AVDD(Pin P13,P14,U15) They must be tied to a low-impedance GND.
iLink CONN.
Close to IC
This capacitor should be placed between Pin P15 and Pin R17 .
This capacitor must be placed to IC pin
Place near PCI8402
Change to NC
5/9
Add test Pad
IEEE 1394a
PCI8402ZHK
FOX_UV31413-WS23P-7F
1394_4P
24.576MHZ_16P_30PPM
ITTI_L5030-24.576-16
EEPROM_SOP-8_256x8
HT24LC02
L: R/W
H: Read only
Resistors should be placed on the SCL and SDA terminals
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HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
PCI (ILINK)
MS60-1-05 (MBX-163)
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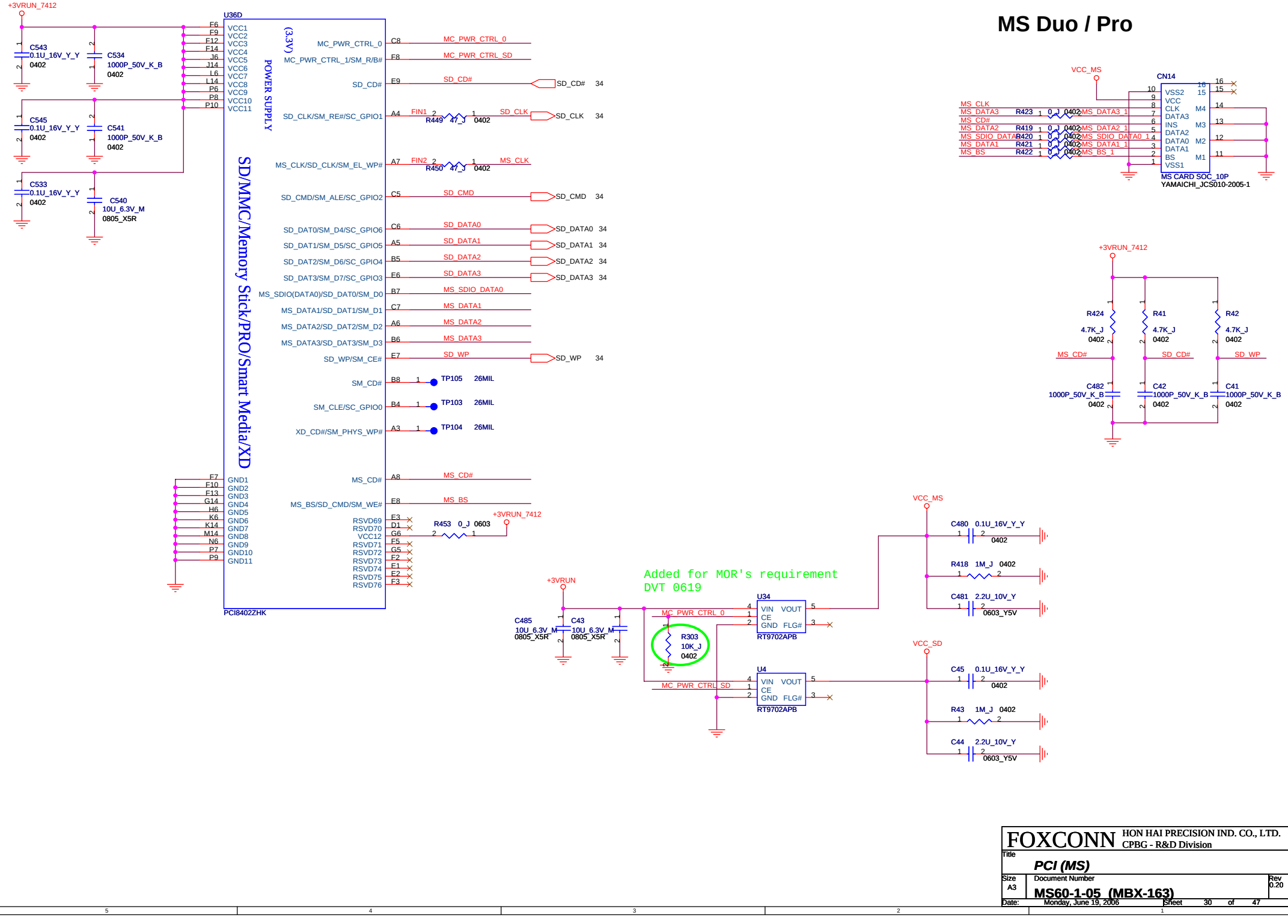
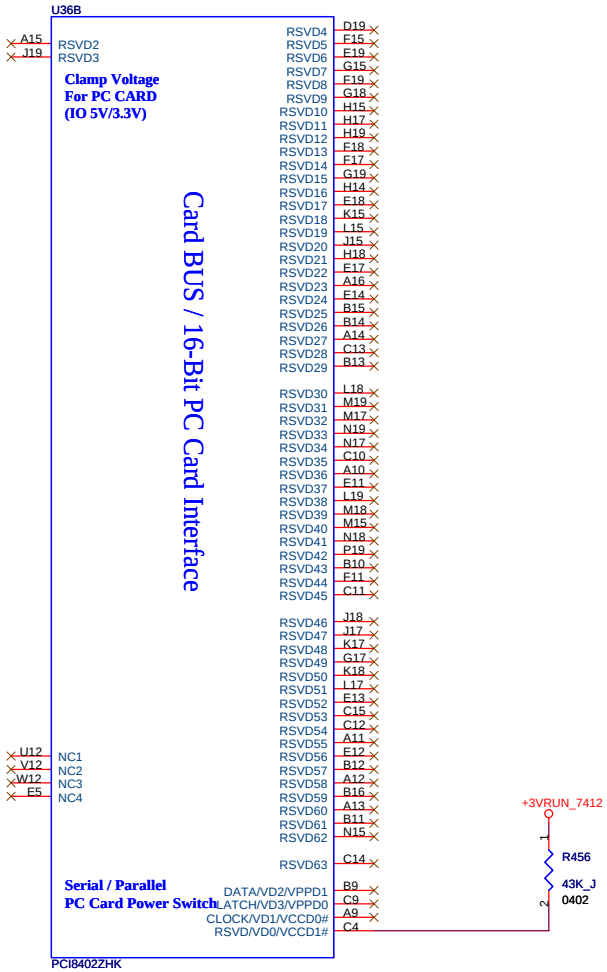
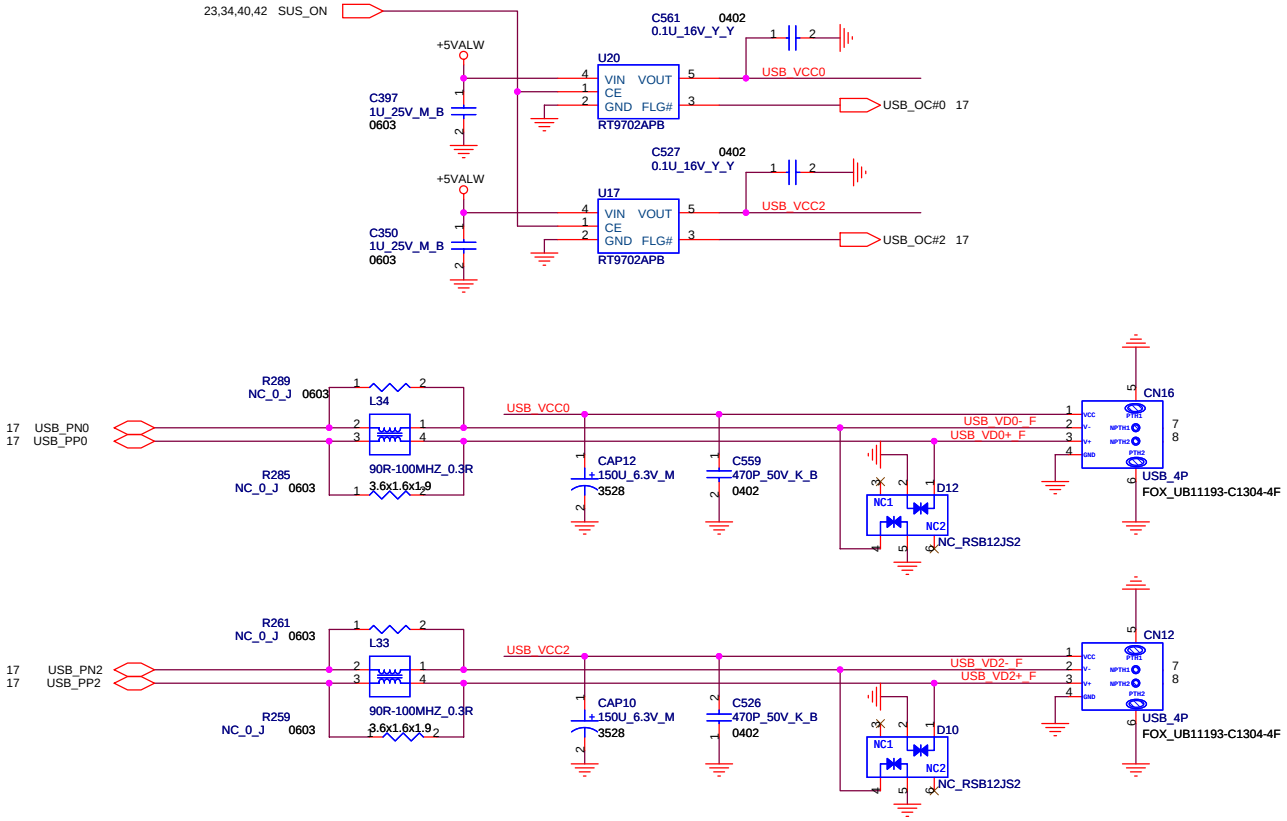
MS Duo / Pro



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	PCI (MS)
Size A3	Document Number MS60-1-05 (MBX-163) Rev 0.20
Date: Monday, June 19, 2006	Sheet 30 of 47



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	***PCI (PCMCIA)***	
Size A3	Document Number **MS60**	Rev 0.20
Date: Monday, June 19, 2006	Sheet 31 of 47	

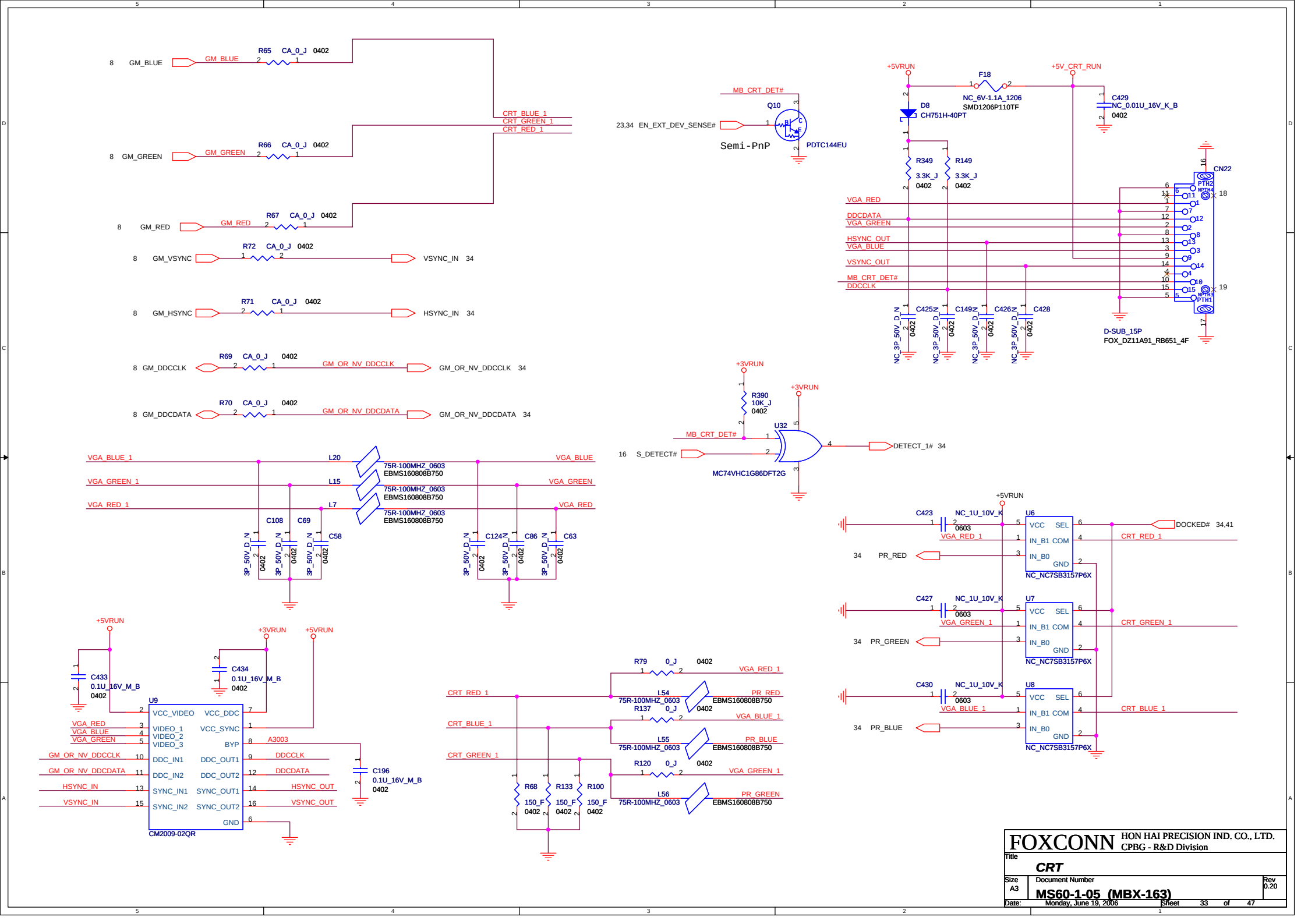


FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

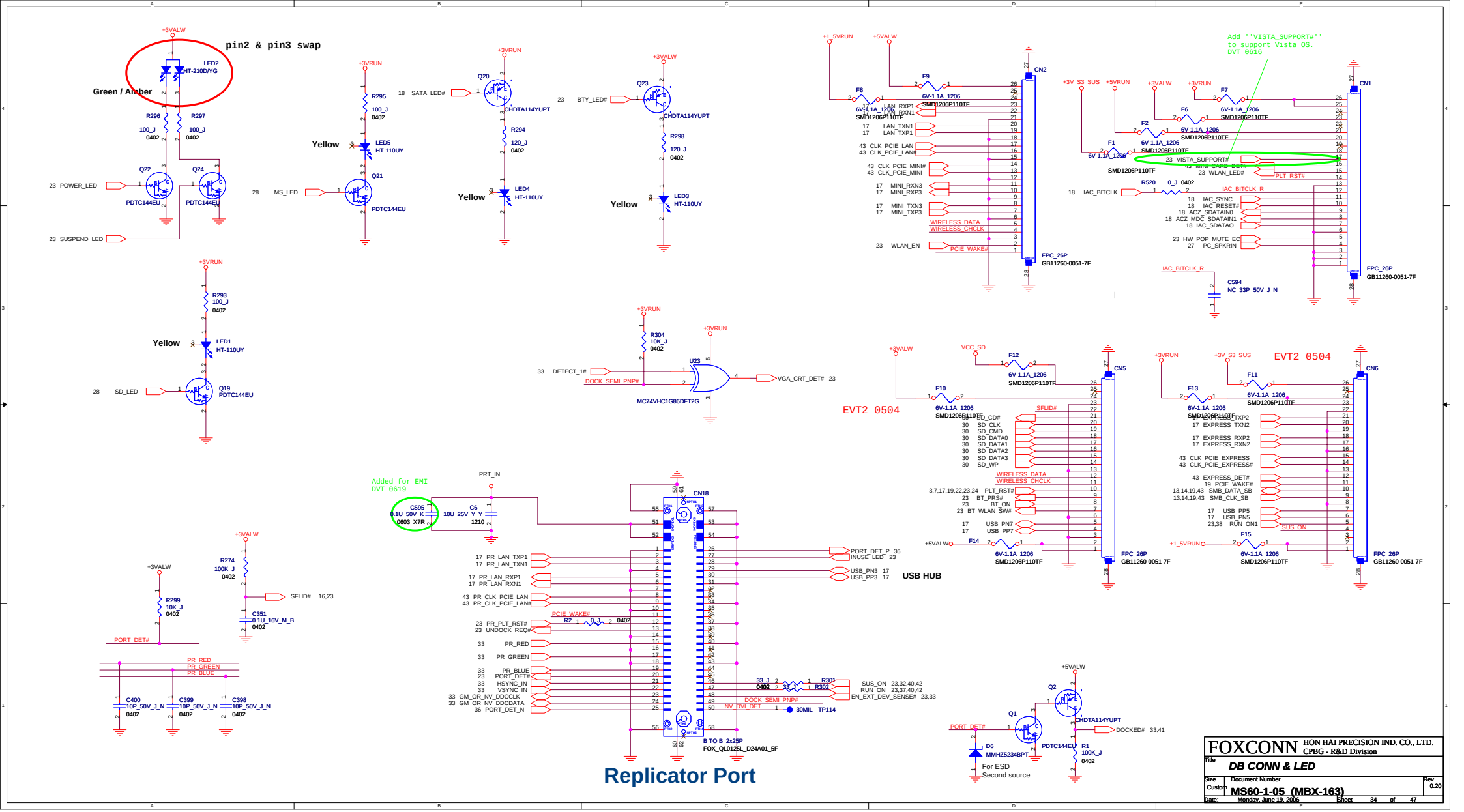
Title: ***USB2.0/DOCKING CONN.***

Size: A3 | Document Number: **MS60-1-05 (MBX-163)** | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 32 of 47



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title: CRT			
Size: A3	Document Number: MS60-1-05 (MBX-163)		Rev: 0.20
Date: Monday, June 19, 2006	Sheet 33 of 47		


pin2 & pin3 swap
Green / Amber
Yellow
Yellow
Yellow
Yellow
Add ''VISTA_SUPPORT#'' to support Vista OS. DVT 0616
EVT2 0504
EVT2 0504
Added for EMI DVT 0619
USB HUB
Replicator Port
For ESD Second source
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
DB CONN & LED
MS60-1-05 (MBX-163)
Monday, June 19, 2006
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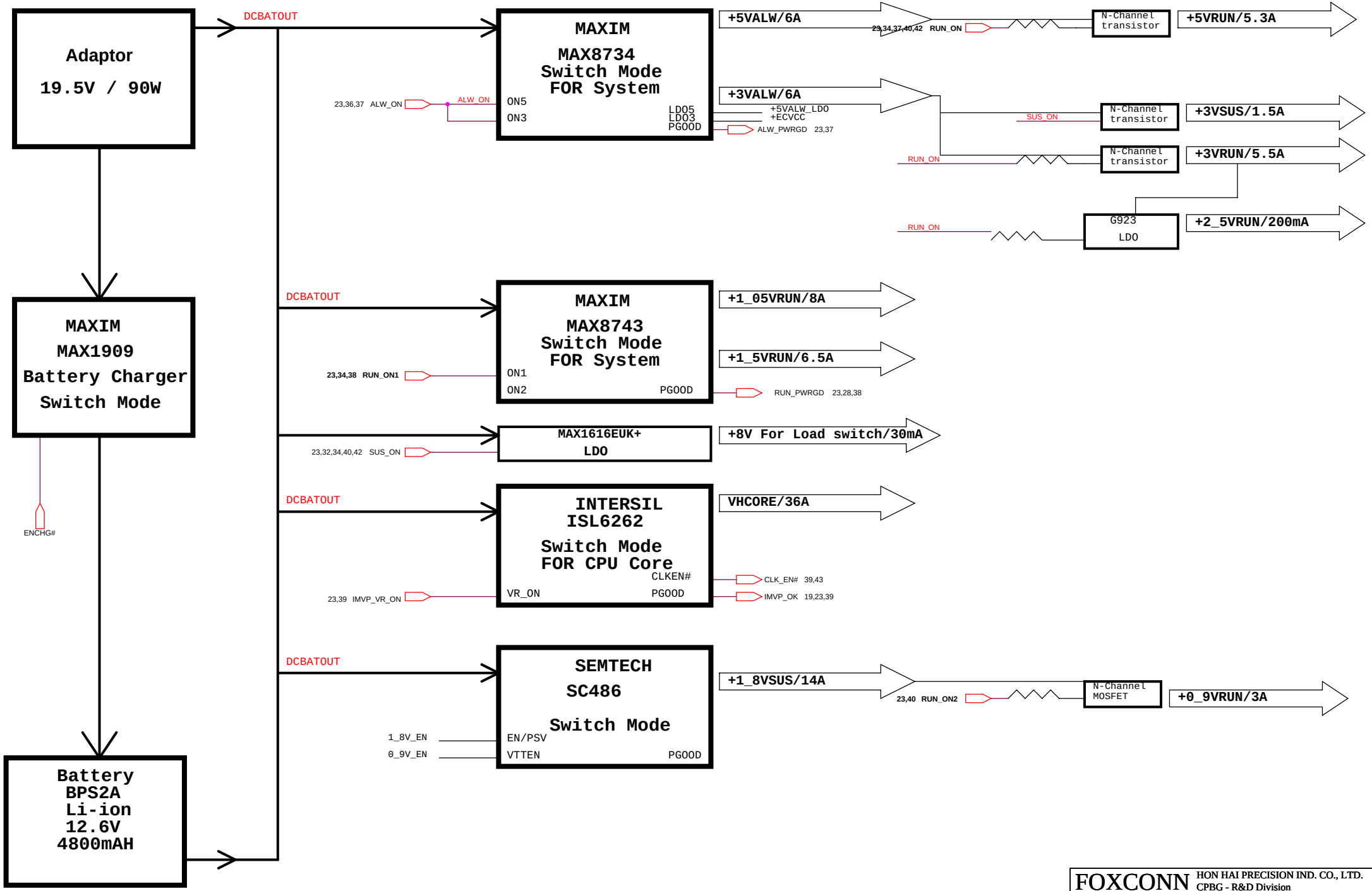
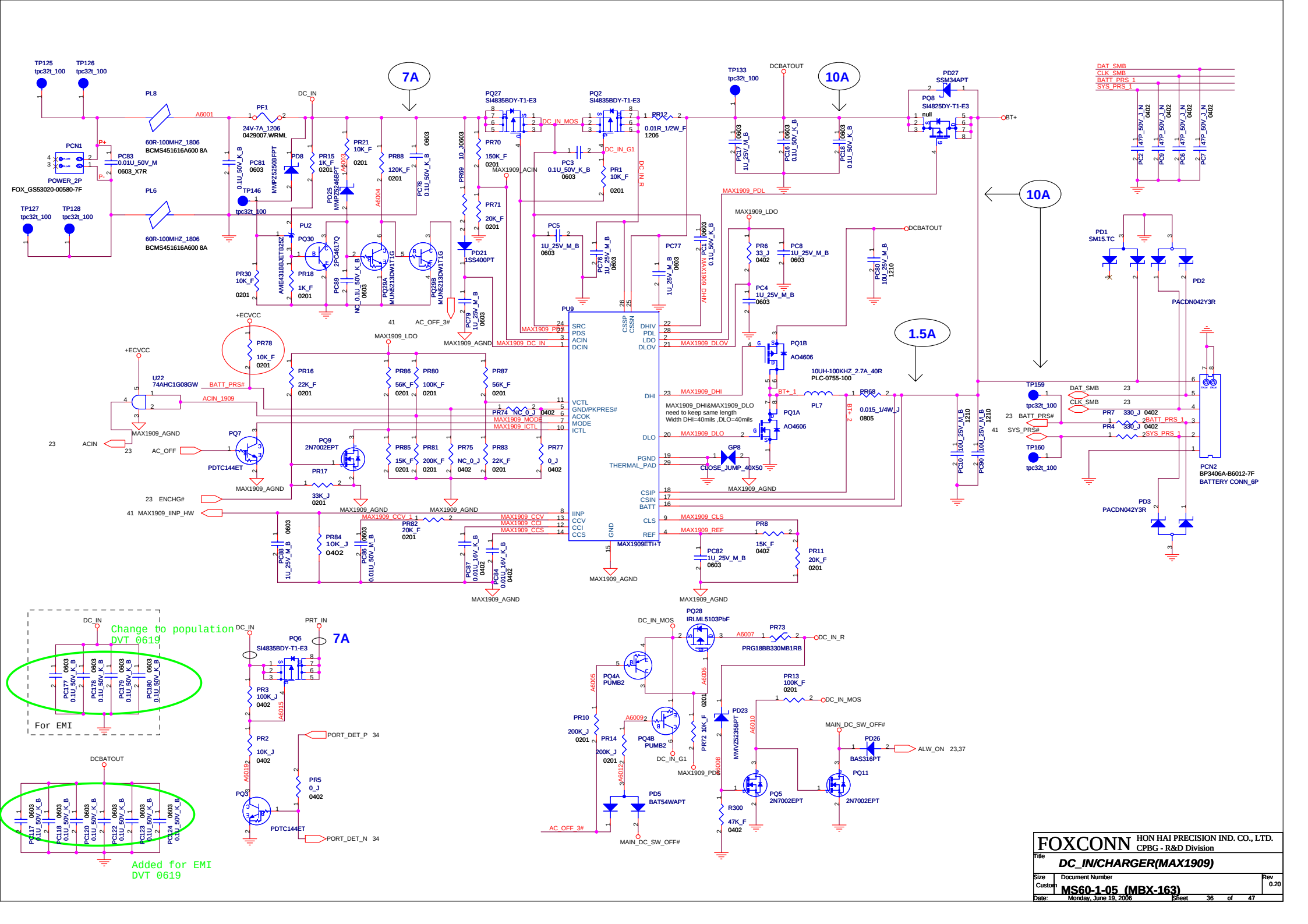


FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: *Power Design Diagram*

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 35 of 47


7A
10A
1.5A
DC_IN
DCBATOUT
BT+
MAX1909_AGND
MAX1909_LDO
MAX1909_PDL
MAX1909_DC_IN
MAX1909_DLOV
MAX1909_DHI
MAX1909_DLO
MAX1909_MODE
MAX1909_ICTL
MAX1909_CCV
MAX1909_CCI
MAX1909_CCS
MAX1909_CLS
MAX1909_REF
MAX1909_PDL
MAX1909_DHI&MAX1909_DLO need to keep same length Width DHI=40mils ,DLO=40mils
MAX1909ETI+T
PU9
PQ1A AO4606
PQ1B AO4606
PL7 10UH-100KHZ_2.7A_40R PLC-0755-100
PR68 0.015_1/4W_J 0805
PQ27 SI4835BDY-T1-E3
PQ2 SI4835BDY-T1-E3
PQ8 SI4825DY-T1-E3
PR12 0.01R_1/2W_F 1206
PF1 24V-7A_1206 0429007.WRML
PL8 60R-100MHZ_1806 BCMS451616A600 8A
PL6 60R-100MHZ_1806 BCMS451616A600 8A
PCN1 POWER_2P FOX_GS53020-00580-7F
PD21 1SS400PT
PD25 MMPZ5246BPT
PD8 MMPZ5250BPT
PQ30 2PC4617Q
PU2 AME431BBJETB25Z
PQ29A PQ29B MUN5213DW1T1G
PQ7 PDTC144ET
PQ9 2N7002EPT
U22 74AHC1G08GW
PQ28 IRLML5103PbF
PQ4A PQ4B PUMB2
PD23 MMVZ5235BPT
PD5 BAT54WAPT
PQ5 2N7002EPT
PQ11 2N7002EPT
PD26 BAS316PT
PD27 SSM34APT
PQ6 SI4835BDY-T1-E3
PQ3 PDTC144ET
PD1 SM15.TC
PD2 PACDN042Y3R
PD3 PACDN042Y3R
PCN2 BP3406A-B6012-7F BATTERY CONN_6P
GP8 CLOSE_JUMP_40X50
TP125 TP126 TP127 TP128 TP133 TP146 TP159 TP160
PR73 PRG18BB330MB1RB
PR74 NC_0_J
PR78 10K_F
PR16 22K_F
PR86 56K_F
PR80 100K_F
PR87 56K_F
PR85 15K_F
PR81 200K_F
PR75 NC_0_J
PR83 22K_F
PR77 0_J
PR17 33K_J
PR82 20K_F
PR84 10K_J
PR8 15K_F
PR11 20K_F
PC82 1U_25V_M_B
PC88 1U_25V_M_B
PC87 0.01U_16V_K_B
PC84 0.01U_16V_K_B
PC86 0.01U_50V_M_B
PC3 0.1U_50V_K_B
PC5 1U_25V_M_B
PC76 1U_25V_M_B
PC77 1U_25V_M_B
PC79 1U_25V_M_B
PC4 1U_25V_M_B
PC6 33_J
PC8 1U_25V_M_B
PC80 10U_25V_M_B
PC10 10U_25V_M_B
PC90 10U_25V_M_B
PC17 1U_25V_M_B
PC16 0.1U_50V_K_B
PC18 0.1U_50V_K_B
PC81 0.01U_50V_M
PC83 0.01U_50V_M
PC89 0.1U_50V_K_B
PC78 0.1U_50V_K_B
PR69 10_J
PR70 150K_F
PR71 20K_F
PR1 10K_F
PR21 10K_F
PR88 120K_F
PR15 1K_F
PR18 1K_F
PR30 10K_F
PR69 10_J
PR14 200K_J
PR10 200K_J
PR72 10K_F
PR13 100K_F
PR3 100K_J
PR2 10K_J
PR5 0_J
R300 47K_F
PR4 330_J
PR7 330_J
PC2 47P_50V_J_N
PC5 47P_50V_J_N
PC9 47P_50V_J_N
PC7 47P_50V_J_N
TP159 TP160
PCN2
DAT_SMB
CLK_SMB
BATT_PRS#
SYS_PRS#
ACIN
AC_OFF
ENCHG#
MAX1909_IINP_HW
ALW_ON
MAIN_DC_SW_OFF#
PORT_DET_P
PORT_DET_N
Change to population DVT 0619
For EMI
Added for EMI DVT 0619
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
DC_IN/CHARGER(MAX1909)
MS60-1-05 (MBX-163)
Monday, June 19, 2006
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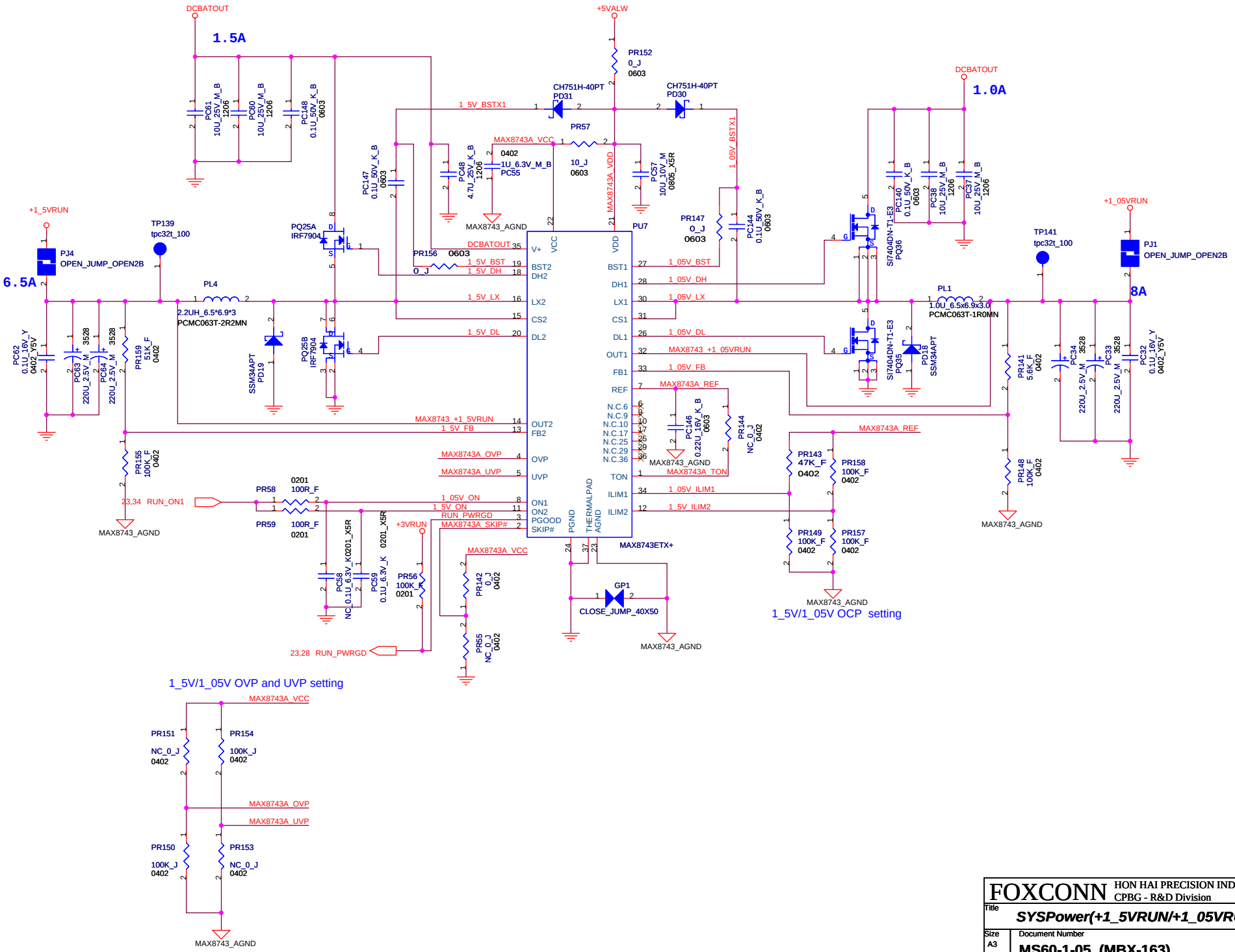
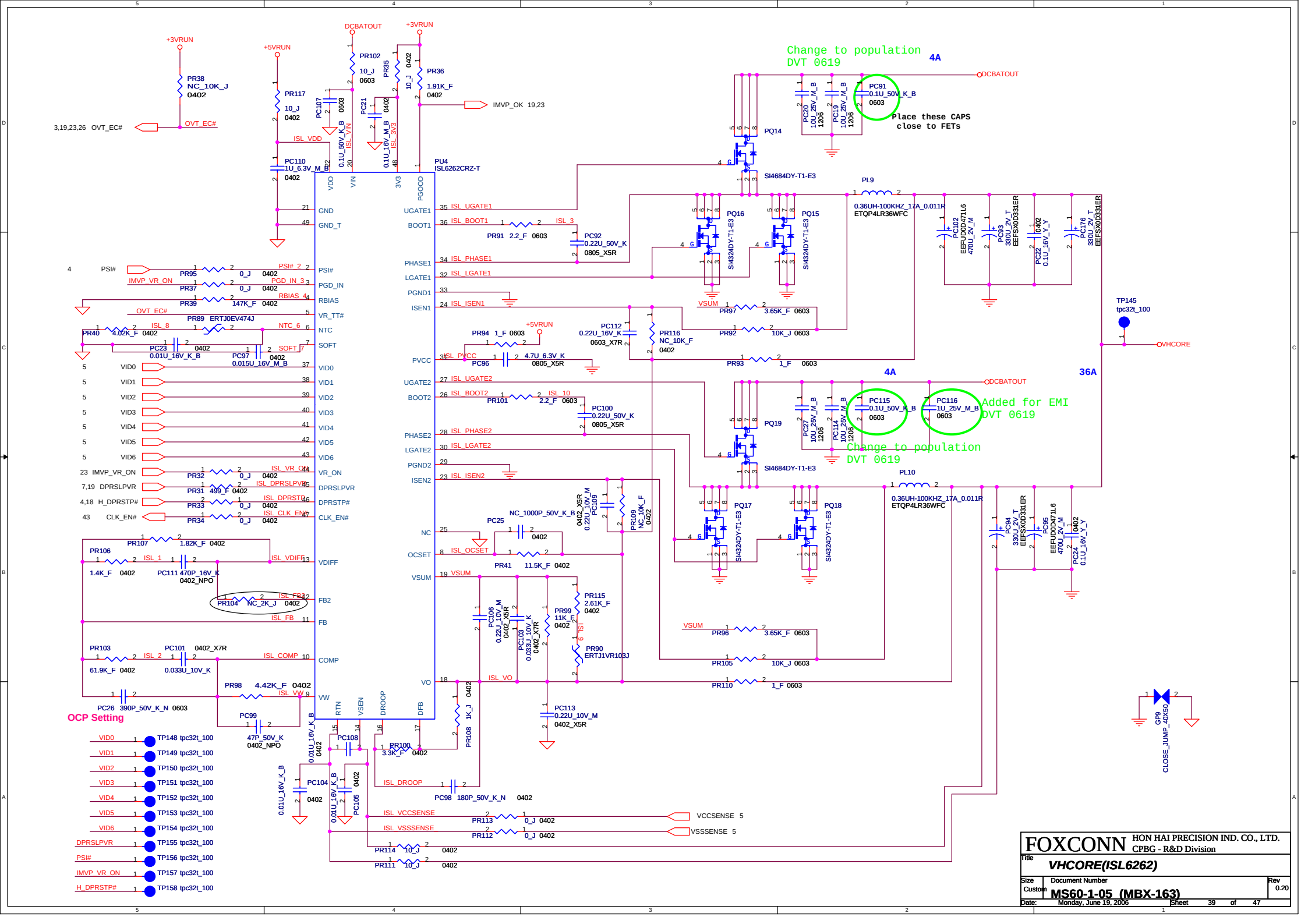
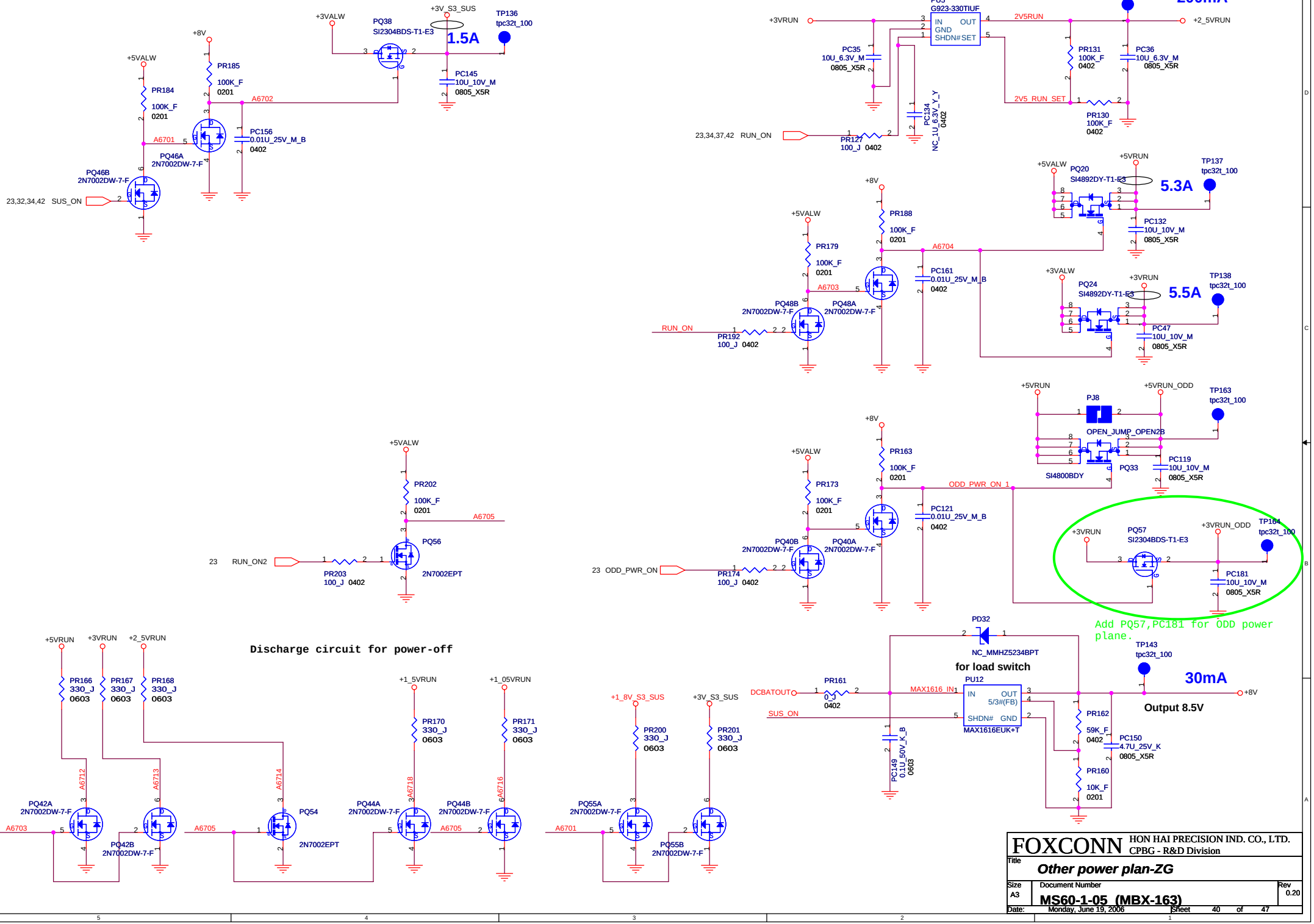
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	SYS Power (3D3VALW/5VALW)	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
Date: Monday, June 19, 2006	Sheet 37 of 47	



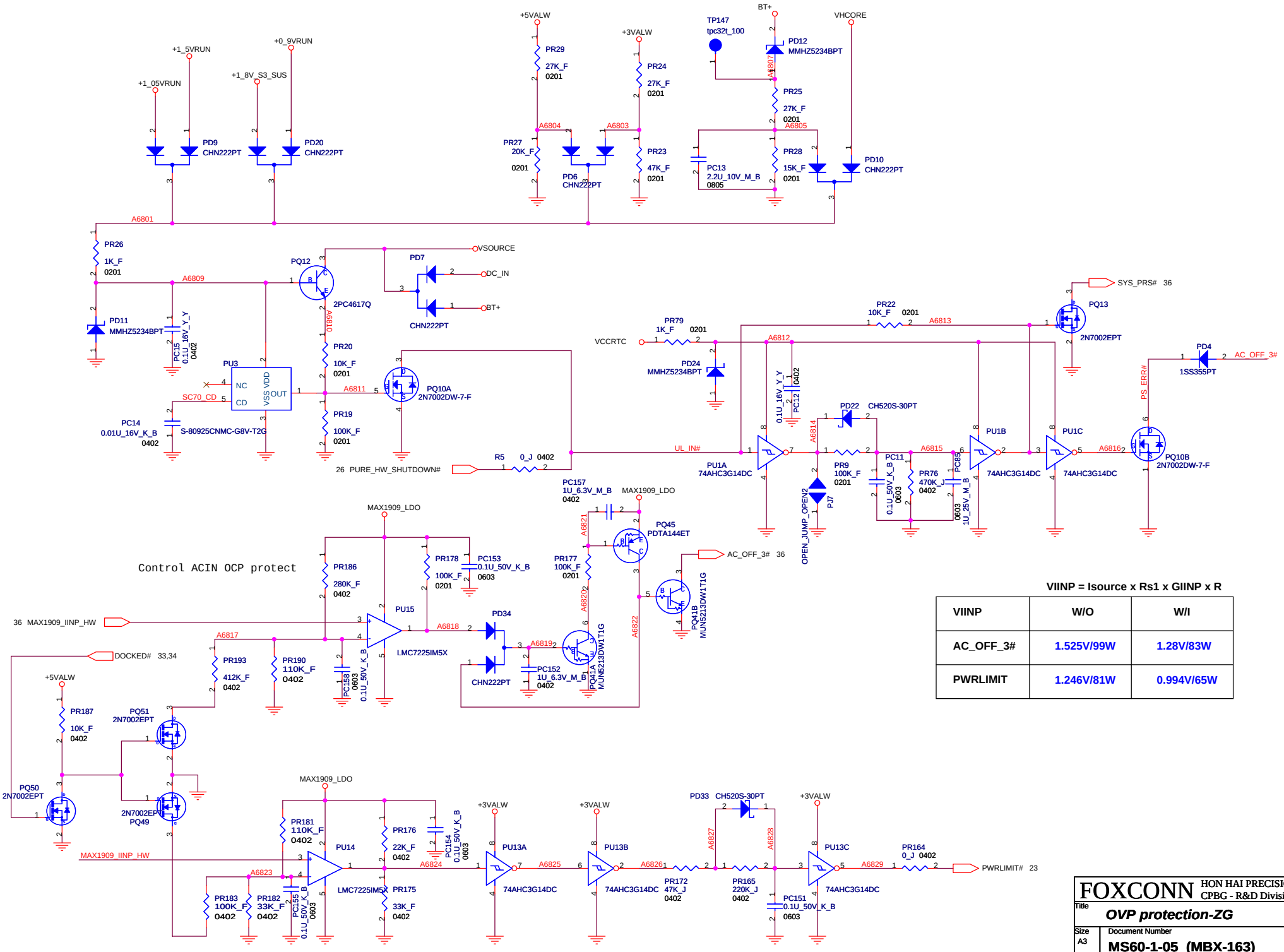
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	SYSPower(+1_5VRUN/+1_05VRUN)	
Size A3	Document Number MS60-1-05_(MBX-163)	Rev 0.20
Date: Monday, June 19, 2006	Sheet 38 of 47	


Change to population
DVT 0619
4A
Place these CAPS
close to FETs
Added for EMI
DVT 0619
Change to population
DVT 0619
36A
OCP Setting
PU4
ISL6262CRZ-T
PQ14
PQ15
PQ16
PQ17
PQ18
PQ19
SI4684DY-T1-E3
SI4324DY-T1-E3
PL9
PL10
0.36UH-100KHZ_17A_0.011R
ETQP4LR36WFC
TP145
tpc32t_100
VHCORE
DCBATOUT
+3VRUN
+5VRUN
IMVP_OK 19,23
3,19,23,26 OVT_EC#
VCCSENSE 5
VSSSENSE 5
CLOSE_JUMP_40X50
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
Title
VHCORE(ISL6262)
Size
Custom
Document Number
MS60-1-05 (MBX-163)
Rev
0.20
Date:
Monday, June 19, 2006
Sheet
39
of
47



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

Title	Other power plan-ZG	
Size A3	Document Number MS60-1-05 (MBX-163)	Rev 0.20
Date: Monday, June 19, 2006	Sheet 40 of 47	



VIINP = Isource x Rs1 x GIINP x R

VIINP	W/O	W/I
AC_OFF_3#	1.525V/99W	1.28V/83W
PWRLIMIT	1.246V/81W	0.994V/65W

FOXCONN HON HAI PRECISION IND. CO., LTD.
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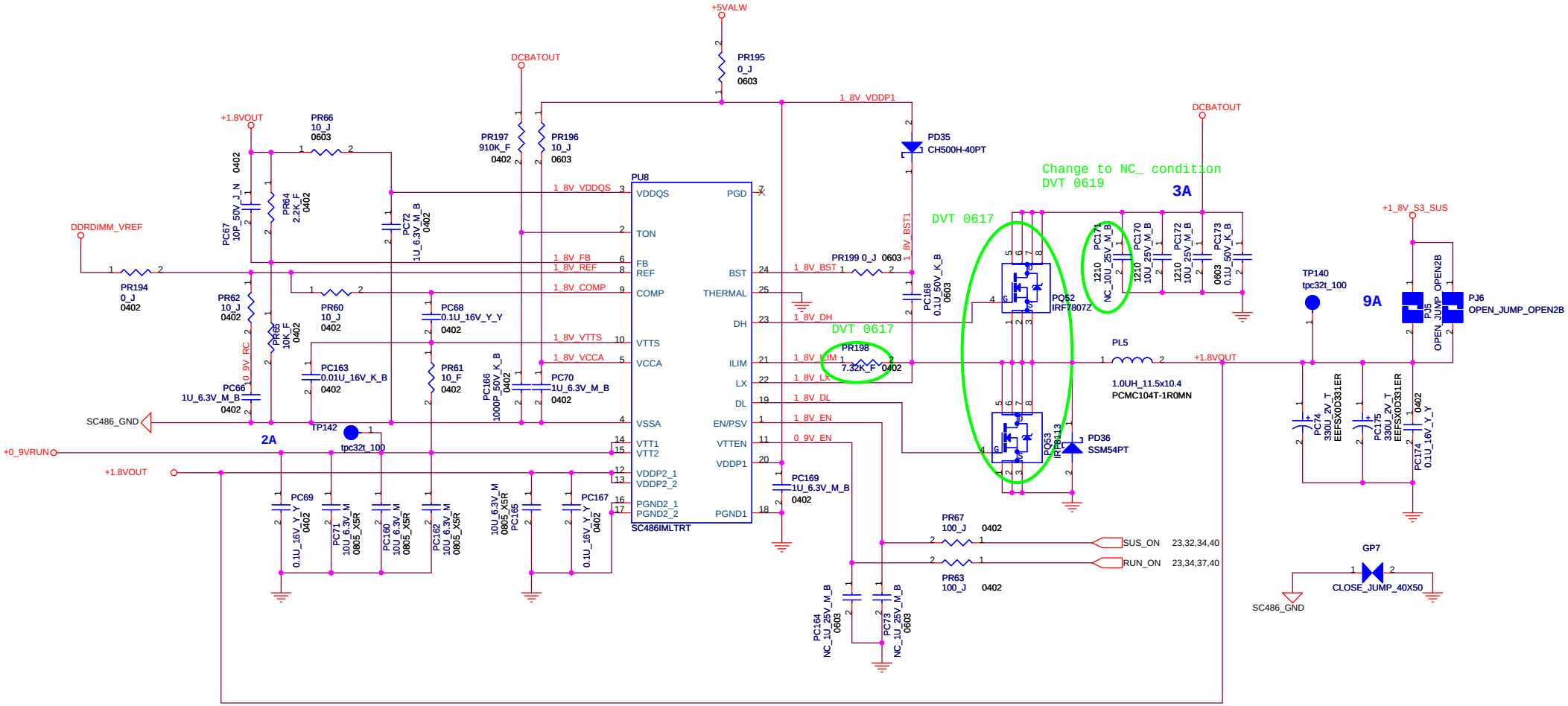
Title: ***OVP protection-ZG***

Size: A3 | Document Number: **MS60-1-05 (MBX-163)** | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 41 of 47



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	DDR2Power(+1_8V_S3_SUS/+0_9VRUN)	
Size A3	Document Number MS60-1-05_(MBX-163)	Rev 0.20
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close to clk gen (For EMI)

Length as short as possible.

CALISTOGA Chip HOST

CPU

ICH7M SATA

CALISTOGA DOT96

ICH7 DMI

CALISTOGA SSCK

Add R522,R523 to replace RP13 DVT 0616

SM bus Address :
1101001 (ICH7)
For clock generator

CLKREQ with internal pull-up resistor
No Stuff Pull-up Resistor
(R69,R40,R41,R70,R1126,R1127)
If EVT ok, del them in DVT

ICS9LPR321BKLF

Pin Straps
Pin 53/59/60/64 100K ohm pull-up

pin53	pin 11/12
0	SRCCLK0
1	27MHz (v)
pin59	**pin 15/16**
0	SRCCLK0
1	SATA (v)
pin60	**pin 37/38**
0	SRCCLK8 (v)
1	CPU_2_ITP
pin64	**pin 13/14**
0	LCDCLK_SS (CA)
1	SRCCLK1 (NV)

FSB Frequency Table:

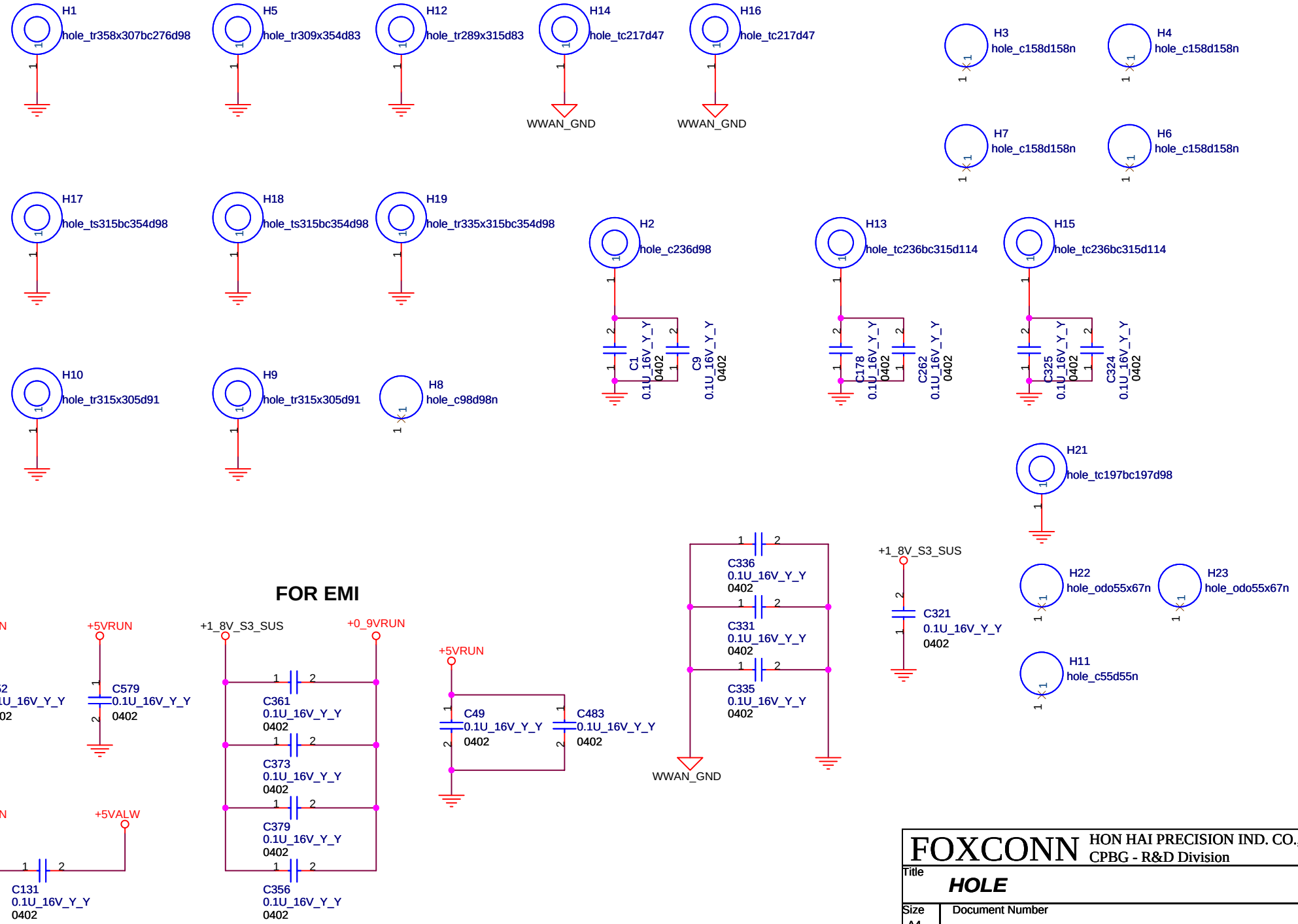
FSLB	FSLA	CPU	SRC[7:0]	PCI
0	0	100	100	33
0	1	133	100	33
1	0	200	100	33
1	1	166	100	33

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

Title: CLOCK GEN

Size: A3 | Document Number: MS60-1-05 (MBX-163) | Rev: 0.20

Date: Monday, June 19, 2006 | Sheet 43 of 47



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: ***HOLE***		
Size: A4	Document Number: **MS60-1-05 (MBX-163)**	Rev: 0.20
Date: Monday, June 19, 2006	Sheet 44 of 47	

MS60 Power On Sequerce Timing

Version : 0.0
Modified date : 2/14/2006

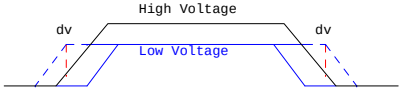
NOTE : (EC KB3910 Min. response time is 1ms)

1. T00 : R=47K , C = 0.1uF is ENE recommand value please refer to KB3910B0-AN4A-200
2. T01 : 5ms is for ALW VCC supplies must never be active while the ECVCC supply is inactive.(Please refer to Intel 16971 Page 300 of t200 timing)
   PS : For KB3910 timing : After ECRST# goes to high ,EC must be check sum and initialized register.For MS01, we measure the T01 Min. 200ms is needed.In MS10 , we will measure this timing again.
3. T02 : ALW_PWRGD:H to PM_RSMRST#:H at least 5ms (Please refer to 16971 Page 300 of t205 timing)
4. T04 : For MS01 SPEC Min. is 50 ms(Normal SPEC is 20ms)
5. T05 : RSMRST# active High to SLP_S5# avtive High Max. is 110ms(Please reference Intel 16971 Page 301of t232 timing
6. T06(Please reference Intel 16971 Page 301 of t234 timing
7. T07 : For MS01 current SPEC Min. is 25 ms(Please refer Intel 16971Page 301 t208 SPEC is Min 10ms)
8. T08 : For MS01 current SPEC Min. is 1 ms(1ms is EC KB3910 at least response time)
9. T09 : For MS01 current SPEC
10. T10 :Please refer to Intel 16971 Page 300 of t214 timing
11. T11 :Please refer to Intel 16971 Page 303 of t216 timing
12. T12 : PM_RSMRST# ACTIVE HIGH TO PM_PWRBTN# ACTIVE LOW is 400ms(Normal SPEC is 110ms;Please reference Intel 16971 Page 301of t232 timing)
13. T13 : For MS01 current SPEC Min. is 700 ms(Normal SPEC is 1ms that EC can response)
14. T14 : For MS01 current SPEC Min. is 5 ms
15. DDR2 1.8V from 0V to 2V Max. is 2 ms please refer to Intel 16981 Page 304
16. IMVP_OK is same with SB_PWRGD(reserved And Gate with SYS_PWRGD)
17. In G7X power sequence :3VRUN-->NVDD,PEX_VDD-->1_8VRUN
18. T15 : Please refer to MAX8771 datasheet
20. T16: Please refer to MAX8771 datasheet
21. T17 : Please refer to Intel CK410(14690) page 53
22. T18 : The ICH7 drives PLTRST# active a mininum of 1ms when initiated through the Reset Control register I/O Register CF9h)
23. CPUPWRGD is an output signal that presents a logical AND of the ICH7's PWROK and VRMPWRGD signals
24. T20 : From ECRST# L->H to IMVP_PWRGD L->H. If EC's 32KHz is not stable, LPC I/F will hang. So the 1sec must be guaranteed.(Requested by Doi's san 05/13)

Remark: (Item1,2,3 add Diode; Item4,5,6 add dischage circuit; Item7 for implement TV)
SPEC please refer to Intel 16981 15.4 GMCH/ICH7M Platform Power -up Requirements)

1. V5REF(+5VRUN) -> +3VRUN, dt:0.7mV
2. V5REF_SUS(+5VALW) -> +3VALW, dt:0.7mV
3. +2.5VRUN -> GMCH_VCC(1.05V), dt:0.7mV
4. +1_5VRUN -> +GMCH(1.05V), dt:0.7mV
5. +3.3VRUN -> +2_5VRUN, dt:0.3mV
6. +3.3VRUN -> +5VRUN (VccLAN), dt:0.3mV
7. +3_3VRUN -> +1_5VRUN(TV), dt:0.7mV

R/C delay (47K/ 0.1uF)



T00	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10
within 10ns~2ms	Min. 5 ms	Min. 10 ms	Min. 40ms	Min. 50ms	Max. 110ms	1 - 2 RTCCLK	Min. 25 ms	1ms	Min. 10ms	Min. 99ms

T11	T12	T13	T14	T15	T16	T17	T18	T19	T20
Max. 50ns	Min. 400ms	Min 700ms	Min 5ms	typ 60us	Min : 3ms Max : 8ms	Max 1.8ms	Min 1ms	Min : 99ms	Min :1s

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<1>2006/3/28 remove U36.SW no need to program for present application.

<2>2006/3/28 Change PR5 from 13K to common parts 10KOhm.

<3>2006/3/29 Change USB CONN. CN16 & CN40 for ID requirement.
P/N : FOX_UB11193-C1301-4F

<4>2006/3/29 Change ODD CONN. CN21 for ID requirement.
P/N : FOXCONN_QT8H0506_64T2R_4F

<5>2006/3/29 Change PC359,PC360 to 10uF
P/N : 1C-2B70106-M100

<6>2006/3/29 update new HDD CONN CN24.
P/N : 2N-0022002-F0G0

<7>2006/3/29 update new DC-IN CONN PCN1.
P/N : FOX_GS53020-00580-7F

<8>2006/3/29 update new BTY CONN PCN2.
P/N : FOXCONN_BP34063_B6012_7F

<9>2006/3/30 U18.U19.U21.R277.R300.R315change to NC according to Customer's feedback.

<10>2006/3/30 R269,R273,R276,R286,R287,R300 change to Populate according to Customer's feedback.

<11>2006/3/30 New add INV_ENABLE_EC logic dur to BIOS Code merge issue.add new component :
U53.U54 P/N : 14-74AHC1G-0800
R762 P/N : 1R-0000103-J200
R763 P/N : 1R-0000000-J200
R764 P/N : 1R-0000104-J200
Delete R176.R177

<12>2006/3/31 Add C20,C21,C22,C31,C33,C68 for EMI slution.
P/N : 1C-2Y20104-Y000

<13>2006/3/31 Add R5 for Customer feedback.
P/N : 1R-0000000-J200

<14>2006/3/31 Dummy R482,R483 for Customer feedback.

<15>2006/3/31 Modify MS PWR Circuit for Customer feedback.add new component :
U55.U56 P/N : 15-RT9702A-0000
C521.C522 P/N : 1C-2Y20104-Y000
R569.R573 P/N : 1R-0000105-J200
C870.C871 P/N : 1C-2Y30225-Y000
C535.C751 P/N : 1C-2B70106-M100
Deleted Component :
Q12.Q13.Q20.Q21.C535.C527.C521.C751.C753.C752.R486.R476.R568.R569

<16>2006/3/31 CN2 Pin11 change to +3V_S3_SUS for Customer feedback.

<17>2006/4/3 CN20.CN32.CN33 Pin assignment modified due to Customer's concern.

<18>2006/4/3 CN31.CN32.CN33 CN34 Connector change.
P/N : GB11261_1051_7F

<19>2006/4/3 L17 & L19 updated according to Customer feedback
P/N : 1L-DCS0603-1000

<20>2006/4/4 Add PWR_MIZER circuit.
U6J GPIO10 with new signal "NV_PWR_MIZER"
new Components added and modified as below :
10K Ohm -- R130.R766 -- P/N : 1R-0000103-J200
7.5K Ohm -- R765.R767.R768.R769.R770 -- P/N : 1R-0000752-F200
4.3K Ohm -- R128 -- P/N : 1R-0000432-F200
2N7002EPT -- Q54.Q55.Q56.Q57.Q58 -- P/N : 17-2N7002E-PT00

<21>2006/4/4 CN10 Pin4.5.6 change to Test pad according to customer's feedback.

<22>2006/4/4 D6.D7.D8 change to Q59.Q60.Q61
P/N : 17-2N7002E-PT00

<23>2006/4/4 R64,R67,R65,R75,R99,R94,R97,R109 change to populate.
P/N : 1R-0000121-J200

<24>2006/4/4 new add Q62 for WLAN LED Logic
P/N : 17-2N7002E-PT00

<25>2006/4/4 NC F1 and C859 according to customer's feedback.

<26>2006/4/4 delete R482.R483 according to customer's feedback.

<27>2006/4/6 add H3 ~ H20

<28>2006/4/6 Update BTY Connector PCN2 for ME requirement.
P/N : 2N-0006001-MKX0

<29>2006/4/6 R278.R289.R270 change to 75Ohm and circuit modified as customer's feedback.
P/N : 1R-0000750-F200

<30>2006/4/6 R543 change to 75Ohm as customer's feedback.
P/N : 1R-0000750-F300

<31>2006/4/6 R553 change to 75Ohm as customer's feedback.
P/N : 1R-0000750-J200

<32>2006/4/6 R99.R94.R97.R109.R67.R64.R65.R75 change to NC as customer's feedback.
and R66.R69.R98.R101 change to 120Ohm.
P/N : 1R-0000121-J200

<33>2006/4/6 CN34 Pin23 change to +5VALW as customer's feedback.

<34>2006/4/6 CN31 Pin1.2 change to +3V_S3_SUS as customer's feedback.

<35>2006/4/6 add 1A Fuse F4.F5.F9.F11.F15.F17.F18.F19
P/N : 1M-F32V1A0-F000

<36>2006/4/6 add 0.5A Fuse F2.F3.F6.F7.F8.F10.F12.F13.F14.F16.F18
P/N : 1M-F32V0A5-F000

<37>2006/4/6 add C872 according to MS20 lesson learn.
P/N : 1C-2B20102-M000

<38>2006/4/6 CN34 Pin23.24 change to +3VRUN.

<39>2006/4/6 add C71.C74.C87 for EMI.
P/N : 1C-2Y20104-Y000

<40>2006/4/6 add C89.C188.C199.C208.C213.C214
P/N : 1C-2Y20104-Y000

<40>2006/4/7 add C215.C216.C217.C218.C219 for EMI solution.
P/N : 1C-2Y20104-Y000

<41>2006/4/7 R118.R119.R351 change to populate as customer's feedback.

<42>2006/4/7 Y1.C104.C107.C492.C497.C501.R433.R434.R427.R428.R429.R430.R132.
R133.R134.R136.R117 change to NC as customer's feedback.

<43>2006/4/7 R439.R443 change to 0 Ohm as customer's feedback.
P/N : 1R-0000000-J200

<44>2006/4/7 update Net name EN_EXT_DEV_SENSE# as customer's feedback.

<45>2006/4/10 Modify ODD PWR Circuit for Customer feedback.add new component :
PQ183 P/N : 17-2N7002D-W000
PR115 P/N : 1R-0000101-J200
PR103.PR114 P/N : 1R-0000104-F100
PC87 P/N : 1C-2B20103-M000
PQ38 P/N : 17-S14800B-DY00
PC76 P/N : 1C-2B70106-M200

<46>2006/4/10 Modify VGA PWR Circuit for Customer feedback.add new component :
PR273 P/N : 1R-0000103-F200
PR773 P/N : 1R-0004992-F200
PQ20 P/N : 17-2N7002E-PT00
PR774 P/N : 1R-0000102-J200
PC873 P/N : 1C-2Y20105-Y000

<47>2006/4/10 add H21~H24.

<48>2006/4/10 Rename Schematic Part referene.
new version since 4/11

<49>2006/4/11 change R68.R133.R100
P/N : 1R-0000151-F200

<50>2006/4/11 PR111.PR114 change to NC according to PWR team's suggestion in EVT.

<51>2006/4/11 Modify ODD reset circuit as customer's feedback.
Add U37 P/N : 15-MAX809S-0000
Add R516 P/N : 1R-0000104-J200
NC R305

<52>2006/4/11 Remove C257 for EMI comment.

<53>2006/4/11 add ODD Reset RC.
Add R517 P/N : 1R-0000103-J200
Add C580 P/N : 1C-2Y20104-Y000

<54>2006/4/14 change R197.R198.R199.R200 to 60.4Ohm
P/N : 1R-000604X-F200

<55>2006/4/14 add R518 for 0Ohm
P/N : 1R-0000000-J200

<56>2006/4/14 CN7.C409.C412.L37.F16.R44.R45 change to CA from NV to fit configuration.

<57>2006/4/27 PR111.PR114 change to Populate from NC according to PWR team's suggestion in EVT.
P/N : 1R-0000100-J200

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MS60-L change list base on MS60-H

<58>2006/5/02 Del all NV_ components for L-model only.

<59>2006/5/03 Remove +1_8VRUN discharge circuit.Delete PR169,PQ44. Add PQ54 P/N:17-2N7002E-PT00

<60>2006/5/03 LED2 pin2,pin3 swap for Power LED color opposite issue

<61>2006/5/03 Change CAP93,CAP94 to NEC,TEPSGV0E337M9-12R,330uF,2.5V
P/N:1C-31T0337-MX00
Add CAP95 P/N:1C-31T0337-MX00

<62>2006/5/04 F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,F13,F14,F15,F16,F17,F19 change to fuse,1.1A PTC type
P/N:1M-F06V1A1-F000

<63>2006/5/05 follow M/E change to exchange PCN1 pin1 & pin2 connection.Layout change placement form top side to bottom side.

<64>2006/5/05 Add GP14,GP15 open jump for repair conveniently

<65>2006/5/05 Add C581,C582,C583,C584,C585,C586,C587,C588,C589,C590,C591,C592 for 22uF_0805_6.3V shortage.

<66>2006/5/08 As to M/E assemble issue, we will need rotat 180degree about T/P module.So that R47 change to stuff

<67>2006/05/09 Rename CAP93,CAP94,CAP95 to PC93,PC94,PC176.And change component to Panasonic,EEFSX0D331ER,330uF,2V
P/N:1C-42T0337-MX00

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<68>2006/05/09 PC54,PC58,PC59,PC139 change to X5R,0.1uF,6.3V,10%,0201 for X7R,0.1uF,10V,0201 shortage.
P/N:1C-2B10104-K100

<69>2006/05/11 L33,L34 pin swap .D12 & D10 change to TOP side for layout conveniently

<70>2006/05/12 PR198 change to 5.6k/0402_1% to modify 1.8V OCP seting value.
P/N:1R-0000562-F200

<71>2006/05/12 CN23 change to ''FOX_MH11747-BR2D-4F'' for ME requirement.
P/N:2N-000400N-FKG0

<72>2006/05/12 CN3,CN8 change to ''FOX_GB5RF120-1200-7F'' for ME requirement.
P/N:1N-0012001-F0T0

<73>2006/05/12 CN7 change to ''FFOXCONN_GB5RF060_1200_7F'' for ME requirement.
P/N:1N-0006000-F0T0

<74>2006/05/12 CN12,CN16 change to ''FOXCONN_UB11193_C1304_4F'' for ME requirement.
P/N:1N-0004000-FEG0

<75>2006/05/12 CN9 change to ''FOXCONN_HS8206E'' for ME requirement.
P/N:1N-0006001-M1T0

<76>2006/05/16 Due to ripple noise issue.PC74,PC175 change to ''Panasonic,EEFSX0D331ER'' .Del PC75 for power requirement.
P/N:1C-42T0337-MX00

<77>2006/05/17 Add PQ55,PQ56,PR200,PR201,PR202,PR203 for power discharge.
P/N:17-2N7002D-W000
P/N:1R-0000331-J300
P/N:1R-0000104-F100
P/N:1R-0000101-J200

<78>2006/05/17 U24 change to ''FOXCONN_PZ4782A_2743_01'' for ME requirement.
P/N:1N-1478002-0000

<79>2006/05/18 PC67 change to 10pF 0402,and need to mount for power requirement.
P/N:1C-2N20100-J000

<80>2006/05/18   CN12,CN16 change footprint to ''FOXCONN_UB11193_C1304_4F_HM'' for DFM.

<81>2006/05/18   Add R519,R520,C593,C594 on ''IAC_BITCLK'' signal for EMI requirement.
P/N:1R-0000000-J200
P/N:1C-2N20330-J000

<82>2006/05/18 H13,H15 footprint change to '' hole_tc236bc315d114'' for ME requirement.
P/N:1X-HOLE000-0232

<83>2006/05/19 CN25 need change to P/N:1N-1200007-0000. CN26 need change to P/N:1N-1200008-0000. Because P/N:1N-120000C-0000 & P/N:1N-120000D-0000 part number are not available.

<84>2006/05/19 Add PC177,PC178,PC179,PC180 on DC_IN trace for EMI requirement.
P/N:1C-2B30104-K000

<85>2006/05/22 Del R89,R140,R127.Add L54,L55,L56 (0 ohm change to bead) for EMI requirement.
P/N:1L-BEBMS16-0801

<86>2006/05/30 change R517 from 10Kohm to 0ohm for solving the ODD issue.
P/N:1R-0000000-J200

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DVT change list

<87>2006/06/15 Delete R264.R271 for Debug BD LED.

<88>2006/06/15 Del reset IC form ODD portion.Del R516,R517,C580. Change U37 to 74AHC1G08GW and connect GPIO_ODD_RST# form KBC for ODD reset.

<89>2006/06/15 Add R521 1k ohm and change R244 connection form ''ALW_ON'' to ''ALW_ON_1'' for customer's requirement.
P/N : 1R-0000102-J200

<90>2006/06/16 PORT_DET# change from EC's pin81 to EC's pin176 for noise decreasing.

<91>2006/6/16 remove RP13 and replace with R519/R520 for WLAN issue improving.
P/N : 1R-0000220-F200

<92>2006/6/16 Add one GPIO signal ''VISTA_SUPPORT#'' that is connected form EC's pin99 to CN1's pin17 to support Vista OS.

<93>2006/6/16 Add PQ57,PC181 for ODD power plane.
P/N:17-S12304B-DS00
P/N:1C-2B70106-M200

<94>2006/6/16 (HDD connector)CN21's pin18 change connection from NC to GND for the starting timing improvement.

<95>2006/6/17 Change PQ52 from SI7392DP to IRF807Z and change PQ53 from SI7336ADP to IRF8113 for power requirement.
P/N:17-1RF7807-2000
P/N:17-1RF8113-0000

<96>2006/6/17 PR198 change from 5.6K ohm to 7.32K ohm to modify OCP setting value.
P/N:1R- 0007321-F200

<97>2006/6/17 U12 change from G961-18ADJEU to SC1565IS-2.5TRT for WWAN voltage drop improvement.
P/N:15-SC15651-0000

<98>2006/6/19 pc117,pc179,pc178,pc180,pc115,pc91 change to populate for EMI requirement.

<99>2006/6/19 Add C595 at PRT_IN power trace for EMI requirement.
P/N:1C-2B30104-K000

<100>2006/6/19 Add PC116,PC117,PC118,PC120,PC122,PC123,PC124 at DCBATOUT power trace for EMI requirement.
P/N:1C-2B30105-M000
P/N:1C-2B30104-K000

<101>2006/6/19 Add R303 10K pulldown at U34's pin1 to avoid start abnormally for customer's requirement.
P/N:1R-0000103-J200

<102>2006/6/19 PC171 change to NC_ condition for power requirement.

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