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P. Leader	Check by	Design by
陳秋福	陳先儒	黃建凱

Project Code & Schematics Subject:	MS11 Main Board	PCB P/N:	1P-0062100-8010(FUBAI) 1P-0062200-8010(NAN YA) 1P-0062500-8010HANSTAR)

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P. Leader	Check by	Design by

Project Code & Schematics Subject: MS11 Main Board

PCB P/N: 1P-0062100-8010(FUBAI)
1P-0062200-8010(NAN YA)
1P-0062500-8010HANSTAR)

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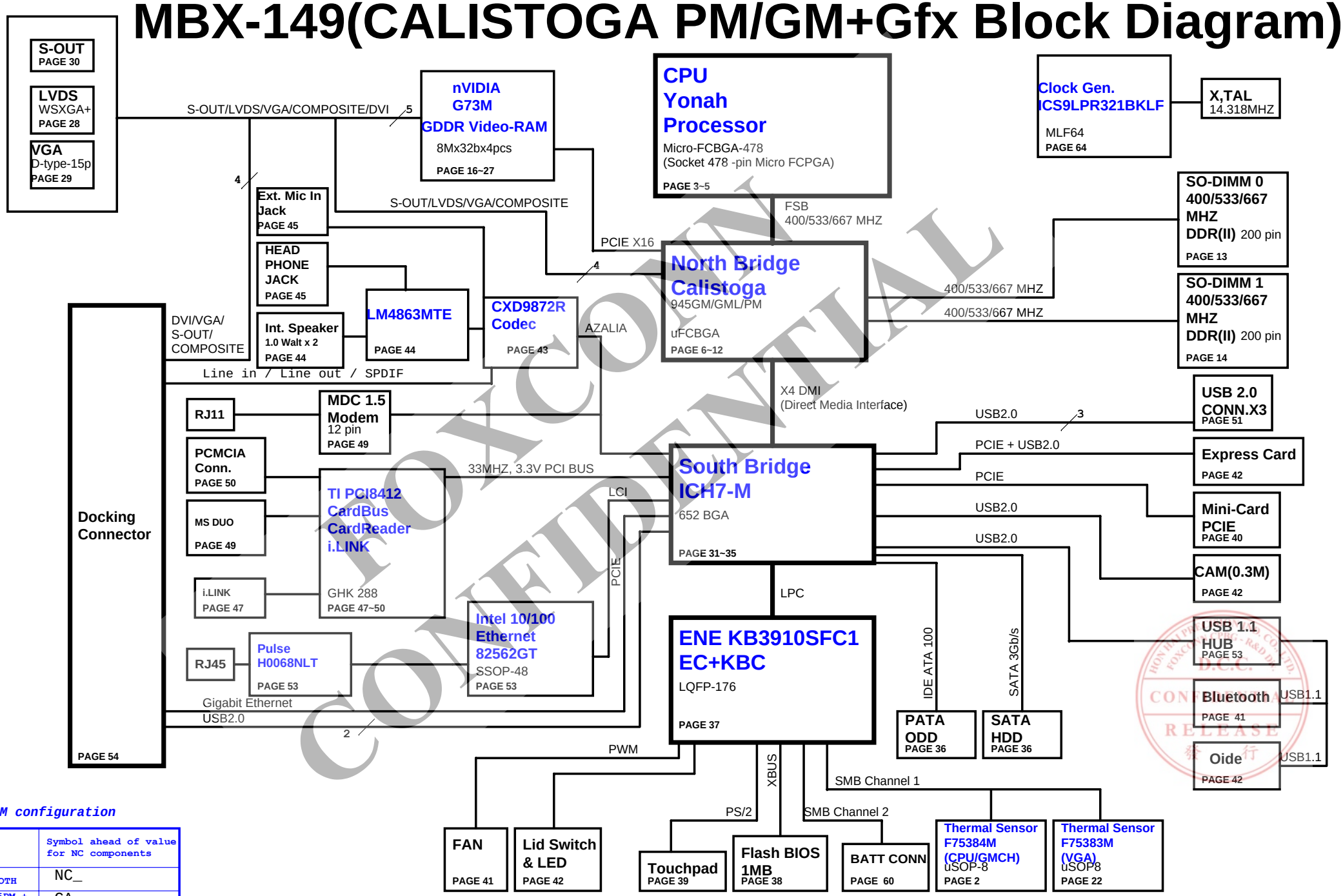
MBX-149(CALISTOGA PM/GM+Gfx Block Diagram)



BOM configuration

	Symbol ahead of value for NC components
BOTH	NC_
945PM + NV72M/73M	CA_
945GM/GML	NV_

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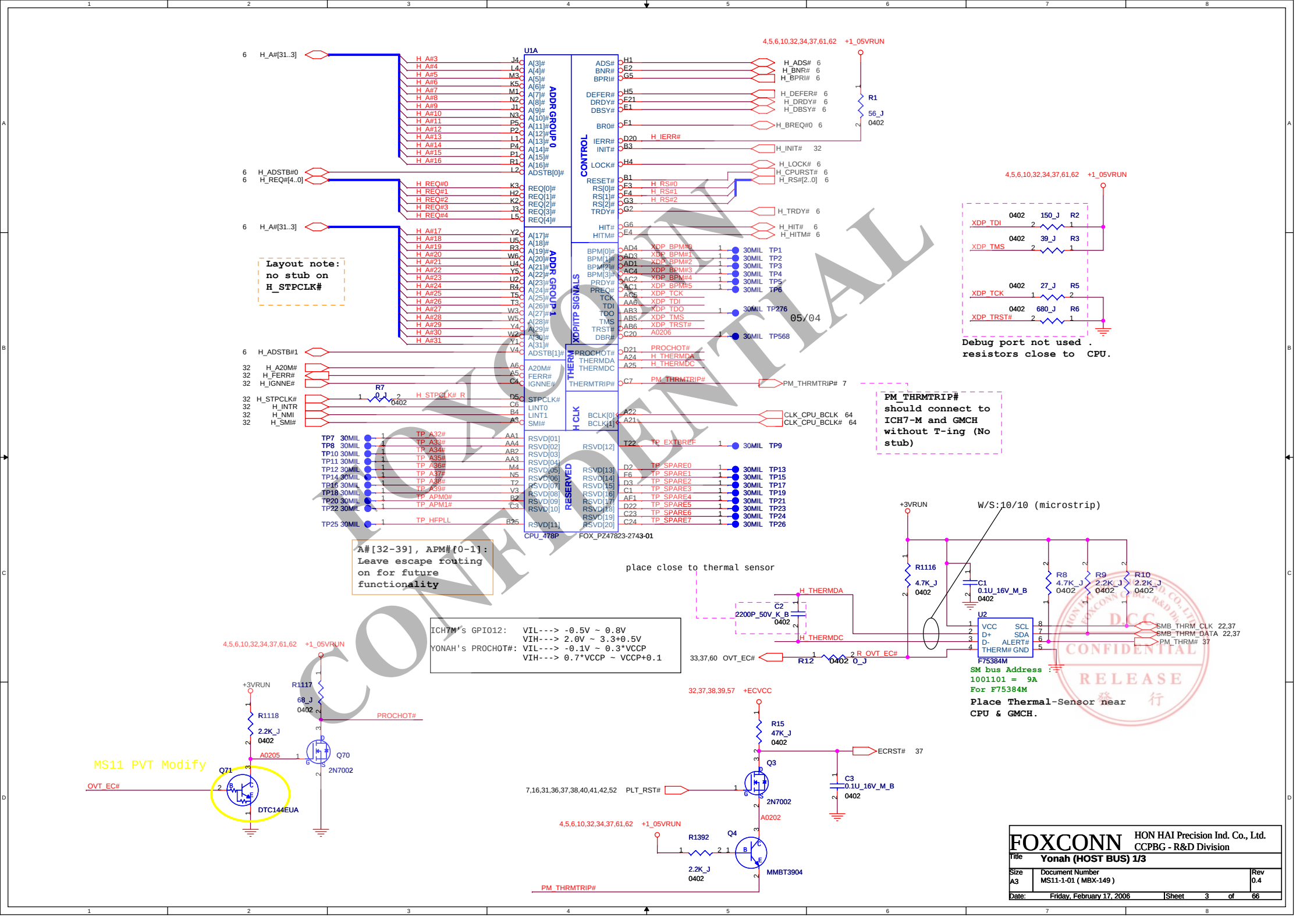
U1A
ADDR GROUP 0
ADDR GROUP 1
CONTROL
XDP/ITP SIGNALS
THERM
H CLK
RESERVED
CPU_478P
FOX_PZ47823-2743-01
Layout note:
no stub on
H_STPCLK#
A#[32-39], APM#[0-1]:
Leave escape routing
on for future
functionality
PM_THRMTRIP#
should connect to
ICH7-M and GMCH
without T-ing (No
stub)
Debug port not used .
resistors close to CPU.
place close to thermal sensor
W/S:10/10 (microstrip)
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
SM bus Address :
1001101 = 9A
For F75384M
Place Thermal-Sensor near
CPU & GMCH.
MS11 PVT Modify
F75384M
DTC144EUA
2N7002
MMBT3904
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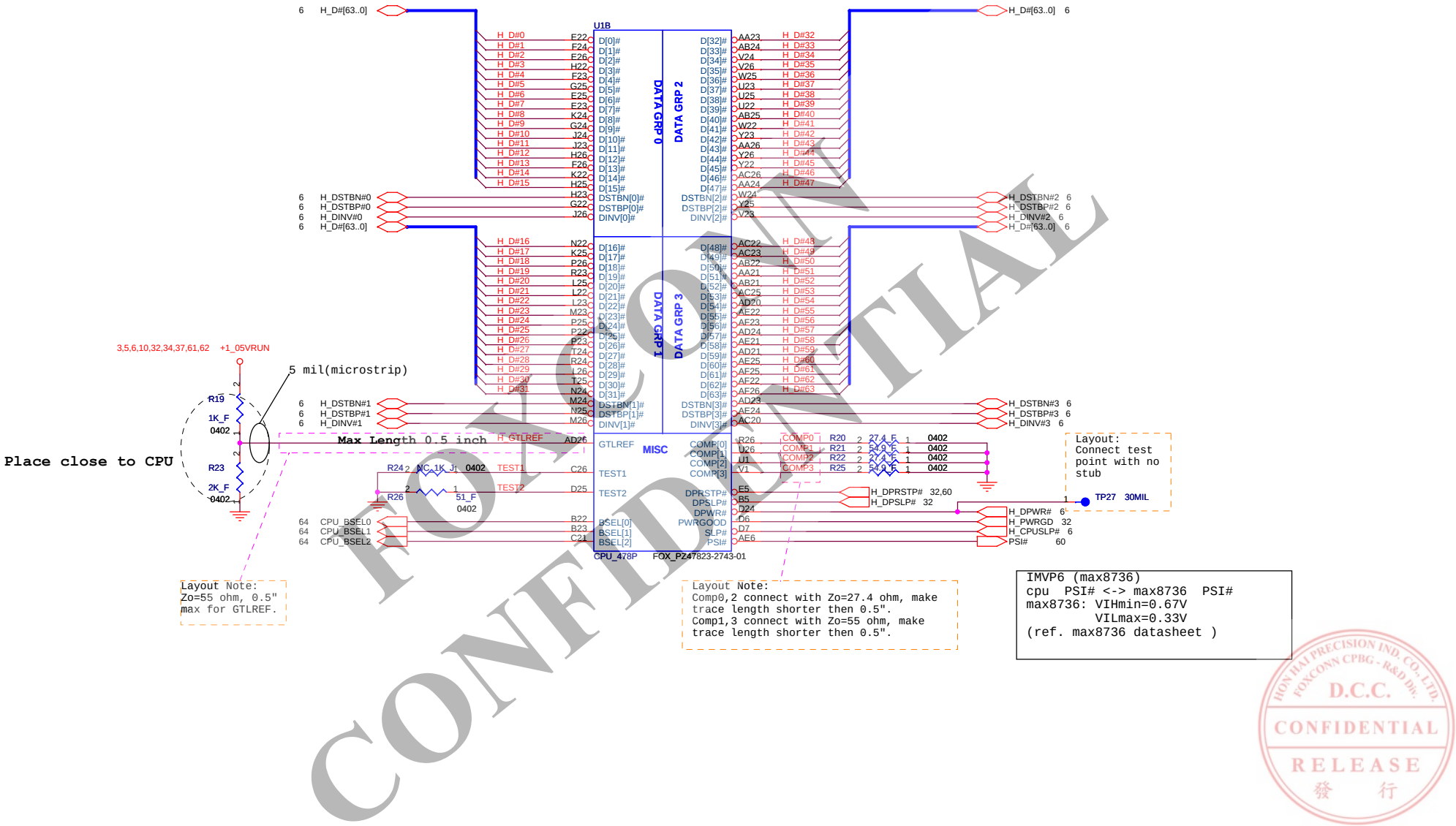

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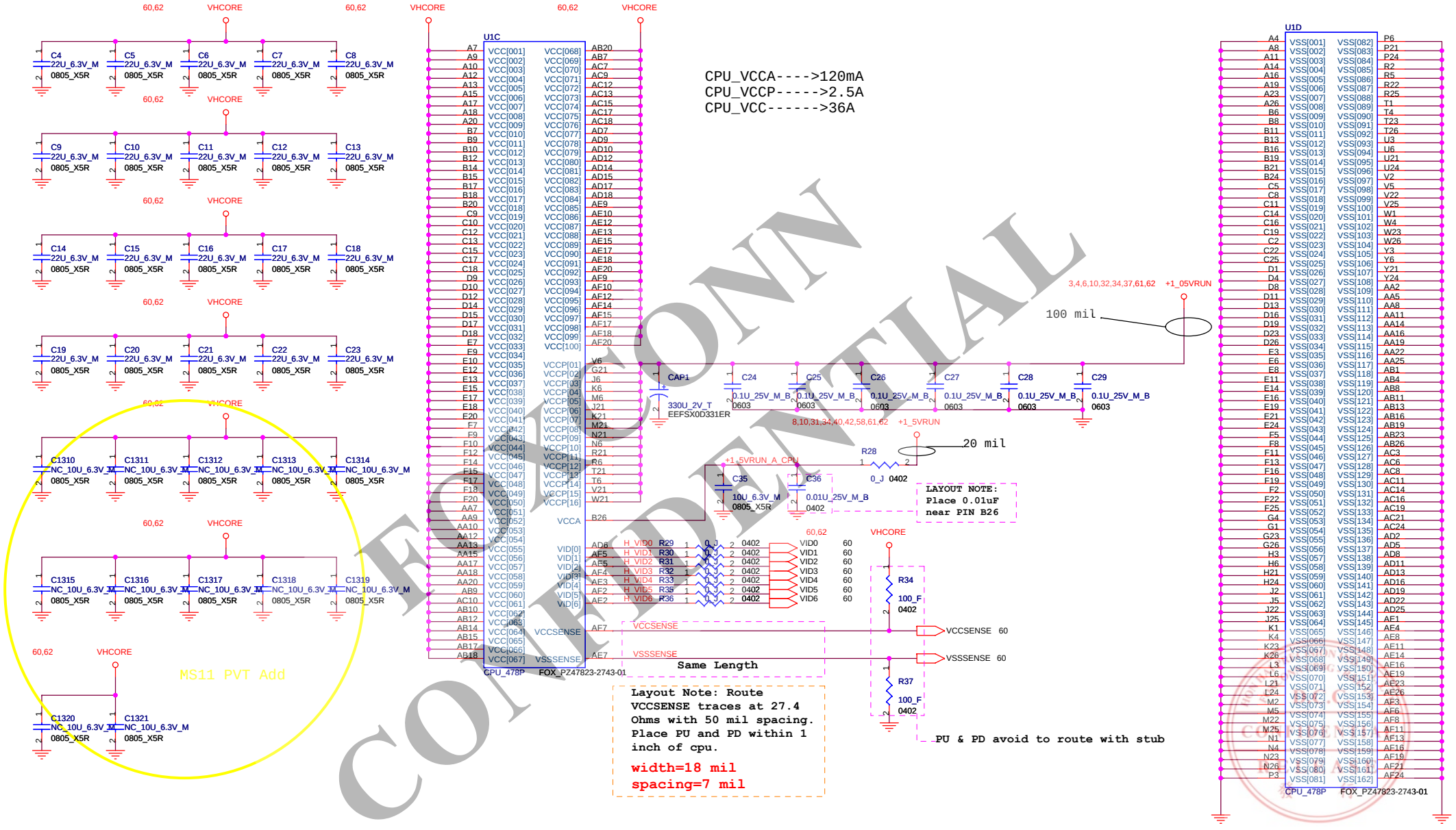

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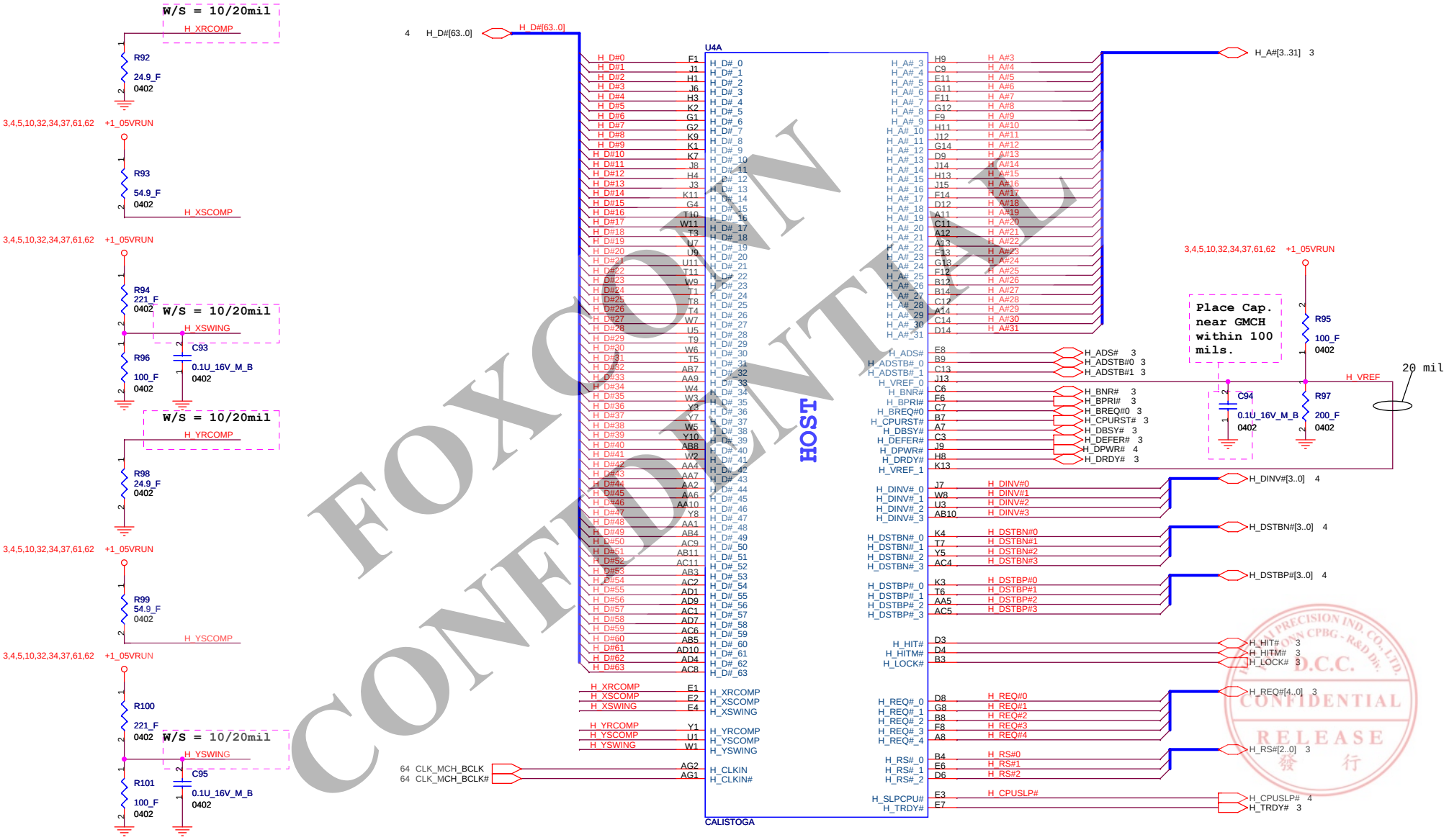

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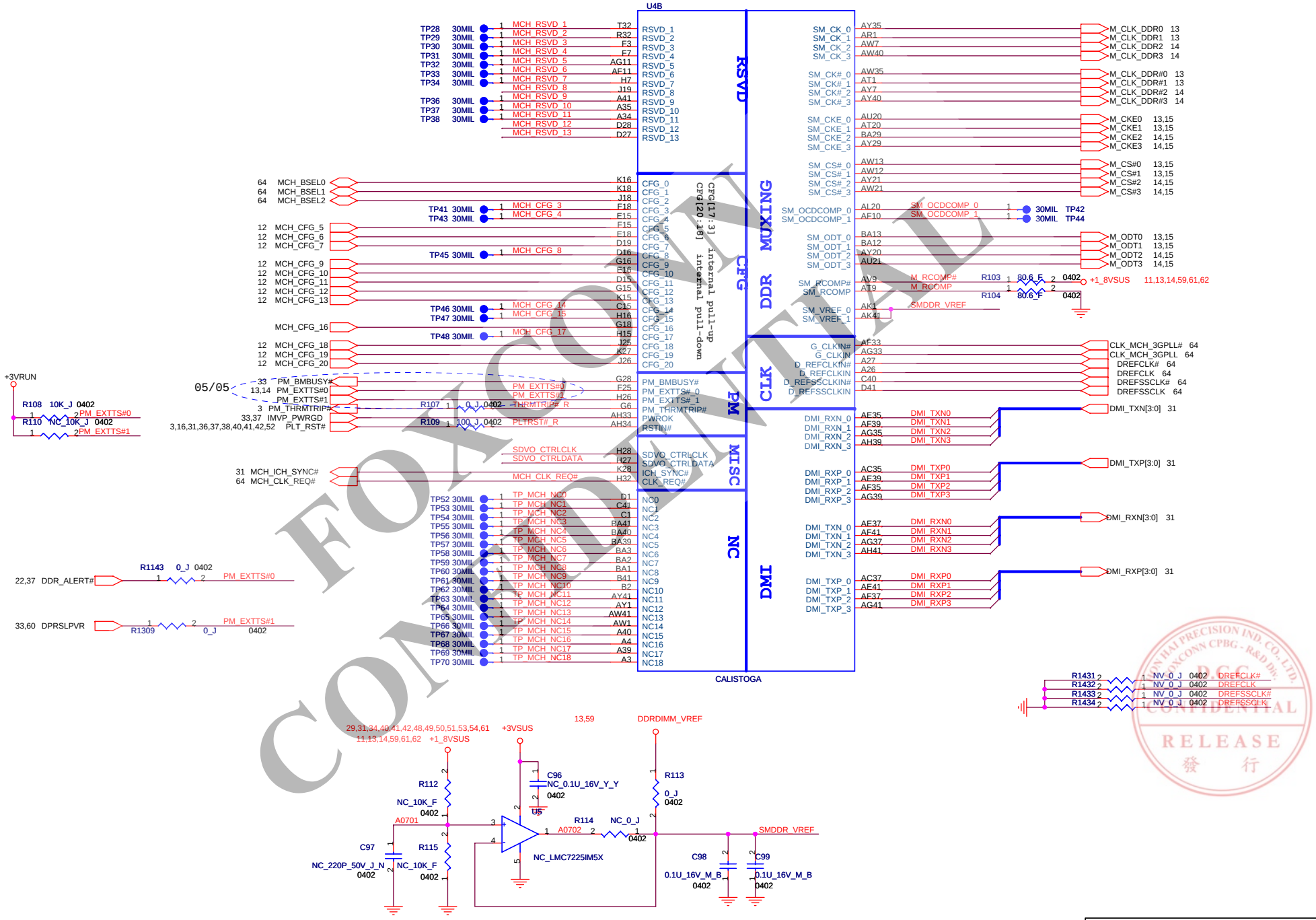

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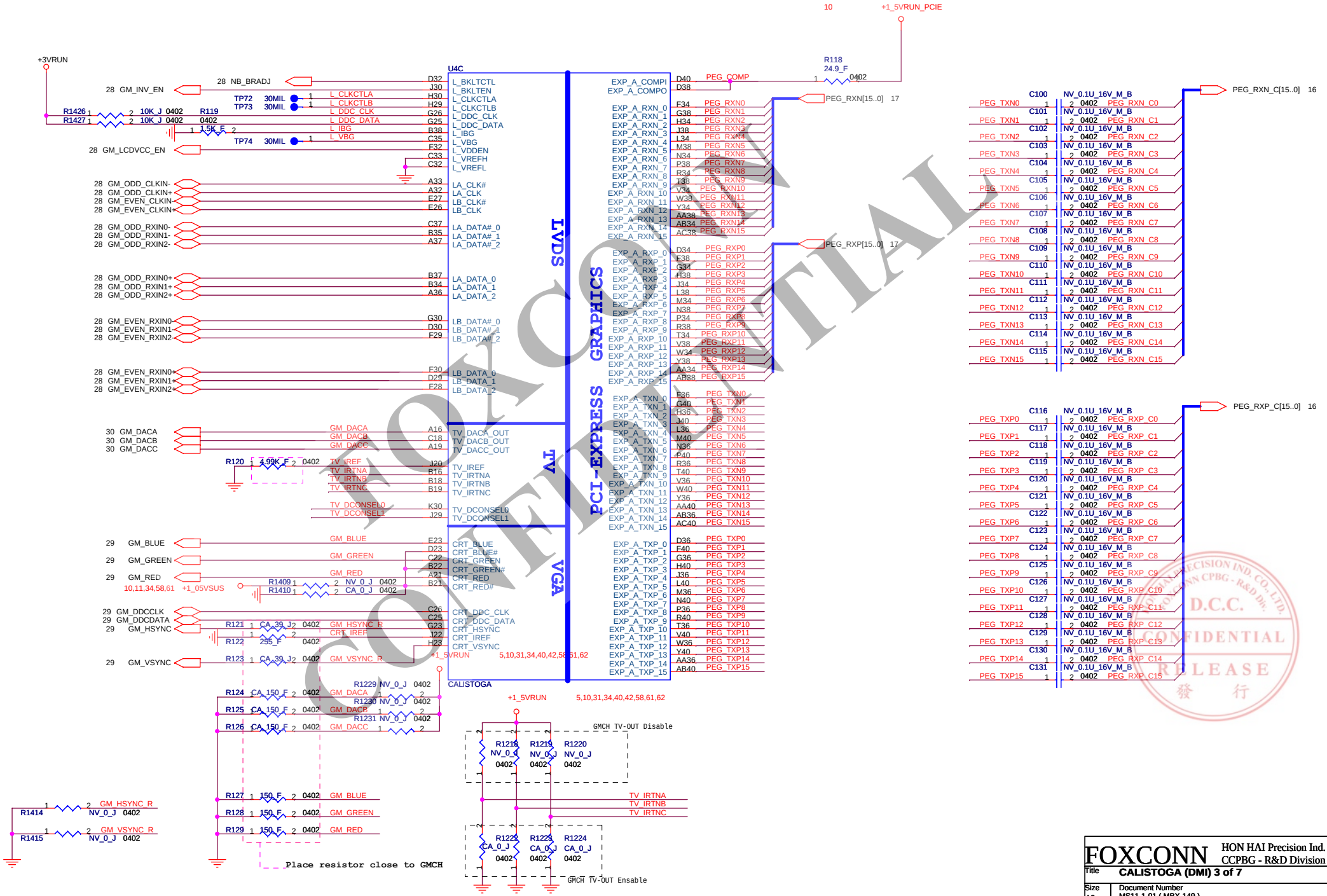

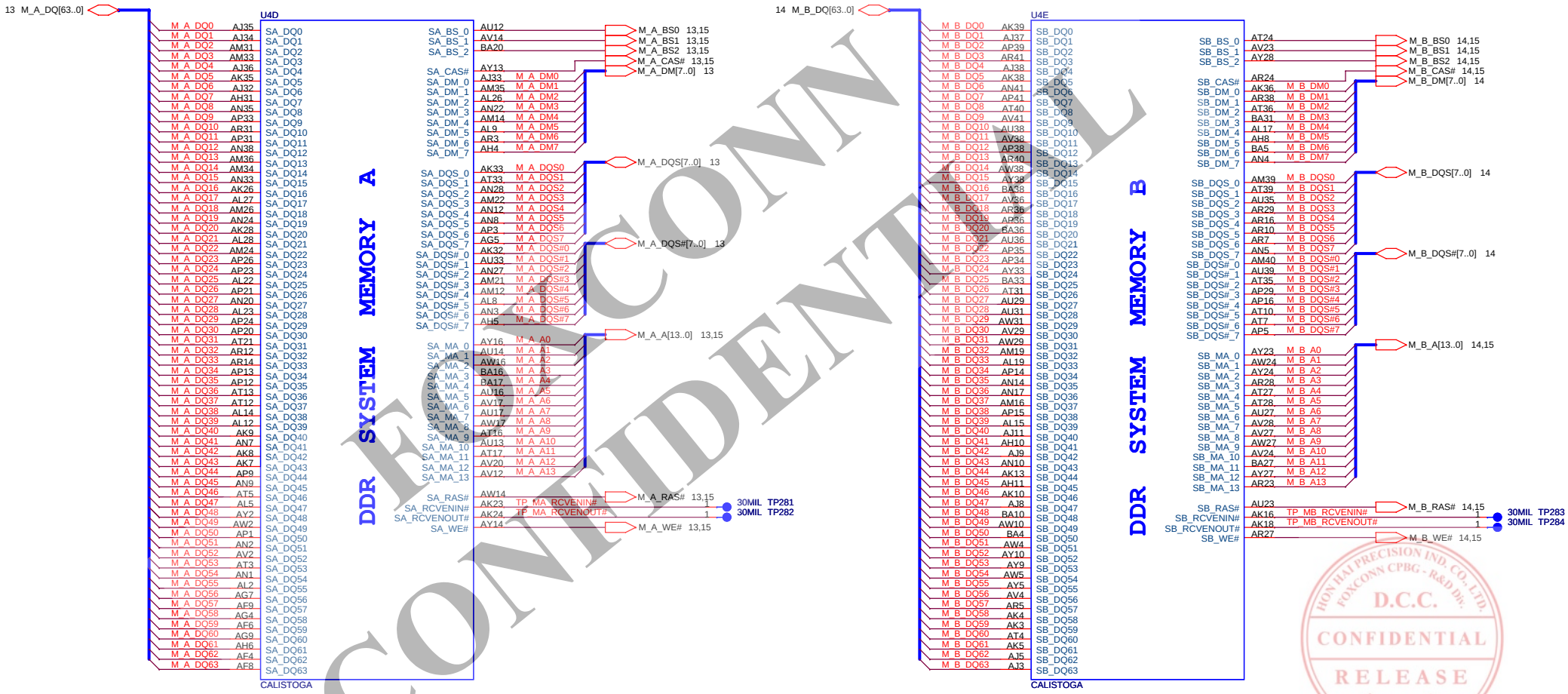

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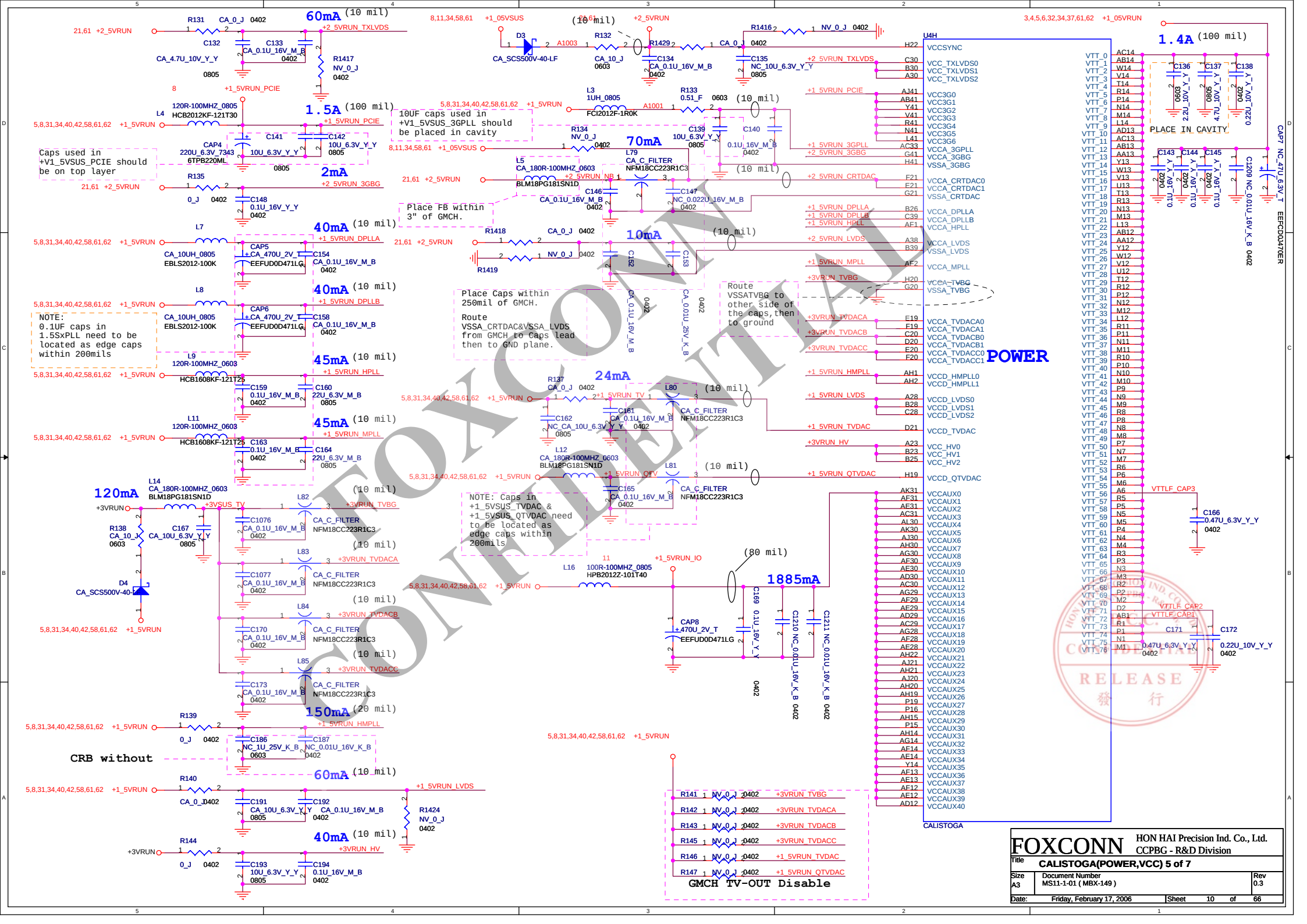
60mA (10 mil)
1.5A (100 mil)
2mA
40mA (10 mil)
40mA (10 mil)
45mA (10 mil)
45mA (10 mil)
120mA
(10 mil)
(10 mil)
(10 mil)
(10 mil)
150mA (20 mil)
CRB without
60mA (10 mil)
40mA (10 mil)
70mA
(10 mil)
(10 mil)
10mA
(10 mil)
24mA
(10 mil)
(10 mil)
(80 mil)
1885mA
1.4A (100 mil)
PLACE IN CAVITY
VTTLF_CAP3
VTTLF_CAP2
VTTLF_CAP1
10UF caps used in +V1_5VSUS_3GPLL should be placed in cavity
Caps used in +V1_5VSUS_PCIE should be on top layer
Place FB within 3" of GMCH.
Place Caps within 250mil of GMCH.
Route VSSA_CRTDAC&VSSA_LVDS from GMCH to Caps lead then to GND plane.
Route VSSATVBG to other side of the caps,then to ground
NOTE: 0.1UF caps in 1.5SxPLL need to be located as edge caps within 200mils
NOTE: Caps in +1_5VSUS_TVDAC & +1_5VSUS_QTVDAC need to be located as edge caps within 200mils
GMCH TV-OUT Disable
U4H
CALISTOGA
POWER
FOXCONN
HON HAI Precision Ind. Co., Ltd.
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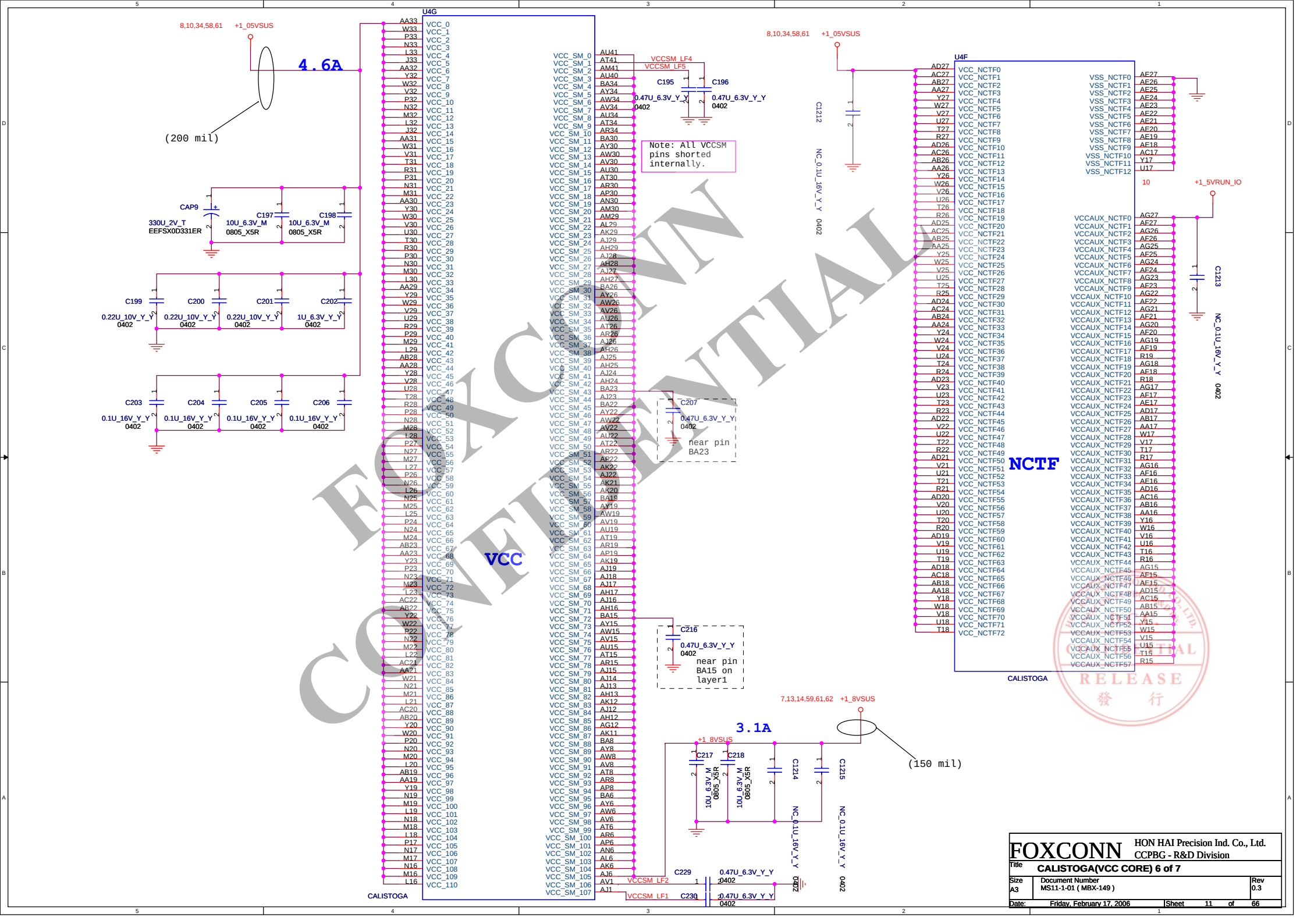

7 MCH_CFG_5 — 1 — 30MIL TP554

MCH_CFG_5	Low = DMIx2 High = DMIx4

7 MCH_CFG_6 — 1 — 30MIL TP556

MCH_CFG_6	Low = Moby Dick High = Calistoga

DDR2 select (default high)

7 MCH_CFG_7 — 1 — 30MIL TP557

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

7 MCH_CFG_9 — 1 — 30MIL TP559

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

For layout convenience

7 MCH_CFG_10 — 1 — 30MIL TP560

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

7 MCH_CFG_11

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

R162 NC_2.2K_J 0402

7 MCH_CFG_12 — 1 — 30MIL TP562
7 MCH_CFG_13 — 1 — 30MIL TP563

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

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

7 MCH_CFG_18 — 1 — 30MIL TP555

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

7 MCH_CFG_19 — 1 — 30MIL TP558

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 — 1 — 30MIL TP561

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

U4I

VSS_0 VSS_1 VSS_2 VSS_3 VSS_4 VSS_5 VSS_6 VSS_7 VSS_8 VSS_9 VSS_10 VSS_11 VSS_12 VSS_13 VSS_14 VSS_15 VSS_16 VSS_17 VSS_18 VSS_19 VSS_20 VSS_21 VSS_22 VSS_23 VSS_24 VSS_25 VSS_26 VSS_27 VSS_28 VSS_29 VSS_30 VSS_31 VSS_32 VSS_33 VSS_34 VSS_35 VSS_36 VSS_37 VSS_38 VSS_39 VSS_40 VSS_41 VSS_42 VSS_43 VSS_44 VSS_45 VSS_46 VSS_47 VSS_48 VSS_49 VSS_50 VSS_51 VSS_52 VSS_53 VSS_54 VSS_55 VSS_56 VSS_57 VSS_58 VSS_59 VSS_60 VSS_61 VSS_62 VSS_63 VSS_64 VSS_65 VSS_66 VSS_67 VSS_68 VSS_69 VSS_70 VSS_71 VSS_72 VSS_73 VSS_74 VSS_75 VSS_76 VSS_77 VSS_78 VSS_79 VSS_80 VSS_81 VSS_82 VSS_83 VSS_84 VSS_85 VSS_86 VSS_87 VSS_88 VSS_89 VSS_90 VSS_91 VSS_92 VSS_93 VSS_94 VSS_95 VSS_96

VSS_97 VSS_98 VSS_99 VSS_100 VSS_101 VSS_102 VSS_103 VSS_104 VSS_105 VSS_106 VSS_107 VSS_108 VSS_109 VSS_110 VSS_111 VSS_112 VSS_113 VSS_114 VSS_115 VSS_116 VSS_117 VSS_118 VSS_119 VSS_120 VSS_121 VSS_122 VSS_123 VSS_124 VSS_125 VSS_126 VSS_127 VSS_128 VSS_129 VSS_130 VSS_131 VSS_132 VSS_133 VSS_134 VSS_135 VSS_136 VSS_137 VSS_138 VSS_139 VSS_140 VSS_141 VSS_142 VSS_143 VSS_144 VSS_145 VSS_146 VSS_147 VSS_148 VSS_149 VSS_150 VSS_151 VSS_152 VSS_153 VSS_154 VSS_155 VSS_156 VSS_157 VSS_158 VSS_159 VSS_160 VSS_161 VSS_162 VSS_163 VSS_164 VSS_165 VSS_166 VSS_167 VSS_168 VSS_169 VSS_170 VSS_171 VSS_172 VSS_173 VSS_174 VSS_175 VSS_176 VSS_177 VSS_178 VSS_179

VSS

CALISTOGA

U4J

VSS_180 VSS_181 VSS_182 VSS_183 VSS_184 VSS_185 VSS_186 VSS_187 VSS_188 VSS_189 VSS_190 VSS_191 VSS_192 VSS_193 VSS_194 VSS_195 VSS_196 VSS_197 VSS_198 VSS_199 VSS_200 VSS_201 VSS_202 VSS_203 VSS_204 VSS_205 VSS_206 VSS_207 VSS_208 VSS_209 VSS_210 VSS_211 VSS_212 VSS_213 VSS_214 VSS_215 VSS_216 VSS_217 VSS_218 VSS_219 VSS_220 VSS_221 VSS_222 VSS_223 VSS_224 VSS_225 VSS_226 VSS_227 VSS_228 VSS_229 VSS_230 VSS_231 VSS_232 VSS_233 VSS_234 VSS_235 VSS_236 VSS_237 VSS_238 VSS_239 VSS_240 VSS_241 VSS_242 VSS_243 VSS_244 VSS_245 VSS_246 VSS_247 VSS_248 VSS_249 VSS_250 VSS_251 VSS_252 VSS_253 VSS_254 VSS_255 VSS_256 VSS_257 VSS_258 VSS_259 VSS_260 VSS_261 VSS_262 VSS_263 VSS_264 VSS_265 VSS_266 VSS_267 VSS_268 VSS_269 VSS_270 VSS_271 VSS_272

VSS

VSS_273 VSS_274 VSS_275 VSS_276 VSS_277 VSS_278 VSS_279 VSS_280 VSS_281 VSS_282 VSS_283 VSS_284 VSS_285 VSS_286 VSS_287 VSS_288 VSS_289 VSS_290 VSS_291 VSS_292 VSS_293 VSS_294 VSS_295 VSS_296 VSS_297 VSS_298 VSS_299 VSS_300 VSS_301 VSS_302 VSS_303 VSS_304 VSS_305 VSS_306 VSS_307 VSS_308 VSS_309 VSS_310 VSS_311 VSS_312 VSS_313 VSS_314 VSS_315 VSS_316 VSS_317 VSS_318 VSS_319 VSS_320 VSS_321 VSS_322 VSS_323 VSS_324 VSS_325 VSS_326 VSS_327 VSS_328 VSS_329 VSS_330 VSS_331 VSS_332 VSS_333 VSS_334 VSS_335 VSS_336 VSS_337 VSS_338 VSS_339 VSS_340 VSS_341 VSS_342 VSS_343 VSS_344 VSS_345 VSS_346 VSS_347 VSS_348 VSS_349 VSS_350 VSS_351 VSS_352 VSS_353 VSS_354 VSS_355 VSS_356 VSS_357 VSS_358 VSS_359 VSS_360

CALISTOGA

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CCPBG - R&D Division

Title	CALISTOGA(VSS) 7 of 7	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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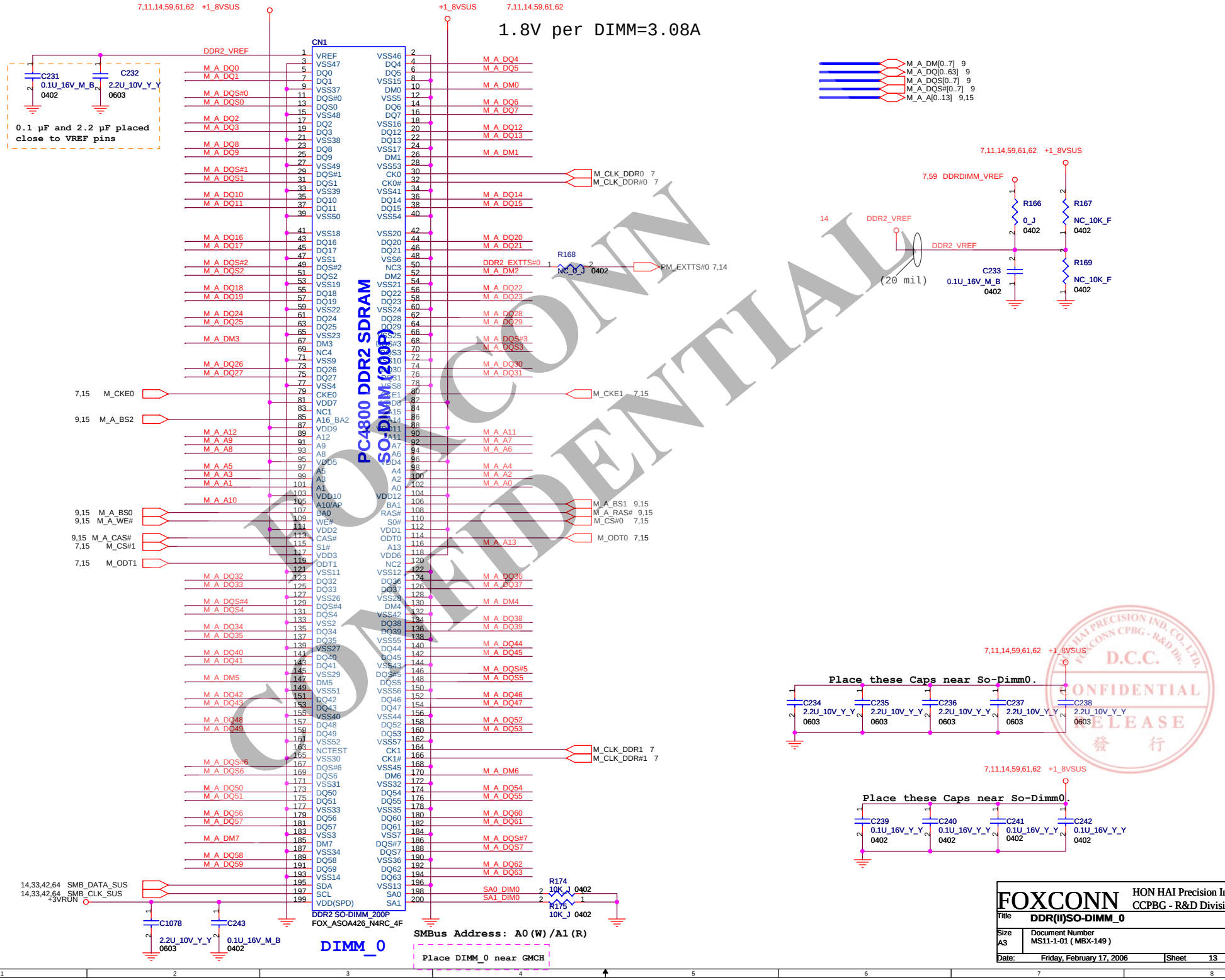
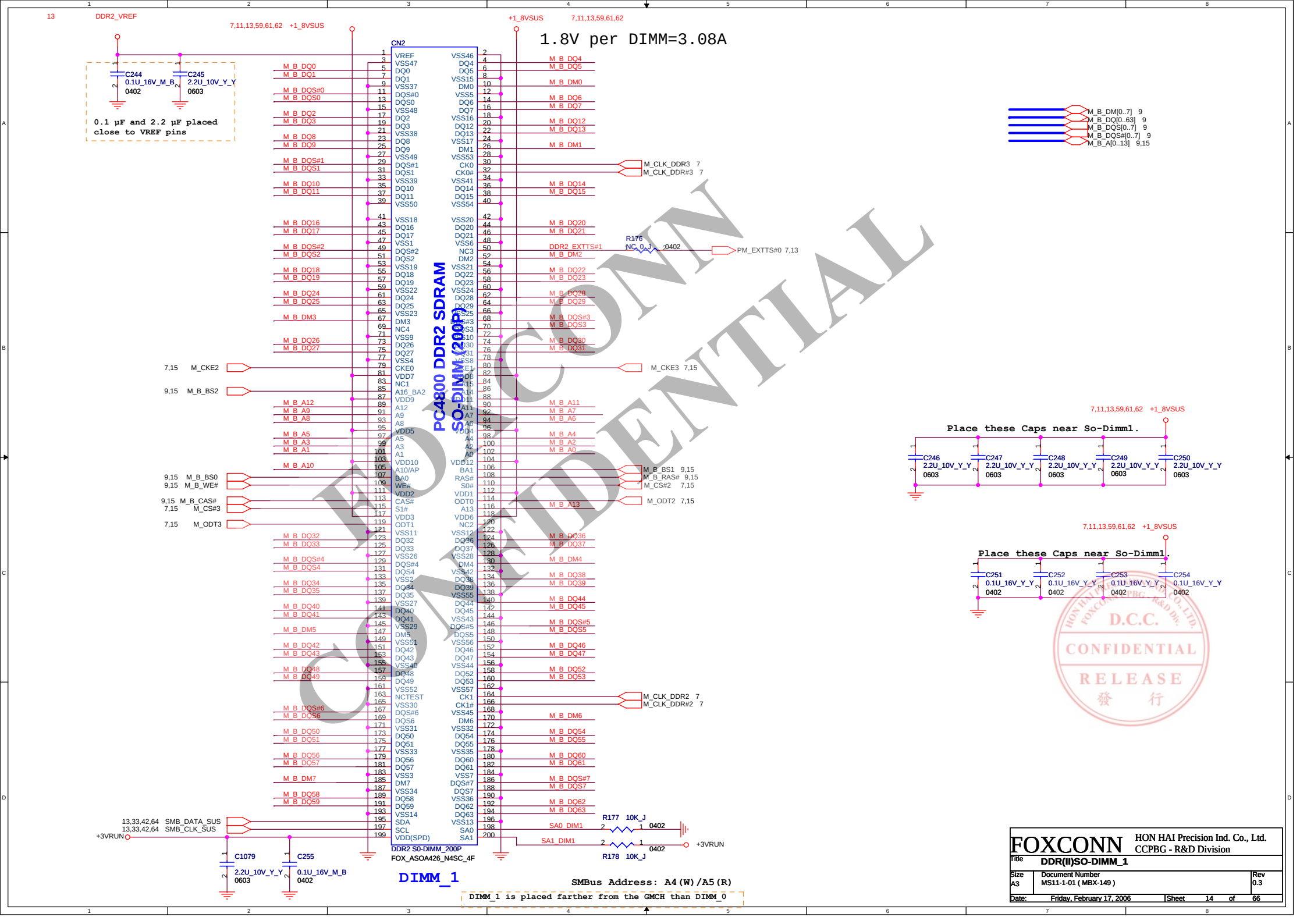


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	DDR(II)SO-DIMM_0
Size A3	Document Number MS11-1-01 (MBX-149)
Rev	0.3
Date: Friday, February 17, 2006	Sheet 13 of 66


13
DDR2_VREF
7,11,13,59,61,62 +1_8VSUS
+1_8VSUS 7,11,13,59,61,62
1.8V per DIMM=3.08A
C244 0.1U_16V_M_B 0402
C245 2.2U_10V_Y_Y 0603
0.1 µF and 2.2 µF placed close to VREF pins
CN2
PC4800 DDR2 SDRAM SO-DIMM (200P)
DDR2 S0-DIMM_200P
FOX_ASOA426_N4SC_4F
DIMM_1
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
M_CLK_DDR3 7
M_CLK_DDR#3 7
M_CLK_DDR2 7
M_CLK_DDR#2 7
R176 NC_0_J 0402
DDR2_EXTTS#1
PM_EXTTS#0 7,13
M_CKE2 7,15
M_CKE3 7,15
M_B_BS2 9,15
M_B_BS0 9,15
M_B_WE# 9,15
M_B_CAS# 9,15
M_CS#3 7,15
M_ODT3 7,15
M_B_BS1 9,15
M_B_RAS# 9,15
M_CS#2 7,15
M_ODT2 7,15
13,33,42,64 SMB_DATA_SUS
13,33,42,64 SMB_CLK_SUS
+3VRUN
C1079 2.2U_10V_Y_Y 0603
C255 0.1U_16V_M_B 0402
R177 10K_J 0402
R178 10K_J 0402
SA0_DIM1
SA1_DIM1
SMBus Address: A4(W)/A5(R)
DIMM_1 is placed farther from the GMCH than DIMM_0
Place these Caps near So-Dimm1.
7,11,13,59,61,62 +1_8VSUS
C246 2.2U_10V_Y_Y 0603
C247 2.2U_10V_Y_Y 0603
C248 2.2U_10V_Y_Y 0603
C249 2.2U_10V_Y_Y 0603
C250 2.2U_10V_Y_Y 0603
Place these Caps near So-Dimm1.
7,11,13,59,61,62 +1_8VSUS
C251 0.1U_16V_Y_Y 0402
C252 0.1U_16V_Y_Y 0402
C253 0.1U_16V_Y_Y 0402
C254 0.1U_16V_Y_Y 0402
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title DDR(II)SO-DIMM_1
Size A3
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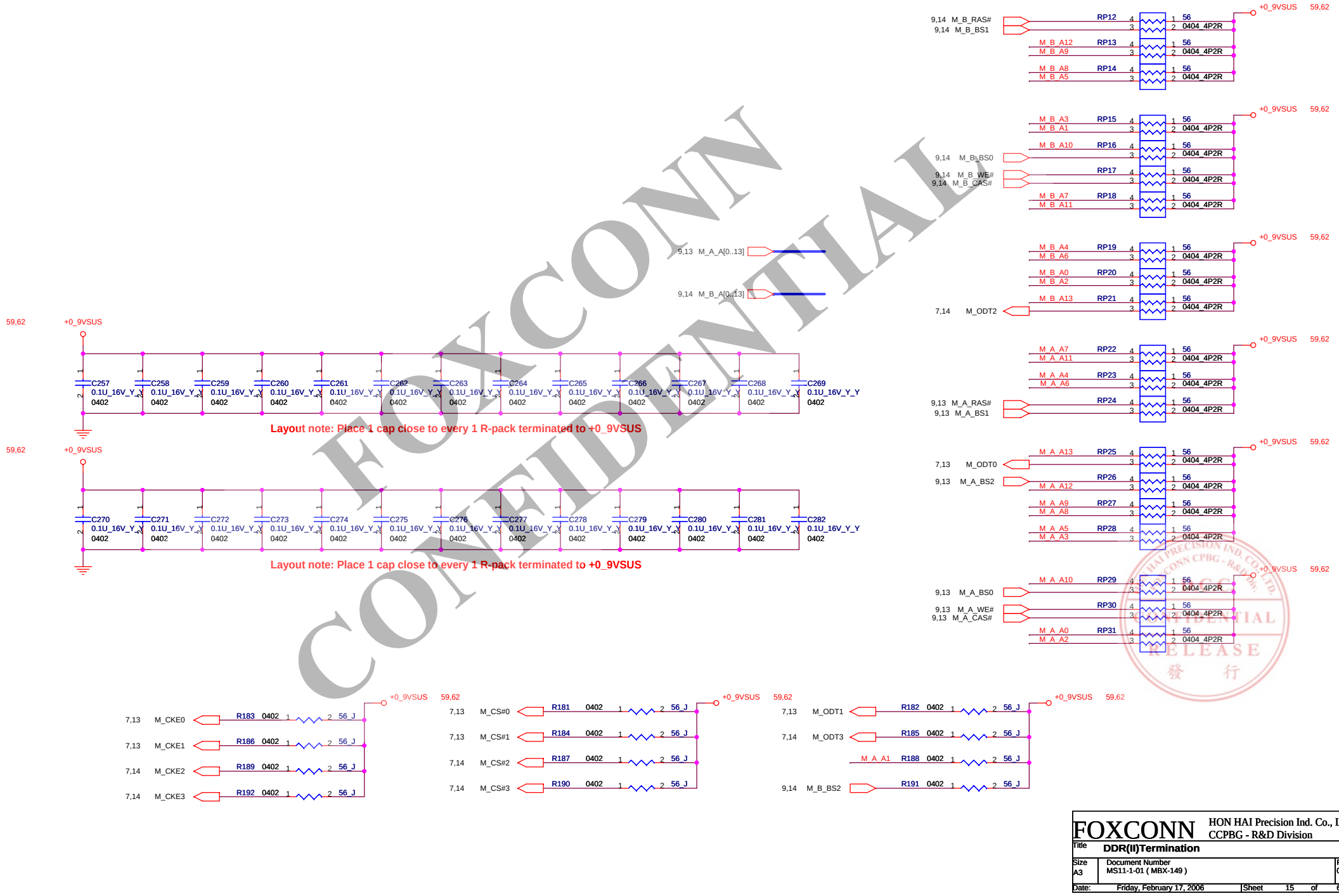
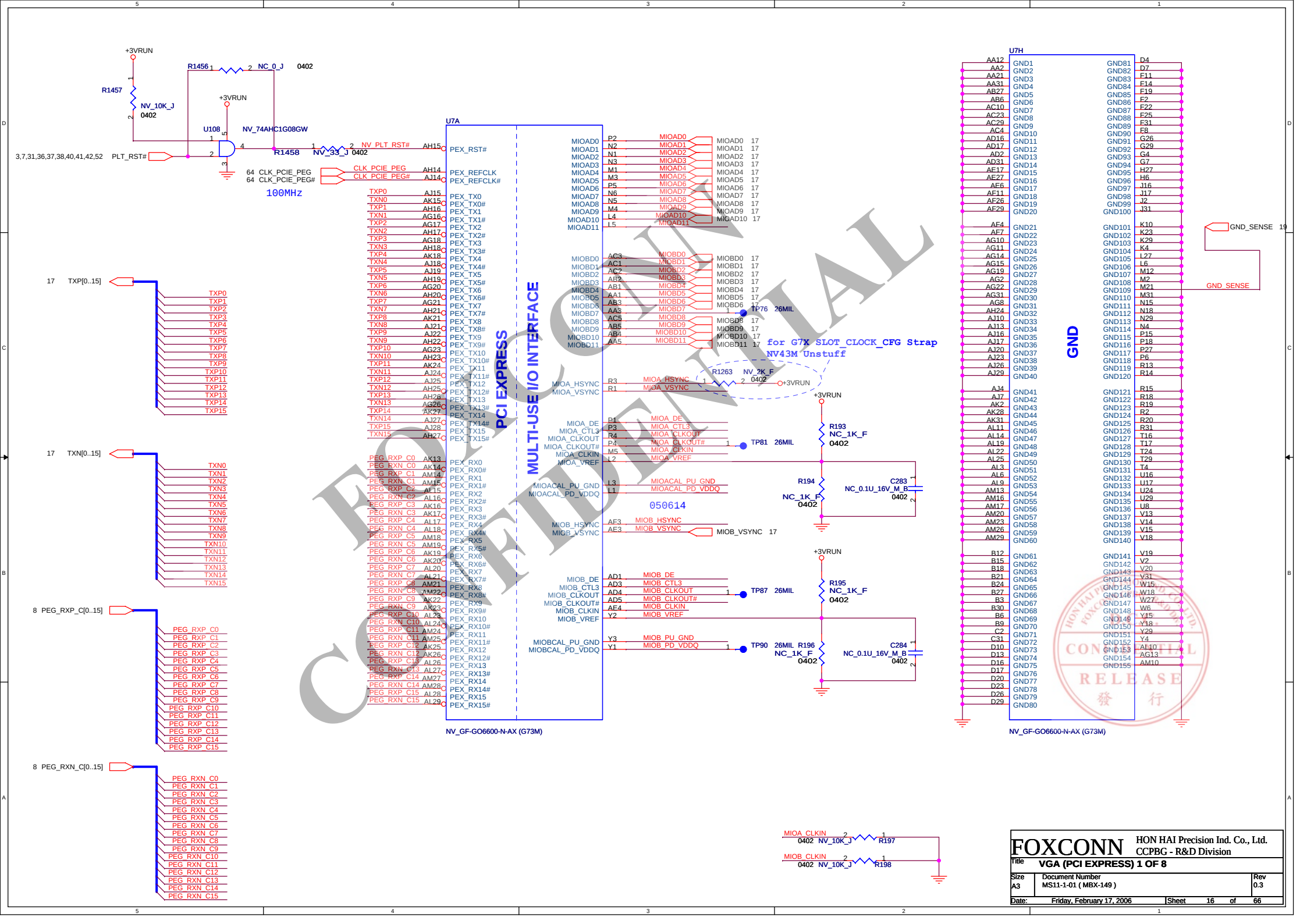


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	DDR(II)Termination	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 15 of 66	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VGA (PCI EXPRESS) 1 OF 8	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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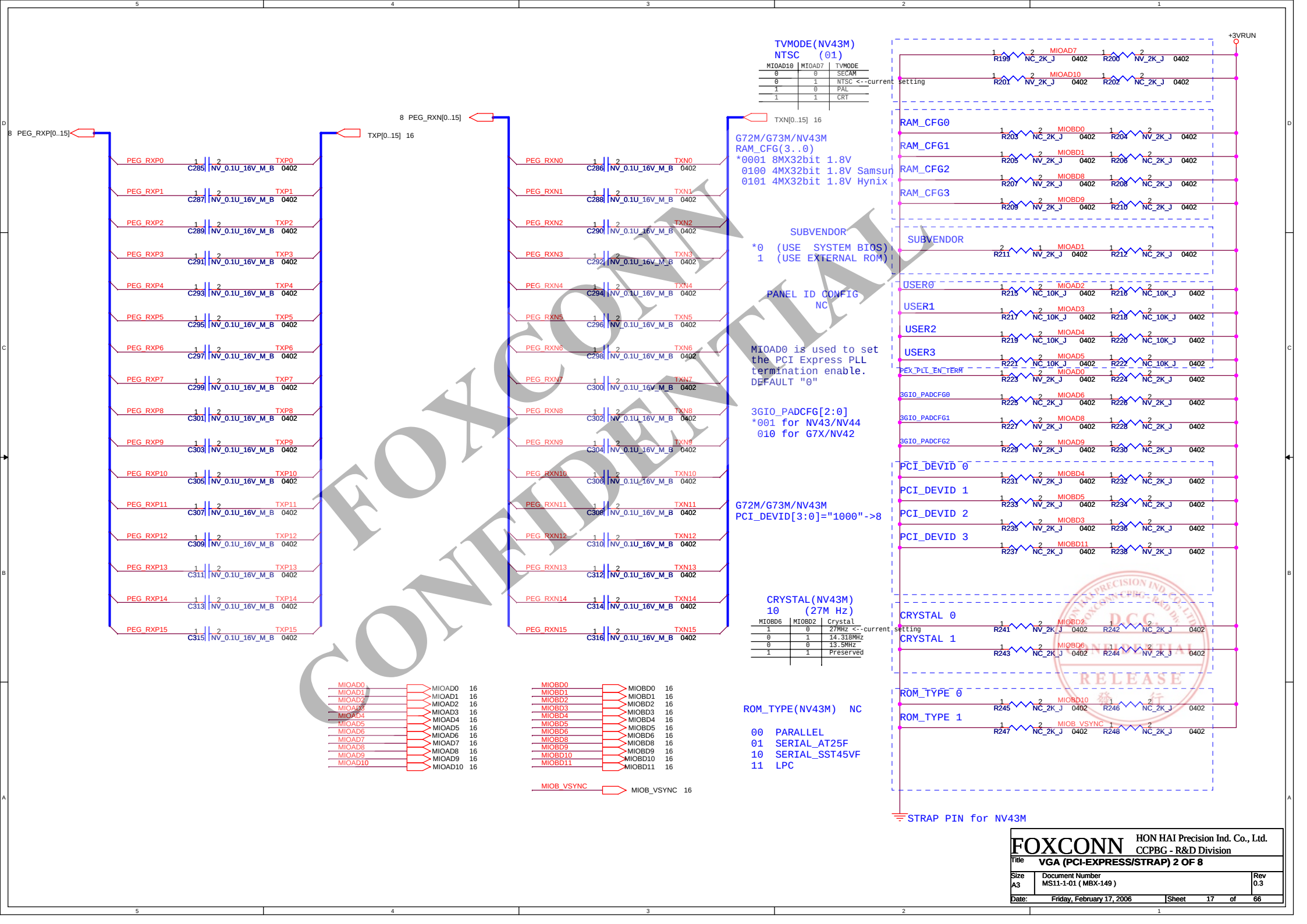

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VGA (PCI-EXPRESS/STRAP) 2 OF 8	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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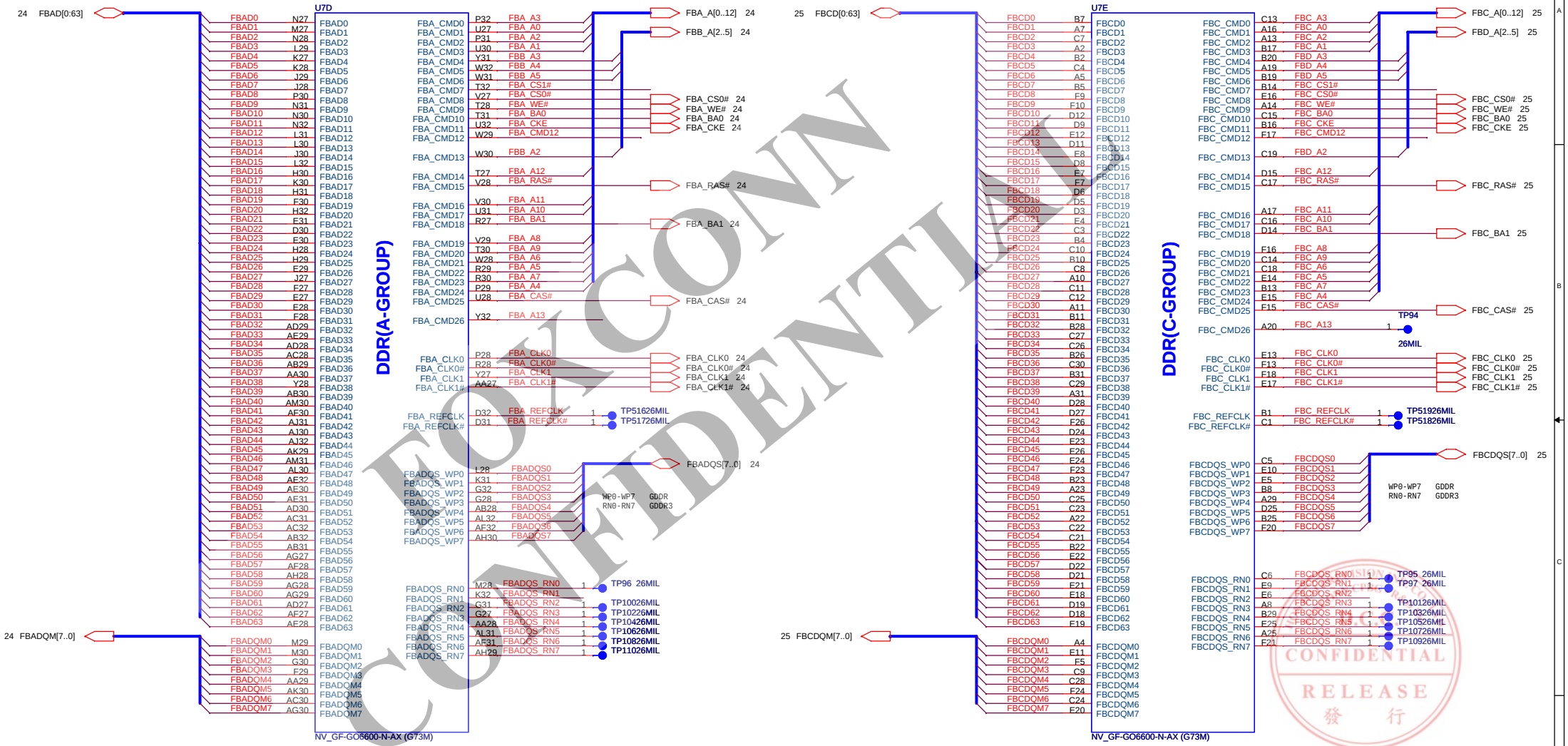

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VGA (GDDR) 3 OF 8	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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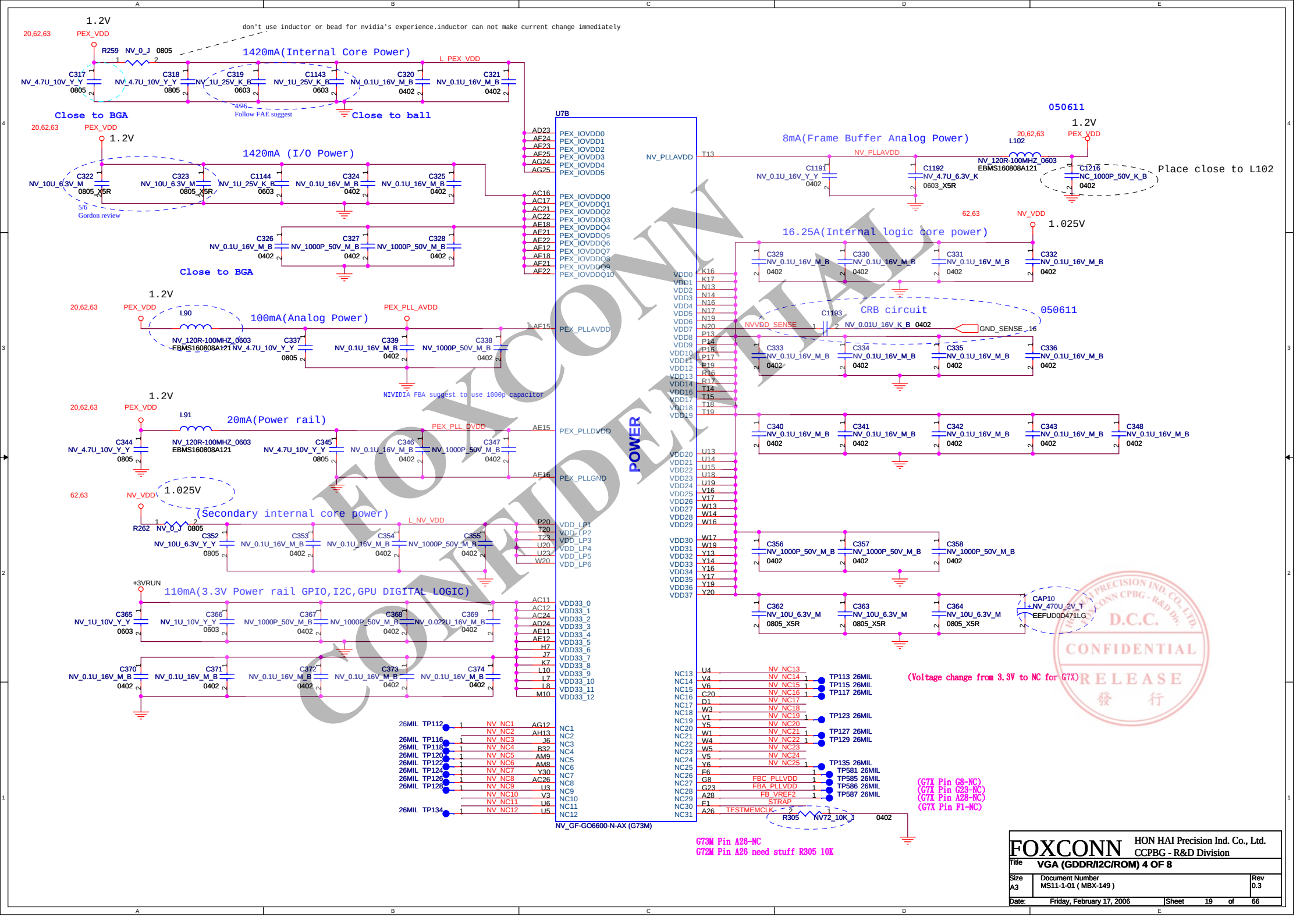
don't use inductor or bead for nvidia's experience.inductor can not make current change immediately
1.2V
20,62,63 PEX_VDD
R259 NV_0_J 0805
1420mA(Internal Core Power)
L_PEX_VDD
C317 NV_4.7U_10V_Y_Y 0805
C318 NV_4.7U_10V_Y_Y 0805
C319 NV_1U_25V_K_B 0603
C1143 NV_1U_25V_K_B 0603
C320 NV_0.1U_16V_M_B 0402
C321 NV_0.1U_16V_M_B 0402
4/26
Follow FAE suggest
Close to BGA
Close to ball
1420mA (I/O Power)
C322 NV_10U_6.3V_M 0805_X5R
C323 NV_10U_6.3V_M 0805_X5R
C1144 NV_1U_25V_K_B 0603
C324 NV_0.1U_16V_M_B 0402
C325 NV_0.1U_16V_M_B 0402
5/6
Gordon review
C326 NV_0.1U_16V_M_B 0402
C327 NV_1000P_50V_M_B 0402
C328 NV_1000P_50V_M_B 0402
Close to BGA
U7B
AD23 AE24 AF23 AF25 AG24 AG25
PEX_IOVDD0 PEX_IOVDD1 PEX_IOVDD2 PEX_IOVDD3 PEX_IOVDD4 PEX_IOVDD5
AC16 AC17 AC21 AC22 AE18 AE21 AE22 AF12 AF18 AF21 AF22
PEX_IOVDDQ0 PEX_IOVDDQ1 PEX_IOVDDQ2 PEX_IOVDDQ3 PEX_IOVDDQ4 PEX_IOVDDQ5 PEX_IOVDDQ6 PEX_IOVDDQ7 PEX_IOVDDQ8 PEX_IOVDDQ9 PEX_IOVDDQ10
NV_PLLAVDD T13
8mA(Frame Buffer Analog Power)
050611
1.2V
20,62,63 PEX_VDD
L102
NV_120R-100MHZ_0603 EBMS160808A121
C1191 NV_0.1U_16V_Y_Y 0402
C1192 NV_4.7U_6.3V_K 0603_X5R
C1216 NC_1000P_50V_K_B 0402
Place close to L102
1.2V
20,62,63 PEX_VDD
L90
NV_120R-100MHZ_0603 EBMS160808A121
100mA(Analog Power)
PEX_PLL_AVDD
C337 NV_4.7U_10V_Y_Y 0805
C339 NV_0.1U_16V_M_B 0402
C338 NV_1000P_50V_M_B 0402
AF15 PEX_PLLAVDD
NIVIDIA FBA suggest to use 1000p capacitor
62,63 NV_VDD
1.025V
16.25A(Internal logic core power)
C329 NV_0.1U_16V_M_B 0402
C330 NV_0.1U_16V_M_B 0402
C331 NV_0.1U_16V_M_B 0402
C332 NV_0.1U_16V_M_B 0402
CRB circuit
050611
NVVDD_SENSE
C1193 NV_0.01U_16V_K_B 0402
GND_SENSE_16
C333 NV_0.1U_16V_M_B 0402
C334 NV_0.1U_16V_M_B 0402
C335 NV_0.1U_16V_M_B 0402
C336 NV_0.1U_16V_M_B 0402
1.2V
20,62,63 PEX_VDD
L91
NV_120R-100MHZ_0603 EBMS160808A121
20mA(Power rail)
PEX_PLL_DVDD
C344 NV_4.7U_10V_Y_Y 0805
C345 NV_4.7U_10V_Y_Y 0805
C346 NV_0.1U_16V_M_B 0402
C347 NV_1000P_50V_M_B 0402
AE15 PEX_PLLDVDD
AE16 PEX_PLLGND
C340 NV_0.1U_16V_M_B 0402
C341 NV_0.1U_16V_M_B 0402
C342 NV_0.1U_16V_M_B 0402
C343 NV_0.1U_16V_M_B 0402
C348 NV_0.1U_16V_M_B 0402
62,63 NV_VDD
1.025V
(Secondary internal core power)
L_NV_VDD
R262 NV_0_J 0805
C352 NV_10U_6.3V_Y 0805
C353 NV_0.1U_16V_M_B 0402
C354 NV_0.1U_16V_M_B 0402
C355 NV_1000P_50V_M_B 0402
P20 T20 T23 U20 U23 W20
VDD_LP1 VDD_LP2 VDD_LP3 VDD_LP4 VDD_LP5 VDD_LP6
C356 NV_1000P_50V_M_B 0402
C357 NV_1000P_50V_M_B 0402
C358 NV_1000P_50V_M_B 0402
+3VRUN
110mA(3.3V Power rail GPIO,I2C,GPU DIGITAL LOGIC)
C365 NV_1U_10V_Y_Y 0603
C366 NV_1U_10V_Y_Y 0603
C367 NV_1000P_50V_M_B 0402
C368 NV_1000P_50V_M_B 0402
C369 NV_0.022U_16V_M_B 0402
C370 NV_0.1U_16V_M_B 0402
C371 NV_0.1U_16V_M_B 0402
C372 NV_0.1U_16V_M_B 0402
C373 NV_0.1U_16V_M_B 0402
C374 NV_0.1U_16V_M_B 0402
AC11 AC12 AC24 AD24 AE11 AE12 H7 J7 K7 L10 L7 L8 M10
VDD33_0 VDD33_1 VDD33_2 VDD33_3 VDD33_4 VDD33_5 VDD33_6 VDD33_7 VDD33_8 VDD33_9 VDD33_10 VDD33_11 VDD33_12
26MIL TP112
26MIL TP116 26MIL TP118 26MIL TP120 26MIL TP122 26MIL TP124 26MIL TP126 26MIL TP128
26MIL TP134
NV_NC1 NV_NC2 NV_NC3 NV_NC4 NV_NC5 NV_NC6 NV_NC7 NV_NC8 NV_NC9 NV_NC10 NV_NC11 NV_NC12
AG12 AH13 J6 B32 AM9 AM8 Y30 AC26 U3 V3 U6 U5
NC1 NC2 NC3 NC4 NC5 NC6 NC7 NC8 NC9 NC10 NC11 NC12
NV_GF-GO6600-N-AX (G73M)
POWER
VDD0 VDD1 VDD2 VDD3 VDD4 VDD5 VDD6 VDD7 VDD8 VDD9 VDD10 VDD11 VDD12 VDD13 VDD14 VDD16 VDD17 VDD18 VDD19
K16 K17 N13 N14 N16 N17 N19 N20 P13 P14 P16 P17 R19 R16 R17 T14 T15 T18 T19
VDD20 VDD21 VDD22 VDD23 VDD24 VDD25 VDD26 VDD27 VDD28 VDD29
U13 U14 U15 U18 U19 V16 V17 W13 W14 W16
VDD30 VDD31 VDD32 VDD33 VDD34 VDD35 VDD36 VDD37
W17 W19 Y13 Y14 Y16 Y17 Y19 Y20
C362 NV_10U_6.3V_M 0805_X5R
C363 NV_10U_6.3V_M 0805_X5R
C364 NV_10U_6.3V_M 0805_X5R
CAP10 NV_470U_2V_T EEFUD0D471LG
NC13 NC14 NC15 NC16 NC17 NC18 NC19 NC20 NC21 NC22 NC23 NC24 NC25 NC26 NC27 NC28 NC29 NC30 NC31
U4 V4 V6 C20 D1 W3 V1 Y5 W1 W4 W5 V5 Y6 F6 G8 G23 A28 F1 A26
NV_NC13 NV_NC14 NV_NC15 NV_NC16 NV_NC17 NV_NC18 NV_NC19 NV_NC20 NV_NC21 NV_NC22 NV_NC23 NV_NC24 NV_NC25 FBC_PLLVDD FBA_PLLVDD FB_VREF2 STRAP TESTMEMCLK
TP113 26MIL TP115 26MIL TP117 26MIL TP123 26MIL TP127 26MIL TP129 26MIL TP135 26MIL TP581 26MIL TP585 26MIL TP586 26MIL TP587 26MIL
(Voltage change from 3.3V to NC for G7X)
(G7X Pin G8-NC)
(G7X Pin G23-NC)
(G7X Pin A28-NC)
(G7X Pin F1-NC)
R305 NV72_10K_J 0402
G73M Pin A26-NC
G72M Pin A26 need stuff R305 10K
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HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title VGA (GDDR/I2C/ROM) 4 OF 8
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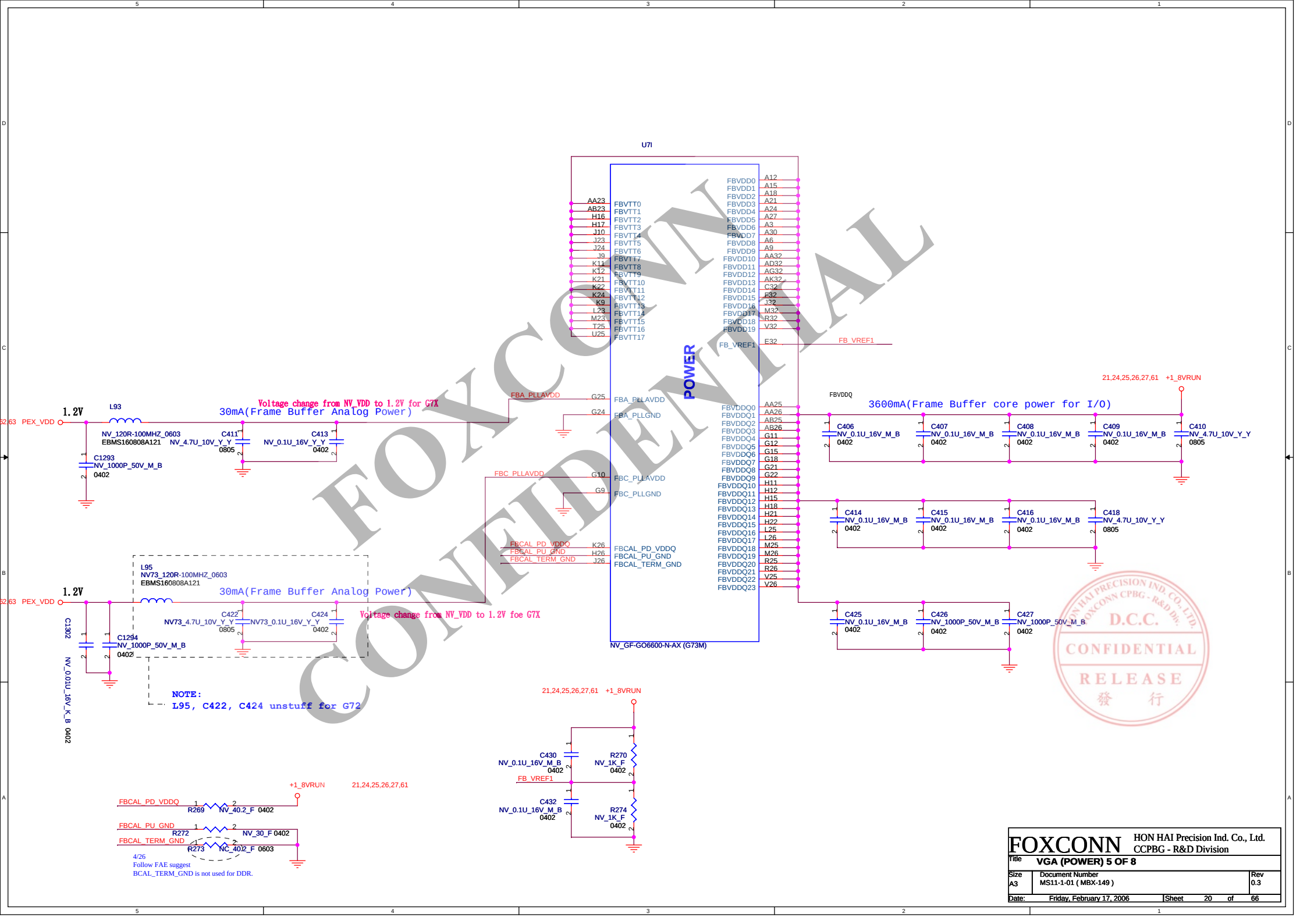

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VGA (POWER) 5 OF 8	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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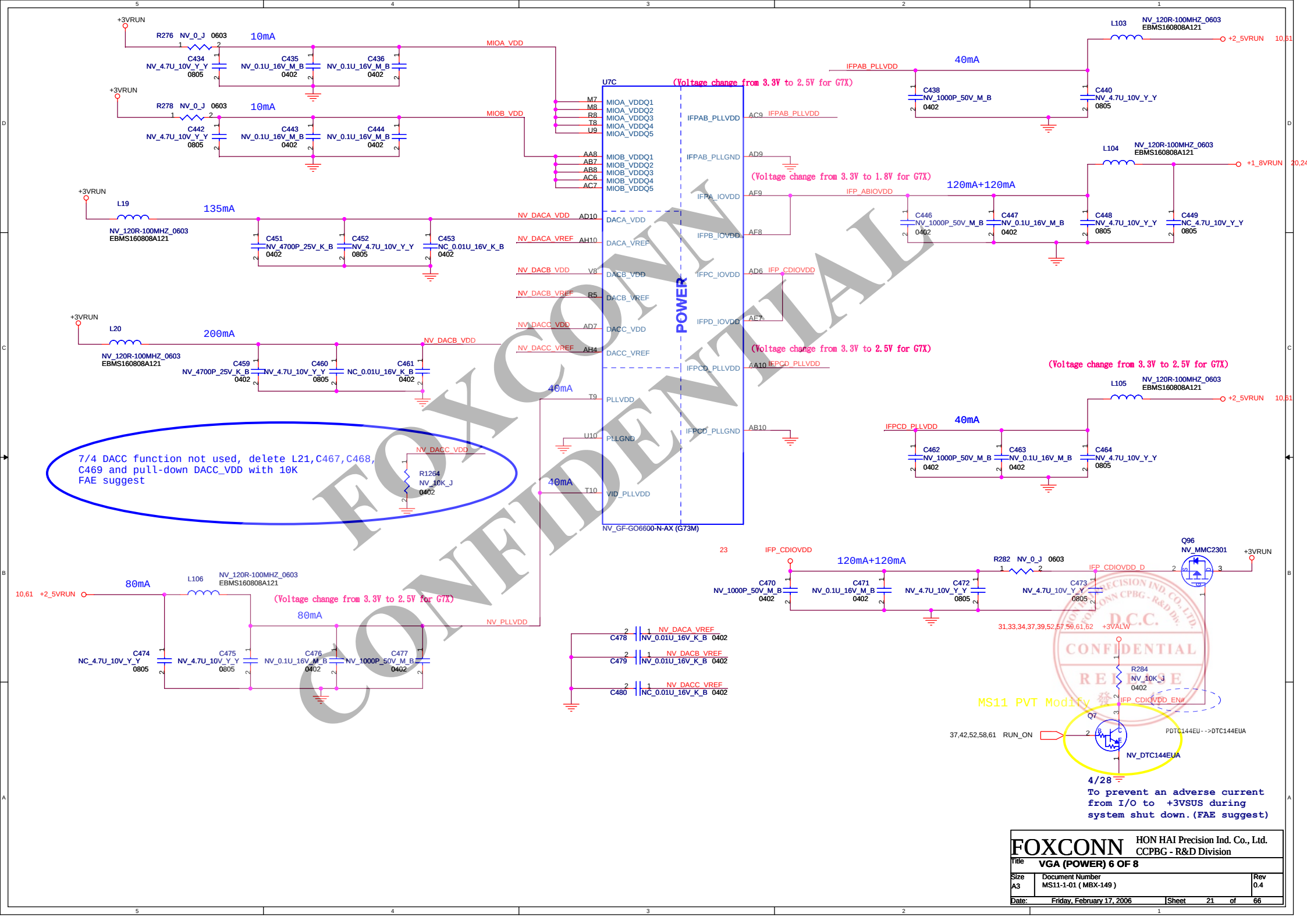
+3VRUN
R276 NV_0_J 0603
10mA
C434 NV_4.7U_10V_Y_Y 0805
C435 NV_0.1U_16V_M_B 0402
C436 NV_0.1U_16V_M_B 0402
MIOA_VDD
R278 NV_0_J 0603
10mA
C442 NV_4.7U_10V_Y_Y 0805
C443 NV_0.1U_16V_M_B 0402
C444 NV_0.1U_16V_M_B 0402
MIOB_VDD
U7C
M7 M8 R8 T8 U9
MIOA_VDDQ1 MIOA_VDDQ2 MIOA_VDDQ3 MIOA_VDDQ4 MIOA_VDDQ5
AA8 AB7 AB8 AC6 AC7
MIOB_VDDQ1 MIOB_VDDQ2 MIOB_VDDQ3 MIOB_VDDQ4 MIOB_VDDQ5
(Voltage change from 3.3V to 2.5V for G7X)
IFPAB_PLLVDD
IFPAB_PLLGND
AC9 IFPAB_PLLVDD
AD9
(Voltage change from 3.3V to 1.8V for G7X)
IFPA_IOVDD
IFPB_IOVDD
IFPC_IOVDD
IFPD_IOVDD
AF9
AF8
AD6 IFP_CDIOVDD
AE7
L103 NV_120R-100MHZ_0603 EBMS160808A121
+2_5VRUN 10,51
IFPAB_PLLVDD
40mA
C438 NV_1000P_50V_M_B 0402
C440 NV_4.7U_10V_Y_Y 0805
L104 NV_120R-100MHZ_0603 EBMS160808A121
+1_8VRUN 20,24
IFP_ABIOVDD
120mA+120mA
C446 NV_1000P_50V_M_B 0402
C447 NV_0.1U_16V_M_B 0402
C448 NV_4.7U_10V_Y_Y 0805
C449 NC_4.7U_10V_Y_Y 0805
+3VRUN
L19
135mA
NV_120R-100MHZ_0603 EBMS160808A121
C451 NV_4700P_25V_K_B 0402
C452 NV_4.7U_10V_Y_Y 0805
C453 NC_0.01U_16V_K_B 0402
NV_DACA_VDD AD10 DACA_VDD
NV_DACA_VREF AH10 DACA_VREF
NV_DACB_VDD V8 DACB_VDD
NV_DACB_VREF R5 DACB_VREF
NV_DACC_VDD AD7 DACC_VDD
NV_DACC_VREF AH4 DACC_VREF
POWER
+3VRUN
L20
200mA
NV_120R-100MHZ_0603 EBMS160808A121
C459 NV_4700P_25V_K_B 0402
C460 NV_4.7U_10V_Y_Y 0805
C461 NC_0.01U_16V_K_B 0402
NV_DACB_VDD
(Voltage change from 3.3V to 2.5V for G7X)
IFPCD_PLLVDD
IFPCD_PLLGND
AA10 IFPCD_PLLVDD
AB10
(Voltage change from 3.3V to 2.5V for G7X)
L105 NV_120R-100MHZ_0603 EBMS160808A121
+2_5VRUN 10,51
IFPCD_PLLVDD
40mA
C462 NV_1000P_50V_M_B 0402
C463 NV_0.1U_16V_M_B 0402
C464 NV_4.7U_10V_Y_Y 0805
40mA
T9 PLLVDD
U10 PLLGND
40mA
T10 VID_PLLVDD
NV_GF-GO6600-N-AX (G73M)
7/4 DACC function not used, delete L21,C467,C468, C469 and pull-down DACC_VDD with 10K FAE suggest
NV_DACC_VDD
R1264 NV_10K_J 0402
23 IFP_CDIOVDD
120mA+120mA
C470 NV_1000P_50V_M_B 0402
C471 NV_0.1U_16V_M_B 0402
C472 NV_4.7U_10V_Y_Y 0805
C473 NV_4.7U_10V_Y_Y 0805
R282 NV_0_J 0603
IFP_CDIOVDD_D
Q96 NV_MMC2301
+3VRUN
31,33,34,37,39,52,57,59,61,62 +3VALW
R284 NV_10K_J 0402
IFP_CDIOVDD_EN#
MS11 PVT Modify
Q7
37,42,52,58,61 RUN_ON
PDTC144EU-->DTC144EUA
NV_DTC144EUA
4/28
To prevent an adverse current from I/O to +3VSUS during system shut down.(FAE suggest)
10,61 +2_5VRUN
80mA
L106 NV_120R-100MHZ_0603 EBMS160808A121
(Voltage change from 3.3V to 2.5V for G7X)
80mA
C474 NC_4.7U_10V_Y_Y 0805
C475 NV_4.7U_10V_Y_Y 0805
C476 NV_0.1U_16V_M_B 0402
C477 NV_1000P_50V_M_B 0402
NV_PLLVDD
C478 NV_DACA_VREF NV_0.01U_16V_K_B 0402
C479 NV_DACB_VREF NV_0.01U_16V_K_B 0402
C480 NV_DACC_VREF NC_0.01U_16V_K_B 0402
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HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title VGA (POWER) 6 OF 8
Size A3
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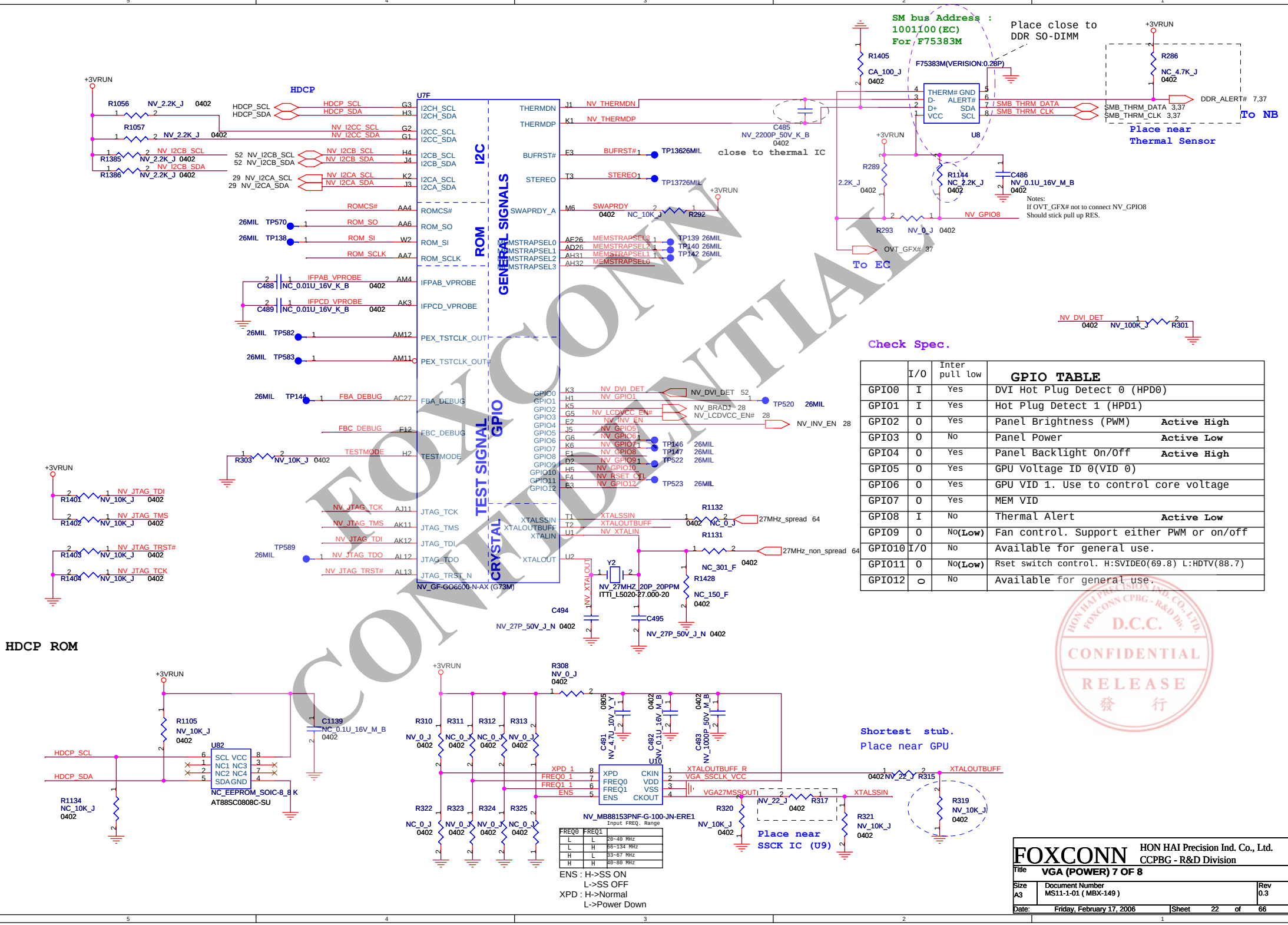

GPIO TABLE			
	I/O	Inter pull low	
GPIO0	I	Yes	DVI Hot Plug Detect 0 (HPD0)
GPIO1	I	Yes	Hot Plug Detect 1 (HPD1)
GPIO2	O	Yes	Panel Brightness (PWM) **Active High**
GPIO3	O	No	Panel Power **Active Low**
GPIO4	O	Yes	Panel Backlight On/Off **Active High**
GPIO5	O	Yes	GPU Voltage ID 0(VID 0)
GPIO6	O	Yes	GPU VID 1. Use to control core voltage
GPIO7	O	Yes	MEM VID
GPIO8	I	No	Thermal Alert **Active Low**
GPIO9	O	No(Low)	Fan control. Support either PWM or on/off
GPIO10	I/O	No	Available for general use.
GPIO11	O	No(Low)	Rset switch control. H:SVIDEO(69.8) L:HDTV(88.7)
GPIO12	O	No	Available for general use.

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

Title: VGA (POWER) 7 OF 8

Size: A3 | Document Number: MS11-1-01 (MBX-149) | Rev: 0.3

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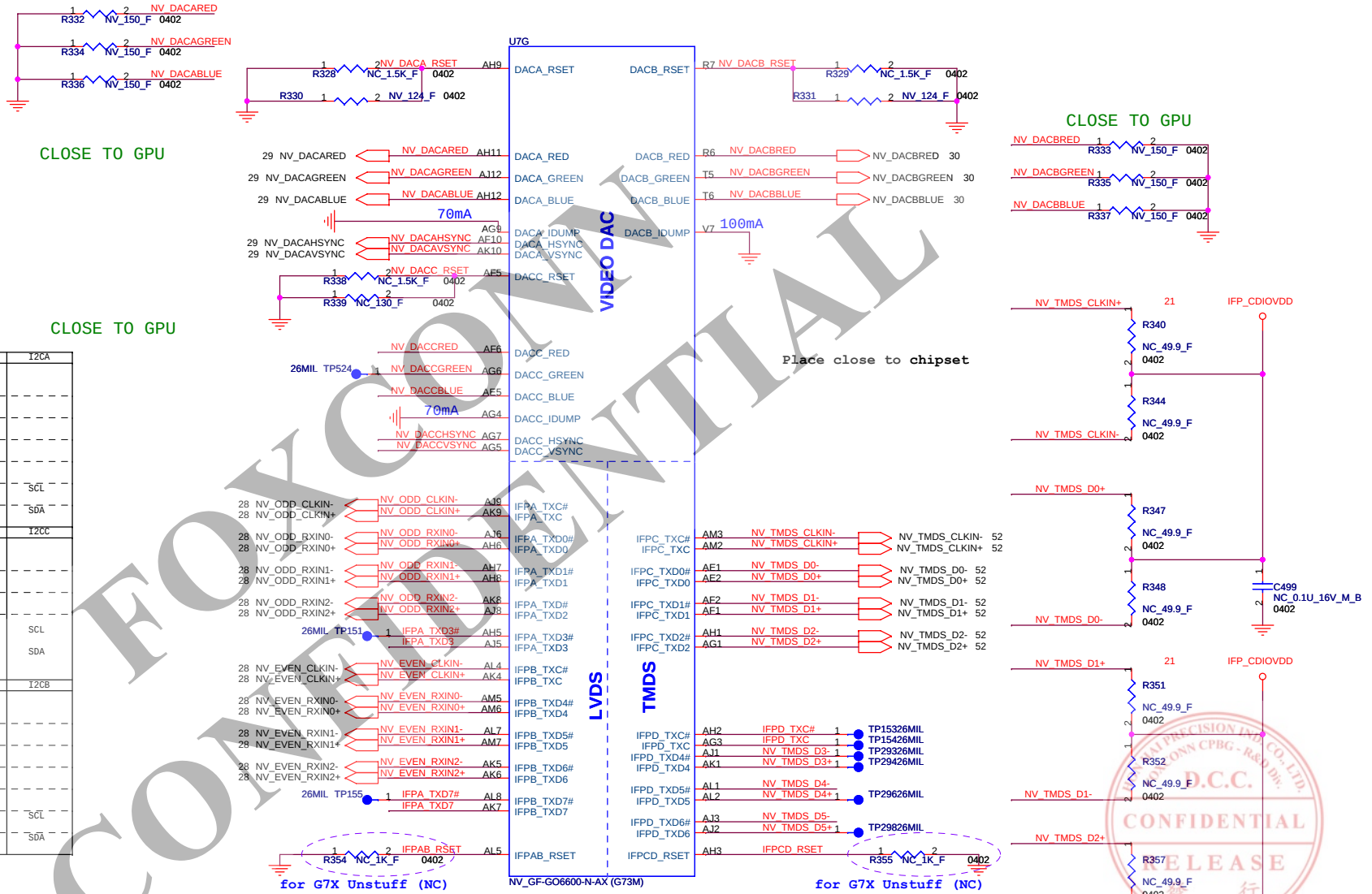

CLOSE TO GPU

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
DACB	**S-VIDEO**	**COMPOSITE**	**D-CONNECTOR**	**I2CC**
DACB-RED	C		PR	
DACB-GREEN	Y		Y	
DACB-BLUE		COMPOSITE		
			LINE1	SCL
			LINE2	SDA
			LINE3	
DACC	**DVI-I**			**I2CB**
DACC-RED	R			
DACC-GREEN	G			
DACC-BLUE	B			
DACC-HSYNC	HSYNC			
DACC-VSYNC	VSYNC			
	DVI-DDCCLK			SCL
	DVI-DDCDATA			SDA

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title	VGA (POWER) 8 OF 8
Size A3	Document Number MS11-1-01 (MBX-149) Rev 0.3
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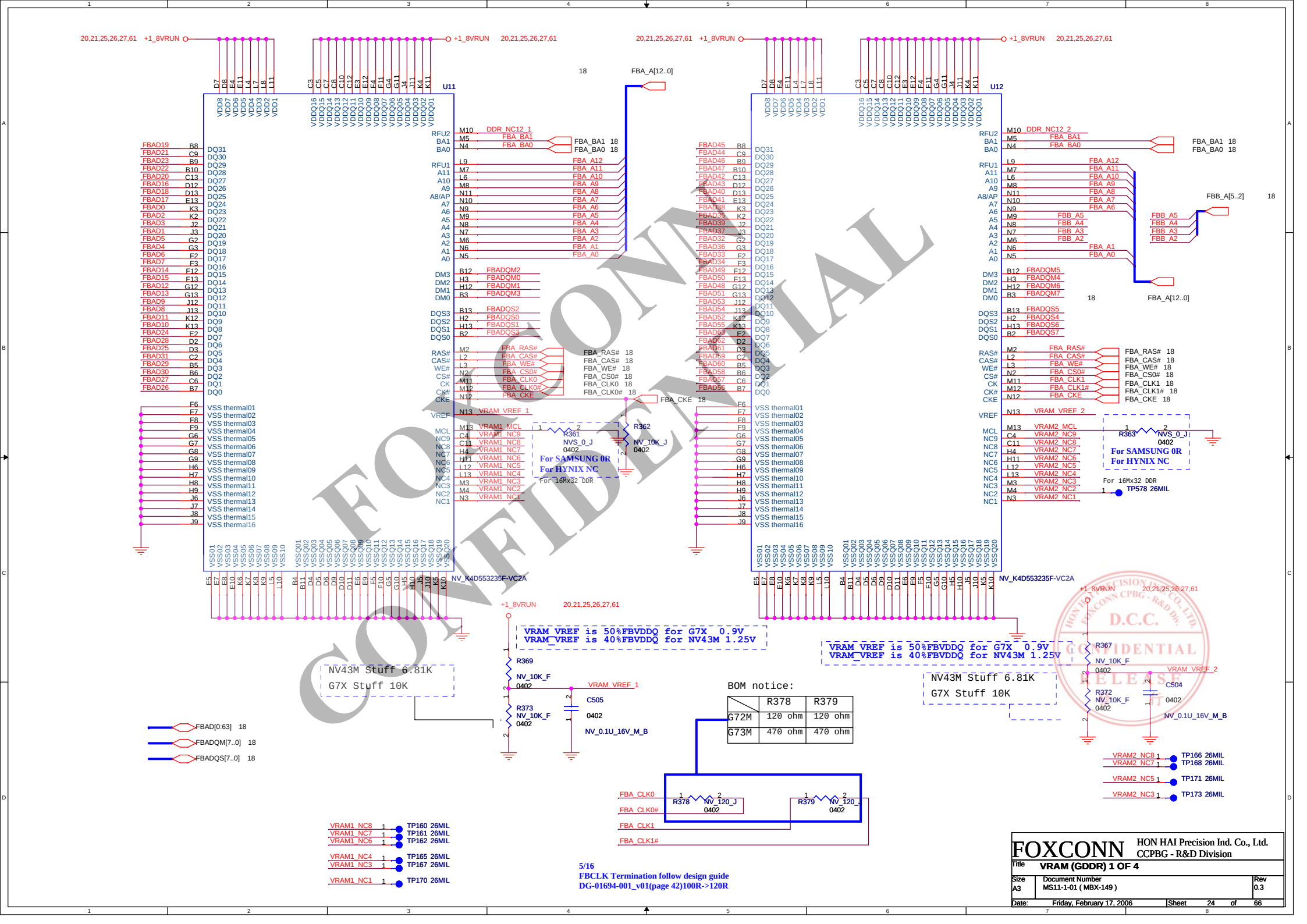
U11
U12
NV_K4D553235F-VC2A
+1_8VRUN
20,21,25,26,27,61
FBA_A[12..0]
FBA_BA1 18
FBA_BA0 18
FBA_RAS# 18
FBA_CAS# 18
FBA_WE# 18
FBA_CS0# 18
FBA_CLK0 18
FBA_CLK0# 18
FBA_CKE 18
VRAM_VREF_1
VRAM_VREF_2
FBB_A[5..2] 18
FBA_A[12..0]
R361 NVS_0_J 0402
R362 NV_10K_J 0402
R363 NVS_0_J 0402
For SAMSUNG 0R
For HYNIX NC
For 16Mx32 DDR
TP578 26MIL
VRAM_VREF is 50%FBVDDQ for G7X 0.9V
VRAM_VREF is 40%FBVDDQ for NV43M 1.25V
NV43M Stuff 6.81K
G7X Stuff 10K
R369 NV_10K_F 0402
R373 NV_10K_F 0402
C505 0402 NV_0.1U_16V_M_B
R367 NV_10K_F 0402
R372 NV_10K_F 0402
C504 0402 NV_0.1U_16V_M_B
BOM notice:
R378 R379
G72M 120 ohm 120 ohm
G73M 470 ohm 470 ohm
R378 NV_120_J 0402
R379 NV_120_J 0402
FBA_CLK0
FBA_CLK0#
FBA_CLK1
FBA_CLK1#
FBAD[0:63] 18
FBADQM[7..0] 18
FBADQS[7..0] 18
VRAM1_NC8 TP160 26MIL
VRAM1_NC7 TP161 26MIL
VRAM1_NC6 TP162 26MIL
VRAM1_NC4 TP165 26MIL
VRAM1_NC3 TP167 26MIL
VRAM1_NC1 TP170 26MIL
VRAM2_NC8 TP166 26MIL
VRAM2_NC7 TP168 26MIL
VRAM2_NC5 TP171 26MIL
VRAM2_NC3 TP173 26MIL
5/16
FBCLK Termination follow design guide
DG-01694-001_v01(page 42)100R->120R
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title VRAM (GDDR) 1 OF 4
Size A3
Document Number MS11-1-01 (MBX-149)
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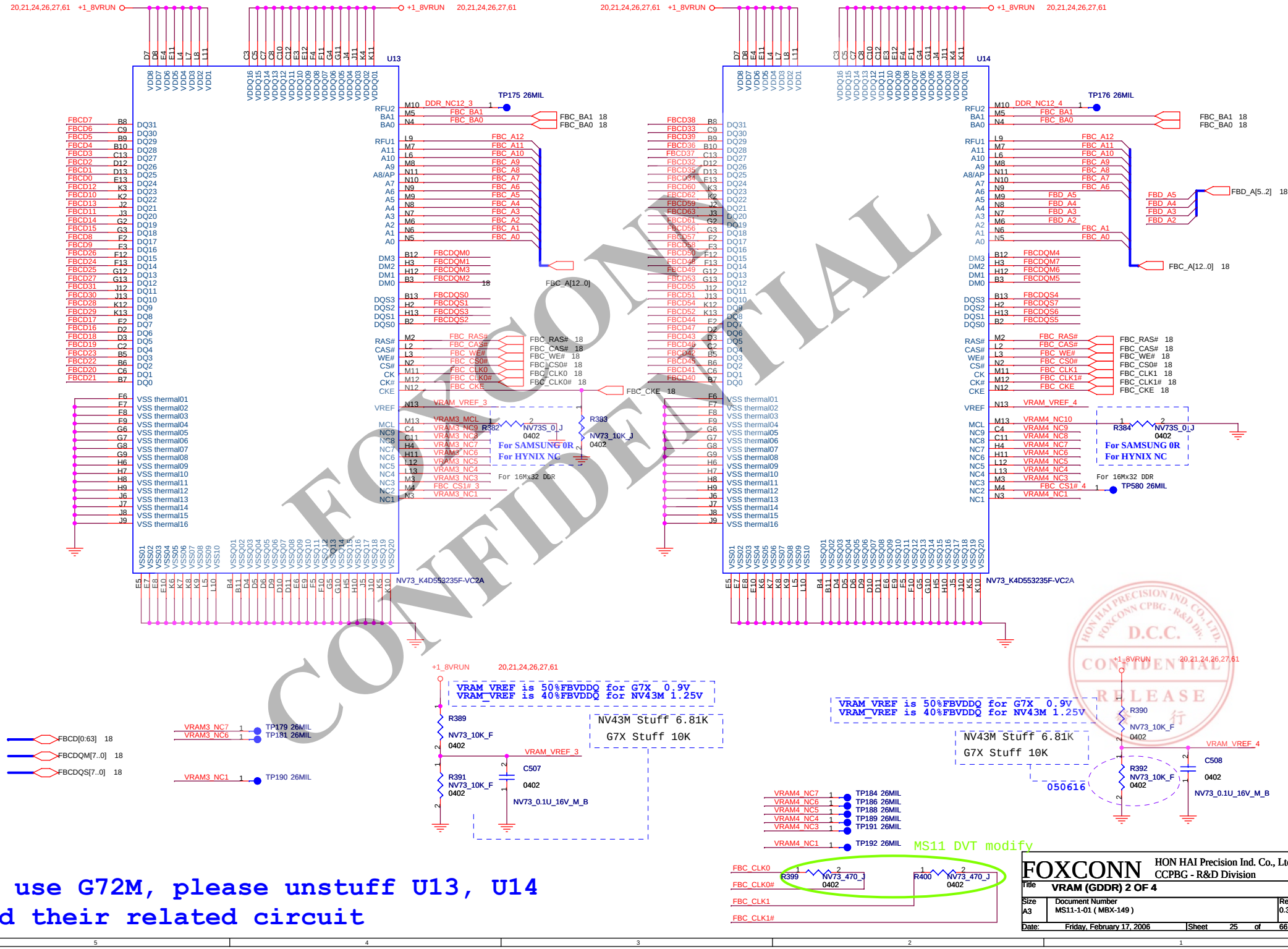
FOXCONN CONFIDENTIAL
CONFIDENTIAL
D.C.C.
RELEASE


U13
U14
NV73_K4D553235F-VC2A
TP175 26MIL
TP176 26MIL
For SAMSUNG 0R
For HYNIX NC
For 16Mx32 DDR
VRAM_VREF is 50%FBVDDQ for G7X 0.9V
VRAM_VREF is 40%FBVDDQ for NV43M 1.25V
NV43M Stuff 6.81K
G7X Stuff 10K
050616
MS11 DVT modify
If use G72M, please unstuff U13, U14
and their related circuit
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
VRAM (GDDR) 2 OF 4
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FOXCONN CONFIDENTIAL
D.C.C.
RELEASE

Decoupling for right MEMORY

Place around the MEM

+1_8VRUN 20,21,24,25,27,61

5/6
4.7u->10u

C510 NV73_10U_6.3V_M 0805_X5R
C511 NV73_0.1U_16V_M_B 0402
C512 NV73_0.1U_16V_M_B 0402
C513 NV73_0.1U_16V_M_B 0402
C514 NV73_0.1U_16V_M_B 0402
C515 NV73_0.1U_16V_M_B 0402
C516 NV73_0.1U_16V_M_B 0402
C517 NV73_0.1U_16V_M_B 0402
C518 NV73_0.1U_16V_M_B 0402
C519 NV73_0.1U_16V_M_B 0402
C520 NV73_0.1U_16V_M_B 0402

+1_8VRUN 20,21,24,25,27,61

1.2A

Place under the MEM

C521 NV73_0.1U_16V_M_B 0402
C522 NV73_0.1U_16V_M_B 0402
C523 NV73_0.1U_16V_M_B 0402
C524 NV73_1000P_50V_M_B 0402
C525 NV73_1000P_50V_M_B 0402
C526 NV73_1000P_50V_M_B 0402
C527 NV73_1000P_50V_M_B 0402
C528 NV73_1000P_50V_M_B 0402

Decoupling for left MEMORY

Place around the MEM

+1_8VRUN 20,21,24,25,27,61

5/6
4.7u->10u

C540 NV73_10U_6.3V_M 0805_X5R
C541 NV73_0.1U_16V_M_B 0402
C542 NV73_0.1U_16V_M_B 0402
C543 NV73_0.1U_16V_M_B 0402
C544 NV73_0.1U_16V_M_B 0402
C545 NV73_0.1U_16V_M_B 0402
C546 NV73_0.1U_16V_M_B 0402
C547 NV73_0.1U_16V_M_B 0402
C548 NV73_0.1U_16V_M_B 0402
C549 NV73_0.1U_16V_M_B 0402
C550 NV73_0.1U_16V_M_B 0402

+1_8VRUN 20,21,24,25,27,61

Place under the MEM

C551 NV73_0.1U_16V_M_B 0402
C552 NV73_0.1U_16V_M_B 0402
C553 NV73_0.1U_16V_M_B 0402
C554 NV73_1000P_50V_M_B 0402
C555 NV73_1000P_50V_M_B 0402
C556 NV73_1000P_50V_M_B 0402
C557 NV73_1000P_50V_M_B 0402
C558 NV73_1000P_50V_M_B 0402

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VRAM (GDDR) 3 OF 4	
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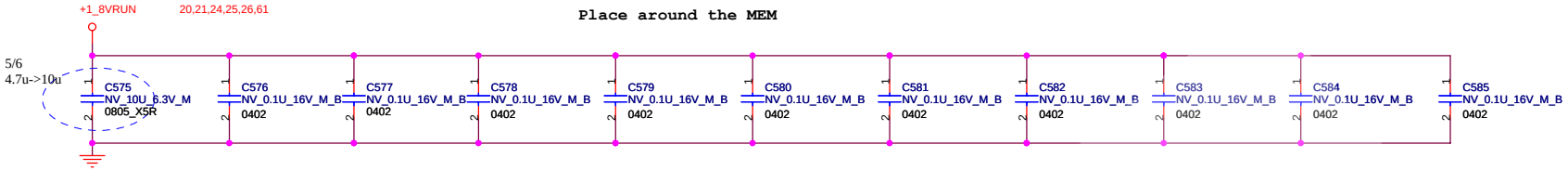
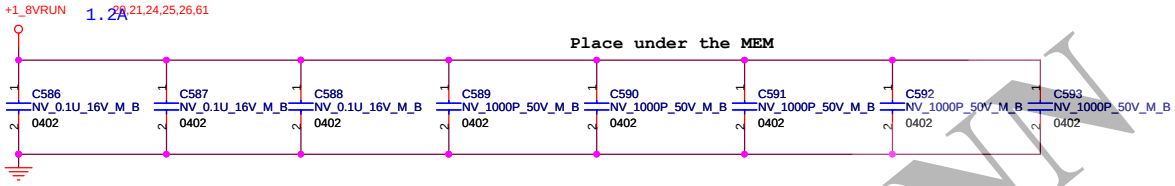
Decoupling for right MEMORY

Place around the MEM

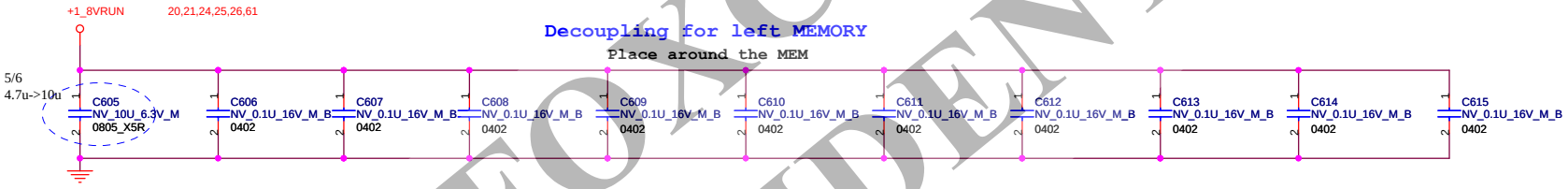


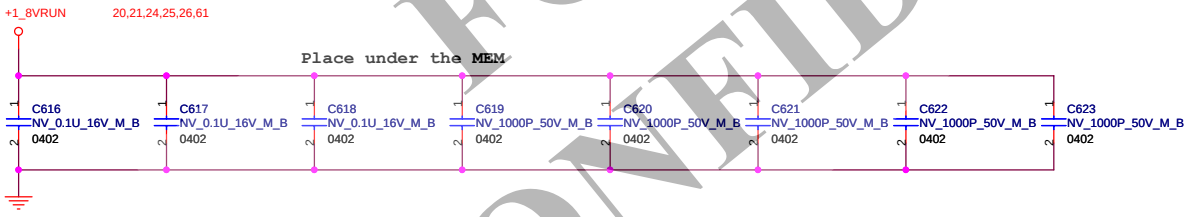


NO USE

Decoupling for left MEMORY

Place around the MEM





FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	VRAM (POWERBYPASS) 4 OF 4	
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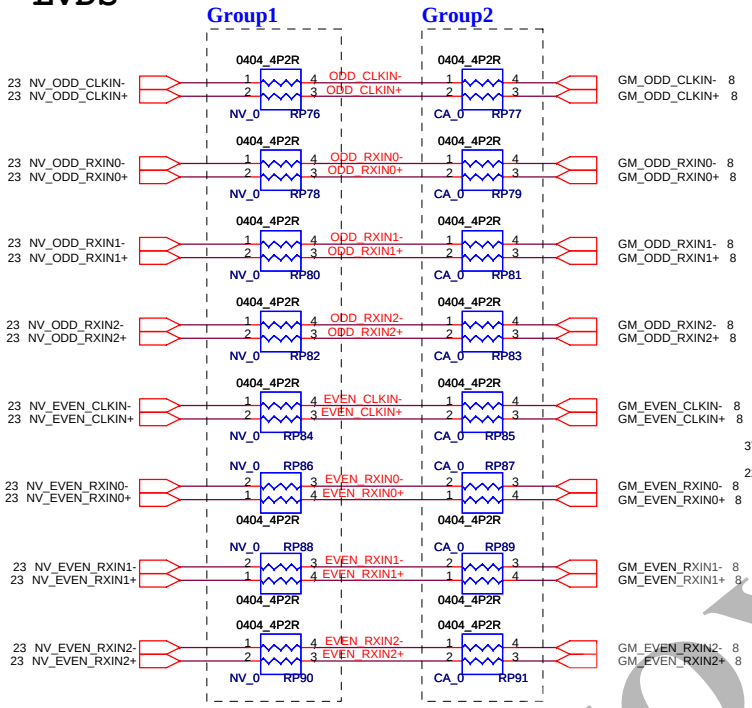
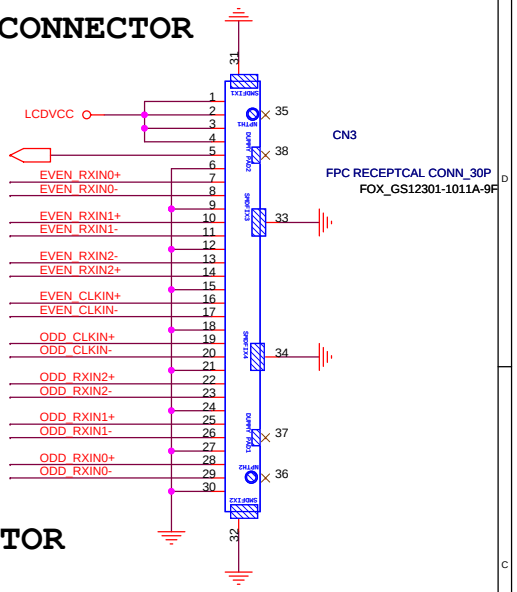
Group1,Group1 should be close

LVDS

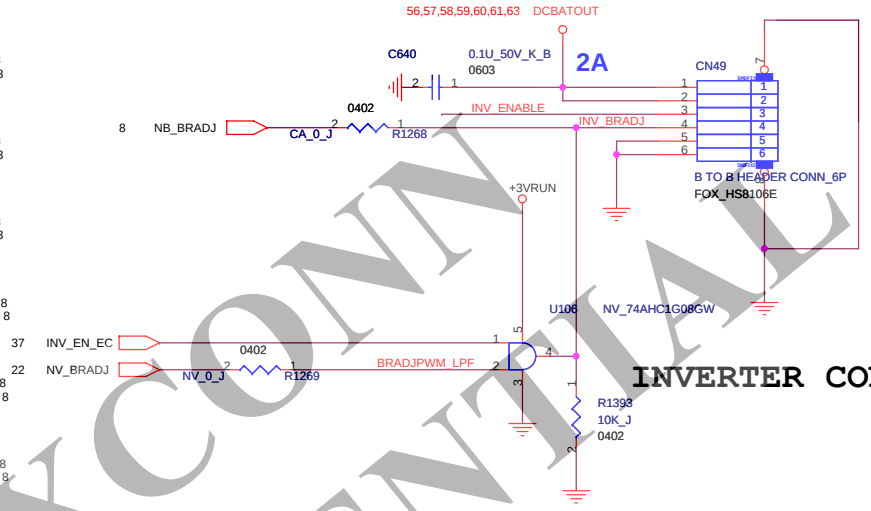
Group1 / Group2

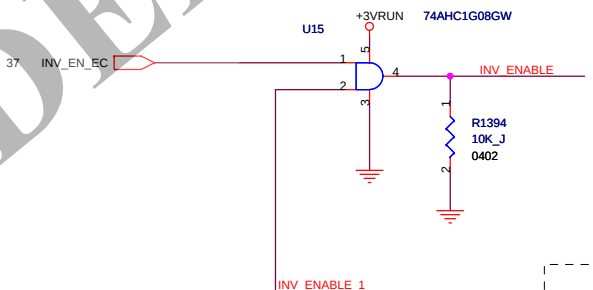


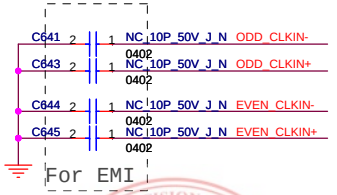
LVDS CONNECTOR

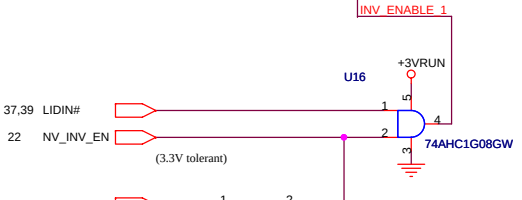


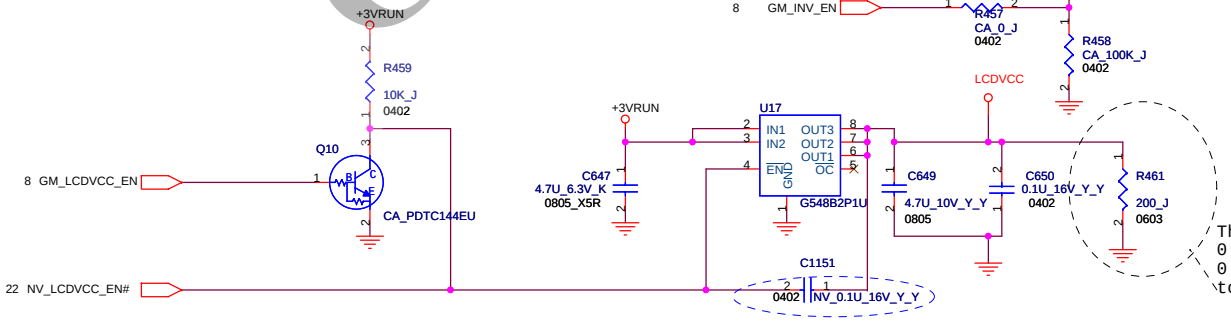
INVERTER CONNECTOR







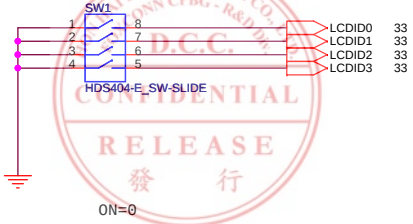




DISCHARGE

The R461 will consume about 0.054 Watt (3.3x3.3/200 = 0.054W). We changed resistor to 0603 size (1/8 Watt)

PANEL ID



Type	WXGA	WXGA-HC	WSXGA+
Size	15.4" wide	15.4" wide	15.4" wide
Vender	Hitach	Hitachi	Hitachi
Device Name	TX39D81VC1AAA	TX39D80VC1GAA	TX39D90VC1GAA
Panel ID Check[3..0]	1000	1000	1100

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: LVDS		
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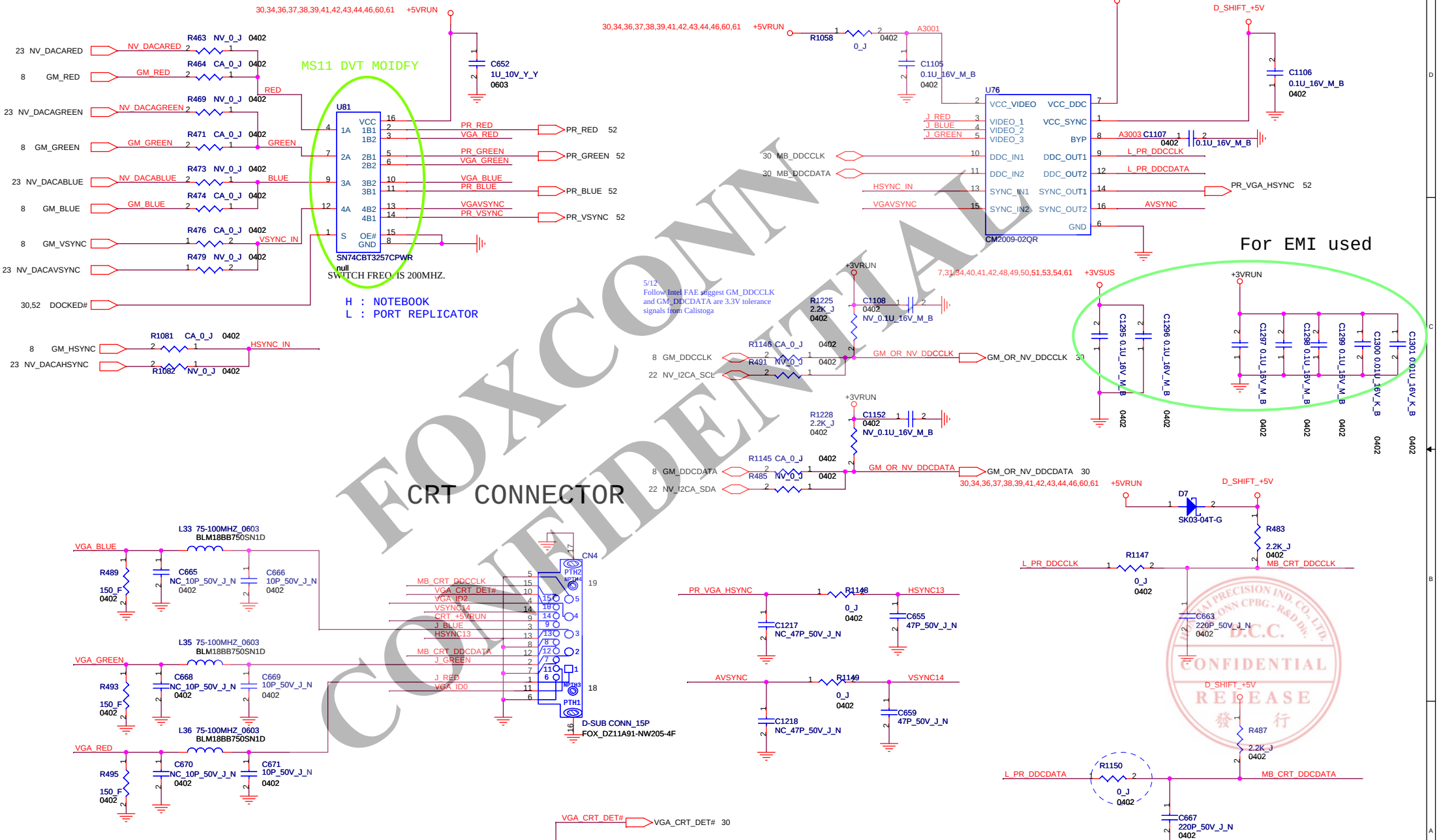
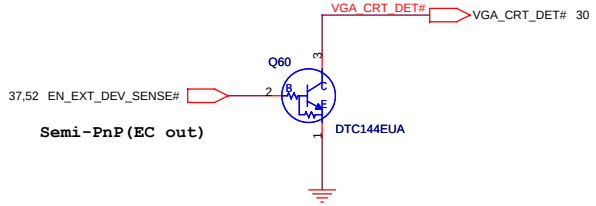
CRT ANALOG SWITCH



For EMI used

CRT CONNECTOR



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: CRT		
Size: A3	Document Number: MS11-1-01 (MBX-149)	Rev: 0.3
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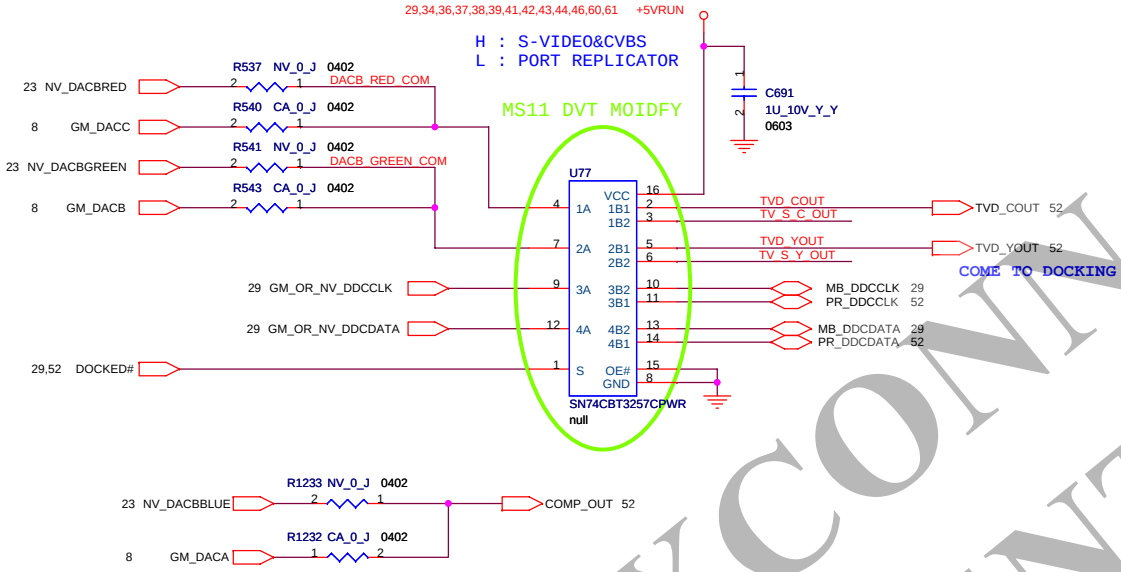
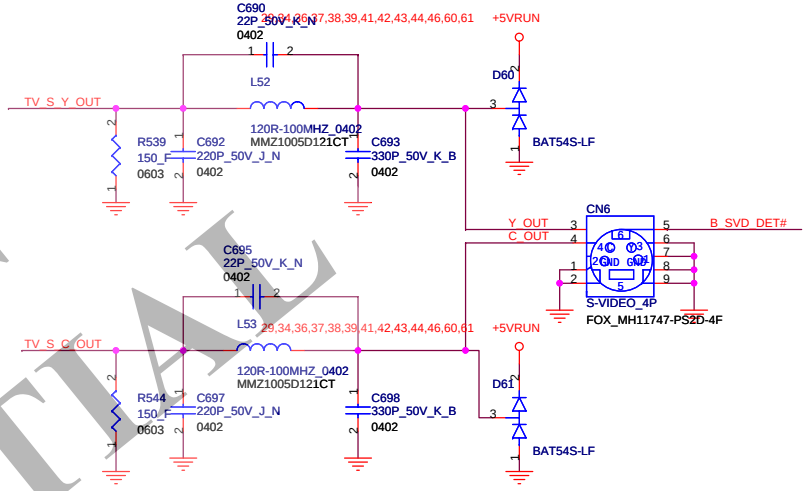
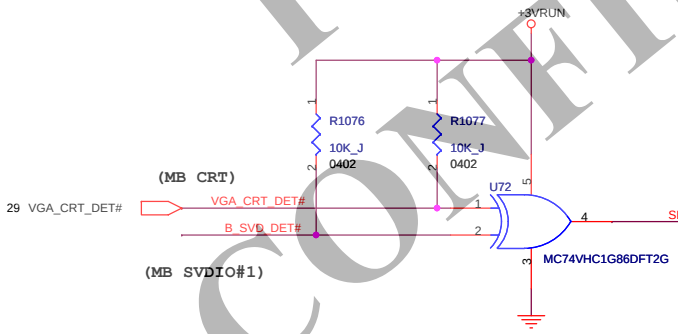
S-VIDEO

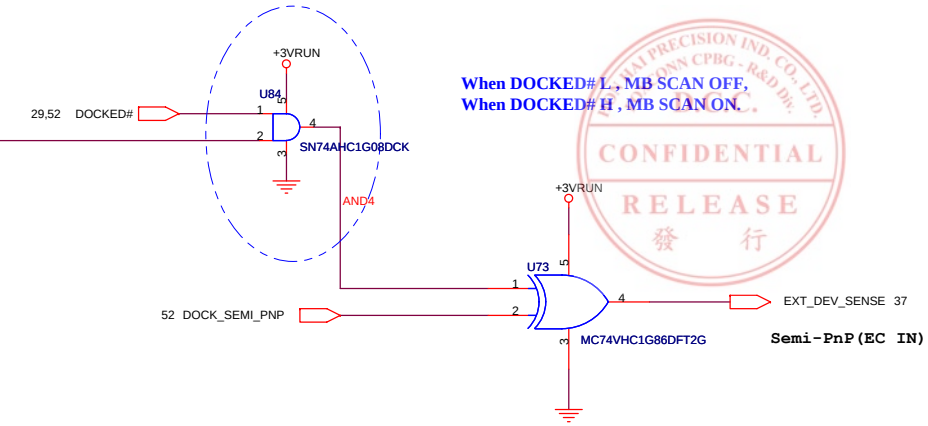
These compoent close to S-Video connector within 700 mil

S-VIDEO ANALOG SWITCH









Semi-PnP

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	S-VIDEO/Semi-PnP	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
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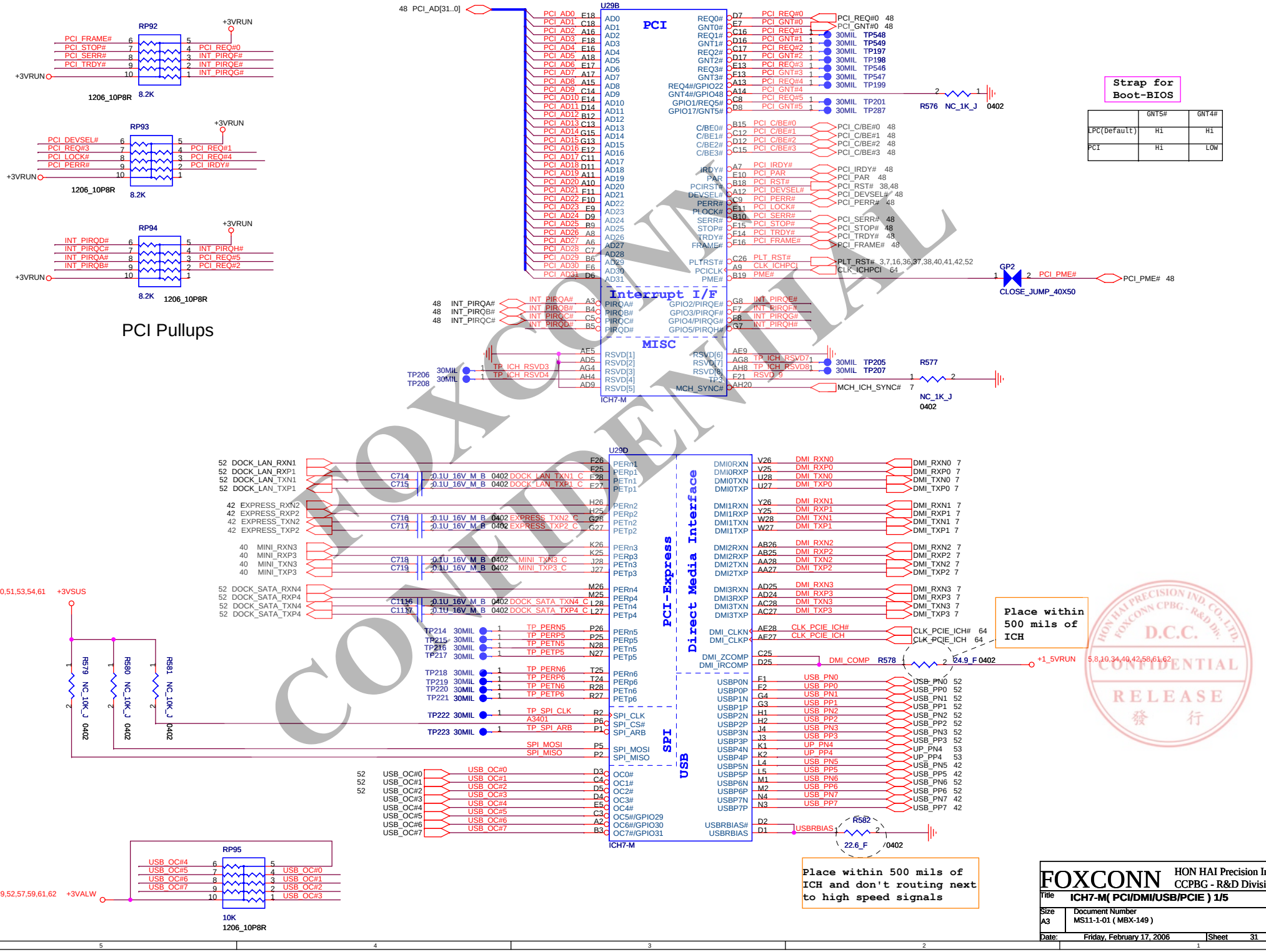
RP92
PCI_FRAME#
PCI_STOP#
PCI_SERR#
PCI_TRDY#
PCI_REQ#0
INT_PIRQF#
INT_PIRQE#
INT_PIRQG#
+3VRUN
1206_10P8R
8.2K
RP93
PCI_DEVSEL#
PCI_REQ#3
PCI_LOCK#
PCI_PERR#
PCI_REQ#1
PCI_REQ#4
PCI_IRDY#
RP94
INT_PIRQD#
INT_PIRQC#
INT_PIRQA#
INT_PIRQB#
INT_PIRQH#
PCI_REQ#5
PCI_REQ#2
PCI Pullups
U29B
PCI
Interrupt I/F
MISC
ICH7-M
48 PCI_AD[31..0]
48 INT_PIRQA#
48 INT_PIRQB#
48 INT_PIRQC#
TP206
TP208
30MIL
TP_ICH_RSVD3
TP_ICH_RSVD4
R576 NC_1K_J 0402
R577 NC_1K_J 0402
GP2
CLOSE_JUMP_40X50
PCI_PME# 48
Strap for Boot-BIOS
GNT5#
GNT4#
LPC(Default)
PCI
LOW
U29D
PCI-Express
Direct Media Interface
SPI
USB
52 DOCK_LAN_RXN1
52 DOCK_LAN_RXP1
52 DOCK_LAN_TXN1
52 DOCK_LAN_TXP1
42 EXPRESS_RXN2
42 EXPRESS_RXP2
42 EXPRESS_TXN2
42 EXPRESS_TXP2
40 MINI_RXN3
40 MINI_RXP3
40 MINI_TXN3
40 MINI_TXP3
52 DOCK_SATA_RXN4
52 DOCK_SATA_RXP4
52 DOCK_SATA_TXN4
52 DOCK_SATA_TXP4
41,42,48,49,50,51,53,54,61 +3VSUS
R579 NC_10K_J 0402
R580 NC_10K_J 0402
R581 NC_10K_J 0402
SPI_CLK
SPI_CS#
SPI_ARB
SPI_MOSI
SPI_MISO
TP_SPI_CLK
TP_SPI_ARB
A3401
52 USB_OC#0
52 USB_OC#1
52 USB_OC#2
USB_OC#3
USB_OC#4
USB_OC#5
USB_OC#6
USB_OC#7
USBRBIAS
R582 22.6_F 0402
DMI_COMP
R578 24.9_F 0402
+1_5VRUN
5,8,10,34,40,42,58,61,62
DMI_ZCOMP
DMI_IRCOMP
DMI_CLKN
DMI_CLKP
CLK_PCIE_ICH#
CLK_PCIE_ICH
Place within 500 mils of ICH
Place within 500 mils of ICH and don't routing next to high speed signals
RP95
USB_OC#4
USB_OC#5
USB_OC#6
USB_OC#7
21,33,34,37,39,52,57,59,61,62 +3VALW
10K
1206_10P8R
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
ICH7-M(PCI/DMI/USB/PCIE) 1/5
Size
A3
Document Number
MS11-1-01 (MBX-149)
Rev
0.3
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Friday, February 17, 2006
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66
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HON HAI PRECISION IND. CO., LTD. FOXCONN CPBG - R&D Div.
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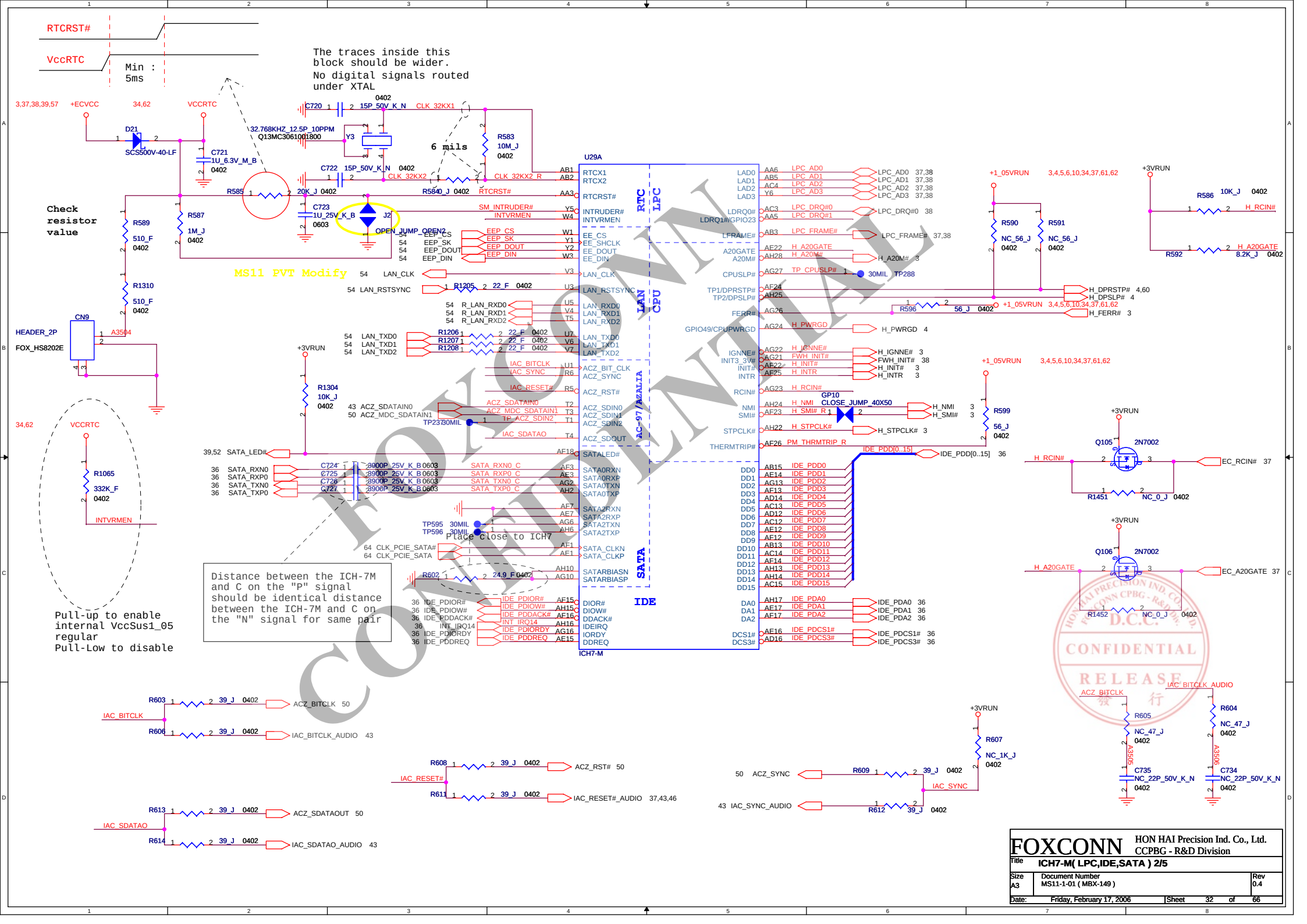
RTCRST#
VccRTC
Min : 5ms
The traces inside this block should be wider.
No digital signals routed under XTAL
Check resistor value
MS11 PVT Modify
Pull-up to enable internal VccSus1_05 regular
Pull-Low to disable
Distance between the ICH-7M and C on the "P" signal should be identical distance between the ICH-7M and C on the "N" signal for same pair
Place Close to ICH7
6 mils
OPEN_JUMP_OPEN2
CLOSE_JUMP_40X50
U29A
ICH7-M
RTC
LPC
LAN
CPU
AC-97/AZALIA
SATA
IDE
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HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
ICH7-M(LPC,IDE,SATA) 2/5
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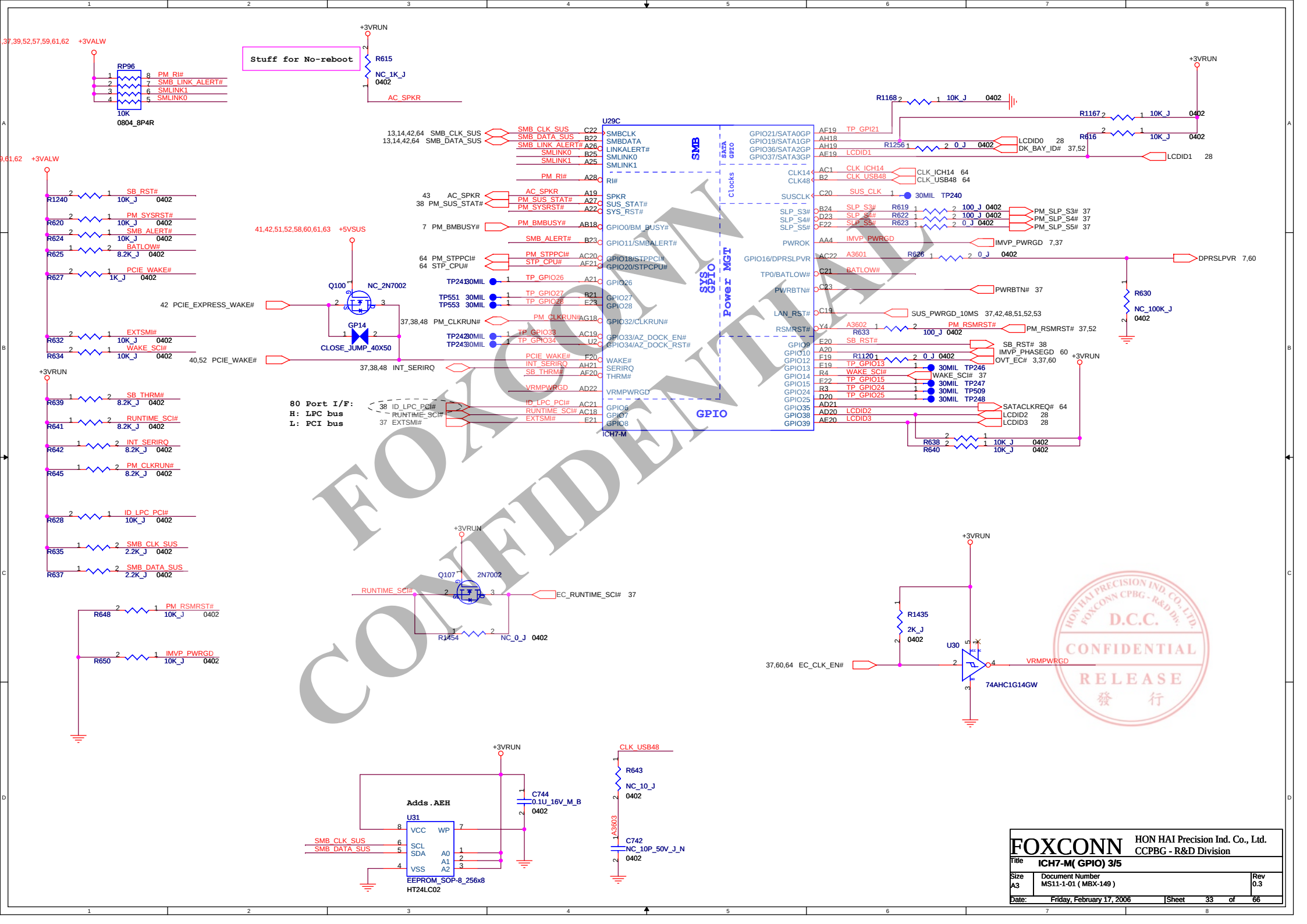
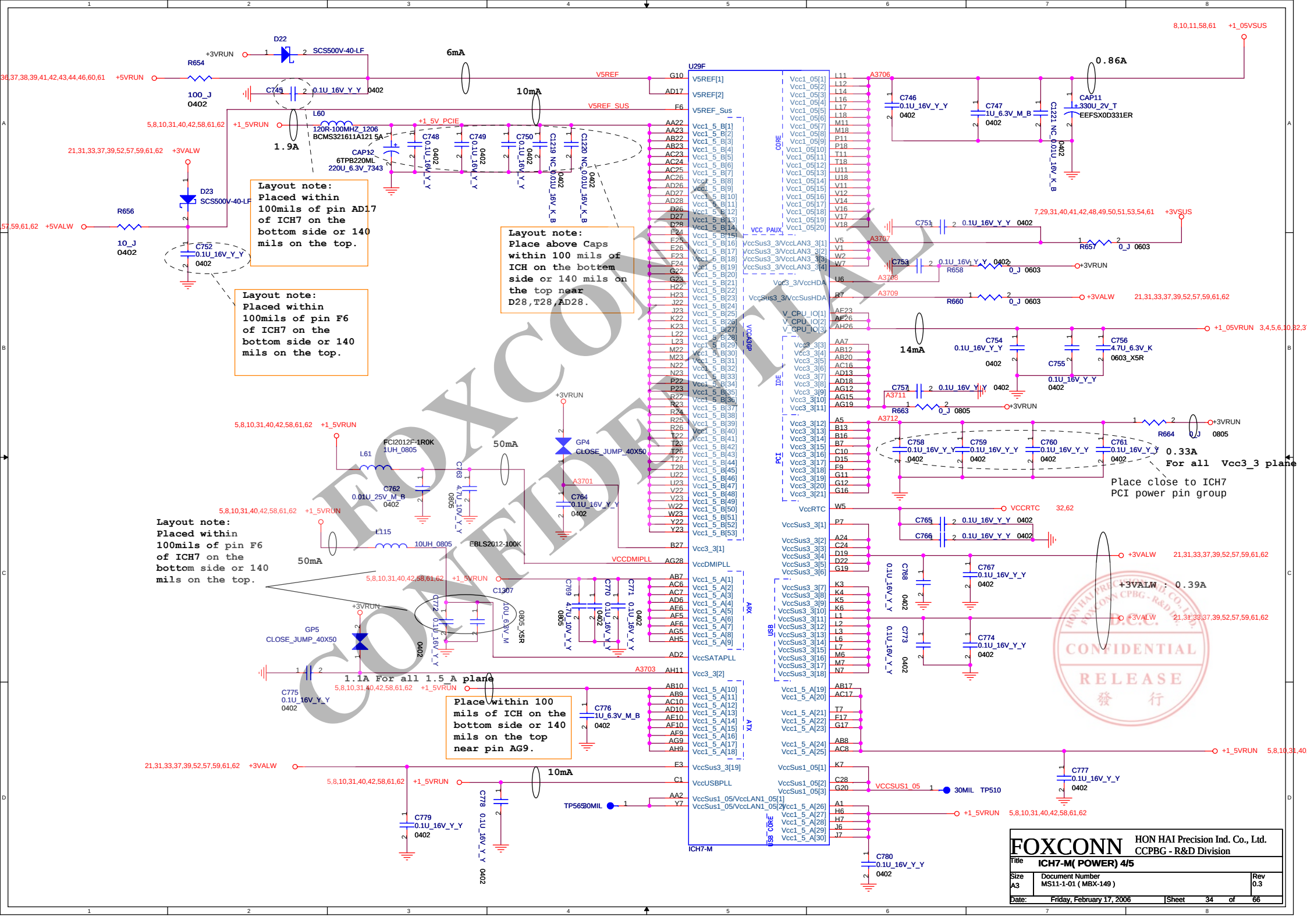
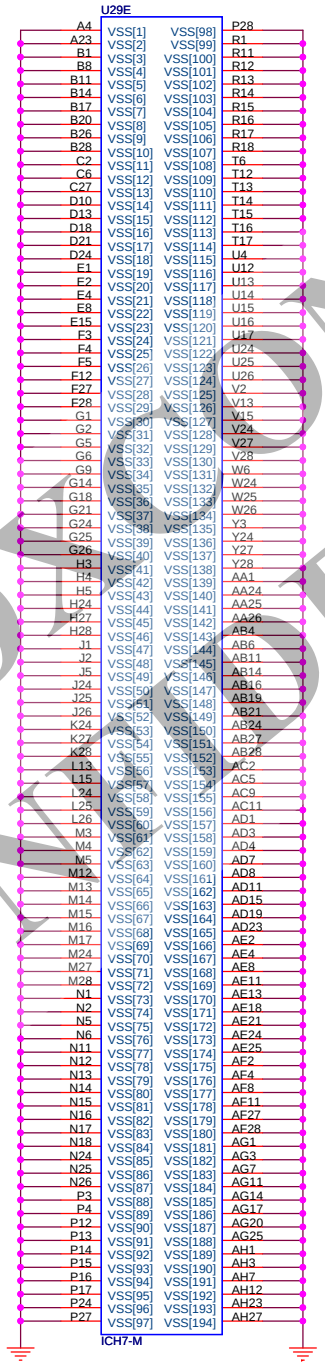
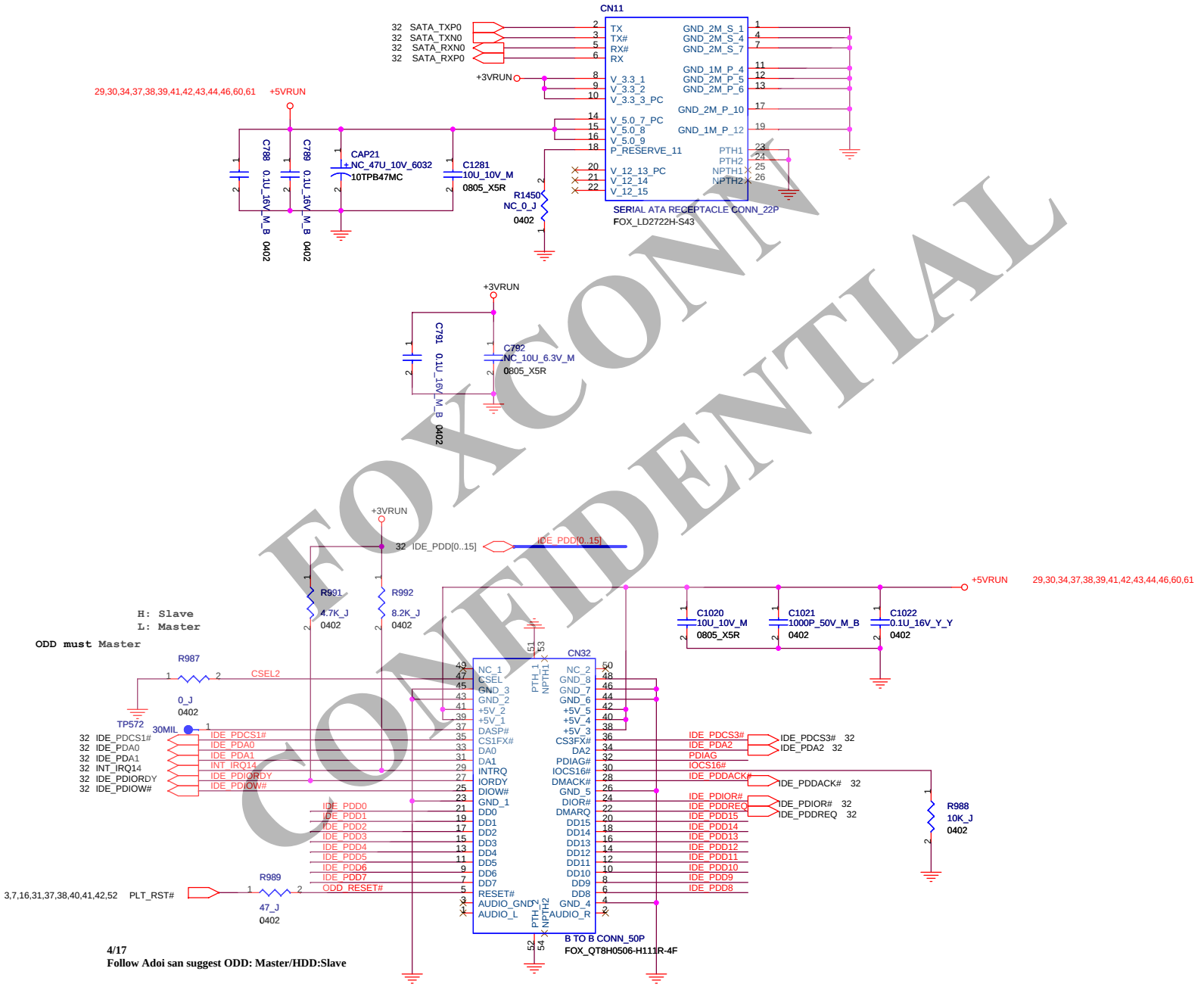

Stuff for No-reboot
R615
NC_1K_J
0402
AC_SPKR
+3VRUN
RP96
10K
0804_8P4R
PM_RI#
SMB_LINK_ALERT#
SMLINK1
SMLINK0
U29C
ICH7-M
SMB
SATA GPIO
Clocks
SYS GPIO
Power MGT
GPIO
SMBCLK
SMBDATA
LINKALERT#
SMLINK0
SMLINK1
RI#
SPKR
SUS_STAT#
SYS_RST#
GPIO0/BM_BUSY#
GPIO11/SMBALERT#
GPIO18/STPPCI#
GPIO20/STPCPU#
GPIO26
GPIO27
GPIO28
GPIO32/CLKRUN#
GPIO33/AZ_DOCK_EN#
GPIO34/AZ_DOCK_RST#
WAKE#
SERIRQ
THRM#
VRMPWRGD
GPIO6
GPIO7
GPIO8
GPIO21/SATA0GP
GPIO19/SATA1GP
GPIO36/SATA2GP
GPIO37/SATA3GP
CLK14
CLK48
SUSCLK
SLP_S3#
SLP_S4#
SLP_S5#
PWROK
GPIO16/DPRSLPVR
TP0/BATLOW#
PWRBTN#
LAN_RST#
RSMRST#
GPIO9
GPIO10
GPIO12
GPIO13
GPIO14
GPIO15
GPIO24
GPIO25
GPIO35
GPIO38
GPIO39
SB_RST#
IMVP_PHASEGD
OVT_EC#
WAKE_SCI#
TP_GPIO13
TP_GPIO15
TP_GPIO24
TP_GPIO25
SATACLKREQ#
LCDID2
LCDID3
TP_GPI21
LCDID0
DK_BAY_ID#
LCDID1
CLK_ICH14
CLK_USB48
SUS_CLK
SLP_S3#
SLP_S4#
SLP_S5#
IMVP_PWRGD
A3601
DPRSLPVR
BATLOW#
PWRBTN#
SUS_PWRGD_10MS
PM_RSMRST#
SB_RST#
IMVP_PHASEGD
OVT_EC#
WAKE_SCI#
TP_GPIO13
TP_GPIO15
TP_GPIO24
TP_GPIO25
SATACLKREQ#
LCDID2
LCDID3
R1168
R1167
R616
R1256
R619
R622
R623
R626
R630
NC_100K_J
R638
R640
SMB_CLK_SUS
SMB_DATA_SUS
SMB_LINK_ALERT#
SMLINK0
SMLINK1
PM_RI#
AC_SPKR
PM_SUS_STAT#
PM_SYSRST#
PM_BMBUSY#
SMB_ALERT#
PM_STPPCI#
STP_CPU#
TP_GPIO26
TP_GPIO27
TP_GPIO28
PM_CLKRUN#
TP_GPIO33
TP_GPIO34
PCIE_WAKE#
INT_SERIRQ
SB_THRM#
VRMPWRGD
ID_LPC_PCI#
RUNTIME_SCI#
EXTSMI#
80 Port I/F:
H: LPC bus
L: PCI bus
Q100
NC_2N7002
GP14
CLOSE_JUMP_40X50
TP2430MIL
TP551 30MIL
TP553 30MIL
TP2420MIL
TP2430MIL
R1240
R620
R624
R625
R627
R632
R634
R639
R641
R642
R645
R628
R635
R637
R648
R650
SB_RST#
PM_SYSRST#
SMB_ALERT#
BATLOW#
PCIE_WAKE#
EXTSMI#
WAKE_SCI#
SB_THRM#
RUNTIME_SCI#
INT_SERIRQ
PM_CLKRUN#
ID_LPC_PCI#
SMB_CLK_SUS
SMB_DATA_SUS
PM_RSMRST#
IMVP_PWRGD
Q107
2N7002
R1454
NC_0_J
EC_RUNTIME_SCI#
R1435
2K_J
U30
74AHC1G14GW
EC_CLK_EN#
U31
EEPROM_SOP-8_256x8
HT24LC02
Adds.AEH
C744
0.1U_16V_M_B
R643
NC_10_J
C742
NC_10P_50V_J_N
CLK_USB48
FOXCONN CONFIDENTIAL
HON HAI PRECISION IND. CO., LTD.
FOXCONN CPBG - R&D Div.
D.C.C.
CONFIDENTIAL
RELEASE
發 行
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
ICH7-M(GPIO) 3/5
Size
A3
Document Number
MS11-1-01 (MBX-149)
Rev
0.3
Date:
Friday, February 17, 2006
Sheet
33
of
66


U29F
ICH7-M
Layout note: Placed within 100mils of pin AD17 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.
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.
Place within 100 mils of ICH on the bottom side or 140 mils on the top near pin AG9.
Place close to ICH7 PCI power pin group
0.33A For all Vcc3_3 plane
1.1A For all 1.5_A plane
+3VALW : 0.39A
0.86A
14mA
6mA
10mA
50mA
1.9A
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
ICH7-M(POWER) 4/5
MS11-1-01 (MBX-149)
Rev 0.3
Friday, February 17, 2006
Sheet 34 of 66
CONFIDENTIAL
RELEASE

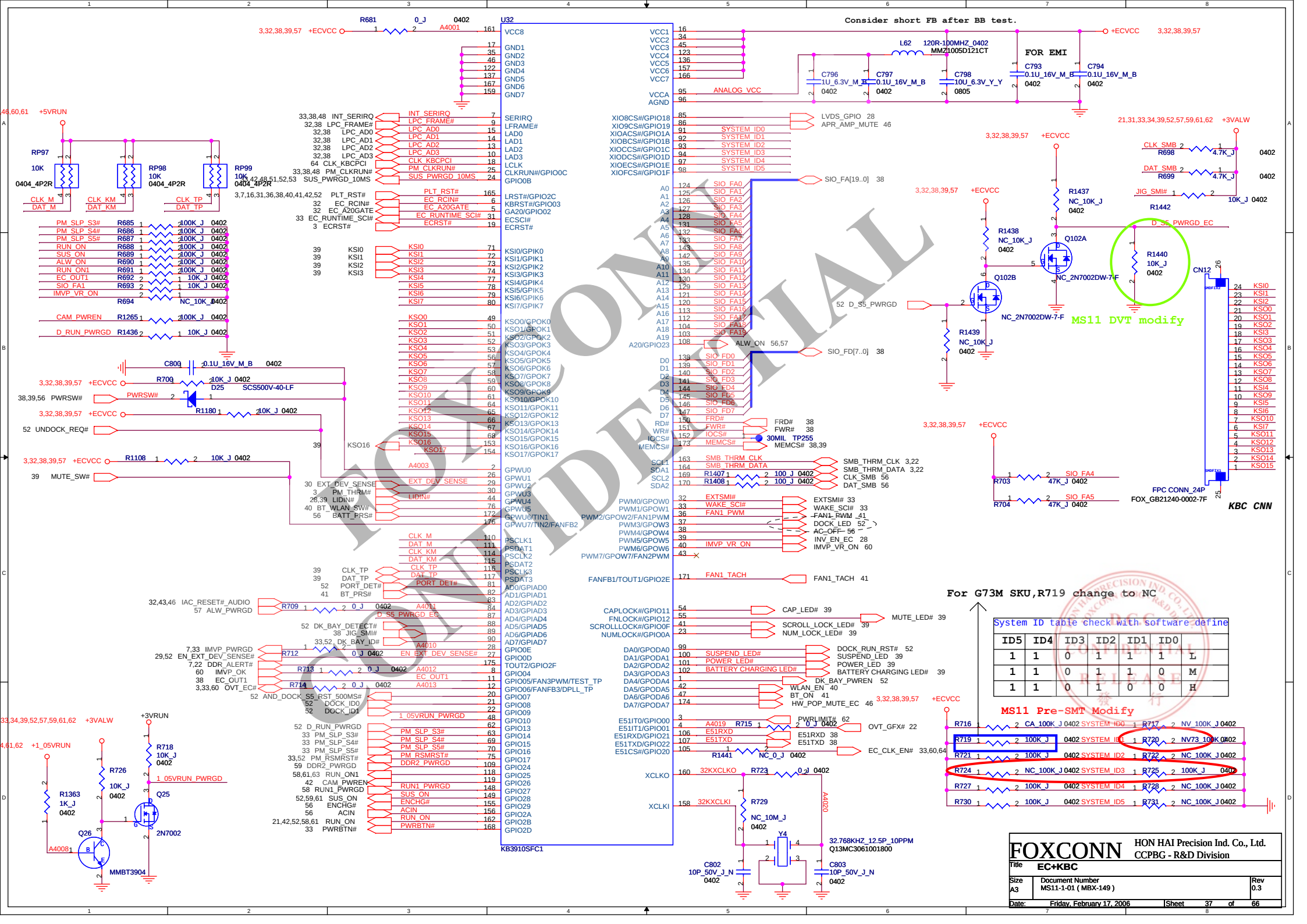


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	ICH7-M(GND) 5/5	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 35 of 66	



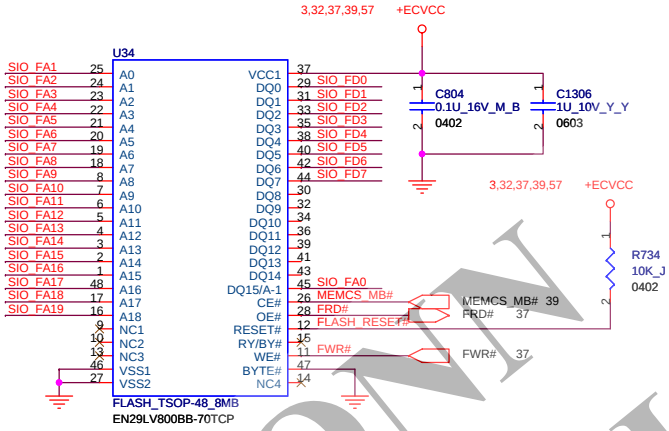
CD-ROM CONN

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	SATA HDD/CD-ROM	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 36 of 66	



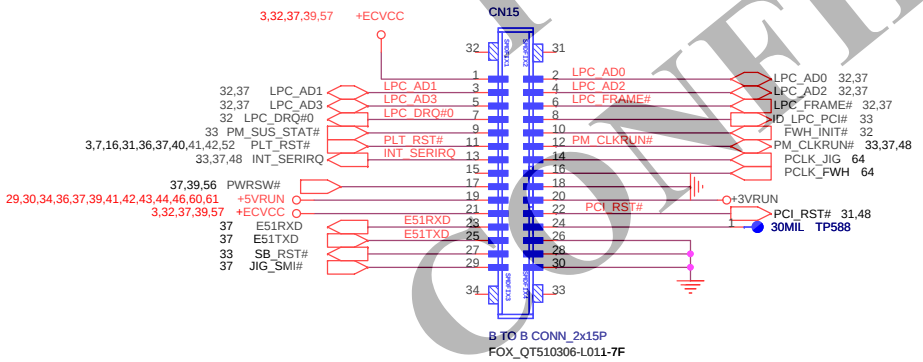
37 SIO_FA[19..0]

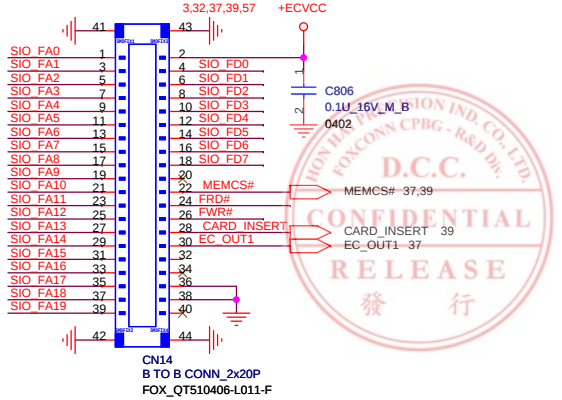
37 SIO_FD[7..0]



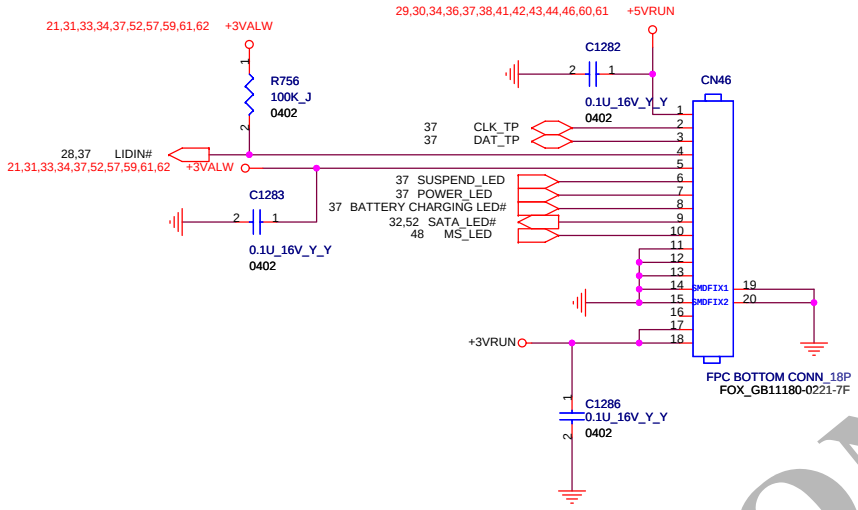
FLASH BIOS

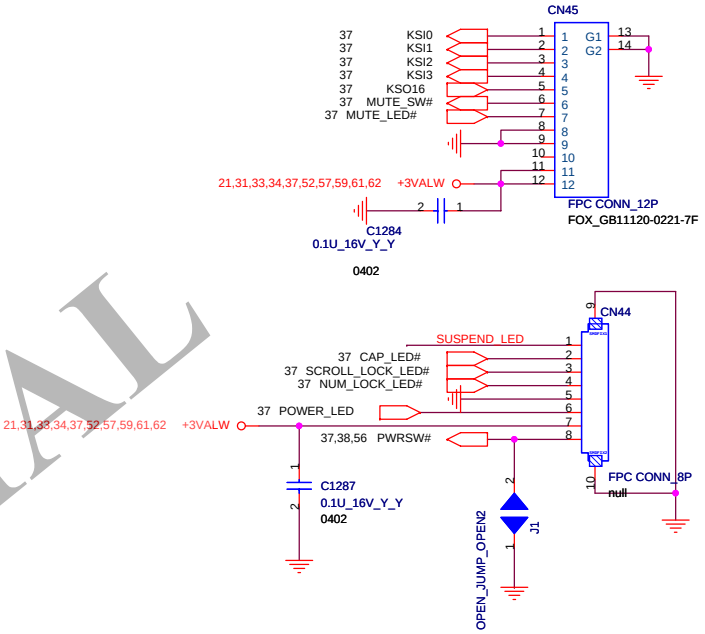
JIG-120

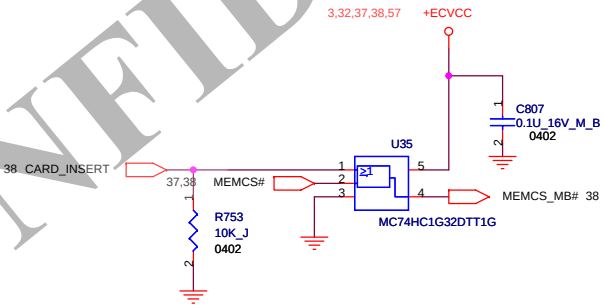


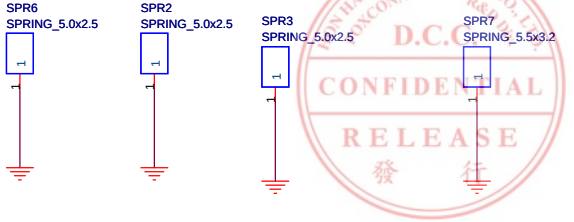


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: Flash ROM/X-Bus CONN		
Size: A3	Document Number: MS11-1-01 (MBX-149)	Rev: 0.3
Date: Friday, February 17, 2006	Sheet 38 of 66	

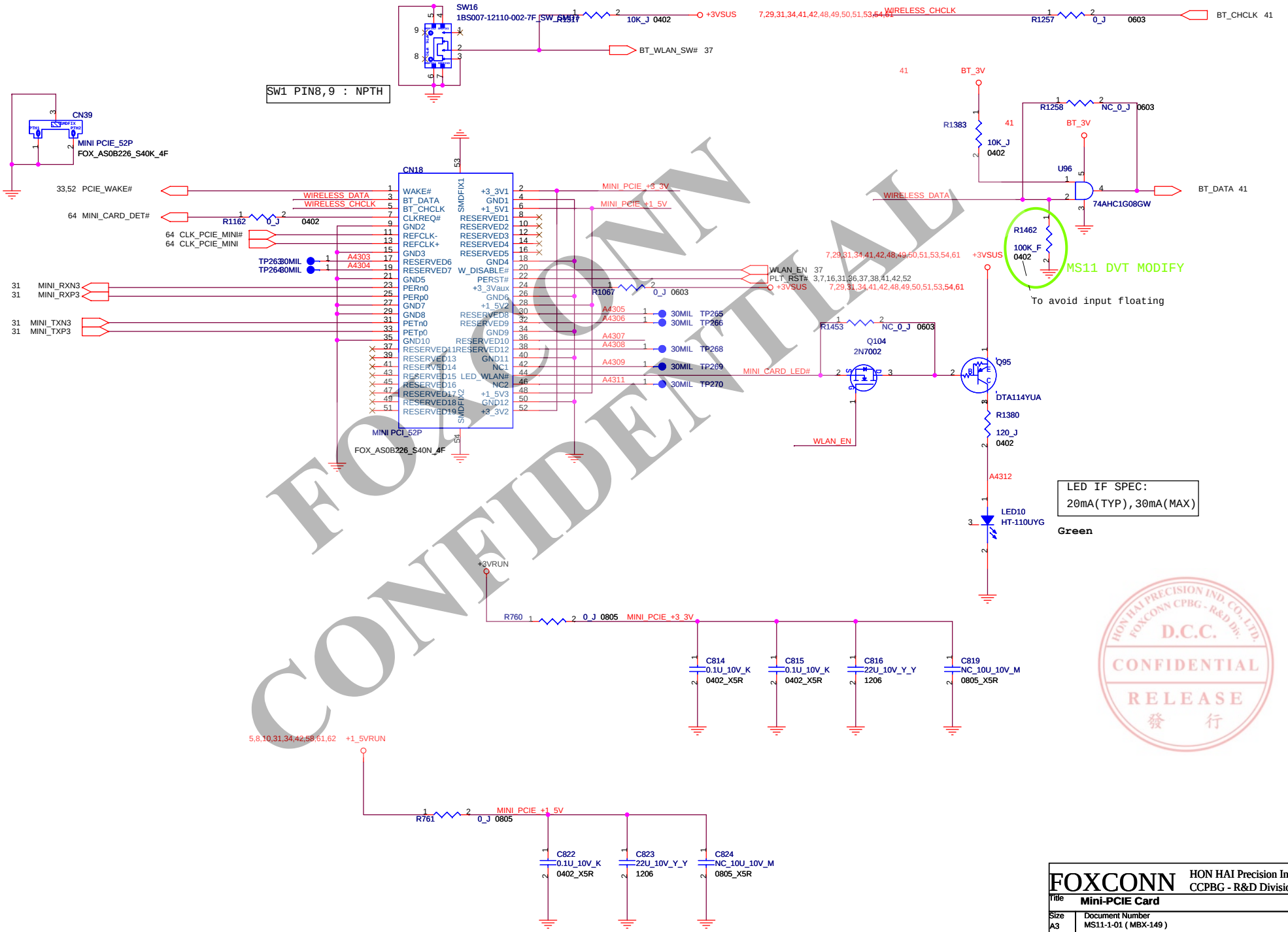




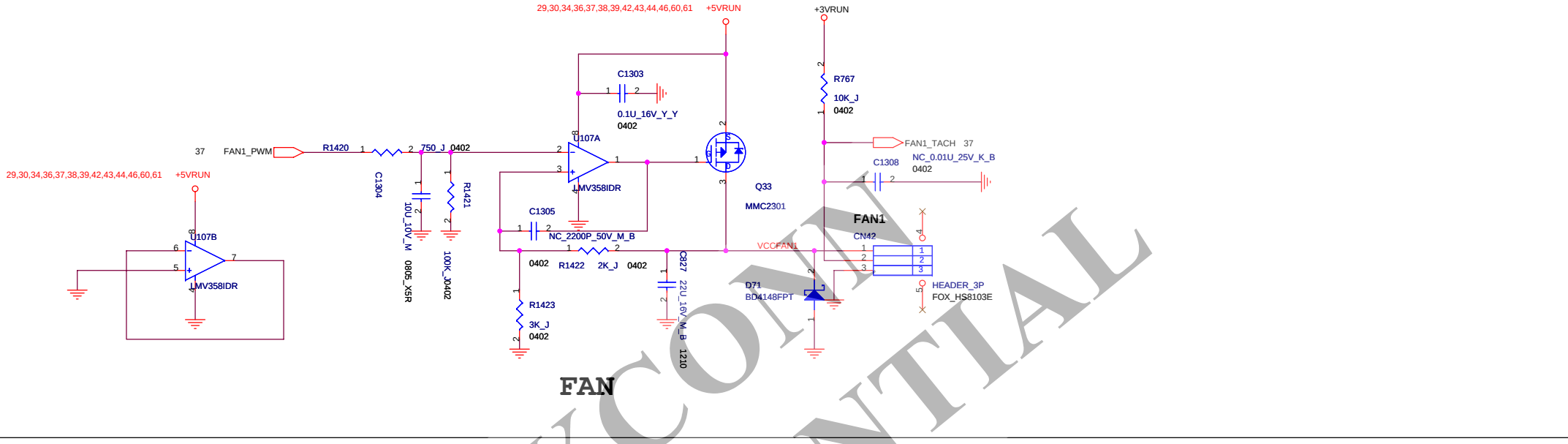




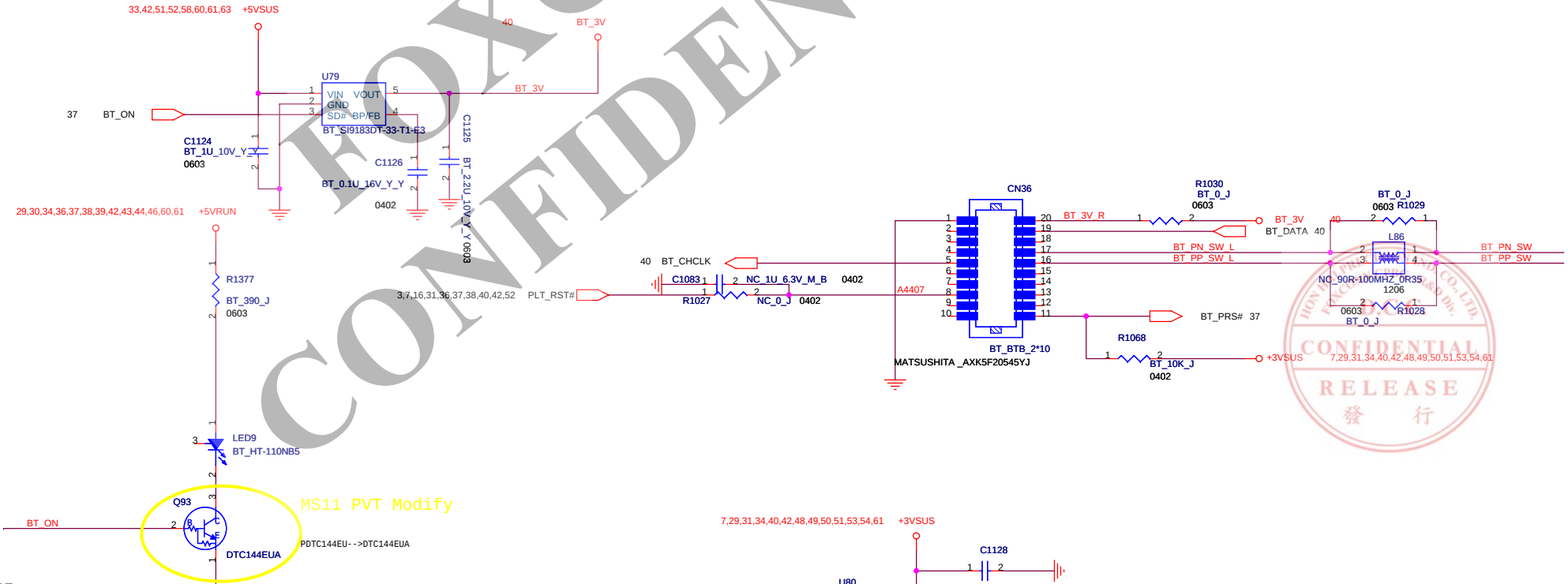
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	LED/LID SW#/Touch PAD	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 39 of 66	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Mini-PCIE Card	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 40 of 66	



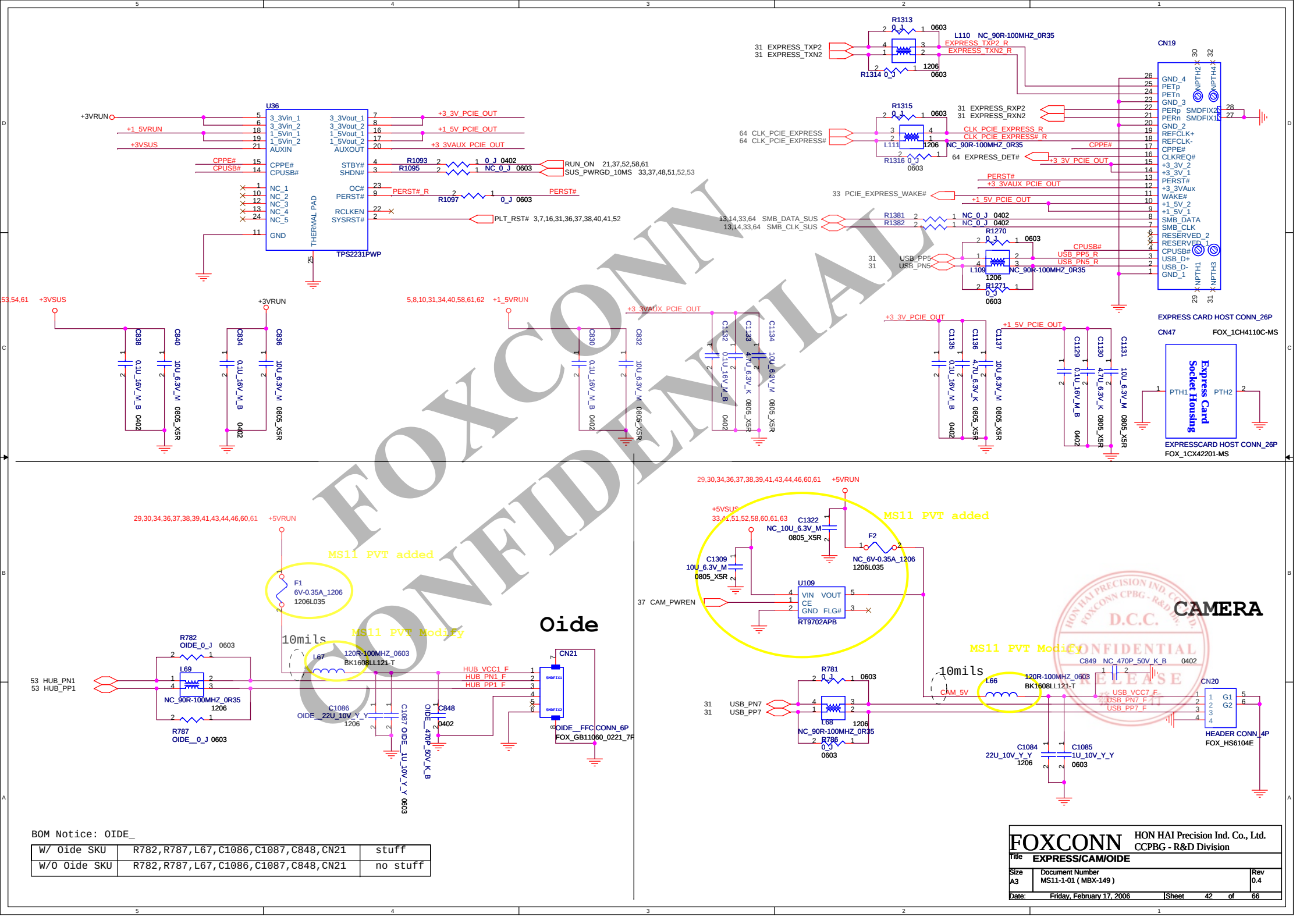
FAN

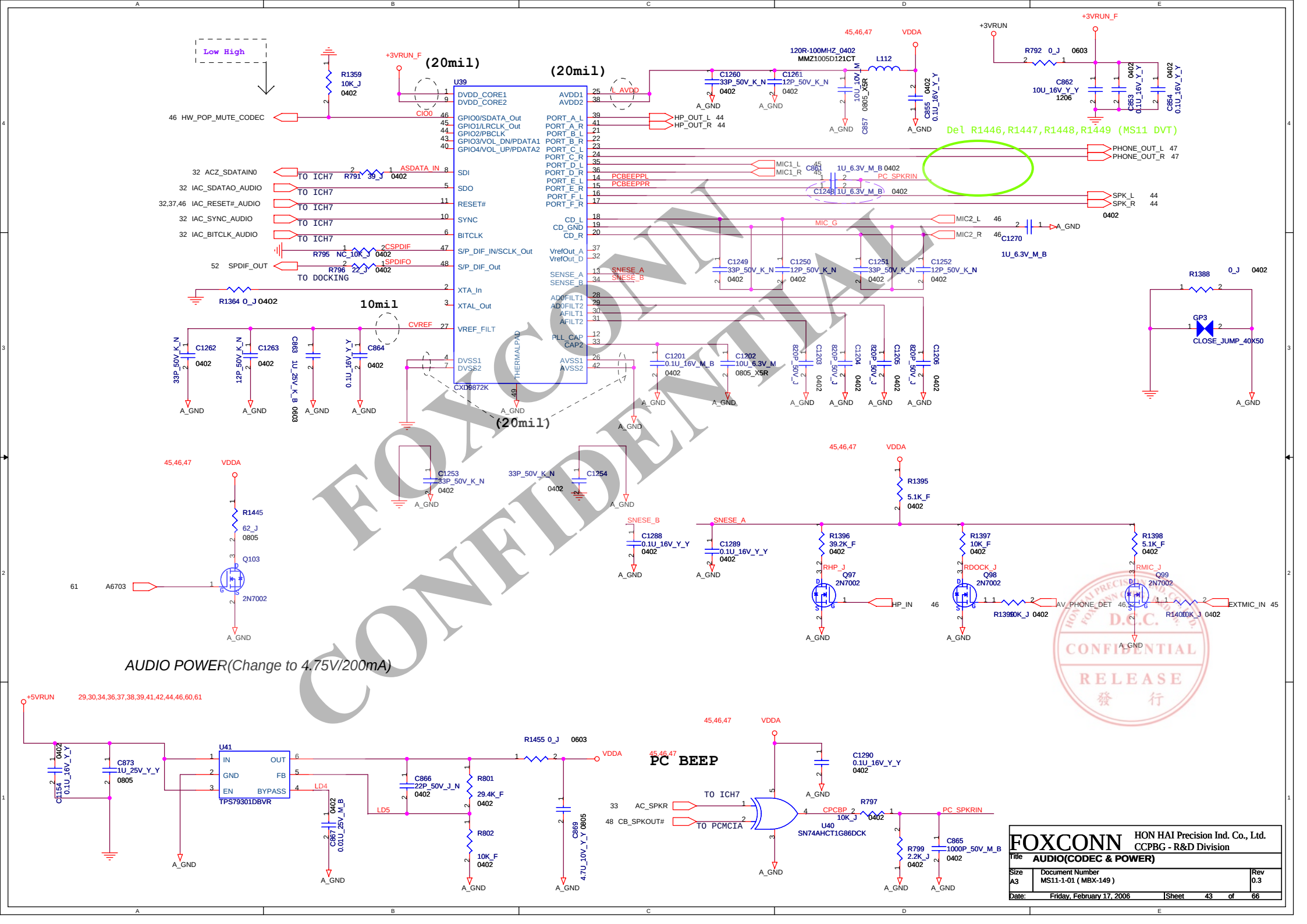


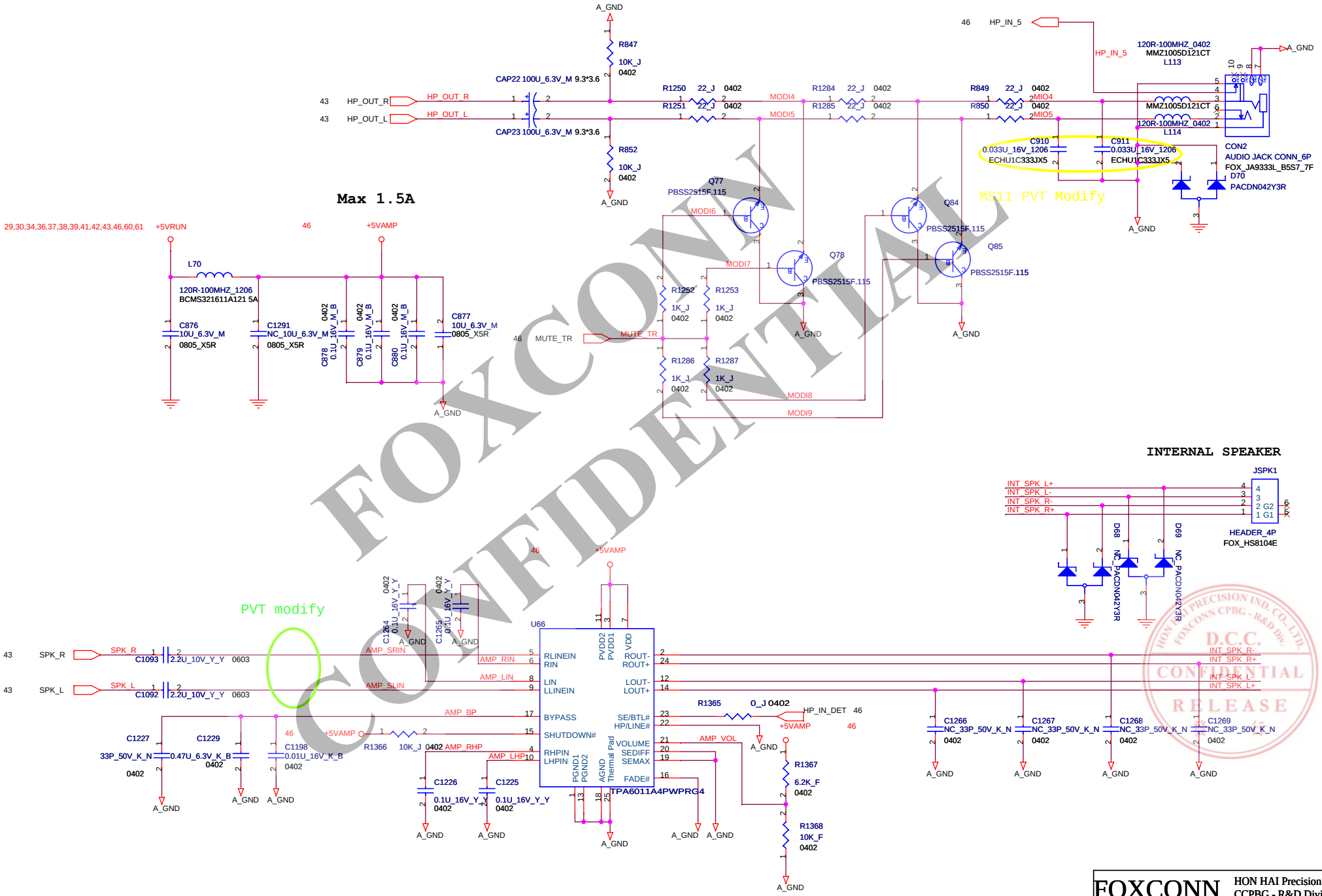
BOM Notice: BT_

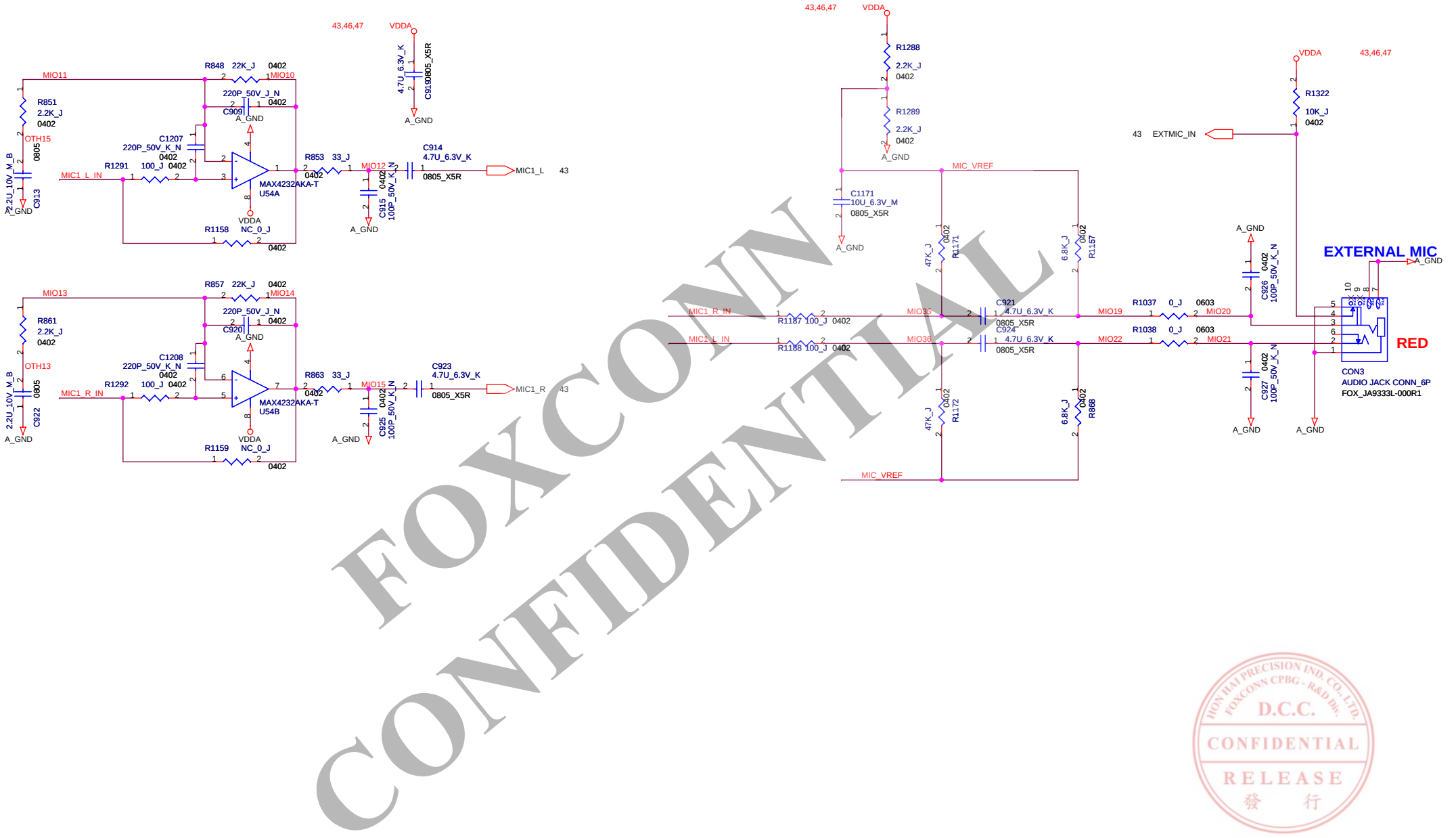
W/ BT SKU	Q93,LEDE9,R1377,U79,C1124,C1125,C1126,C1128,U80,R1068,R1028,R1029,R1030,CN36	stuff
W/O BT SKU	Q93,LEDE9,R1377,U79,C1124,C1125,C1126,C1128,U80,R1068,R1028,R1029,R1030,CN36	no stuff

FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	FAN/Bluetooth	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.4
Date: Friday, February 17, 2006	Sheet 41 of 66	

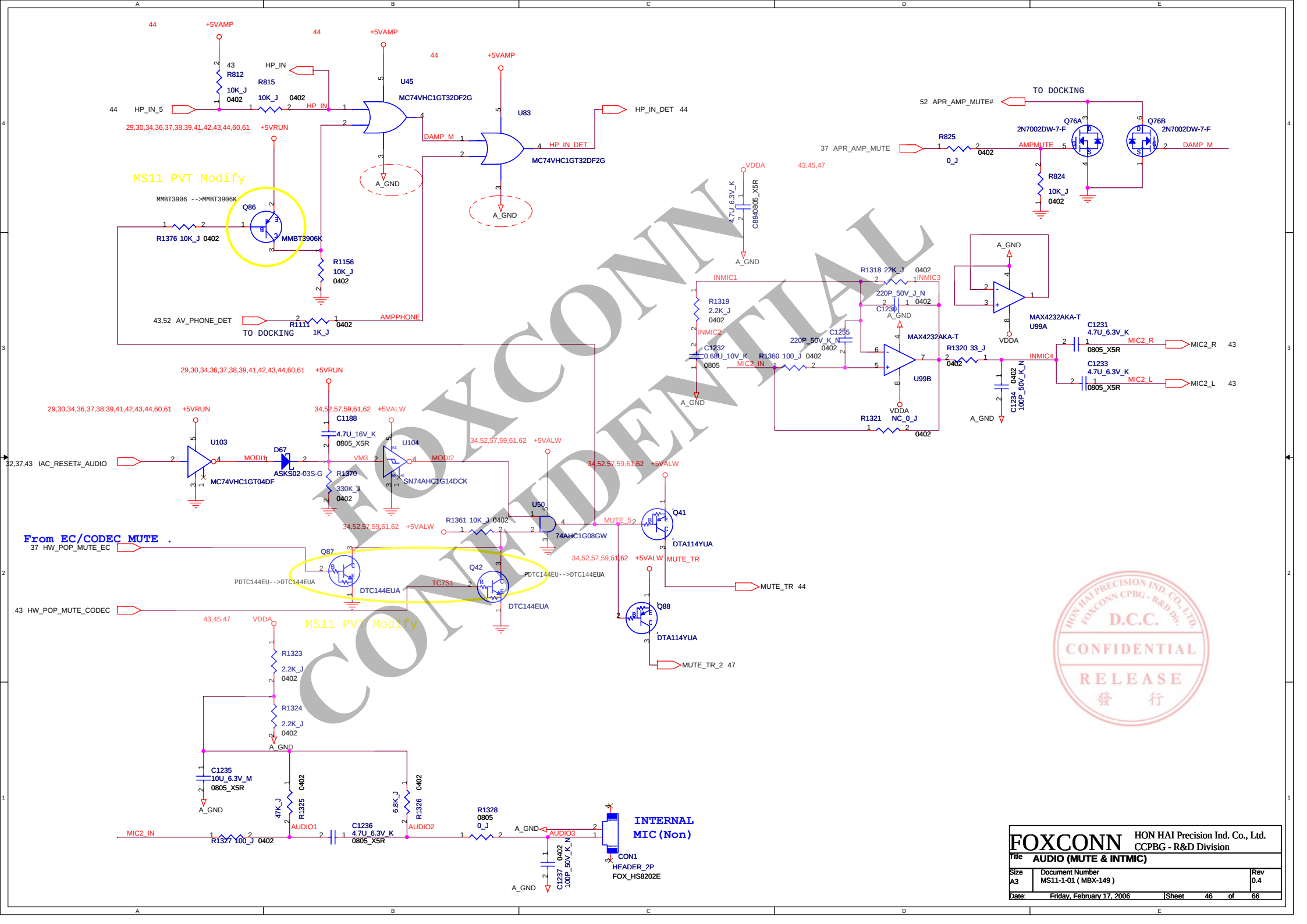








FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	AUDIO(EXT MIC & PHONE OUT)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 45 of 66	


MS11 PVT Modify
MMBT3906 -->MMBT3906K
Q86
MMBT3906K
R1376 10K_J 0402
R1156 10K_J 0402
R1111 1K_J 0402
TO DOCKING
AMPPHONE
HP_IN
HP_IN_5
HP_IN_DET
DAMP_M
U45
MC74VHC1GT32DF2G
U83
A_GND
+5VAMP
+5VRUN
+5VALW
VDDA
R812 43
R815 10K_J 0402
U103
MC74VHC1GT04DF
D67
ASK502-03S-G
R1370 330K_J 0402
U104
SN74AHC1G14DCK
C1188 4.7U_16V_K 0805_X5R
U50
74AHC1G08GW
R1361 10K_J 0402
MUTE_5
Q41
DTA114YUA
MUTE_TR
MUTE_TR_2 47
MUTE_TR 44
From EC/CODEC MUTE .
37 HW_POP_MUTE_EC
43 HW_POP_MUTE_CODEC
Q87
Q42
PDTC144EU-->DTC144EUA
DTC144EUA
TC7S1
Q88
R1323 2.2K_J 0402
R1324 2.2K_J 0402
C1235 10U_6.3V_M 0805_X5R
R1325 47K_J 0402
R1326 6.8K_J 0402
C1236 4.7U_6.3V_K 0805_X5R
R1327 100_J 0402
R1328 0805 0_J
AUDIO1
AUDIO2
AUDIO3
MIC2_IN
INTERNAL MIC (Non)
CON1
HEADER_2P
FOX_HS8202E
C1237 100P_50V_K_N
C8940805_X5R 4.7U_6.3V_K
R1319 2.2K_J 0402
R1318 22K_J 0402
C1230 220P_50V_J_N 0402
C1255 220P_50V_K_N 0402
C1232 0.68U_10V_K 0805
R1360 100_J 0402
INMIC1
INMIC2
INMIC3
INMIC4
MAX4232AKA-T
U99A
U99B
R1320 33_J 0402
R1321 NC_0_J 0402
C1234 100P_50V_K_N 0402
C1231 4.7U_6.3V_K 0805_X5R
C1233 4.7U_6.3V_K 0805_X5R
MIC2_R
MIC2_L
TO DOCKING
APR_AMP_MUTE#
APR_AMP_MUTE
Q76A
Q76B
2N7002DW-7-F
AMPMUTE
R825 0_J 0402
R824 10K_J 0402
IAC_RESET#_AUDIO
AV_PHONE_DET
29,30,34,36,37,38,39,41,42,43,44,60,61
34,52,57,59,61,62
43,45,47
FOXCONN CONFIDENTIAL
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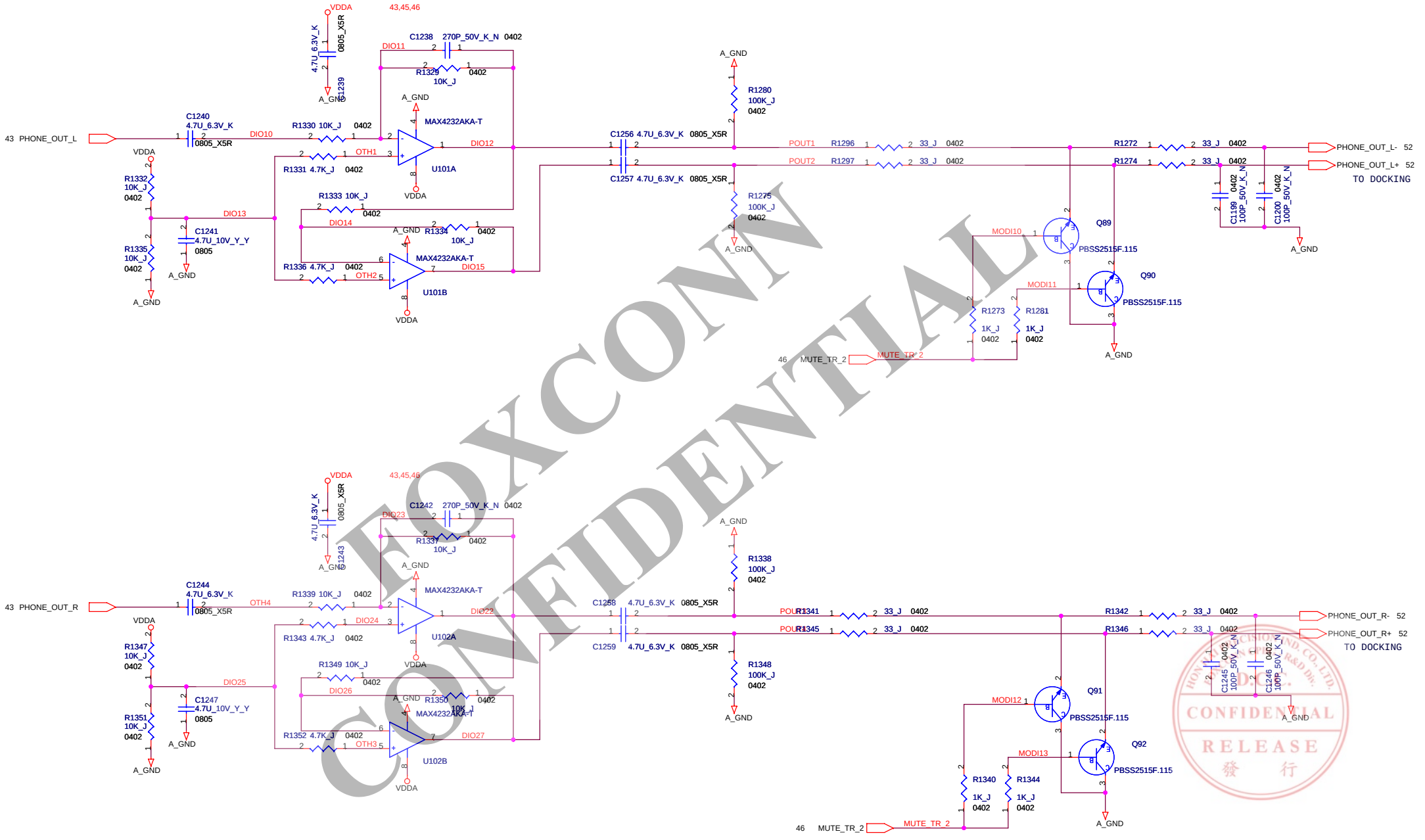
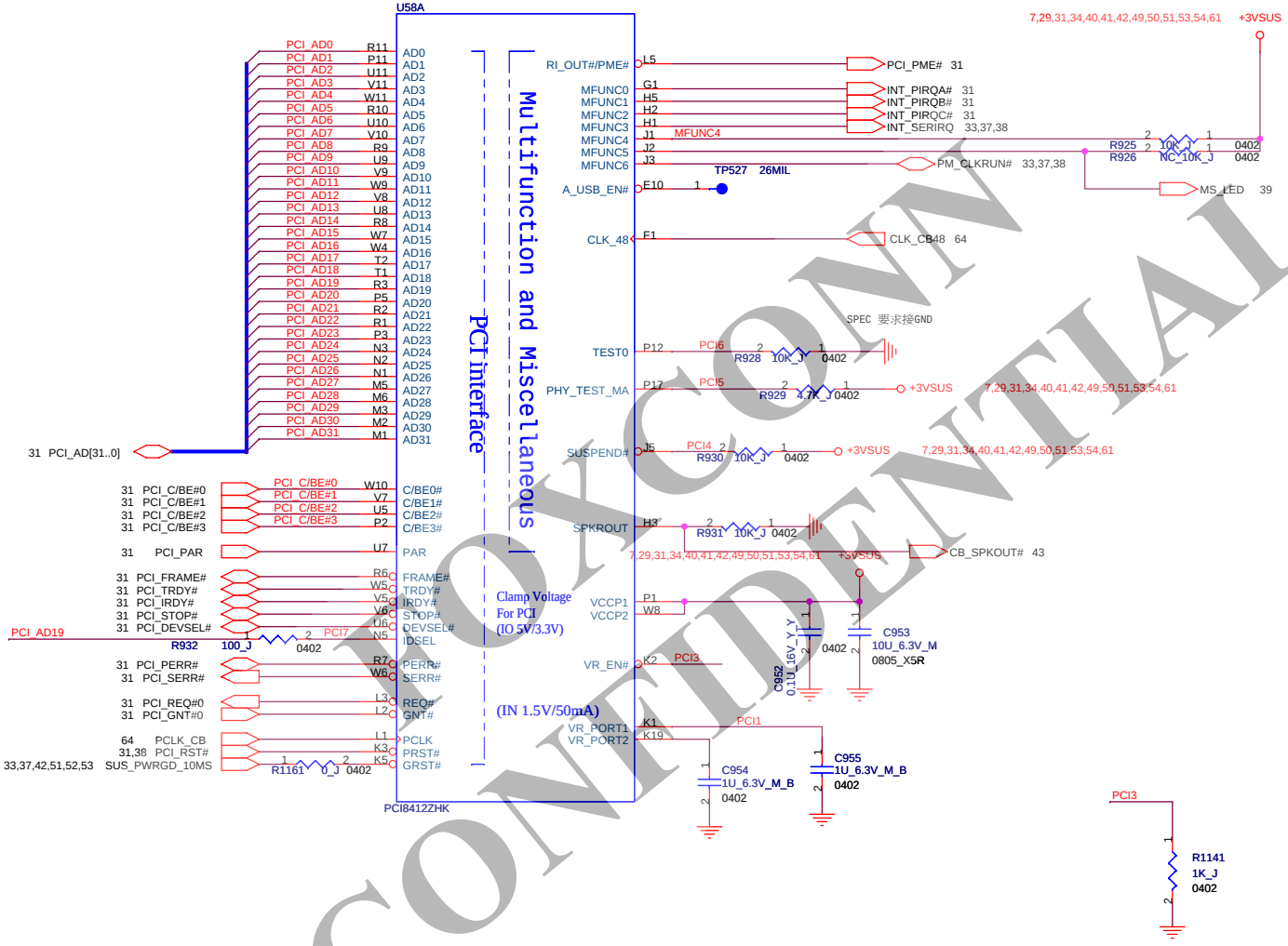
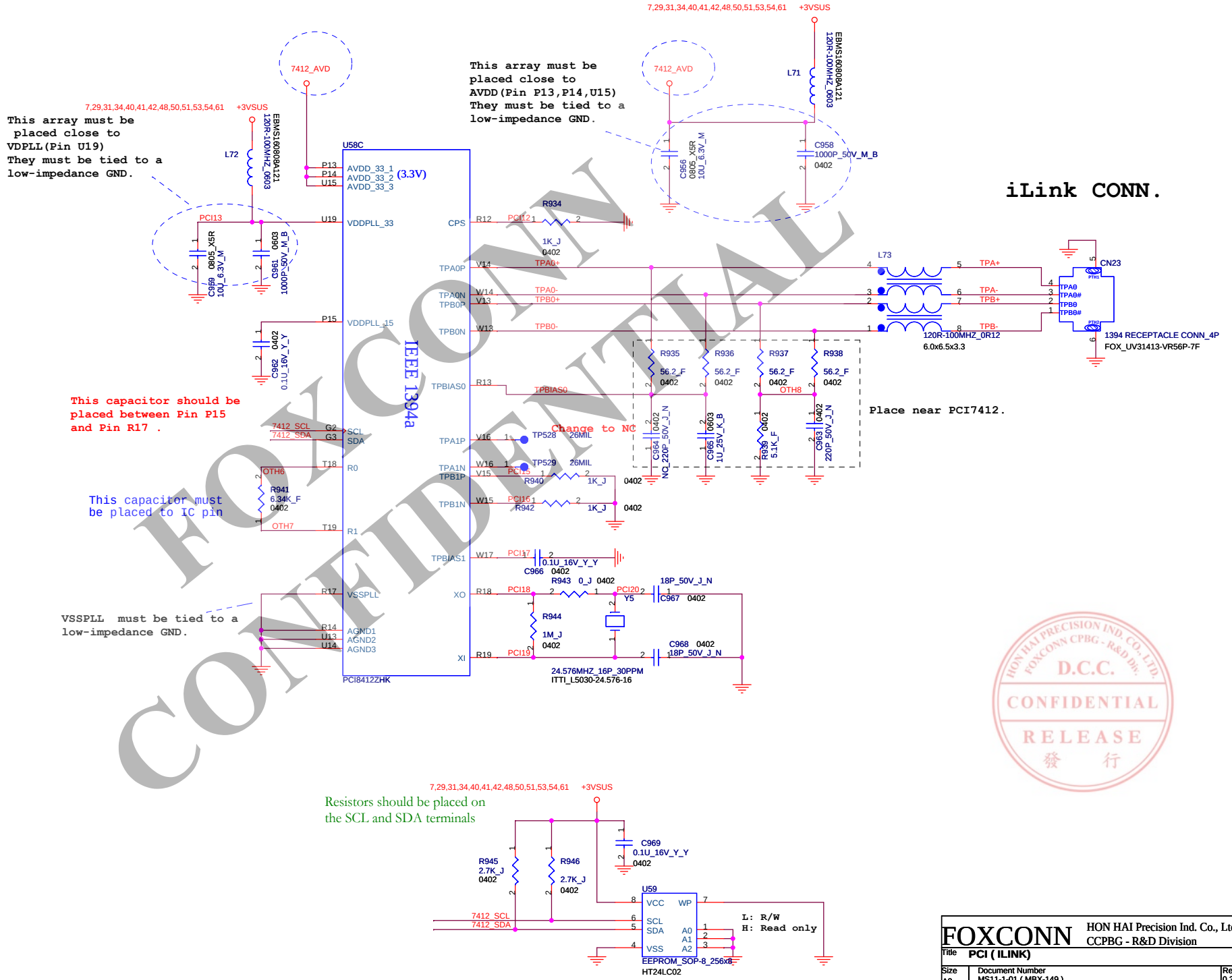
FOXCONN HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division
Title AUDIO (MUTE & INTMIC)
Size A3
Document Number MS11-1-01 (MBX-149)
Rev 0.4
Date: Friday, February 17, 2006
Sheet 46 of 66



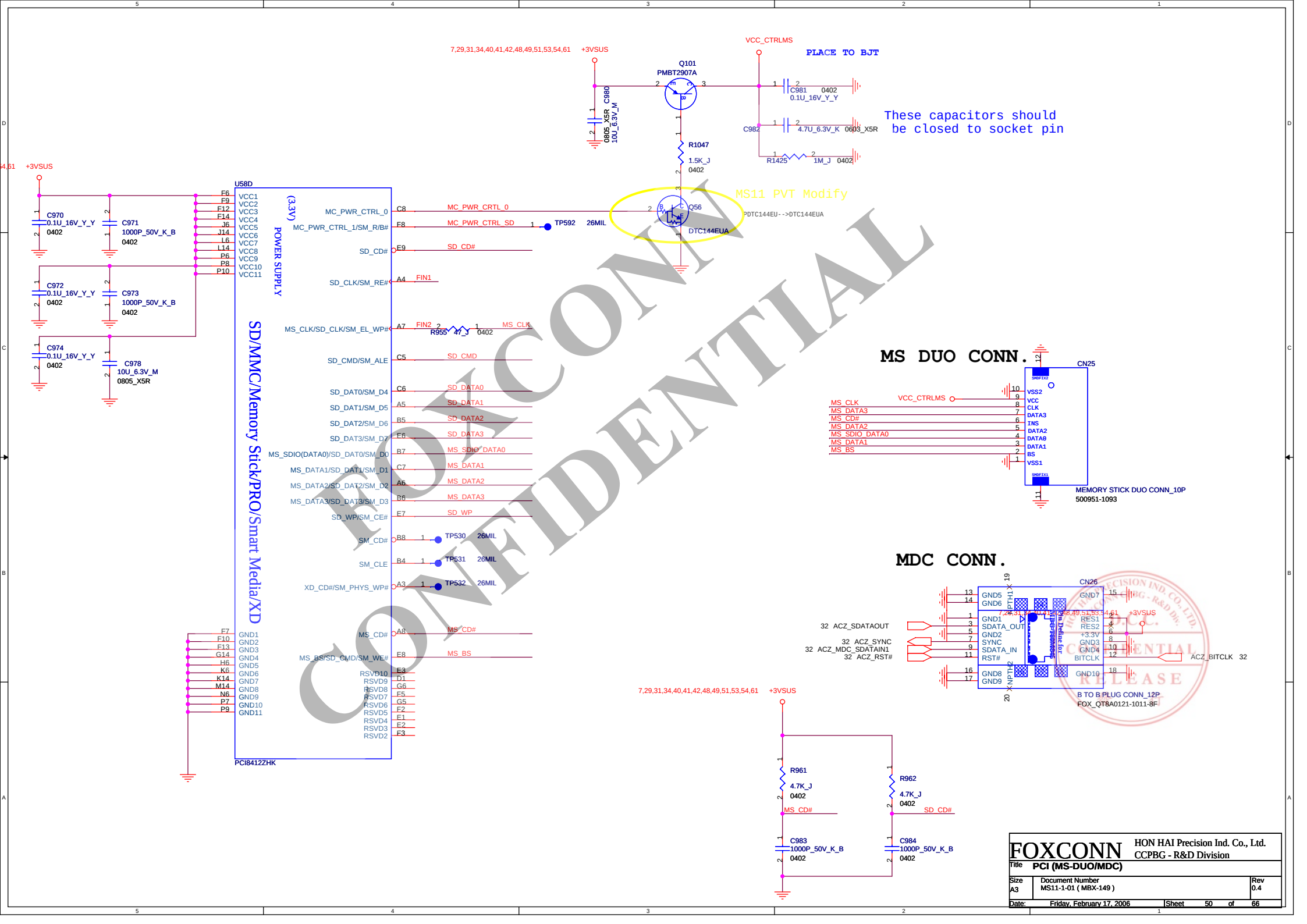
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	AUDIO (PHONE OUT)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 47 of 66	



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	PCI (PCI BUS)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 48 of 66	

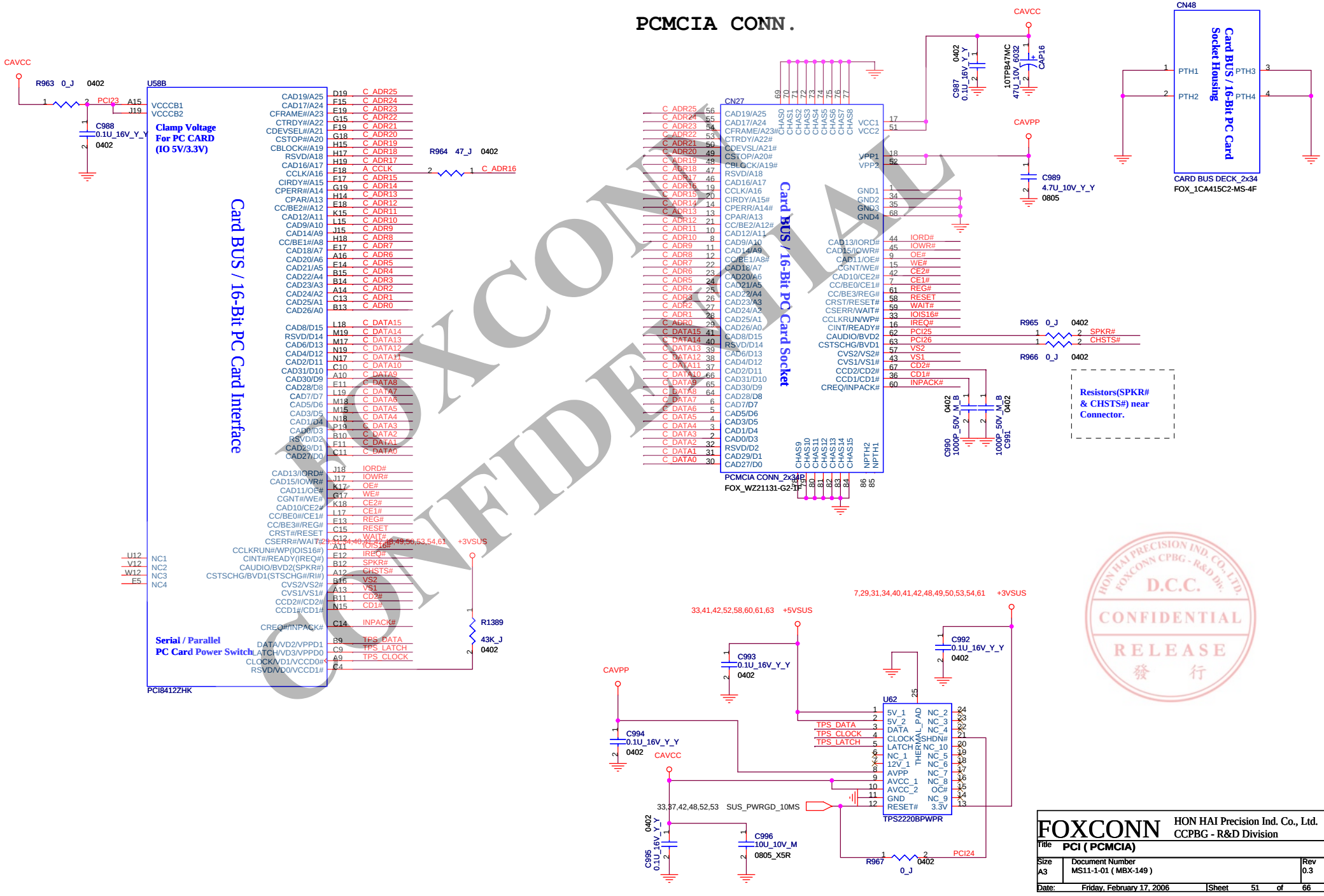


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	PCI (ILINK)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 49 of 66	



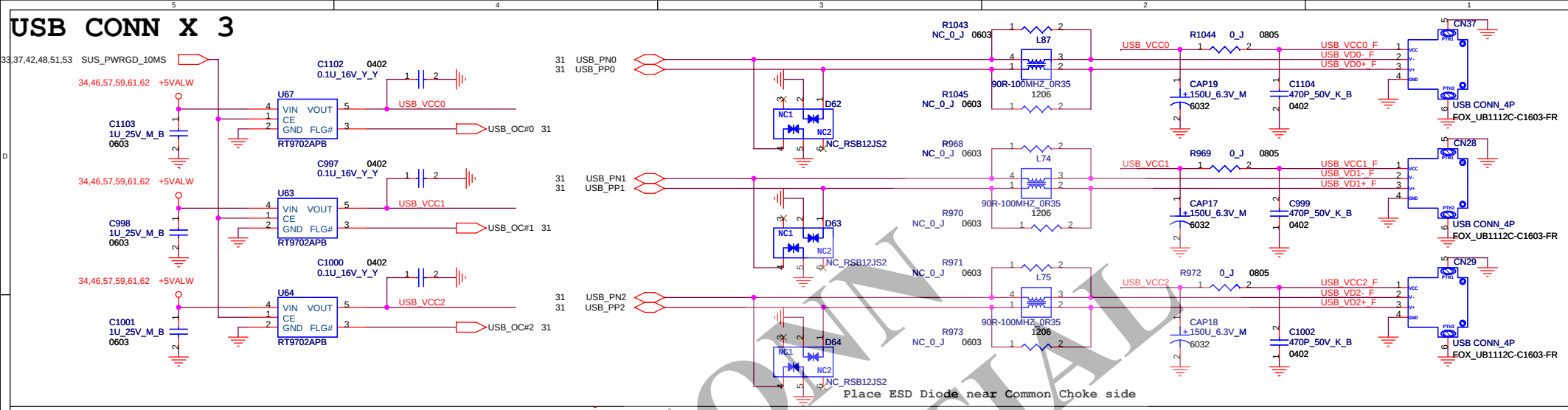
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	PCI (MS-DUO/MDC)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.4
Date: Friday, February 17, 2006	Sheet 50 of 66	

PCMCIA CONN.

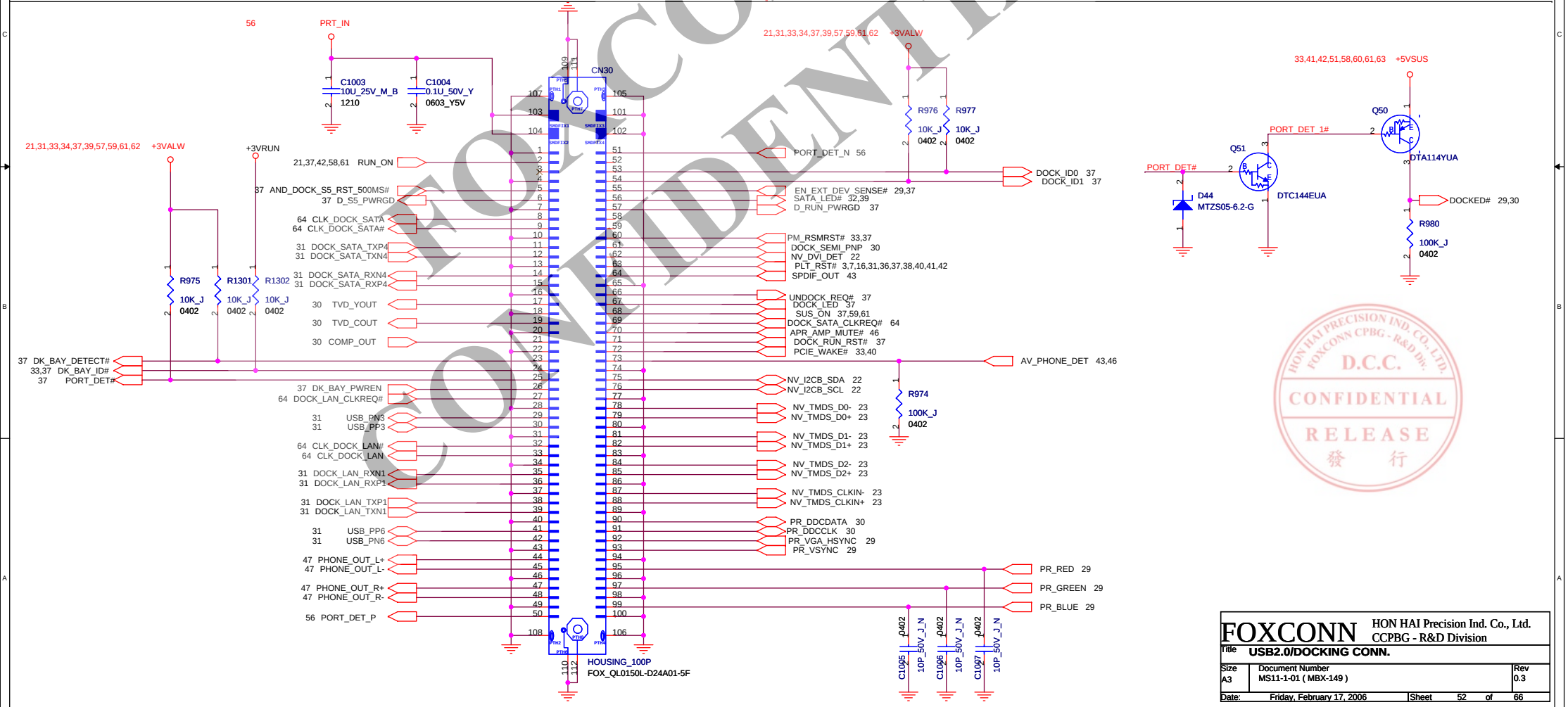


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	PCI (PCMCIA)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 51 of 66	

USB CONN X 3



Place ESD Diode near Common Choke side



FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	USB2.0/DOCKING CONN.	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 52 of 66	

BOM notice:

	R1243	R1244	R1247	R1248	R1459	R1460
BT + OIDE SKU	NC	NC	NC	NC	NC	NC
BT SKU	0 ohm	0 ohm	0 ohm	0 ohm	NC	NC
OIDE SKU	0 ohm	0 ohm	NC	NC	0 ohm	0 ohm

MS11 DVT add

R1459 0_J 0402 HUB_PN1_R
R1460 0_J 0402 HUB_PP1_R
UP_PN4_R R1243 0_J 0402
UP_PP4_R R1244 0_J 0402
R1247 0_J 0402 HUB_PN2_R
R1248 0_J 0402 HUB_PP2_R

Layout note:
Place R1243 ,R1244 under U88 Pin1,Pin2
Place R1459,R1460 under U88 Pin 11,Pin 12
Place R1247,R1248 under U88 Pin 15,Pin 16

BOM notice:

	R1194	R1195
BT + OIDE SKU	30 ohm	30 ohm
BT SKU	0 ohm	0 ohm
OIDE SKU	0 ohm	0 ohm

BOM notice:

	R1196	R1197	R1198	R1199
BT + OIDE SKU	30 ohm	30 ohm	30 ohm	30 ohm
BT SKU	0 ohm	0 ohm	0 ohm	0 ohm
OIDE SKU	0 ohm	0 ohm	0 ohm	0 ohm

U88
HUB_TUSB2036
DP0PUR, DM0, DP0, BUSPWR#, SUSPND, RESET#, EECLK, EEDATA/GANGED#, EXTMEM#, MODE, VCC1, VCC2, GND1, GND2
PWRON1#, PWRON2#, PWRON3#, OVRCUR1#, OVRCUR2#, OVRCUR3#, DM1, DP1, DM2, DP2, DM3, DP3, OCPROT#/PWRSW#, NP3#, NPINT1, NPINT0, XTAL1/CLK48, XTAL2

NC_22P_50V_J_N 0402 C1186
C1185 NC_22P_50V_J_N 0402
R1193 HUB_1.5K_J 0402
R1236 HUB_4.7K_J 0402
R1311 0_J 0402
HUB_SCL, HUB_SDA, EXTMEM#
C1167 HUB_0.01U_16V_K_B 0402
C1168 HUB_0.1U_6.3V_K 0402_X7R
C1163 HUB_22P_50V_J_N
C1164 HUB_22P_50V_J_N 0402
C1165 HUB_22P_50V_J_N 0402
C1166 HUB_22P_50V_J_N 0402
R1237 HUB_4.7K_J 0402
R1190 HUB_4.7K_J 0402
R1191 HUB_4.7K_J 0402
R1192 HUB_4.7K_J 0402
R1196 0_J 0402 HUB_PN1
R1197 0_J 0402 HUB_PP1
R1198 0_J 0402 HUB_PN2
R1199 0_J 0402 HUB_PP2
R1200 HUB_15K_F 0402
R1201 HUB_15K_F 0402
R1202 HUB_15K_F 0402
R1203 HUB_15K_F 0402
C1169 HUB_33P_50V_J_N 0402
R1303 HUB_10M_J 0402
Y7 HUB_6MHZ_20P_30PPM TXC_6P06000028
R1204 HUB_2.2K_F 0402
C1170 HUB_33P_50V_J_N 0402
R1373 HUB_10K_J 0402
R1374 NC_10K_J 0402
U89
NC_EEPROM_SOIC-8_1KB
AT93C46-10SU-2.7
R1312 NC_0_J 0402
R1239 NC_1K_J 0402
R1461 0_J 0402
R1300 NC_1K_J 0402
C1187 NC_1U_6.3V_M_B 0402

7,29,31,34,40,41,42,48,49,50,51,54,61 +3VSUS
33,37,42,48,51,52 SUS_PWRGD_10MS
UP_PN4 31
UP_PP4 31
HUB_PN1 42
HUB_PP1 42
HUB_PN2 41
HUB_PP2 41

MS11 DVT Pre-SMT add

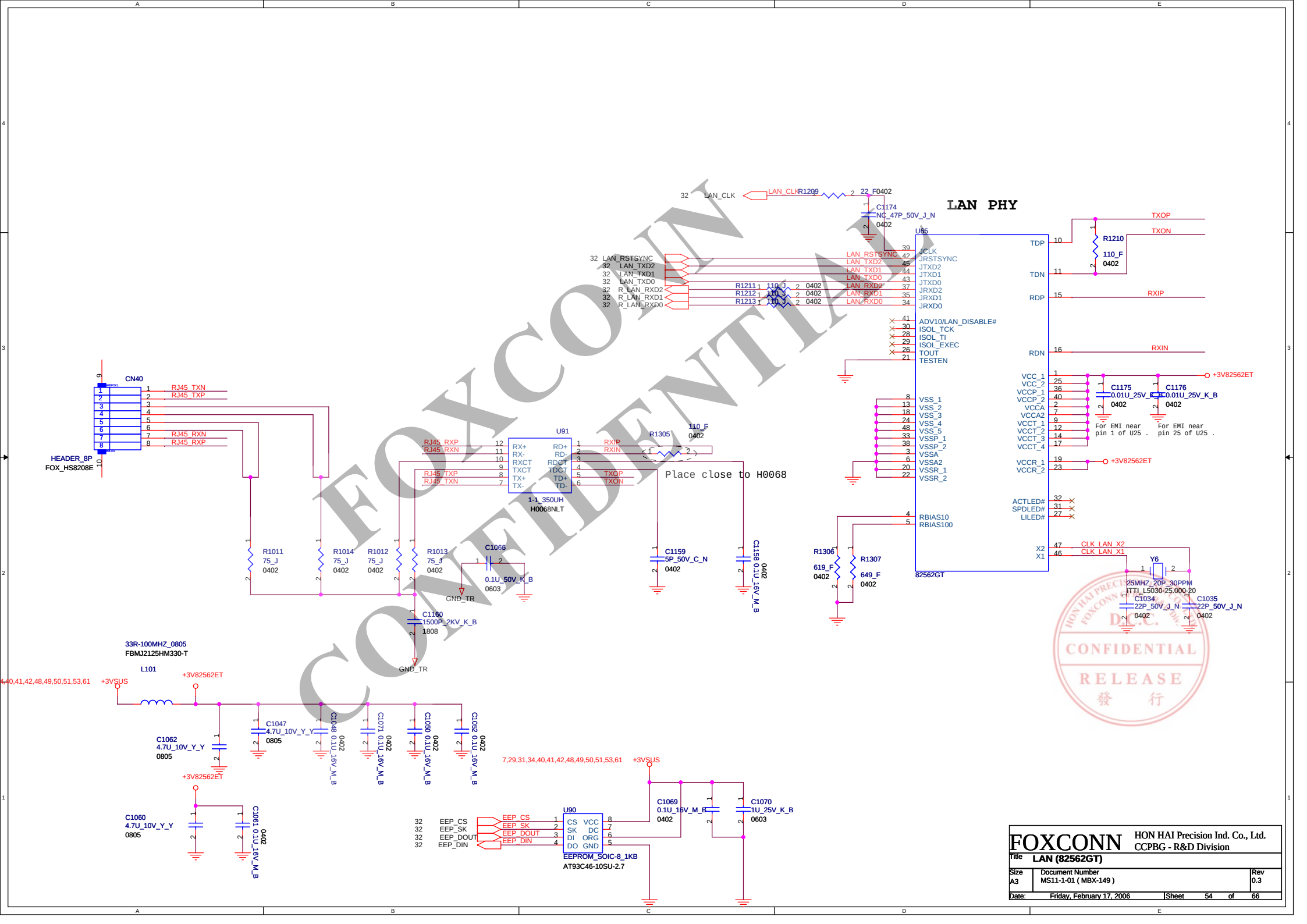
Impedance Matching
Place close to chip

Hi : EEPROM disable
Low : EEPROM enable

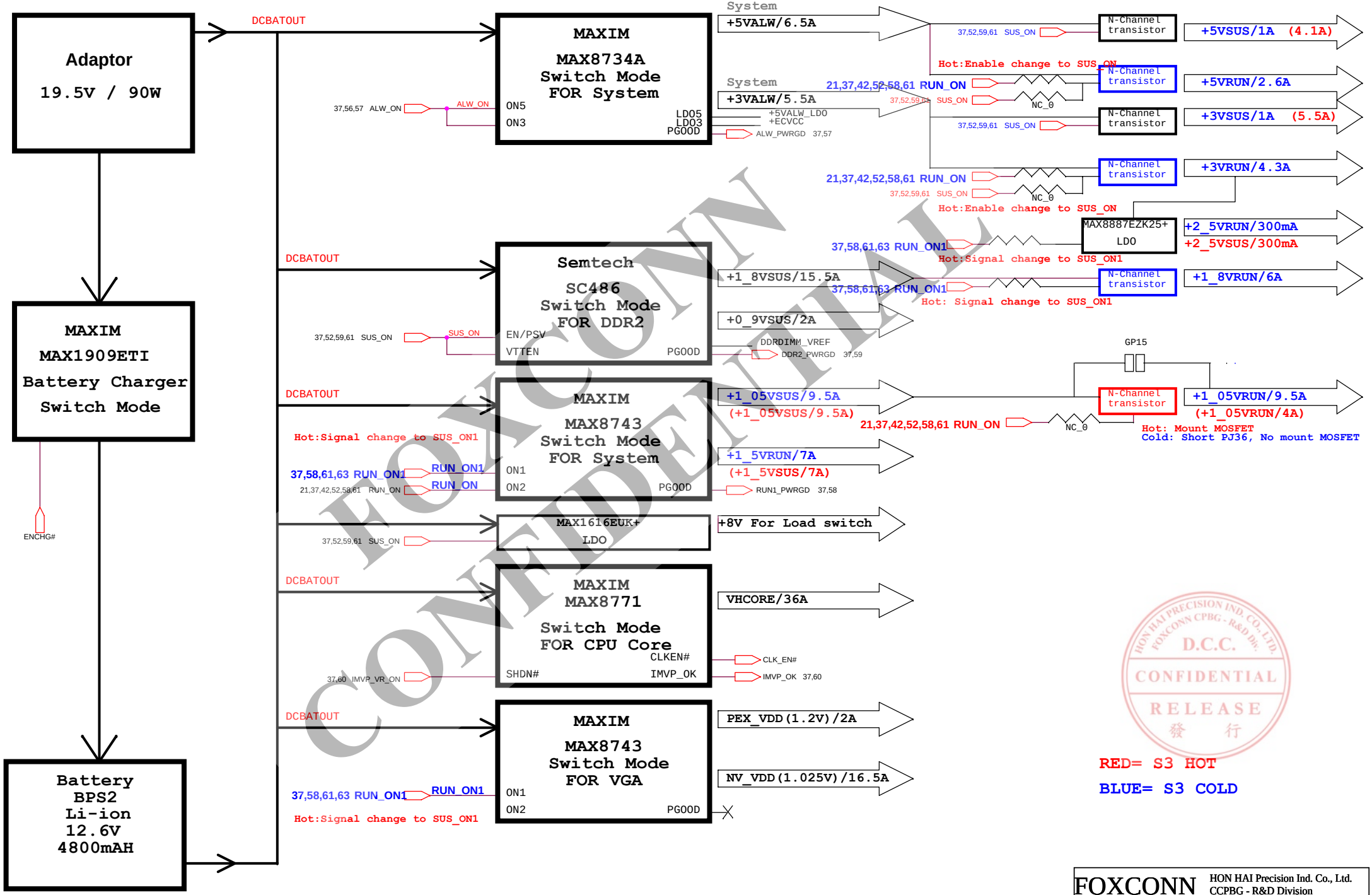
MS11 DVT add

Follow MS20:
Add R1461 0 ohm to GND when EEPROM not in use
to make sure GANGED# is not left floating
When EEPROM is used,R1461 is NC

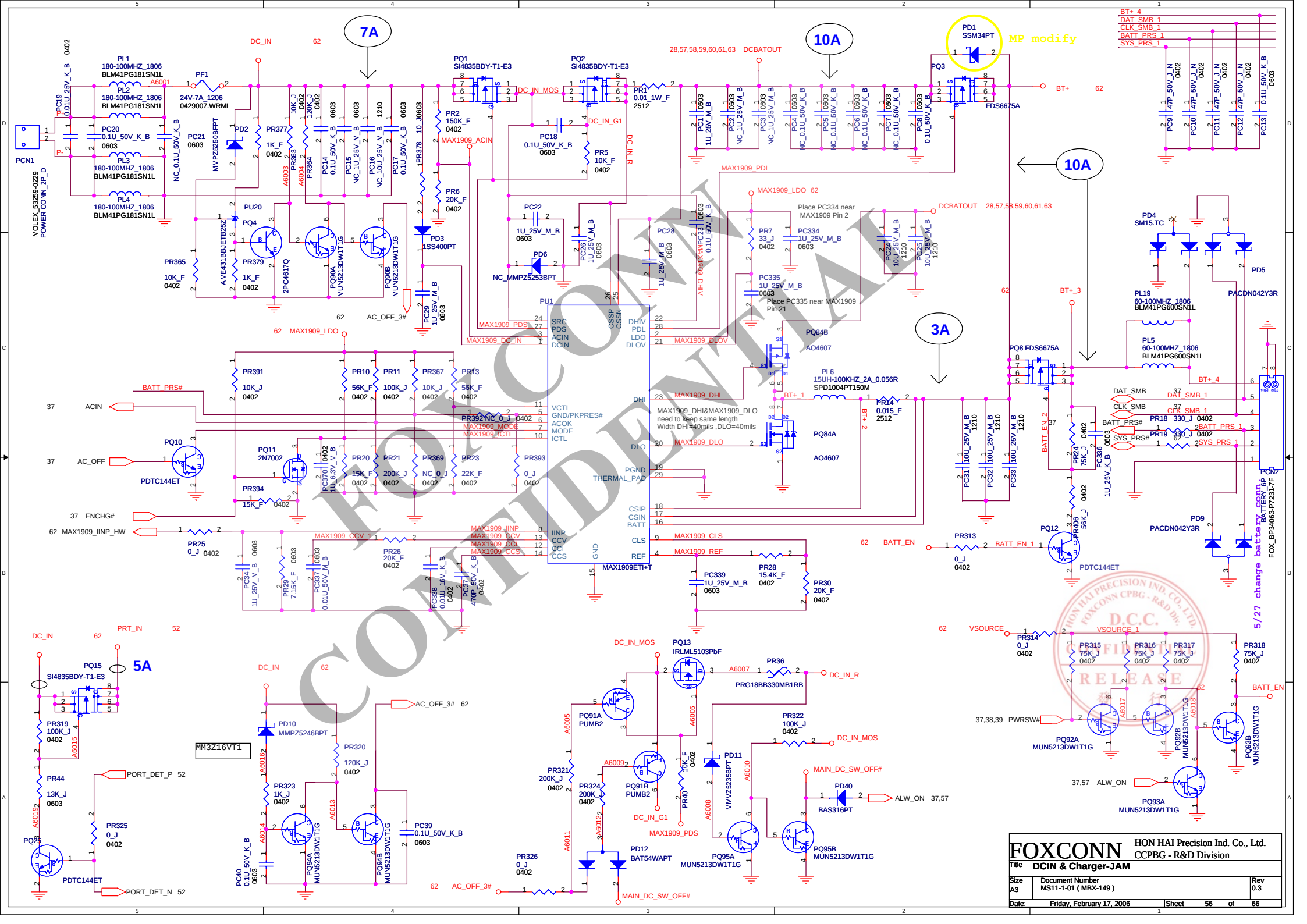
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: USB HUB		
Size: A3	Document Number: MS11-1-01 (MBX-149)	Rev: 0.3
Date: Friday, February 17, 2006	Sheet 53 of 66	

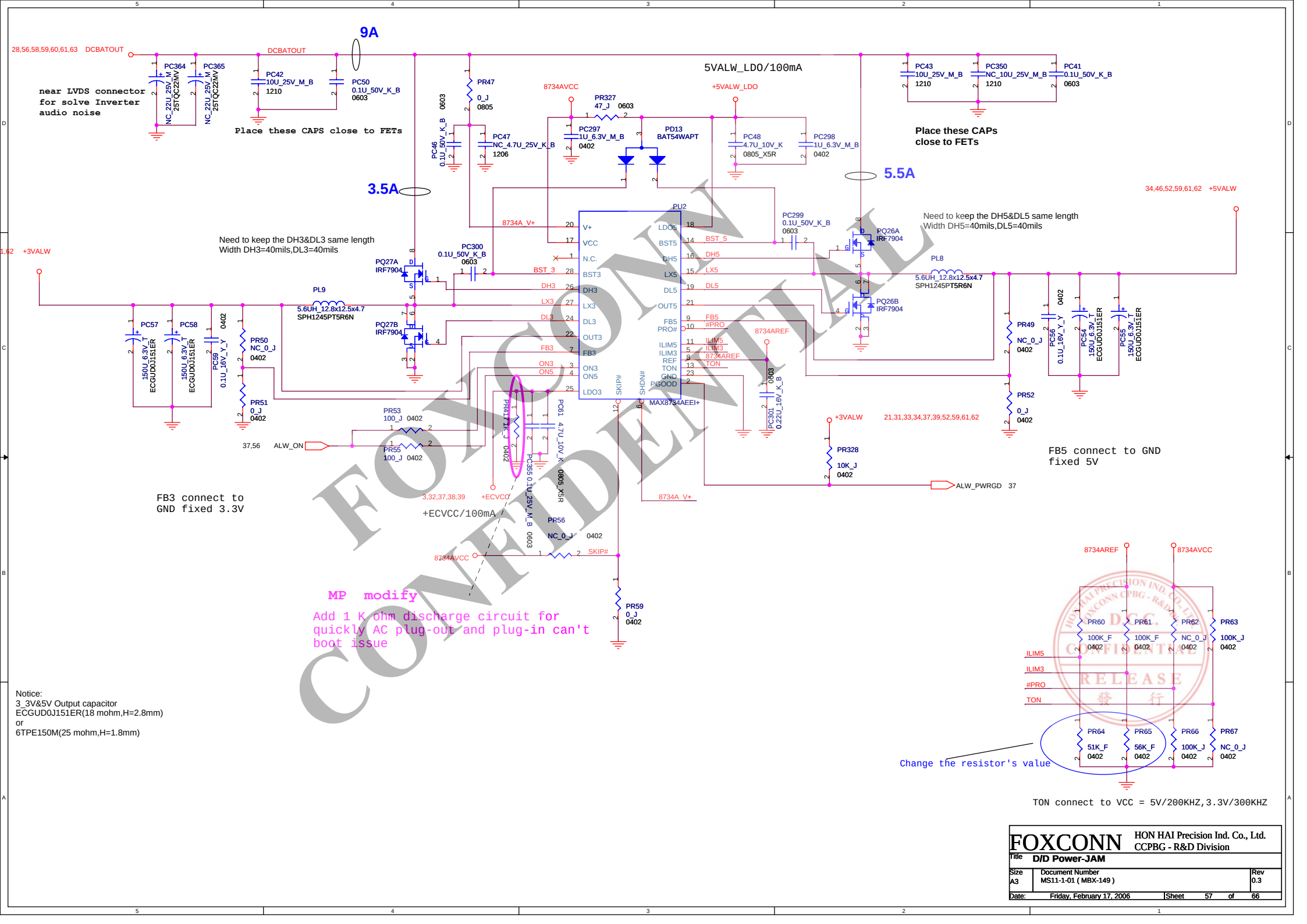


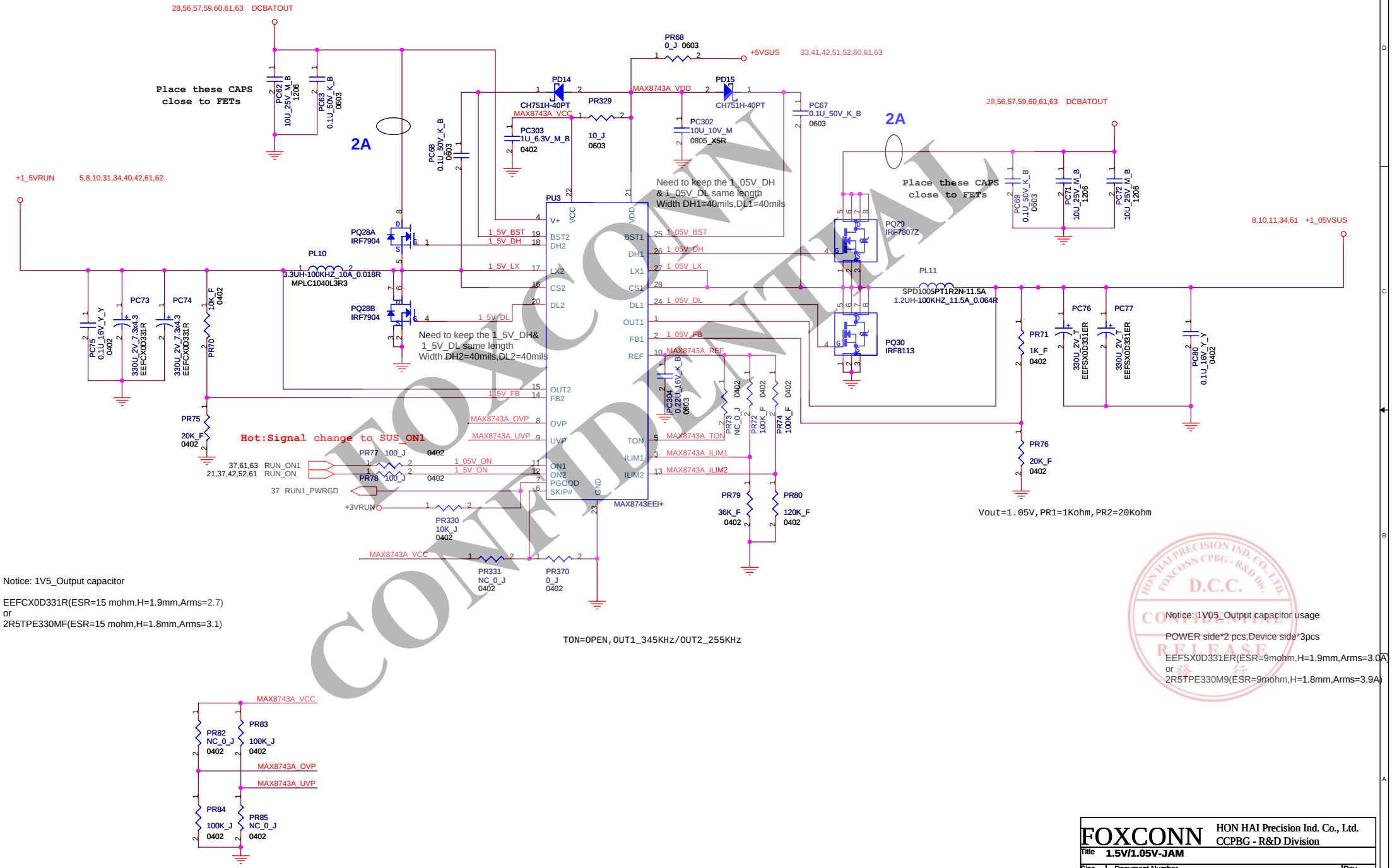
FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	LAN (82562GT)	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 54 of 66	

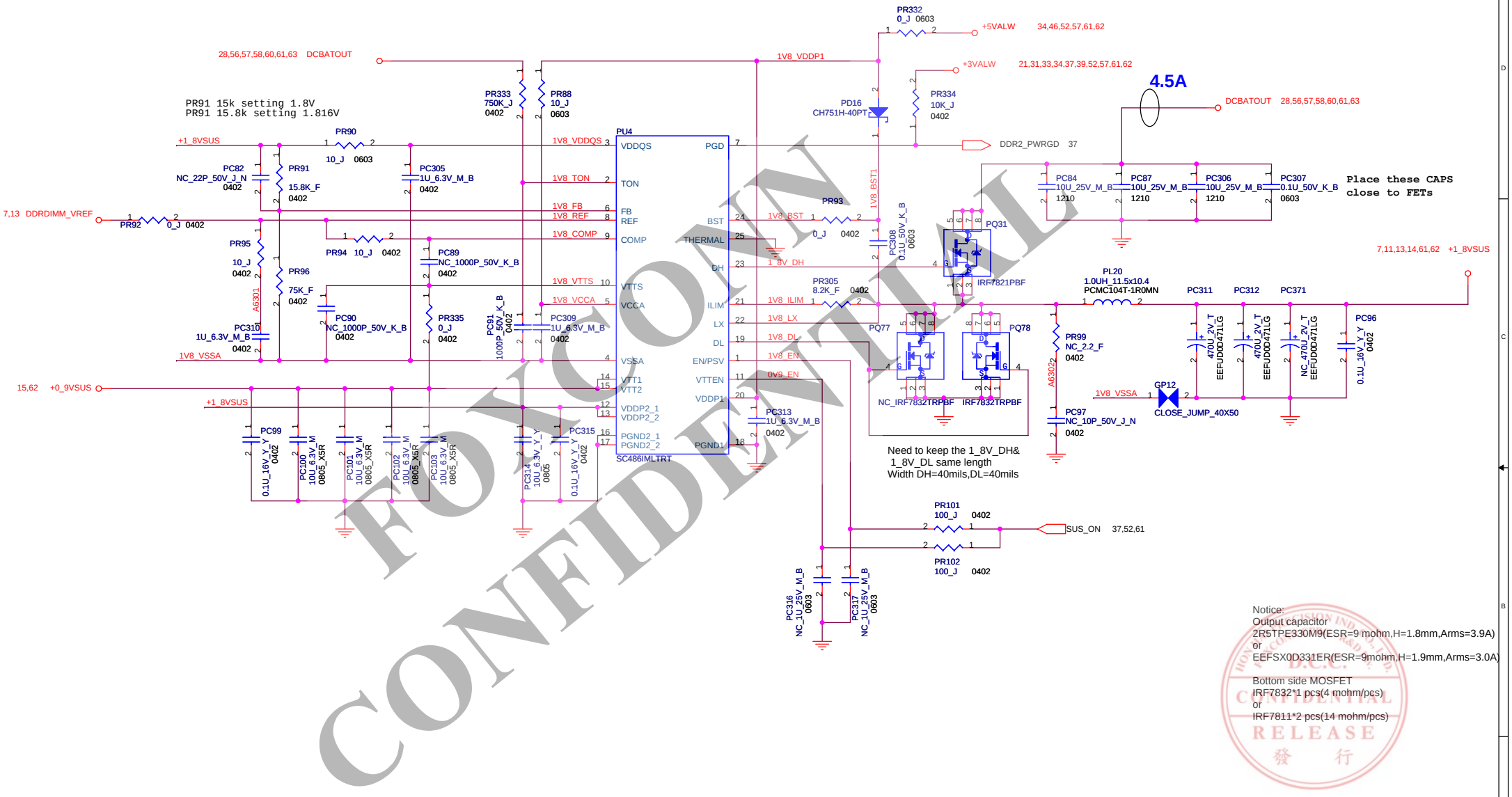


FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	Power Design Diagram-ZG	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 55 of 66	

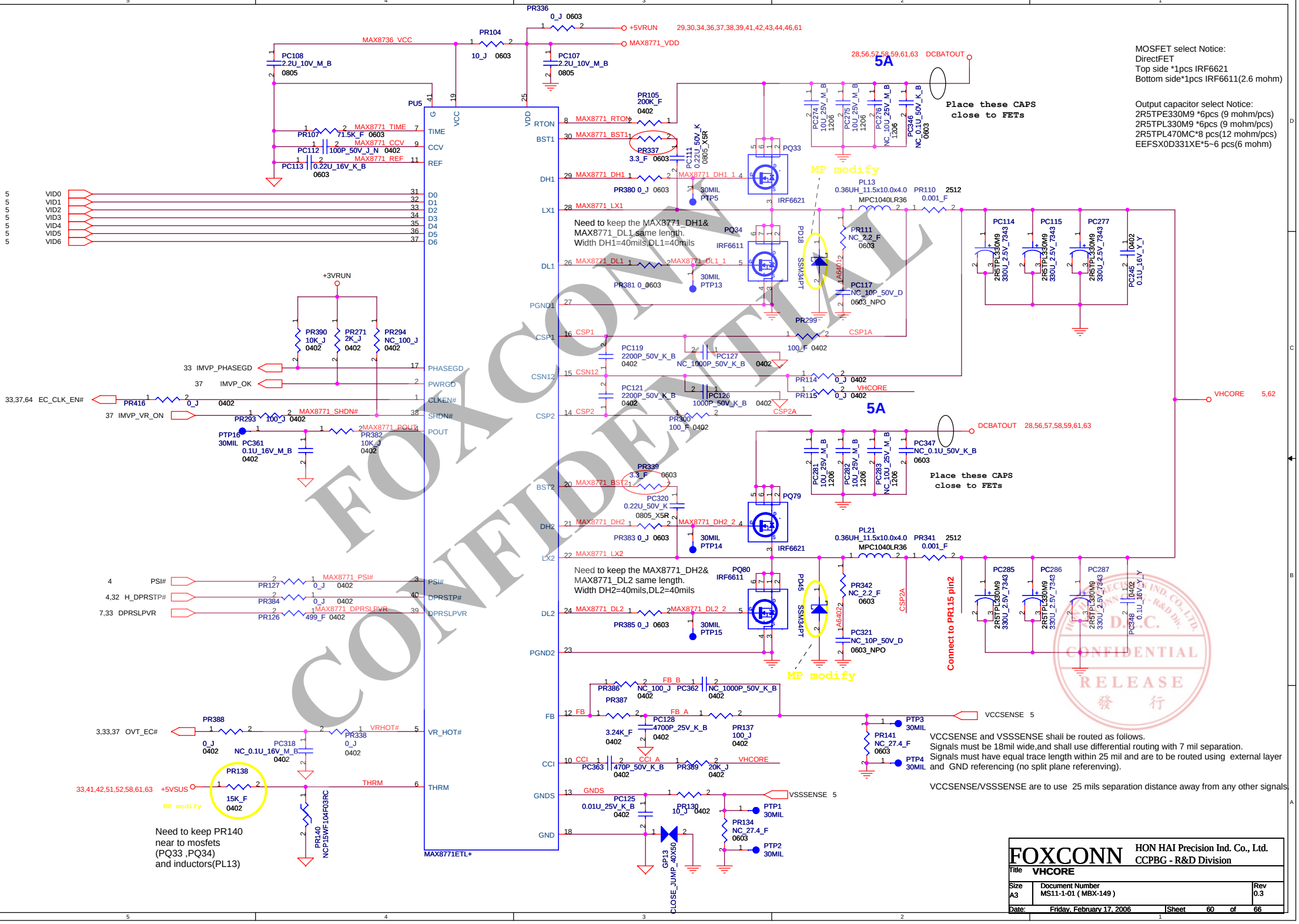

7A
10A
10A
3A
5A
DC_IN
PRT_IN
MP modify
5/27 change battery conn
PCN1
MOLEX_53259-0229
POWER CONN_2P_D
PL1
180-100MHZ_1806
BLM41PG181SN1L
PL2
180-100MHZ_1806
BLM41PG181SN1L
PL3
180-100MHZ_1806
BLM41PG181SN1L
PL4
180-100MHZ_1806
BLM41PG181SN1L
PF1
24V-7A_1206
0429007.WRML
PD2
MMPZ5250BFPT
PU20
AME4311BBJETB25Z
PQ4
2PC4617Q
PQ90A
MUN5213DW1T1G
PQ90B
MUN5213DW1T1G
PD3
1SS400PT
PQ1
SI4835BDY-T1-E3
PQ2
SI4835BDY-T1-E3
PR1
0.01_1W_F
2512
PD1
SSM34PT
PQ3
FDS6675A
PD4
SM15.TC
PD5
PACDN042Y3R
PD6
NC_MMPZ5253BPT
PU1
MAX1909ETI+T
PQ84B
AO4607
PQ84A
AO4607
PL6
15UH-100KHZ_2A_0.056R
SPD1004PT150M
PR14
0.015_F
2512
PL19
60-100MHZ_1806
BLM41PG600SN1L
PL5
60-100MHZ_1806
BLM41PG600SN1L
PQ8
FDS6675A
PQ10
PDTC144ET
PQ11
2N7002
PQ12
PDTC144ET
PD9
PACDN042Y3R
BATTERY_6P
FOX_BP34063-P7231-7F
PQ15
SI4835BDY-T1-E3
PD10
MMPZ5246BPT
MM3Z16VT1
PQ13
IRLML5103PbF
PQ91A
PUMB2
PQ91B
PUMB2
PD11
MMVZ5235BPT
PD40
BAS316PT
PD12
BAT54WAPT
PQ95A
MUN5213DW1T1G
PQ95B
MUN5213DW1T1G
PQ92A
MUN5213DW1T1G
PQ92B
MUN5213DW1T1G
PQ93A
MUN5213DW1T1G
PQ93B
MUN5213DW1T1G
PQ94A
MUN5213DW1T1G
PQ94B
MUN5213DW1T1G
PR36
PRG18BB330MB1RB
PR44
13K_J
0603
PR319
100K_J
0402
PR320
120K_J
0402
PR321
200K_J
0402
PR322
100K_J
0402
PR323
1K_J
0402
PR324
200K_J
0402
PR325
0_J
0402
PR326
0_J
0402
PR391
10K_J
0402
PR392
NC_0_J
0402
PR393
0_J
0402
PR394
15K_F
0402
PR2
150K_F
0402
PR5
10K_F
0402
PR6
20K_F
0402
PR7
33_J
0402
PR10
56K_F
0402
PR11
100K_J
0402
PR13
56K_F
0402
PR20
15K_F
0402
PR21
200K_J
0402
PR23
22K_F
0402
PR25
0_J
0402
PR26
20K_F
0402
PR28
15.4K_F
0402
PR30
20K_F
0402
PR313
0_J
0402
PR314
0_J
0402
PR315
75K_J
0402
PR316
75K_J
0402
PR317
75K_J
0402
PR318
75K_J
0402
PR365
10K_F
0402
PR367
10K_J
0402
PR369
NC_0_J
0402
PR377
1K_F
0402
PR378
10_J
0603
PR379
1K_F
0402
PR406
56K_J
0402
PC334
1U_25V_M_B
0603
PC335
1U_25V_M_B
0603
PC339
1U_25V_M_B
0603
PC370
1U_6.3V_M_B
0402
PC337
0.01U_50V_M_B
0603
PC338
0.01U_16V_K_B
0402
PC371
470P_50V_K_B
0402
PC40
0.1U_50V_K_B
0603
PC39
0.1U_50V_K_B
0603
PC18
0.1U_50V_K_B
0603
PC22
1U_25V_M_B
0603
PC26
1U_25V_M_B
0603
PC28
1U_25V_M_B
0603
PC29
1U_25V_M_B
0603
PC34
1U_25V_M_B
0603
PC19
0.01U_25V_K_B
0402
PC20
0.1U_50V_K_B
0603
PC21
0603
PC31
10U_25V_M_B
1210
PC32
10U_25V_M_B
1210
PC33
10U_25V_M_B
1210
PC336
1U_25V_K_B
0603
ACIN
AC_OFF
ENCHG#
MAX1909_IINP_HW
BATT_PRS#
AC_OFF_3#
MAX1909_LDO
MAX1909_PDS
MAX1909_DC_IN
MAX1909_ACIN
MAX1909_PDL
MAX1909_DHI
MAX1909_DLO
MAX1909_DLOV
MAX1909_MODE
MAX1909_ICTL
MAX1909_IINP
MAX1909_CCV
MAX1909_CCI
MAX1909_CCS
MAX1909_CLS
MAX1909_REF
MAX1909_DHI&MAX1909_DLO
need to keep same length
Width DHI=40mils ,DLO=40mils
Place PC334 near
MAX1909 Pin 2
Place PC335 near MAX1909
Pin 21
DCBATOUT
28,57,58,59,60,61,63
BT+
BT+_3
BT+_4
BT+_1
BT+_2
BATT_EN
BATT_EN_1
BATT_EN_2
VSOURCE
VSOURCE_1
PWRSW#
ALW_ON
MAIN_DC_SW_OFF#
DC_IN_MOS
DC_IN_R
DC_IN_G1
PORT_DET_P
PORT_DET_N
DAT_SMB
CLK_SMB
BATT_PRS#
SYS_PRS#
DAT_SMB_1
CLK_SMB_1
BATT_PRS_1
SYS_PRS_1
SRC
PDS
ACIN
DCIN
GSSP
CSSN
DHIV
PDL
LDO
DLOV
VCTL
GND/PKPRES#
ACOK
MODE
ICTL
DHI
DLO
PGND
THERMAL_PAD
CSIP
CSIN
BATT
CLS
REF
IINP
CCV
CCI
CCS
GND
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title
DCIN & Charger-JAM
Size
A3
Document Number
MS11-1-01 (MBX-149)
Rev
0.3
Date:
Friday, February 17, 2006
Sheet
56
of
66
FOXCONN CONFIDENTIAL
D.C.C.
RELEASE







FOXCONN	HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title	1.8V/0.9V-CWK	
Size A3	Document Number MS11-1-01 (MBX-149)	Rev 0.3
Date: Friday, February 17, 2006	Sheet 59 of 66	


MAX8771ETL+
MP modify
Place these CAPS close to FETs
Connect to PR115 pin2
Need to keep PR140 near to mosfets (PQ33 ,PQ34) and inductors(PL13)
Need to keep the MAX8771_DH1& MAX8771_DL1 same length. Width DH1=40mils,DL1=40mils
Need to keep the MAX8771_DH2& MAX8771_DL2 same length. Width DH2=40mils,DL2=40mils
MOSFET select Notice:
DirectFET
Top side *1pcs IRF6621
Bottom side*1pcs IRF6611(2.6 mohm)
Output capacitor select Notice:
2R5TPE330M9 *6pcs (9 mohm/pcs)
2R5TPL330M9 *6pcs (9 mohm/pcs)
2R5TPL470MC*8 pcs(12 mohm/pcs)
EEFSX0D331XE*5~6 pcs(6 mohm)
VCCSENSE and VSSSENSE shall be routed as follows.
Signals must be 18mil wide,and shall use differential routing with 7 mil separation.
Signals must have equal trace length within 25 mil and are to be routed using external layer and GND referencing (no split plane referenving).
VCCSENSE/VSSSENSE are to use 25 mils separation distance away from any other signals.
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title VHCORE
Size A3
Document Number MS11-1-01 (MBX-149)
Rev 0.3
Date: Friday, February 17, 2006
Sheet 60 of 66
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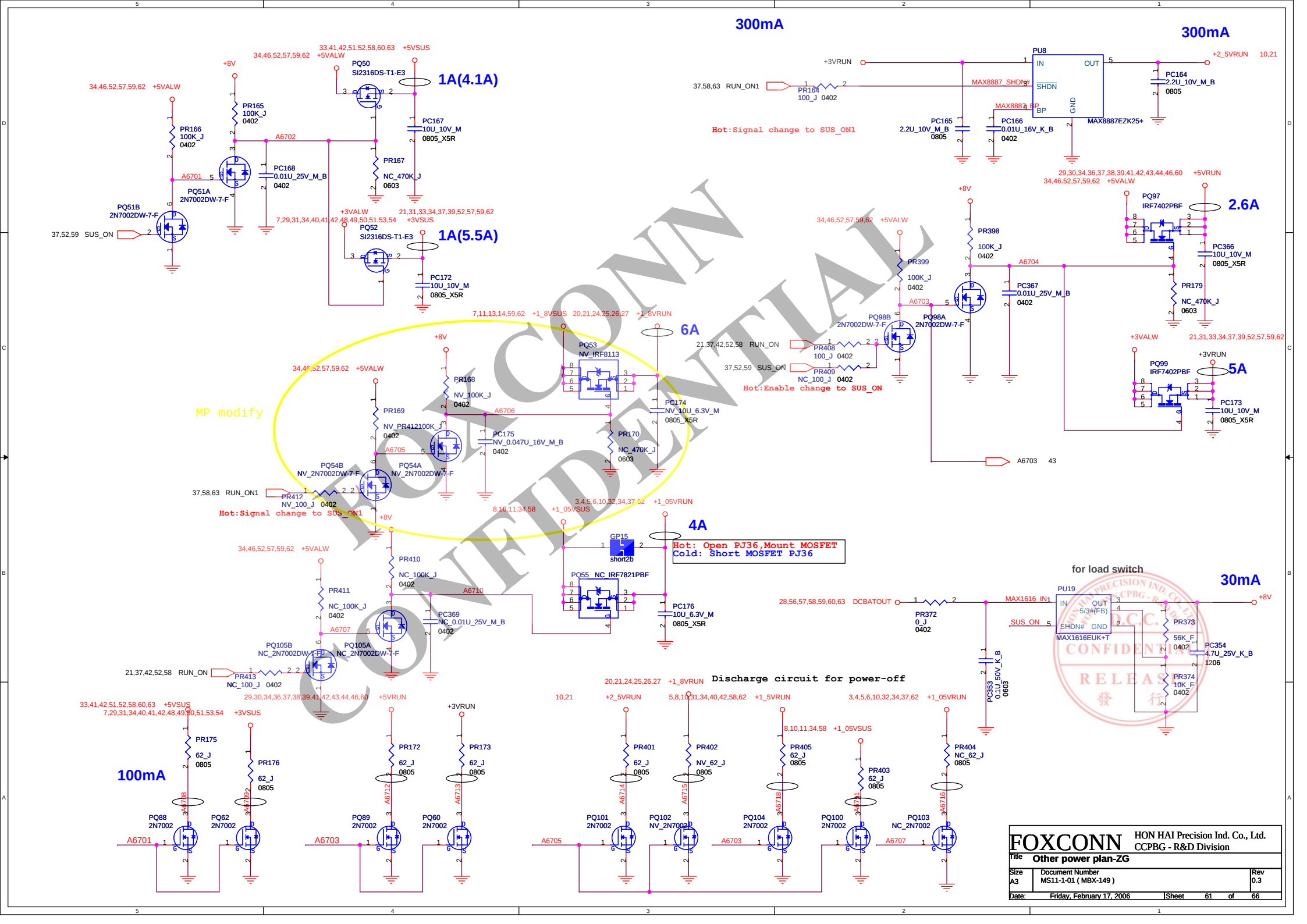
CONFIDENTIAL RELEASE


300mA
300mA
1A(4.1A)
1A(5.5A)
2.6A
6A
5A
4A
30mA
100mA
MP modify
Hot:Signal change to SUS_ON1
Hot:Signal change to SUS_ON
Hot:Enable change to SUS_ON
Hot: Open PJ36,Mount MOSFET
Cold: Short MOSFET PJ36
for load switch
Discharge circuit for power-off
PU8
MAX8887EZK25+
PU19
MAX1616EUK+T
PQ50 SI2316DS-T1-E3
PQ52 SI2316DS-T1-E3
PQ51A 2N7002DW-7-F
PQ51B 2N7002DW-7-F
PQ53 NV_IRF8113
PQ54A NV_2N7002DW-7-F
PQ54B NV_2N7002DW-7-F
PQ55 NC_IRF7821PBF
PQ97 IRF7402PBF
PQ98A 2N7002DW-7-F
PQ98B 2N7002DW-7-F
PQ99 IRF7402PBF
PQ105A NC_2N7002DW-7-F
PQ105B NC_2N7002DW-7-F
PQ88 2N7002
PQ62 2N7002
PQ89 2N7002
PQ60 2N7002
PQ101 2N7002
PQ102 NV_2N7002
PQ104 2N7002
PQ100 2N7002
PQ103 NC_2N7002
GP15 short2b
SUS_ON
RUN_ON1
RUN_ON
+8V
+5VALW
+3VRUN
+3VSUS
+5VSUS
+5VRUN
+2_5VRUN
+1_8VSUS
+1_8VRUN
+1_05VSUS
+1_05VRUN
DCBATOUT
A6701
A6702
A6703
A6704
A6705
A6706
A6707
A6708
A6710
A6712
A6713
A6714
A6715
A6716
A6718
A6721
FOXCONN
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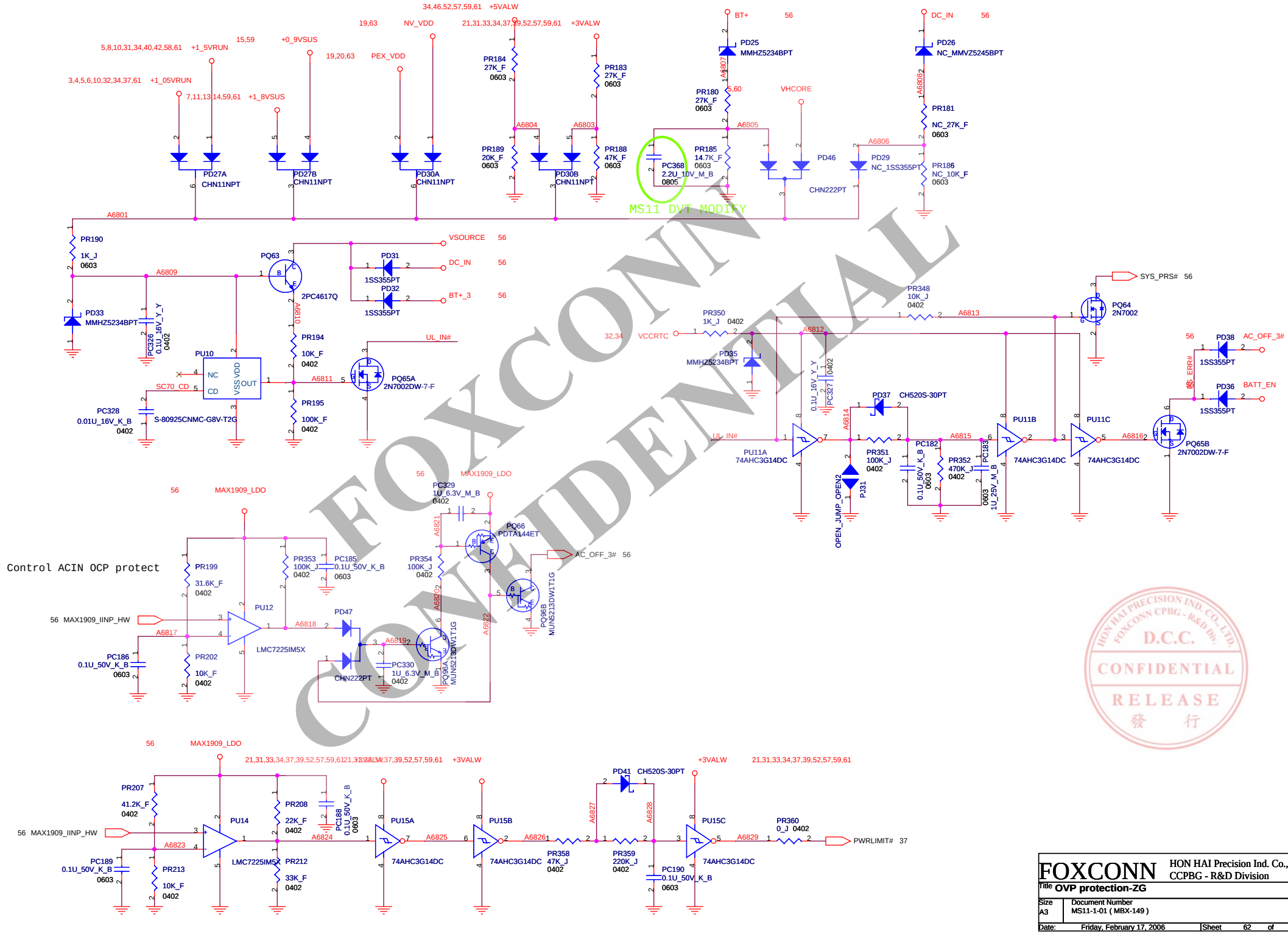
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Other power plan-ZG
Document Number MS11-1-01 (MBX-149)
Rev 0.3
Friday, February 17, 2006
Sheet 61 of 66


34,46,52,57,59,61 +5VALW
19,63 NV_VDD
21,31,33,34,37,39,52,57,59,61 +3VALW
5,8,10,31,34,40,42,58,61 +1_5VRUN
15,59 +0_9VSUS
19,20,63 PEX_VDD
3,4,5,6,10,32,34,37,61 +1_05VRUN
7,11,13,14,59,61 +1_8VSUS
BT+ 56
DC_IN 56
VHCORE
PD25 MMHZ5234BPT
PD26 NC_MMVZ5245BPT
PR180 27K_F 0603
PR181 NC_27K_F 0603
PR182 5.60
PR183 27K_F 0603
PR184 27K_F 0603
PR185 14.7K_F 0603
PR186 NC_10K_F 0603
PR188 47K_F 0603
PR189 20K_F 0603
PC368 2.2U_10V_M_B 0805
PD27A CHN11NPT
PD27B CHN11NPT
PD30A CHN11NPT
PD30B CHN11NPT
PD46 CHN222PT
PD29 NC_1SS355PT
A6801
A6803
A6804
A6805
A6806
A6807
A6808
MS11 DVT MODIFY
PR190 1K_J 0603
PD33 MMHZ5234BPT
PC326 0.1U_16V_Y_Y 0402
PQ63 2PC4617Q
PD31 1SS355PT
PD32 1SS355PT
VSOURCE 56
DC_IN 56
BT+_3 56
A6809
A6810
PR194 10K_F 0402
PR195 100K_F 0402
PU10 S-80925CNMC-G8V-T2G
SC70_CD
PC328 0.01U_16V_K_B 0402
PQ65A 2N7002DW-7-F
UL_IN#
A6811
PR348 10K_J 0402
PR350 1K_J 0402
PD35 MMHZ5234BPT
32,34 VCCRTC
A6812
A6813
A6814
A6815
A6816
PQ64 2N7002
SYS_PRS# 56
PD37 CH520S-30PT
PU11A 74AHC3G14DC
PU11B 74AHC3G14DC
PU11C 74AHC3G14DC
PR351 100K_J 0402
PR352 470K_J 0402
PC182 0.1U_50V_K_B 0603
PC183 1U_25V_M_B 0603
PJ31 OPEN_JUMP_OPEN2
PD38 AC_OFF_3#
PD36 BATT_EN
1SS355PT
PQ65B 2N7002DW-7-F
56 MAX1909_LDO
PC329 1U_6.3V_M_B 0402
PQ66 PDTA144ET
AC_OFF_3# 56
PQ96B MUN5213DW1T1G
Control ACIN OCP protect
PR199 31.6K_F 0402
PR353 100K_J 0402
PC185 0.1U_50V_K_B 0603
PR354 100K_J 0402
PU12 LMC7225IM5X
56 MAX1909_IINP_HW
A6817
A6818
A6819
A6821
A6822
PD47 CHN222PT
PC186 0.1U_50V_K_B 0603
PR202 10K_F 0402
PC330 1U_6.3V_M_B 0402
PQ95A MUN5213DW1T1G
56 MAX1909_LDO
21,31,33,34,37,39,52,57,59,61 +3VALW
PR207 41.2K_F 0402
PR208 22K_F 0402
PC188 0.1U_50V_K_B 0603
PU14 LMC7225IM5X
PC189 0.1U_50V_K_B 0603
PR212 33K_F 0402
PR213 10K_F 0402
A6823
A6824
PU15A 74AHC3G14DC
A6825
PU15B 74AHC3G14DC
A6826
PR358 47K_J 0402
PD41 CH520S-30PT
A6827
A6828
PR359 220K_J 0402
PC190 0.1U_50V_K_B 0603
PU15C 74AHC3G14DC
A6829
PR360 0_J 0402
PWRLIMIT# 37
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HON HAI PRECISION IND. CO., LTD. FOXCONN CPBG - R&D Div.
D.C.C.
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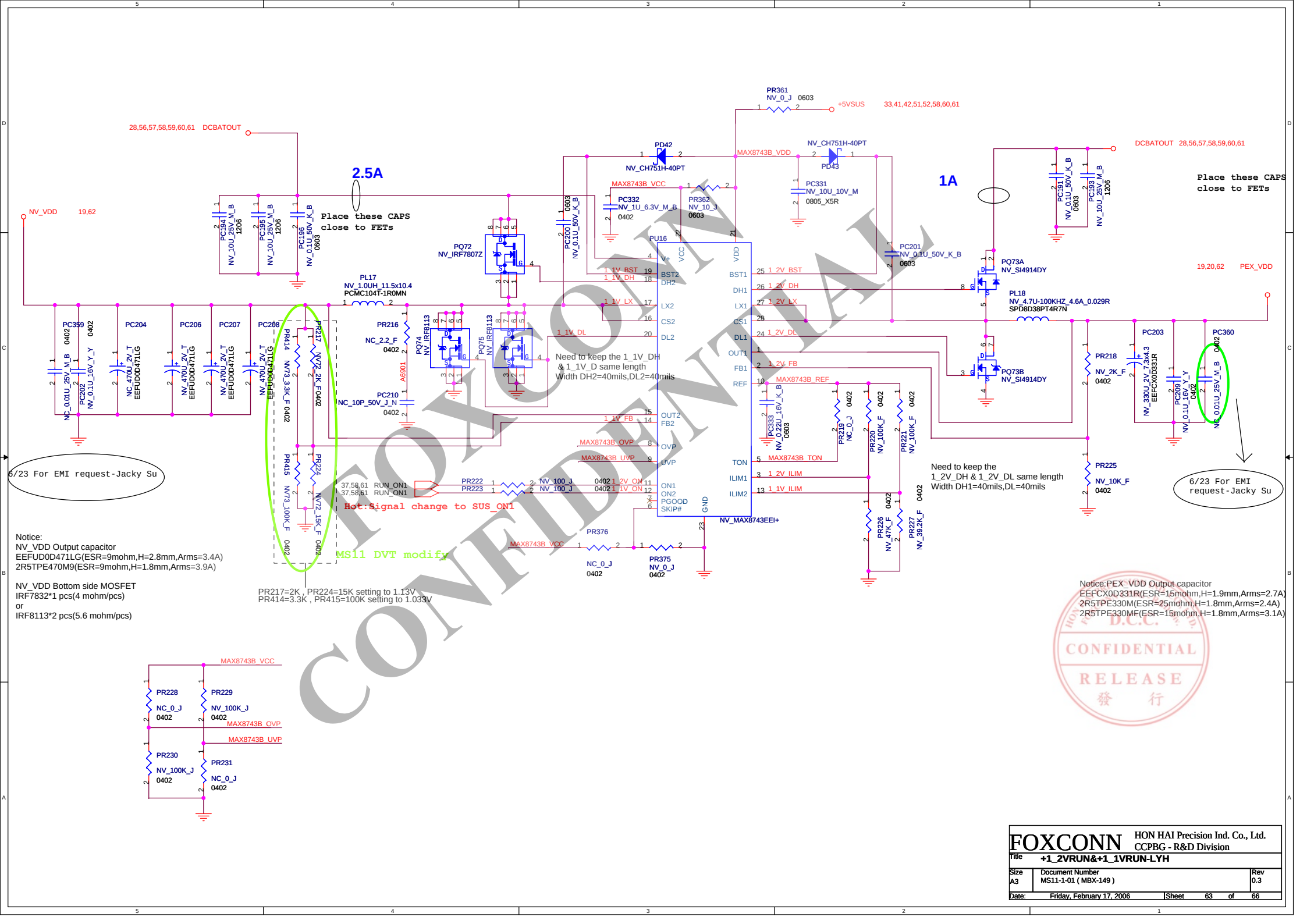
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title OVP protection-ZG
Size A3
Document Number MS11-1-01 (MBX-149)
Rev 0.3
Date: Friday, February 17, 2006
Sheet 62 of 66


28,56,57,58,59,60,61 DCBATOUT
2.5A
1A
Place these CAPS close to FETs
NV_VDD 19,62
+5VSUS 33,41,42,51,52,58,60,61
MAX8743B_VDD
MAX8743B_VCC
PU16
NV_MAX8743EEI+
PL17 NV_1.0UH_11.5x10.4 PCMC104T-1R0MN
PL18 NV_4.7U-100KHZ_4.6A_0.029R SPD8D38PT4R7N
PQ72 NV_IRF7807Z
PQ73A NV_SI4914DY
PQ73B NV_SI4914DY
PQ74 NV_IRF8113
PQ75 NV_IRF8113
PD42 NV_CH751H-40PT
PD43 NV_CH751H-40PT
Need to keep the 1_1V_DH & 1_1V_D same length Width DH2=40mils,DL2=40mils
Need to keep the 1_2V_DH & 1_2V_DL same length Width DH1=40mils,DL=40mils
Hot:Signal change to SUS_ON1
MS11 DVT modify
PR217=2K , PR224=15K setting to 1.13V
PR414=3.3K , PR415=100K setting to 1.033V
6/23 For EMI request-Jacky Su
6/23 For EMI request-Jacky Su
DCBATOUT 28,56,57,58,59,60,61
19,20,62 PEX_VDD
Place these CAPS close to FETs
Notice:
NV_VDD Output capacitor
EEFUD0D471LG(ESR=9mohm,H=2.8mm,Arms=3.4A)
2R5TPE470M9(ESR=9mohm,H=1.8mm,Arms=3.9A)
NV_VDD Bottom side MOSFET
IRF7832*1 pcs(4 mohm/pcs)
or
IRF8113*2 pcs(5.6 mohm/pcs)
Notice:PEX_VDD Output capacitor
EEFCX0D331R(ESR=15mohm,H=1.9mm,Arms=2.7A)
2R5TPE330M(ESR=25mohm,H=1.8mm,Arms=2.4A)
2R5TPE330MF(ESR=15mohm,H=1.8mm,Arms=3.1A)
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RELEASE
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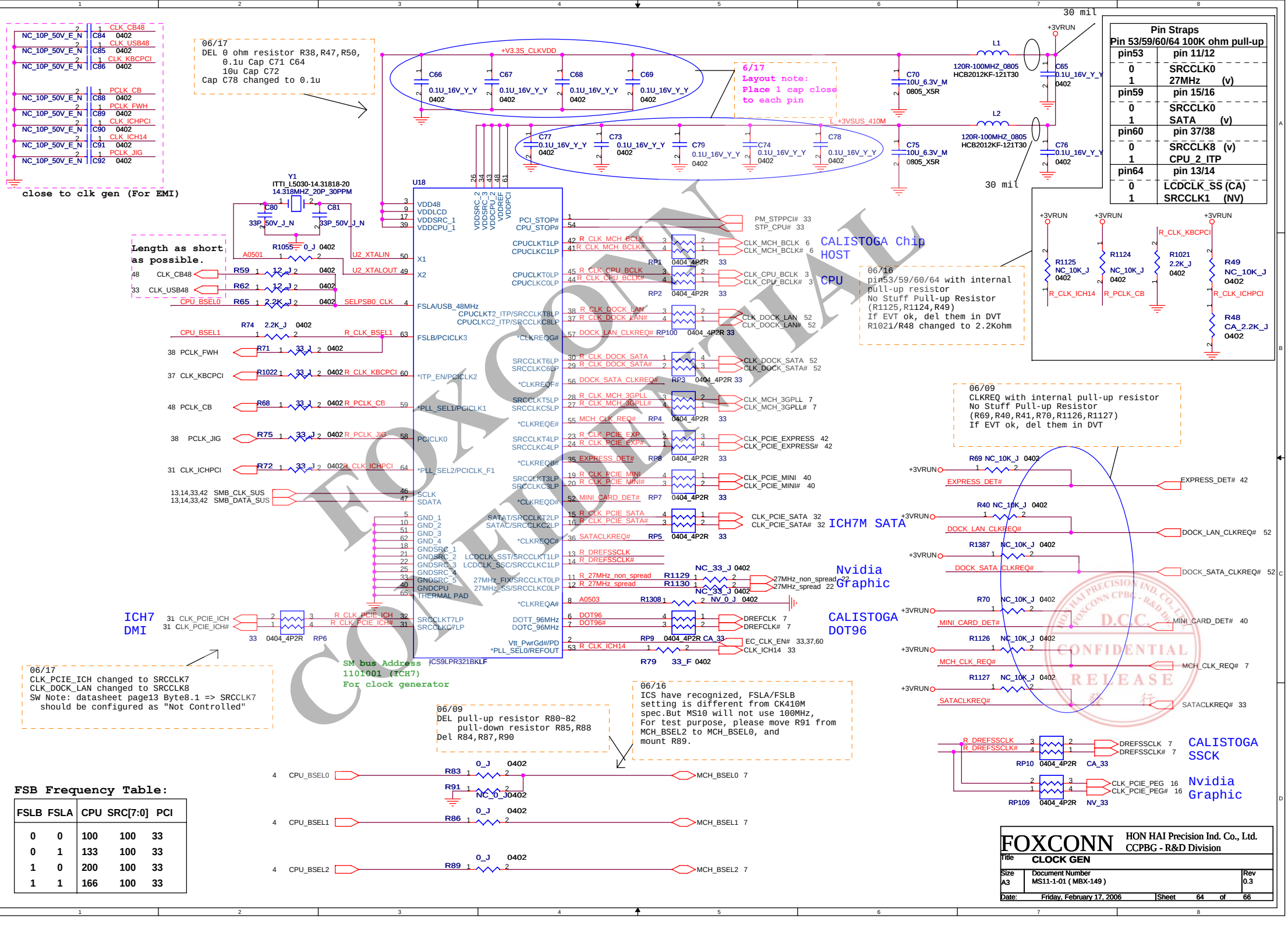
FOXCONN
HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division
Title +1_2VRUN&+1_1VRUN-LYH
Size A3
Document Number MS11-1-01 (MBX-149)
Rev 0.3
Date: Friday, February 17, 2006
Sheet 63 of 66


close to clk gen (For EMI)
06/17
DEL 0 ohm resistor R38,R47,R50,
0.1u Cap C71 C64
10u Cap C72
Cap C78 changed to 0.1u
6/17
Layout note:
Place 1 cap close
to each pin
30 mil
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)
Length as short as possible.
CALISTOGA Chip
HOST
CPU
06/16
pin53/59/60/64 with internal pull-up resistor
No Stuff Pull-up Resistor (R1125,R1124,R49)
If EVT ok, del them in DVT
R1021/R48 changed to 2.2Kohm
06/09
CLKREQ with internal pull-up resistor
No Stuff Pull-up Resistor
(R69,R40,R41,R70,R1126,R1127)
If EVT ok, del them in DVT
ICH7M SATA
Nvidia Graphic
CALISTOGA DOT96
ICH7 DMI
06/17
CLK_PCIE_ICH changed to SRCCLK7
CLK_DOCK_LAN changed to SRCCLK8
SW Note: datasheet page13 Byte8.1 => SRCCLK7
should be configured as "Not Controlled"
SM bus Address
1101001 (ICH7)
For clock generator
06/09
DEL pull-up resistor R80~82
pull-down resistor R85,R88
Del R84,R87,R90
06/16
ICS have recognized, FSLA/FSLB setting is different from CK410M spec.But MS10 will not use 100MHz, For test purpose, please move R91 from MCH_BSEL2 to MCH_BSEL0, and mount R89.
CALISTOGA SSCK
Nvidia Graphic
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.
CCPBG - R&D Division
Title CLOCK GEN
Size A3
Document Number MS11-1-01 (MBX-149)
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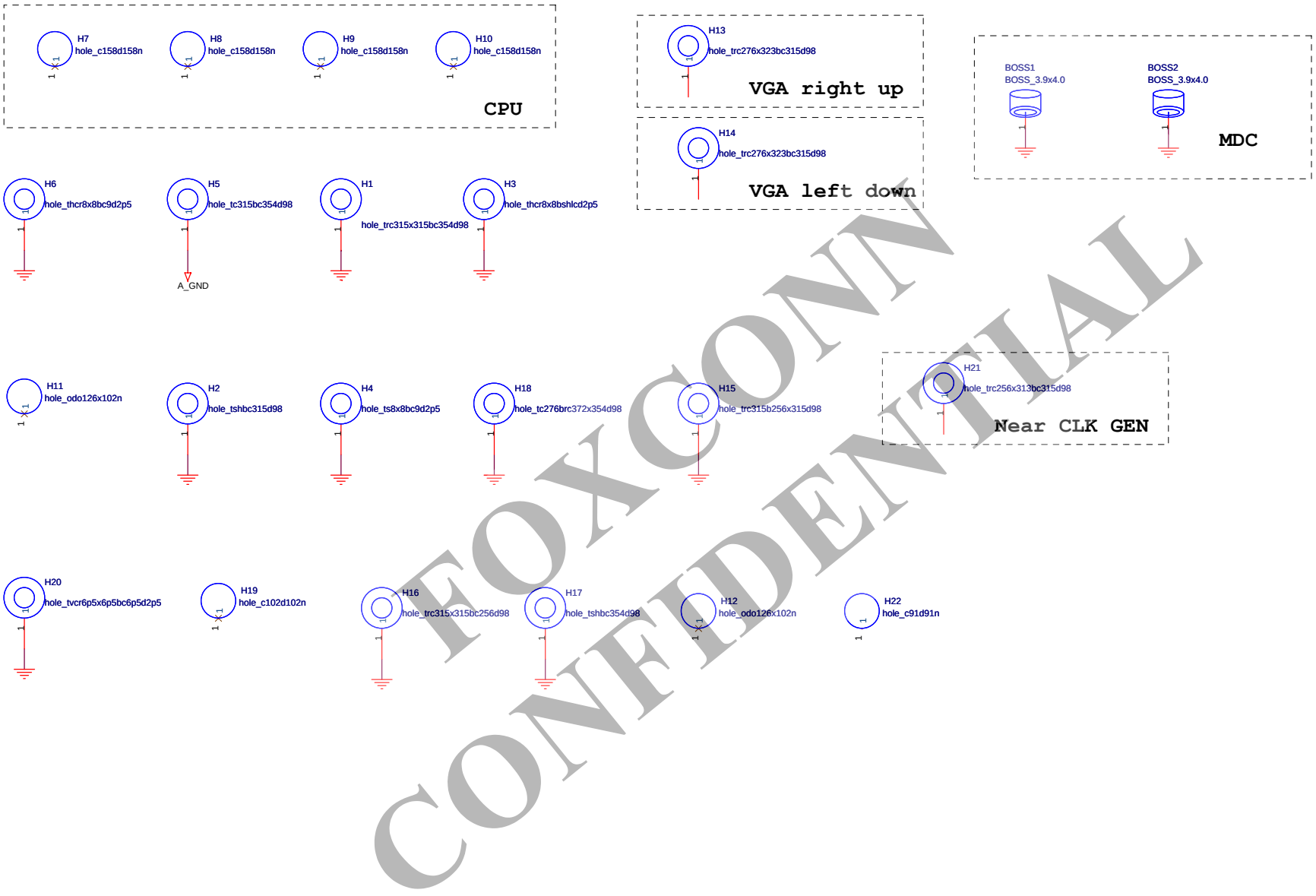

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HISTORY

(2005/12/15 Initail REV 0.3)

P.43 Del R1446,R1447,R1448,R1449 for audio driver issue
P.53 Add R1459,R1460 to bypass USB hub for OIDE only
P.53 Add R1461,when U89 is not used,to make sure GANGED# is not left floating.

(2005/12/15) Power modify
P.63 change PR217 from 2k to 11k,PR224 from 15k to 100k for G72M core voltage setting
P.63 change PR414 from 560 to 3.3k,PR415 from 22k to 100k for G73M core voltage setting

(2005/12/21)

P.25 Nvidia's FAE recommend to change R399 & R400 value from 120 ohm to 470 ohm for G73M's terminator setting

(2005/12/28)

P.29 change U81 from SN74CBT3257PW to SN74CBT3257CPW.Because SN74CBT3257PW is unavailable.
P.30 change U77 from SN74CBT3257PW to SN74CBT3257CPW.Because SN74CBT3257PW is unavailable.
P.30 change R1440 from NC to mount.To avoid EC's input floating.

(2005/12/28) Power modify
P.63 change PR217 from 11k to 2k,PR224 from 100k to 15k for G72M core voltage setting

(2005/12/29)
P.40 Add R1462 pull down to avoid input floating.

(2005/12/29) Power modify
P.62 change PC368 from NC to mount.To reduce UL_LOCK occured rate.

(2006/01/06)

P.37 R720 change to NV73_ condition,R724 change to NC condition,R725 change to mount for system ID setting.

(2006/01/14)

P.53 R1311 change to mount for USB Hub no function issue.

MS11 PVT

(2006/02/06)

P.42 Del Q79,C1222,R1266,R1267,Q80. Add U109,C1309 for USB camera over current protect

(2006/02/08)

P.5 Change C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23 from 22uF to 10uF for industry wide shortage of 0805 X5R 22uF capacitors

P.5 Added C1310,C1311,C1312,C1313,C1314,C1315,C1316,C1317,C1318,C1319,C1320,C1321 for industry wide shortage of 0805 X5R 22uF capacitors

P.5 Del C1271,C1272,C1273,C1274,C1275,C1276,C1277,C1278,C1279,C1280 to release the layout space in order to place 12 pcs 10uF capacitors

P.32 Add J2 to discharge RTC for repair conveniently

(2006/02/09)

P.42 Add F1 for Oide over current protect

(2006/02/10)

P.42 Change L66,L67 package from 0402 to 0603.Beacuse 0402 package rating is too risky
P.44 Change C910,C911 from 0.047uF to 0.033uF for passband ripple.

(2006/02/13)

P.03 Change Q71 from PDTC144EU to DTC144EUA for make BOM conveniently.
P.21 Change Q7 from PDTC144EU to DTC144EUA for make BOM conveniently.
P.41 Change Q93 from PDTC144EU to DTC144EUA for make BOM conveniently.
P.46 Change Q42,Q87 from PDTC144EU to DTC144EUA for make BOM conveniently.
P.46 Change Q86 from MMBT3906 to MMBT3906K for make BOM conveniently.
P.50 Change Q56 from PDTC144EU to DTC144EUA for make BOM conveniently.

(2006/02/15)

P.42 Add F2 and C1322 to bypass U109, directly connect CAM_5V to +5VRUN

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