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P. Leader	Check by	Design by

PCB P/N: 1P-106A100-40SB

Project Code & Schematics Subject: MS80 Main Board

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Title: ***Index Page***

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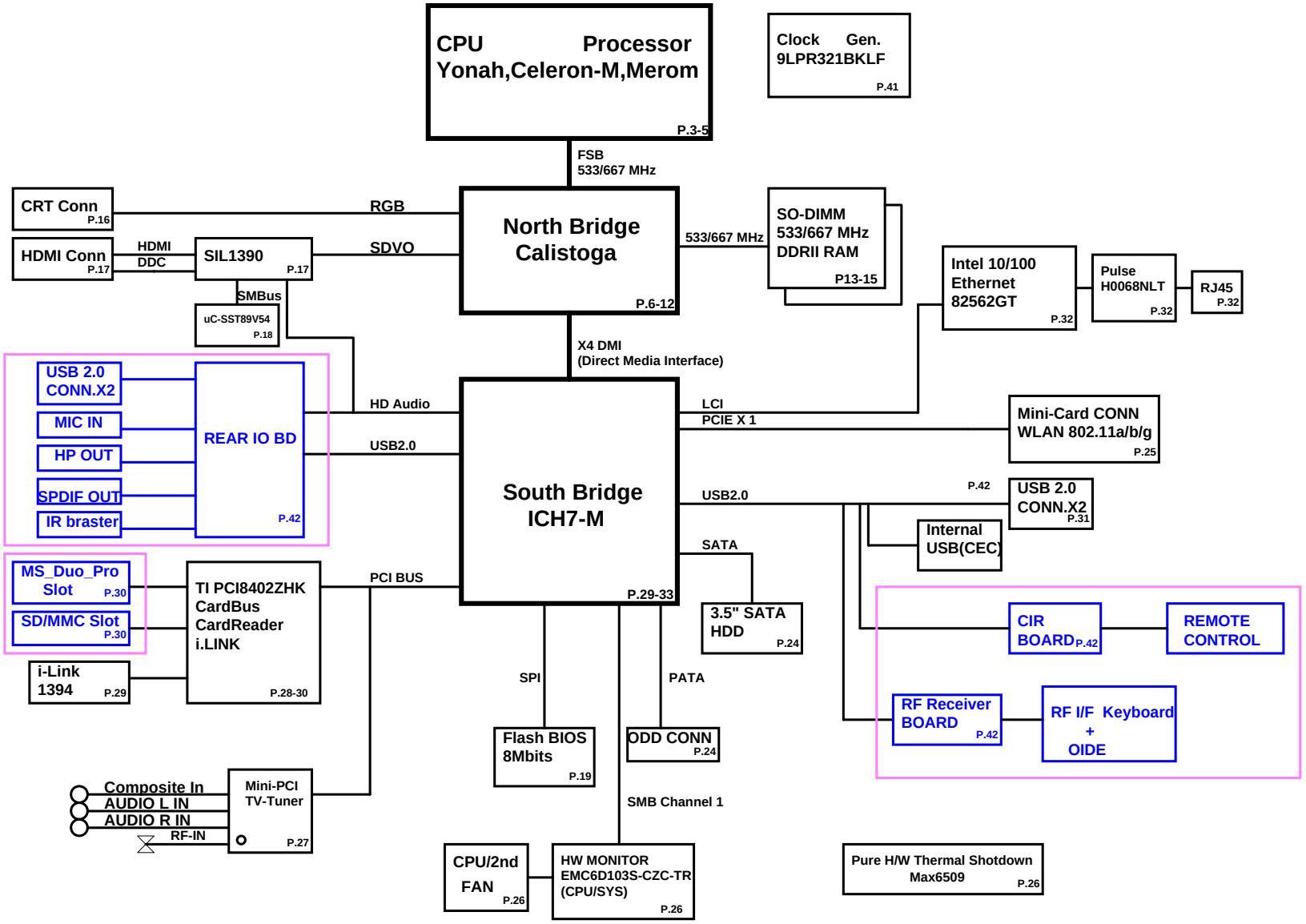
MS80 Bolck diagram



SYSTEM DC/DC
SC411MLTRT P.35

INPUTS	OUTPUTS
DC_OUT	+5VALW
DC_OUT	+3VALW

SYSTEM DC/DC
MAX8743 P.36

INPUTS	OUTPUTS
DC_OUT	+1_5VRUN
	+1_05VRUN

DDRII DC/DC
SC486 P.37

INPUTS	OUTPUTS
DC_OUT	+1_8VSUS
	+0_9VRUN

CPU DC/DC
ISL6262
P.38

INPUTS	OUTPUTS
DC_OUT	VHCORE

HDD DC/DC
MAX8546 P.40

INPUTS	OUTPUTS
DC_OUT	+12VRUN

MAX1616
P.34

INPUTS	OUTPUT
DC_IN	MAX1616_LDO

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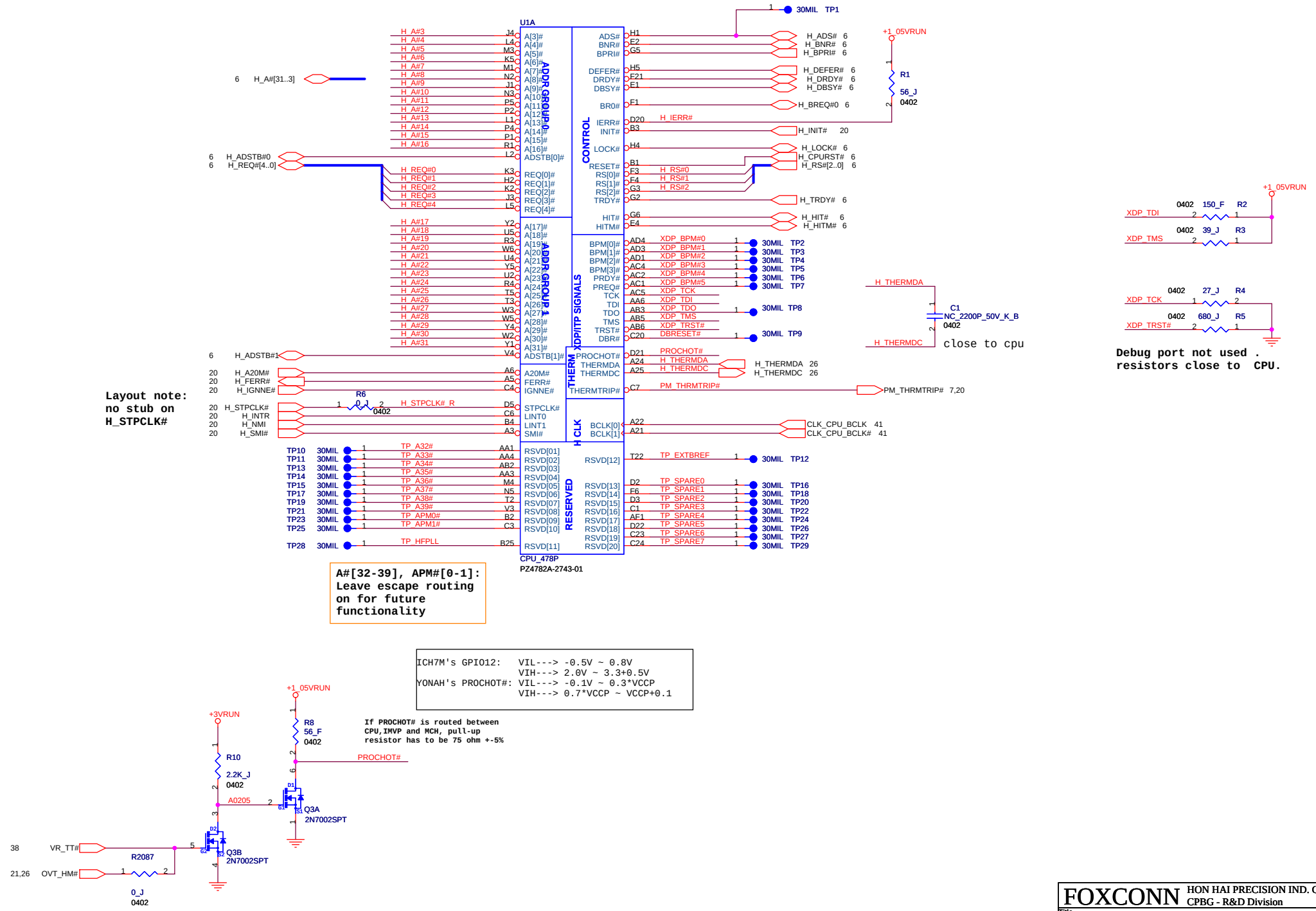

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Title: *Yonah (HOST BUS) 1/3*

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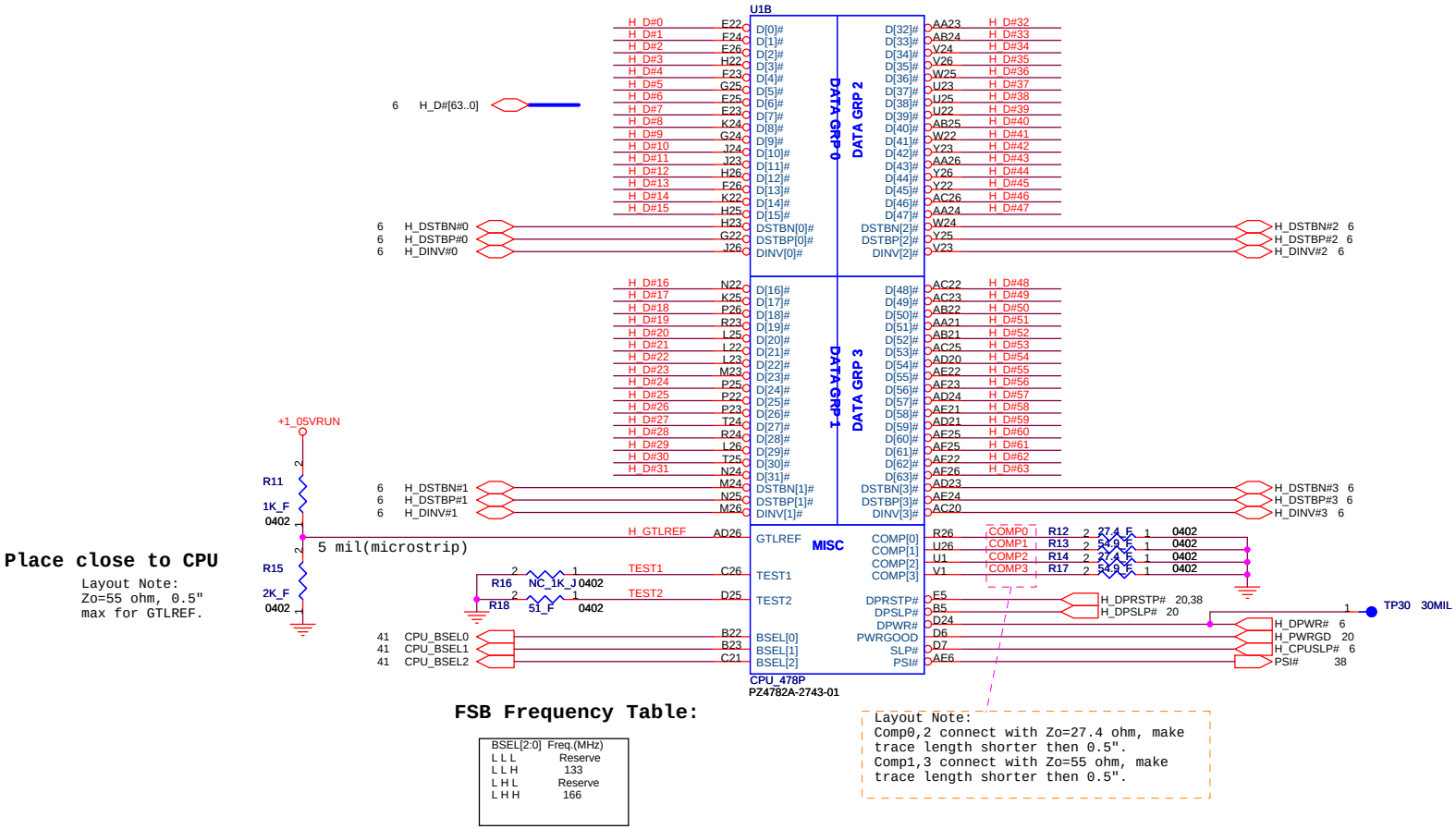

Place close to CPU

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*
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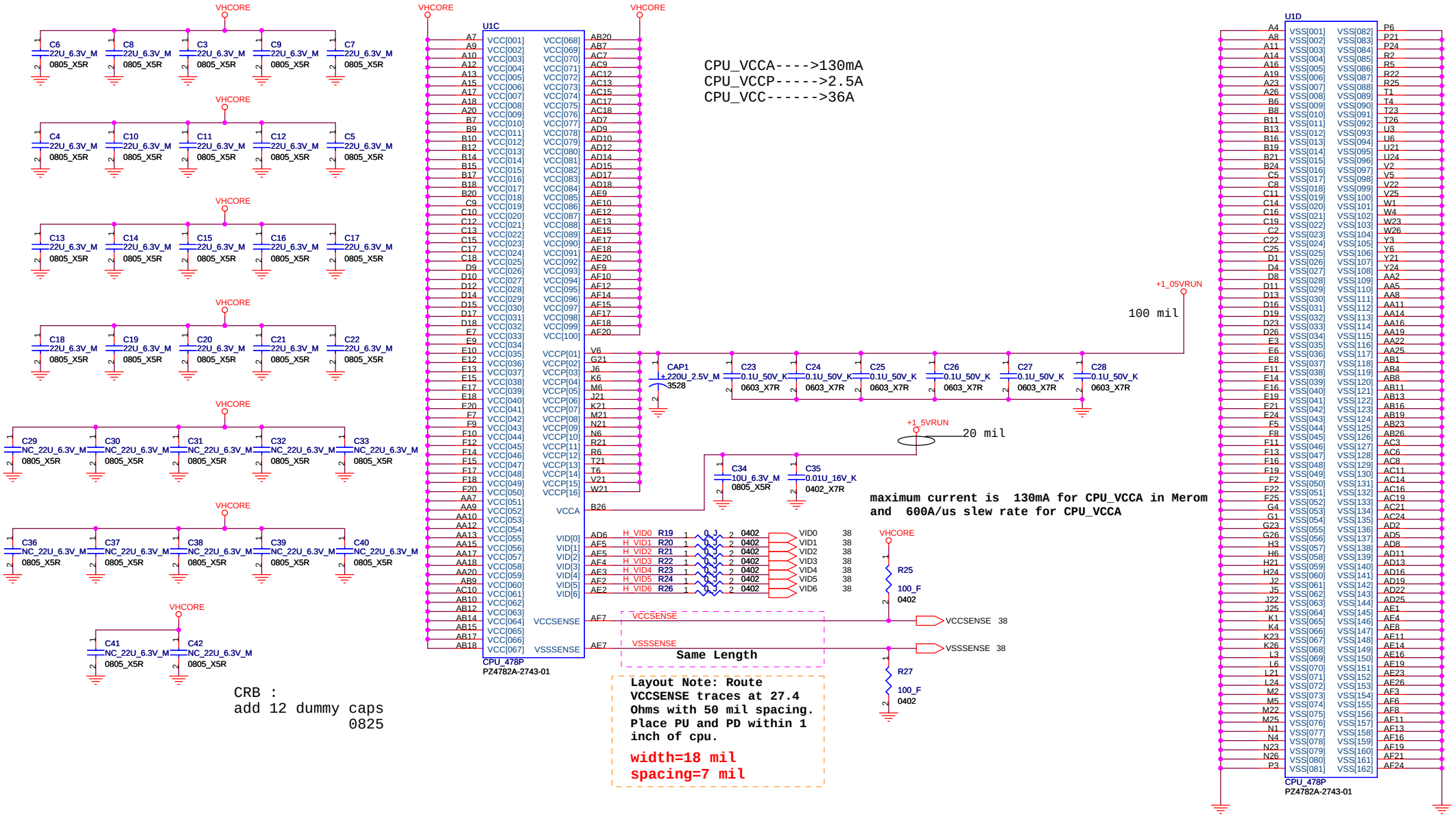

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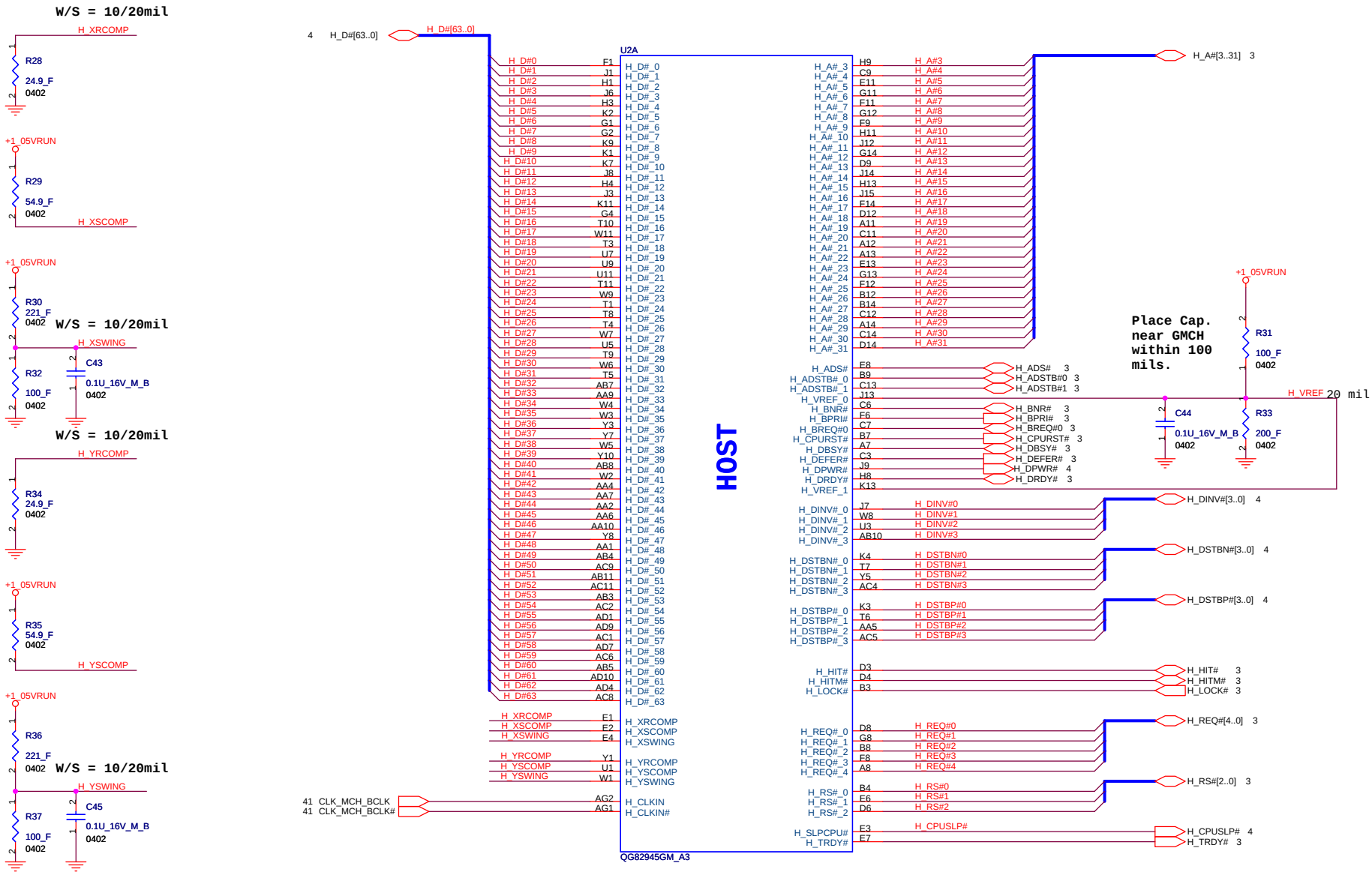

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Title	CALISTOHA (HOST)	
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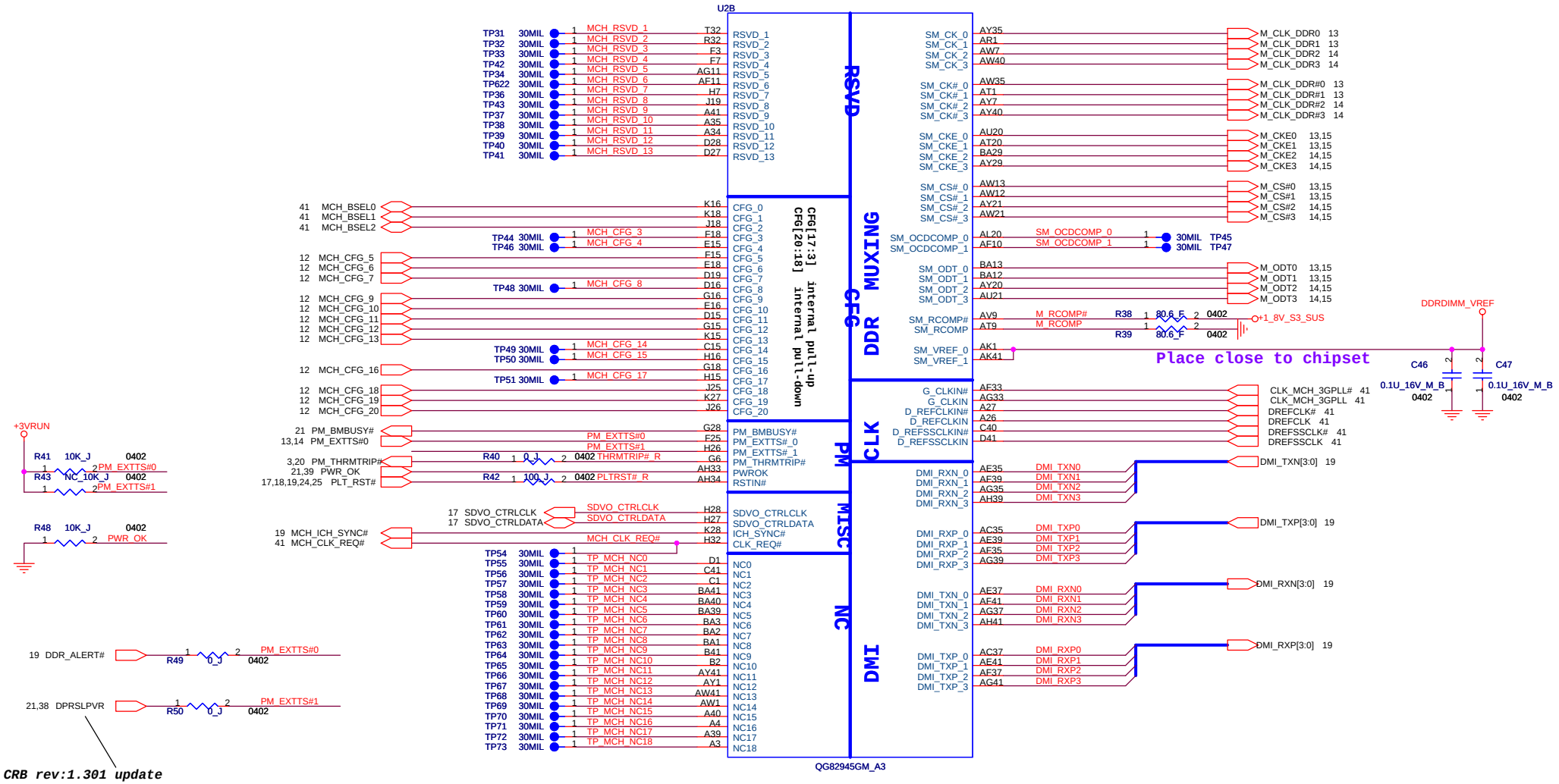

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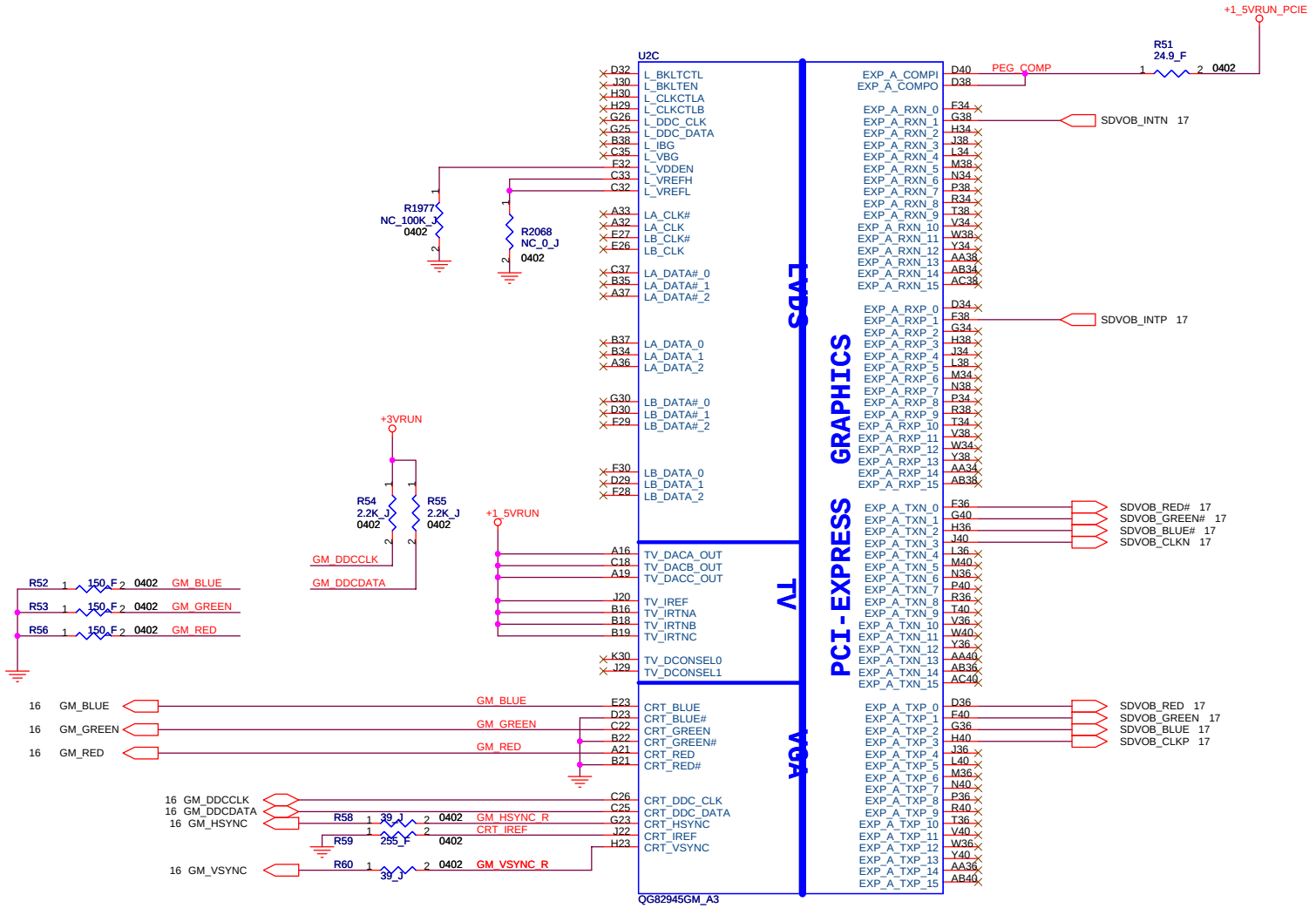

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Title	CALISTOGA (GRAPHIC) 3 of 7
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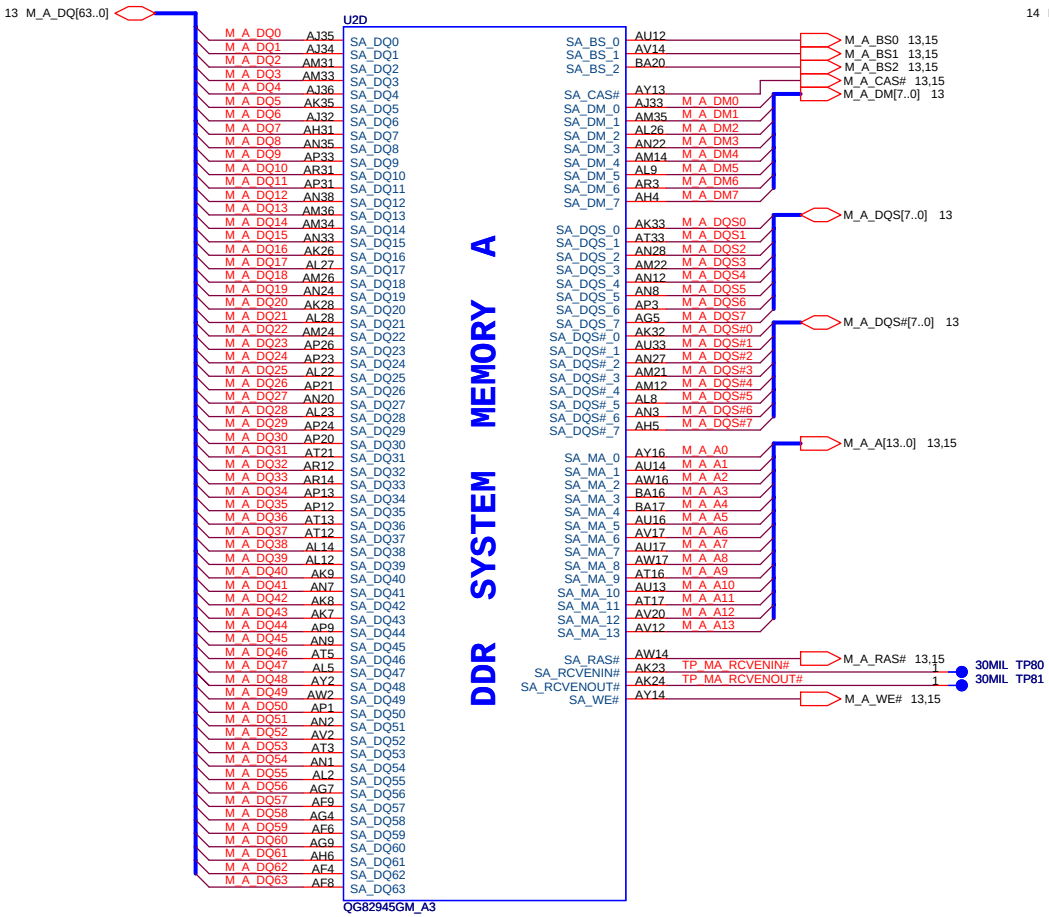

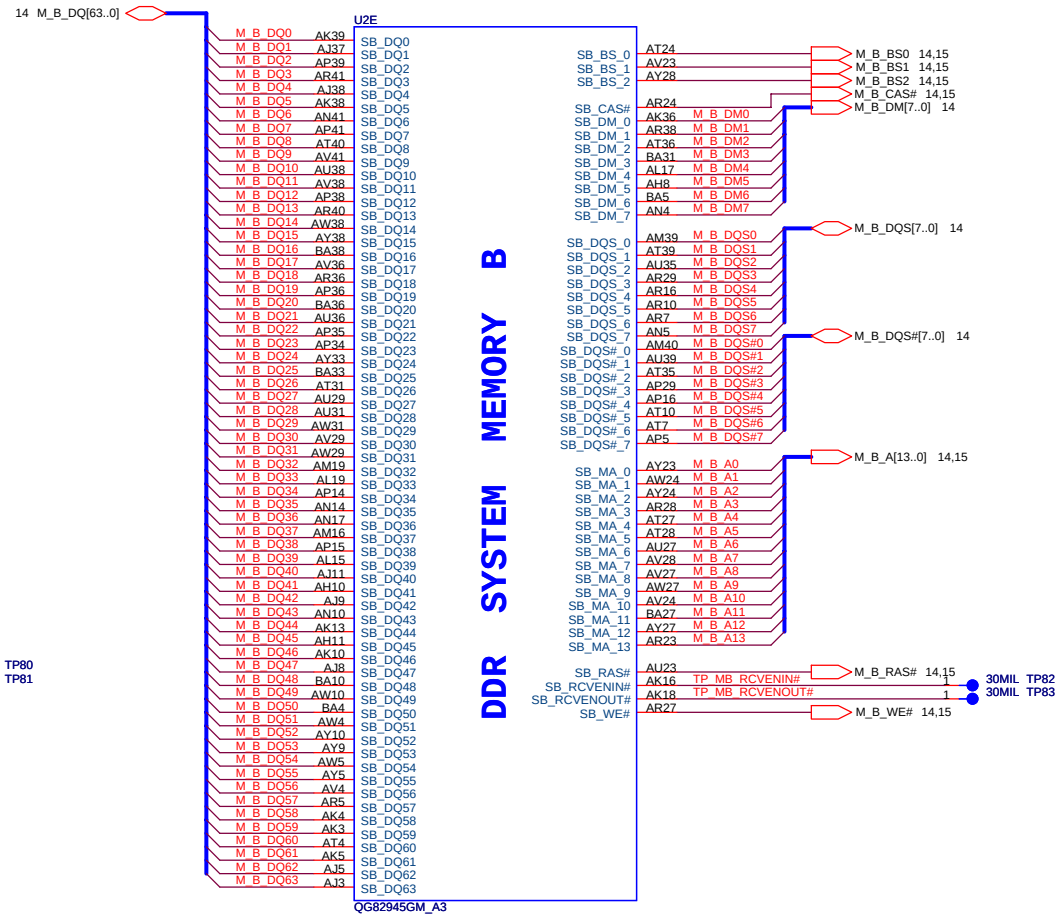

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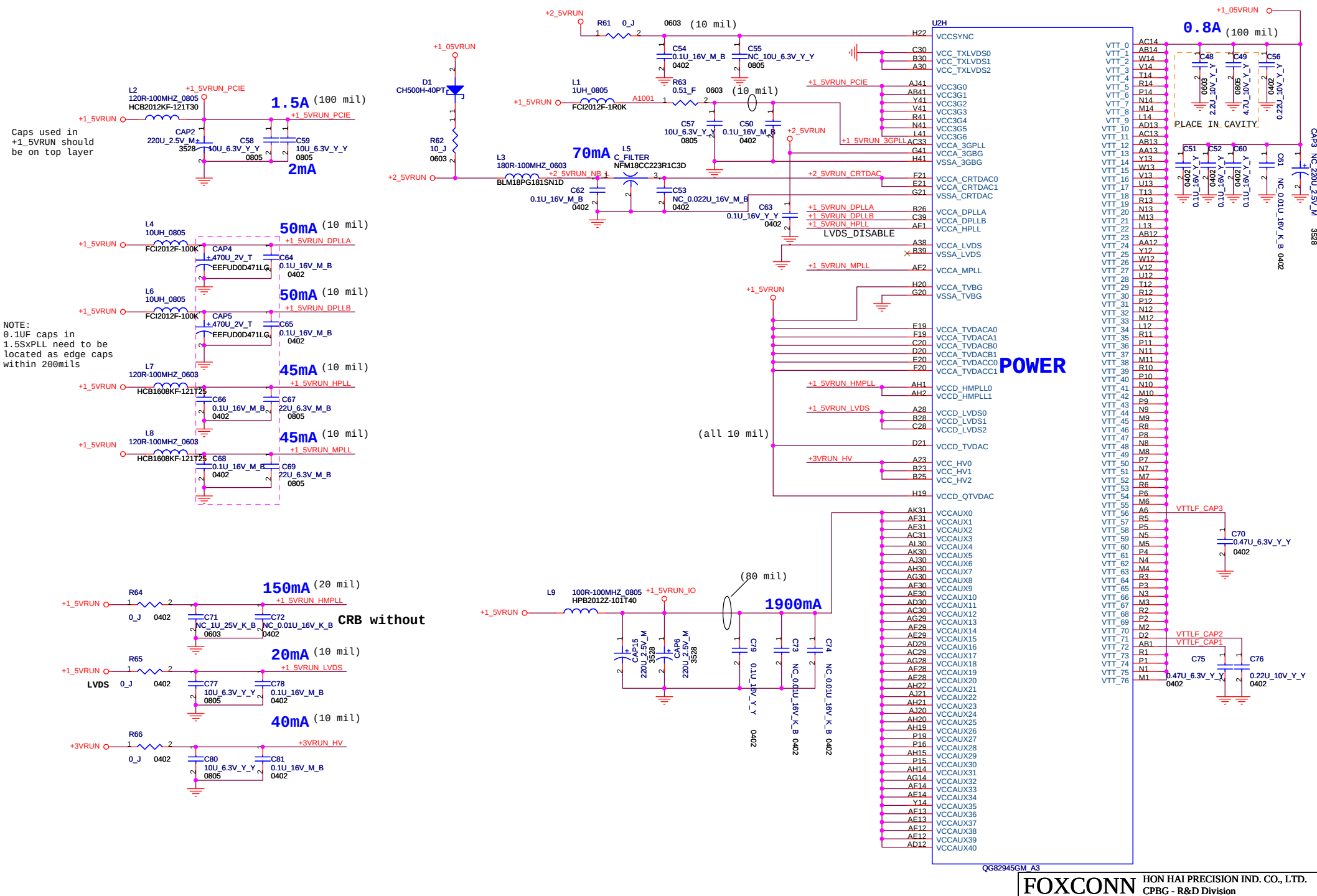

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Title: CALISTOGA(POWER,VCC) 5 of 7

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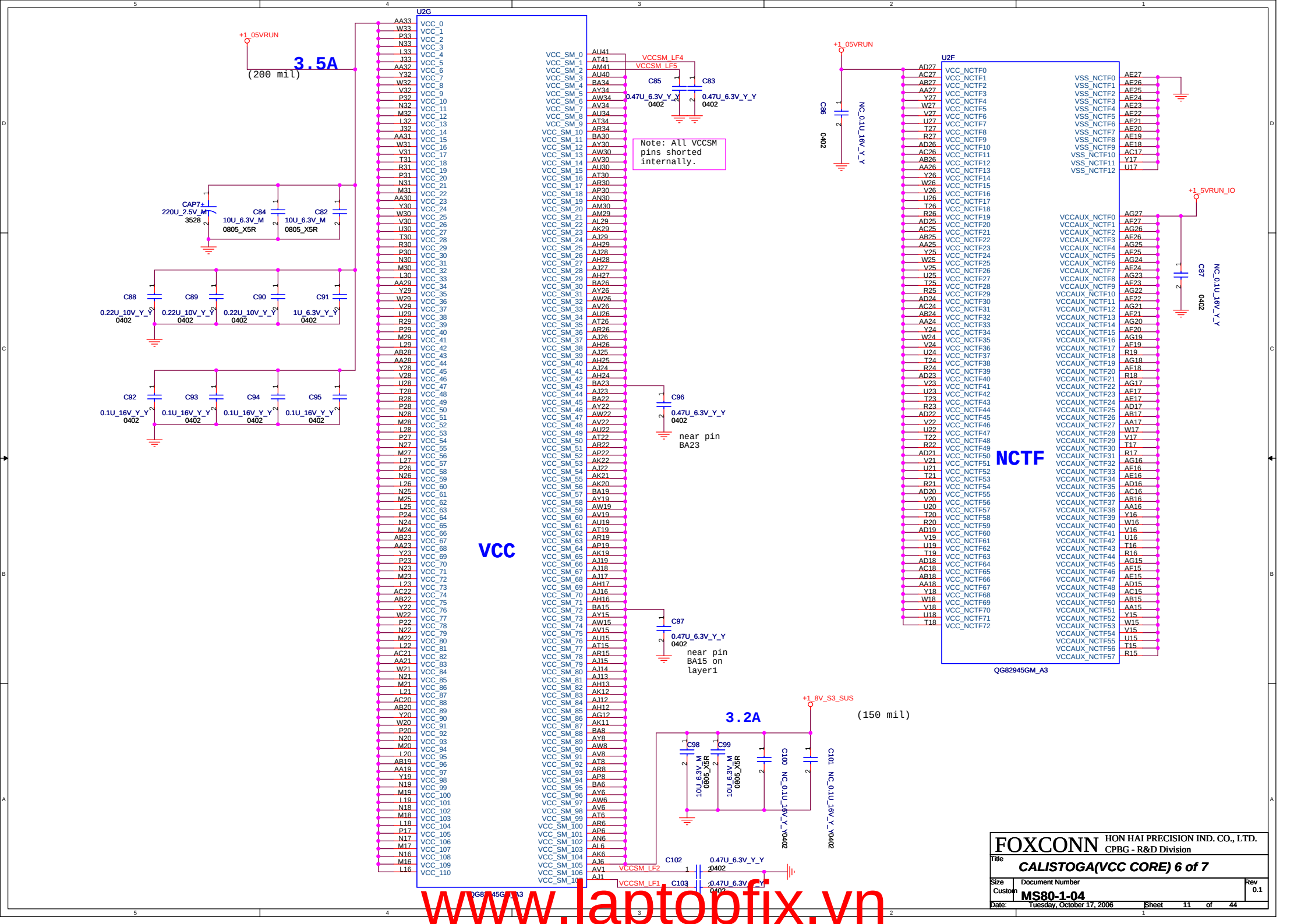

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7 MCH_CFG_5 — 1 — 30MIL TP84

MCH_CFG_5	Low = DMIx2 High = DMIx4

7 MCH_CFG_6 — 1 — 30MIL TP85

MCH_CFG_6	Low = Moby Dick High = Calistoga

DDR2 select (default high)

7 MCH_CFG_7 — 1 — 30MIL TP87

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

7 MCH_CFG_9 — 1 — 30MIL TP89

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

For layout convenience

7 MCH_CFG_10 — 1 — 30MIL TP90

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

7 MCH_CFG_11 — 1 — R67 NC_2.2K_J 0402 — 2

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

7 MCH_CFG_12 — 1 — 30MIL TP92
7 MCH_CFG_13 — 1 — 30MIL TP93

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 — 1 — 30MIL TP94

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 TP86

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

7 MCH_CFG_19 — 1 — 30MIL TP88

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 TP91

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

U2I

VSS

AC41	VSS_0	VSS_97	AK34
AA41	VSS_1	VSS_98	AG34
W41	VSS_2	VSS_99	AF34
T41	VSS_3	VSS_100	AE34
P41	VSS_4	VSS_101	AC34
M41	VSS_5	VSS_102	C34
J41	VSS_6	VSS_103	AW33
F41	VSS_7	VSS_104	AV33
AV40	VSS_8	VSS_105	AR33
AP40	VSS_9	VSS_106	AE33
AN40	VSS_10	VSS_107	AB33
AK40	VSS_11	VSS_108	Y33
AJ40	VSS_12	VSS_109	V33
AH40	VSS_13	VSS_110	T33
AG40	VSS_14	VSS_111	R33
AF40	VSS_15	VSS_112	M33
AE40	VSS_16	VSS_113	H33
B40	VSS_17	VSS_114	G33
AY39	VSS_18	VSS_115	F33
AW39	VSS_19	VSS_116	D33
AV39	VSS_20	VSS_117	B33
AR39	VSS_21	VSS_118	AH32
AN39	VSS_22	VSS_119	AG32
AJ39	VSS_23	VSS_120	AE32
AC39	VSS_24	VSS_121	AE32
AB39	VSS_25	VSS_122	AC32
AA39	VSS_26	VSS_123	AB32
Y39	VSS_27	VSS_124	G32
W39	VSS_28	VSS_125	B32
V39	VSS_29	VSS_126	AY31
T39	VSS_30	VSS_127	AV31
R39	VSS_31	VSS_128	AN31
P39	VSS_32	VSS_129	AJ31
N39	VSS_33	VSS_130	AG31
M39	VSS_34	VSS_131	AB31
L39	VSS_35	VSS_132	Y31
J39	VSS_36	VSS_133	AB30
H39	VSS_37	VSS_134	E30
G39	VSS_38	VSS_135	AT29
F39	VSS_39	VSS_136	AN29
D39	VSS_40	VSS_137	AB29
AT38	VSS_41	VSS_138	T29
AM38	VSS_42	VSS_139	N29
AH38	VSS_43	VSS_140	K29
AG38	VSS_44	VSS_141	G29
AF38	VSS_45	VSS_142	E29
AE38	VSS_46	VSS_143	C29
C38	VSS_47	VSS_144	B29
AK37	VSS_48	VSS_145	A29
AH37	VSS_49	VSS_146	BA28
AB37	VSS_50	VSS_147	AW28
AA37	VSS_51	VSS_148	AU28
Y37	VSS_52	VSS_149	AP28
W37	VSS_53	VSS_150	AM28
V37	VSS_54	VSS_151	AD28
T37	VSS_55	VSS_152	AC28
R37	VSS_56	VSS_153	W28
P37	VSS_57	VSS_154	J28
N37	VSS_58	VSS_155	E28
M37	VSS_59	VSS_156	AP27
L37	VSS_60	VSS_157	AM27
J37	VSS_61	VSS_158	AK27
H37	VSS_62	VSS_159	J27
G37	VSS_63	VSS_160	G27
F37	VSS_64	VSS_161	F27
D37	VSS_65	VSS_162	C27
AY36	VSS_66	VSS_163	B27
AW36	VSS_67	VSS_164	AN26
AN36	VSS_68	VSS_165	M26
AH36	VSS_69	VSS_166	K26
AG36	VSS_70	VSS_167	F26
AF36	VSS_71	VSS_168	D26
AE36	VSS_72	VSS_169	AK25
AC36	VSS_73	VSS_170	P25
C36	VSS_74	VSS_171	K25
B36	VSS_75	VSS_172	H25
BA35	VSS_76	VSS_173	E25
AV35	VSS_77	VSS_174	D25
AR35	VSS_78	VSS_175	A25
AH35	VSS_79	VSS_176	BA24
AB35	VSS_80	VSS_177	AU24
AA35	VSS_81	VSS_178	AL24
Y35	VSS_82	VSS_179	AW23
W35	VSS_83		
V35	VSS_84		
T35	VSS_85		
R35	VSS_86		
P35	VSS_87		
N35	VSS_88		
M35	VSS_89		
L35	VSS_90		
J35	VSS_91		
H35	VSS_92		
G35	VSS_93		
F35	VSS_94		
D35	VSS_95		
AN34	VSS_96		

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U2J

VSS

AT23	VSS_180	VSS_273	J11
AN23	VSS_181	VSS_274	D11
AM23	VSS_182	VSS_275	B11
AH23	VSS_183	VSS_276	AV10
AC23	VSS_184	VSS_277	AP10
W23	VSS_185	VSS_278	AL10
K23	VSS_186	VSS_279	AJ10
J23	VSS_187	VSS_280	AG10
F23	VSS_188	VSS_281	AC10
C23	VSS_189	VSS_282	W10
AA22	VSS_190	VSS_283	U10
K22	VSS_191	VSS_284	BA9
G22	VSS_192	VSS_285	AW9
F22	VSS_193	VSS_286	AR9
E22	VSS_194	VSS_287	AH9
D22	VSS_195	VSS_288	AB9
A22	VSS_196	VSS_289	Y9
BA21	VSS_197	VSS_290	R9
AV21	VSS_198	VSS_291	G9
AR21	VSS_199	VSS_292	E9
AN21	VSS_200	VSS_293	A9
AL21	VSS_201	VSS_294	AG8
AB21	VSS_202	VSS_295	AD8
Y21	VSS_203	VSS_296	AA8
P21	VSS_204	VSS_297	U8
K21	VSS_205	VSS_298	K8
J21	VSS_206	VSS_299	C8
H21	VSS_207	VSS_300	BA7
C21	VSS_208	VSS_301	AV7
AW20	VSS_209	VSS_302	AP7
AR20	VSS_210	VSS_303	AL7
AM20	VSS_211	VSS_304	AJ7
AA20	VSS_212	VSS_305	AH7
K20	VSS_213	VSS_306	AF7
B20	VSS_214	VSS_307	AC7
A20	VSS_215	VSS_308	R7
AN19	VSS_216	VSS_309	G7
AC19	VSS_217	VSS_310	D7
W19	VSS_218	VSS_311	AG6
K19	VSS_219	VSS_312	AD6
G19	VSS_220	VSS_313	AB6
C19	VSS_221	VSS_314	Y6
AH18	VSS_222	VSS_315	U6
P18	VSS_223	VSS_316	N6
H18	VSS_224	VSS_317	K6
D18	VSS_225	VSS_318	H6
A18	VSS_226	VSS_319	B6
AY17	VSS_227	VSS_320	AV5
AR17	VSS_228	VSS_321	AE5
AP17	VSS_229	VSS_322	AD5
AM17	VSS_230	VSS_323	AY4
AK17	VSS_231	VSS_324	AR4
AV16	VSS_232	VSS_325	AP4
AN16	VSS_233	VSS_326	AL4
AL16	VSS_234	VSS_327	AJ4
J16	VSS_235	VSS_328	Y4
F16	VSS_236	VSS_329	U4
C16	VSS_237	VSS_330	R4
AN15	VSS_238	VSS_331	J4
AM15	VSS_239	VSS_332	F4
AK15	VSS_240	VSS_333	C4
N15	VSS_241	VSS_334	AY3
M15	VSS_242	VSS_335	AW3
L15	VSS_243	VSS_336	AV3
B15	VSS_244	VSS_337	AL3
A15	VSS_245	VSS_338	AH3
BA14	VSS_246	VSS_339	AG3
AT14	VSS_247	VSS_340	AF3
AK14	VSS_248	VSS_341	AD3
AD14	VSS_249	VSS_342	AC3
AA14	VSS_250	VSS_343	AA3
U14	VSS_251	VSS_344	G3
K14	VSS_252	VSS_345	AT2
H14	VSS_253	VSS_346	AR2
E14	VSS_254	VSS_347	AP2
AV13	VSS_255	VSS_348	AK2
AR13	VSS_256	VSS_349	AJ2
AN13	VSS_257	VSS_350	AD2
AM13	VSS_258	VSS_351	AB2
AL13	VSS_259	VSS_352	Y2
AG13	VSS_260	VSS_353	U2
P13	VSS_261	VSS_354	T2
E13	VSS_262	VSS_355	N2
D13	VSS_263	VSS_356	J2
B13	VSS_264	VSS_357	H2
AY12	VSS_265	VSS_358	F2
AC12	VSS_266	VSS_359	C2
K12	VSS_267	VSS_360	AL1
H12	VSS_268		
E12	VSS_269		
AD11	VSS_270		
AA11	VSS_271		
Y11	VSS_272		

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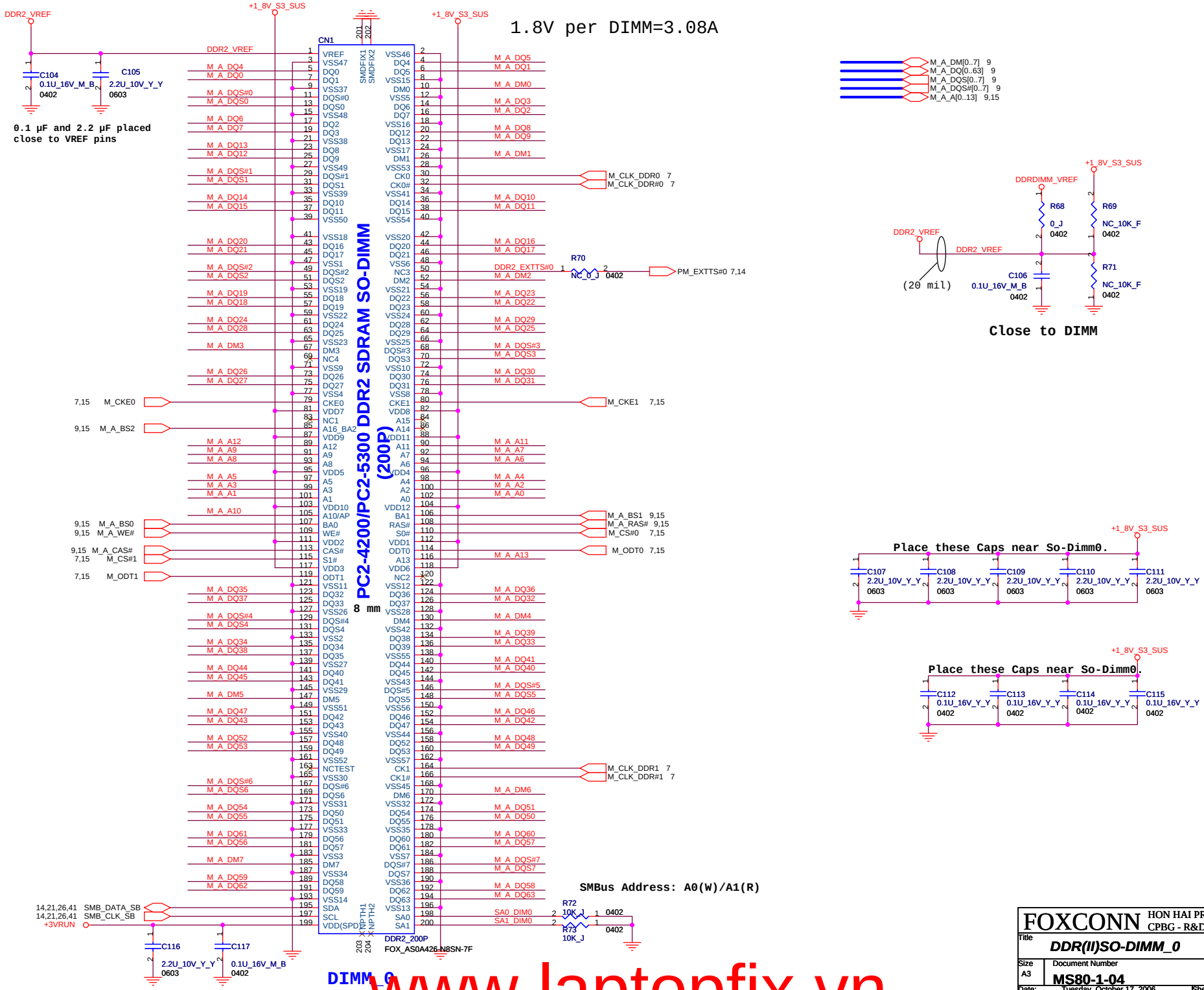

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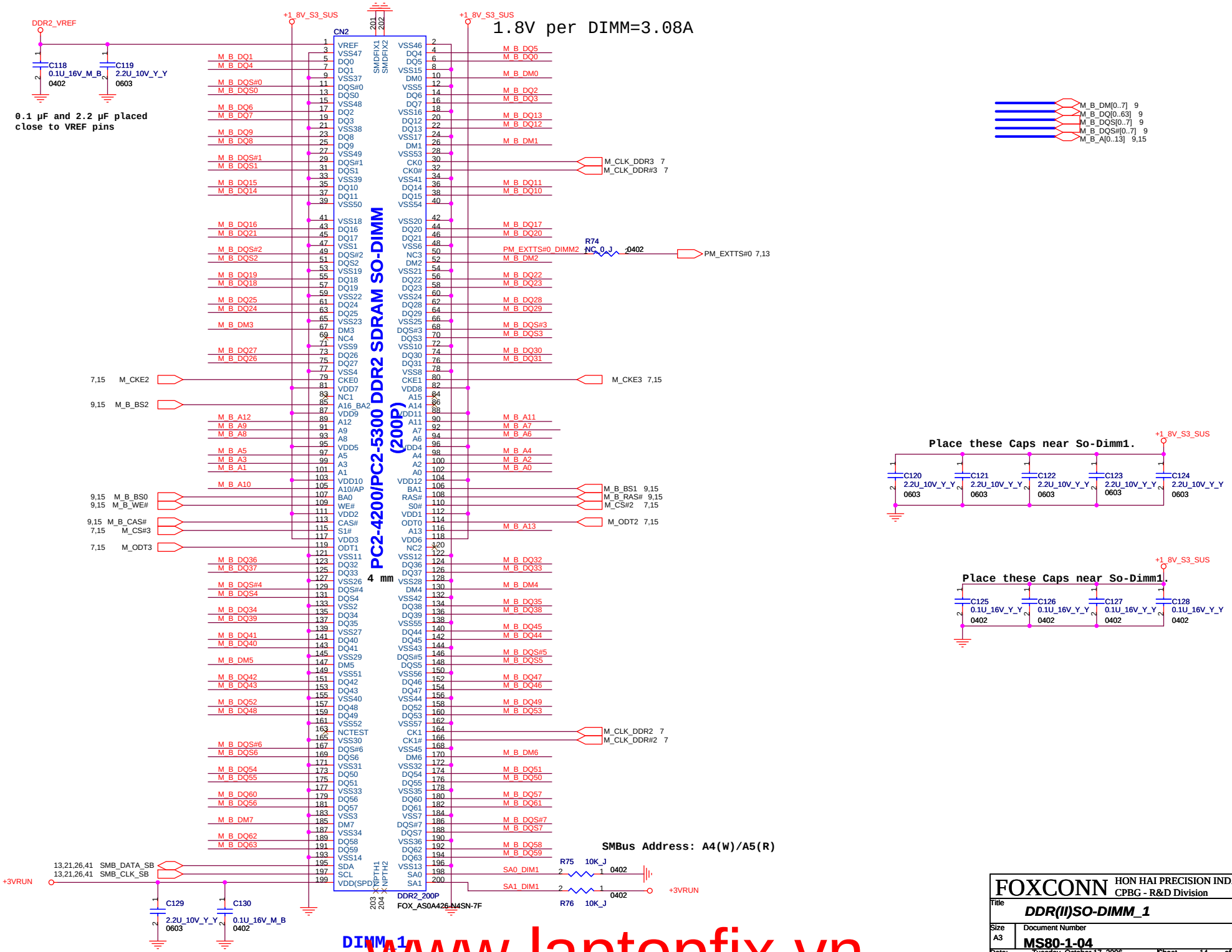

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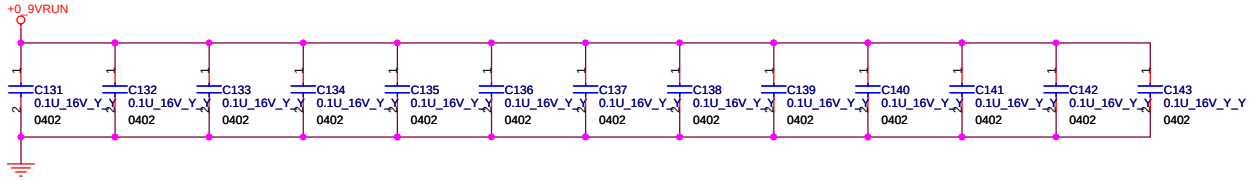
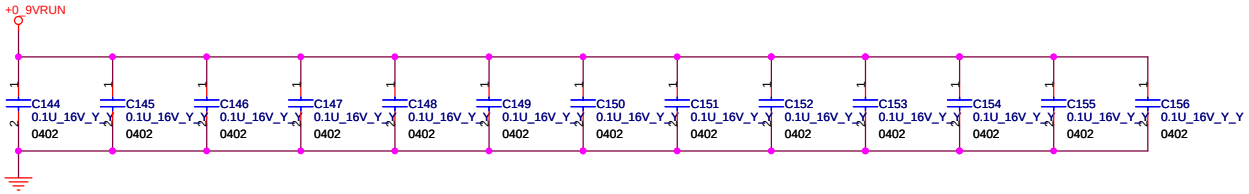
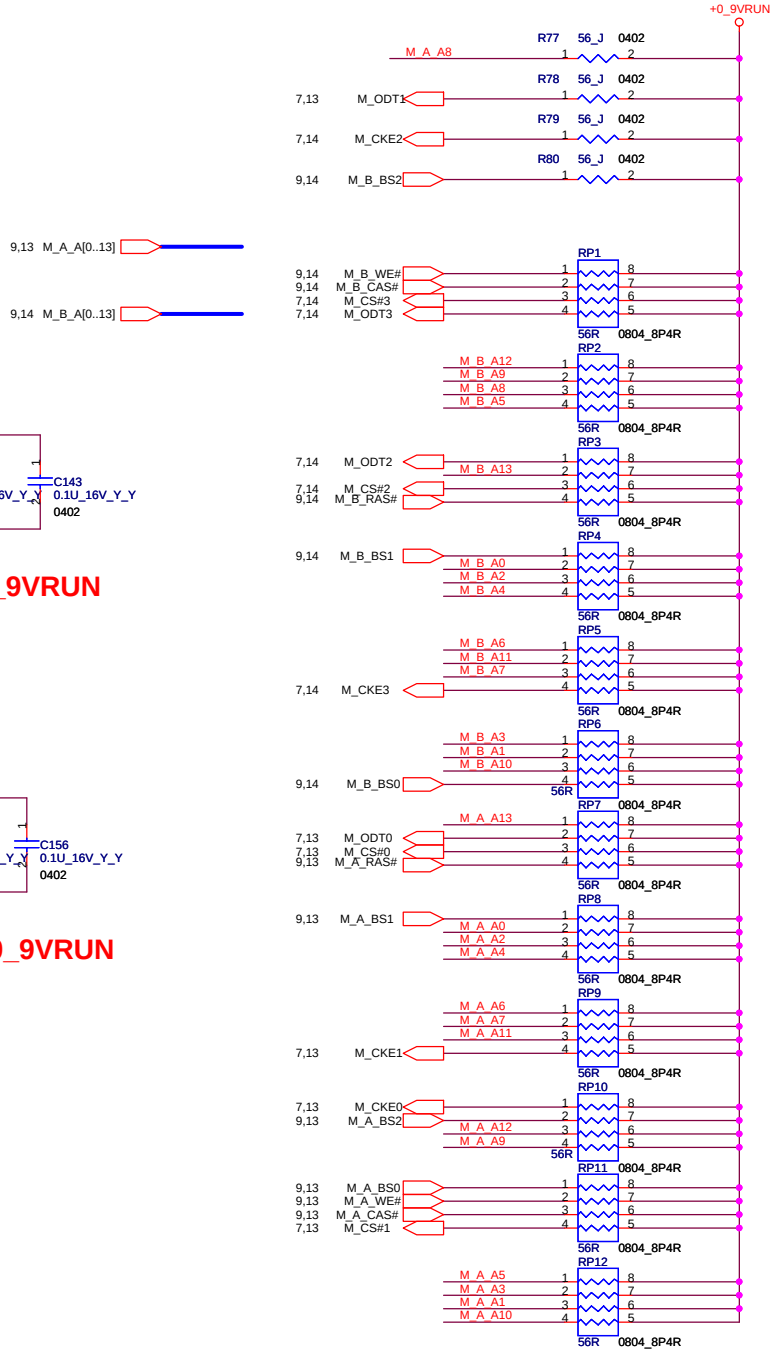


Layout note: Place 1 cap close to every 1 R-pack terminated to +0_9VRUN



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	**MS80-1-04**	0.1

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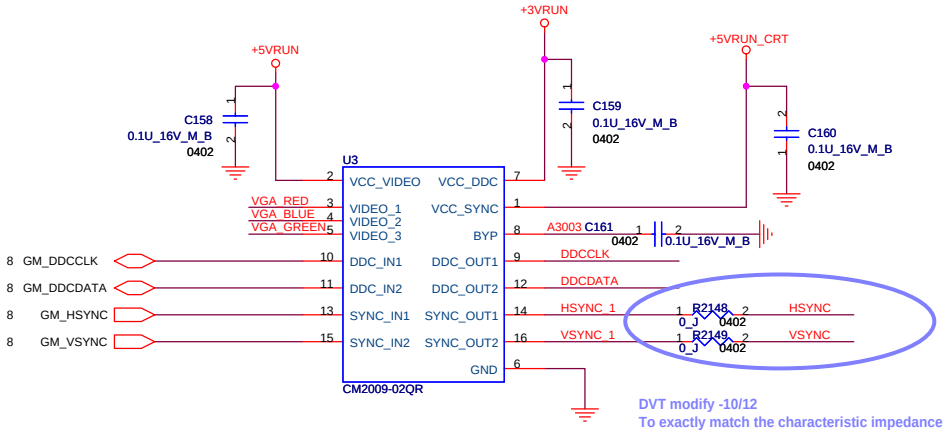
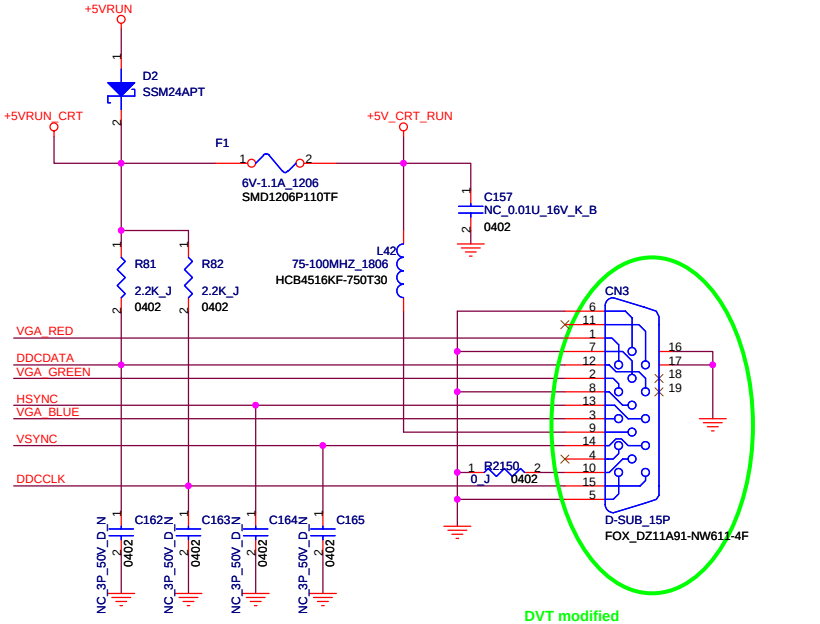
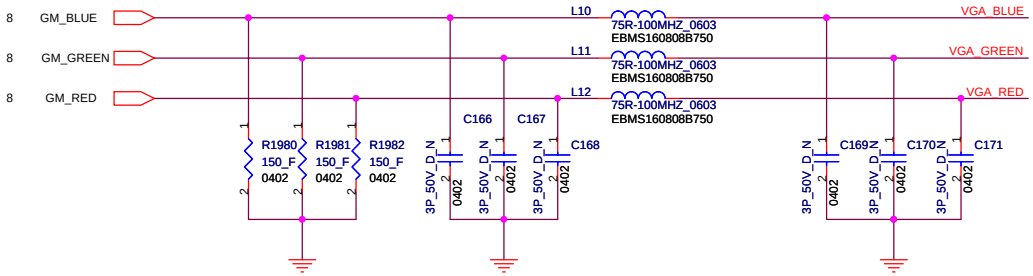


DVT modify -10/12
To exactly match the characteristic impedance of the SYNC lines , added this 2pcs series resistor for fine tune.



DVT modified
Connector color changed
Pin10 connected to GND for SONY SPEC



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: CRT		
Size: A3	Document Number: MS80-1-04	Rev: 0.1
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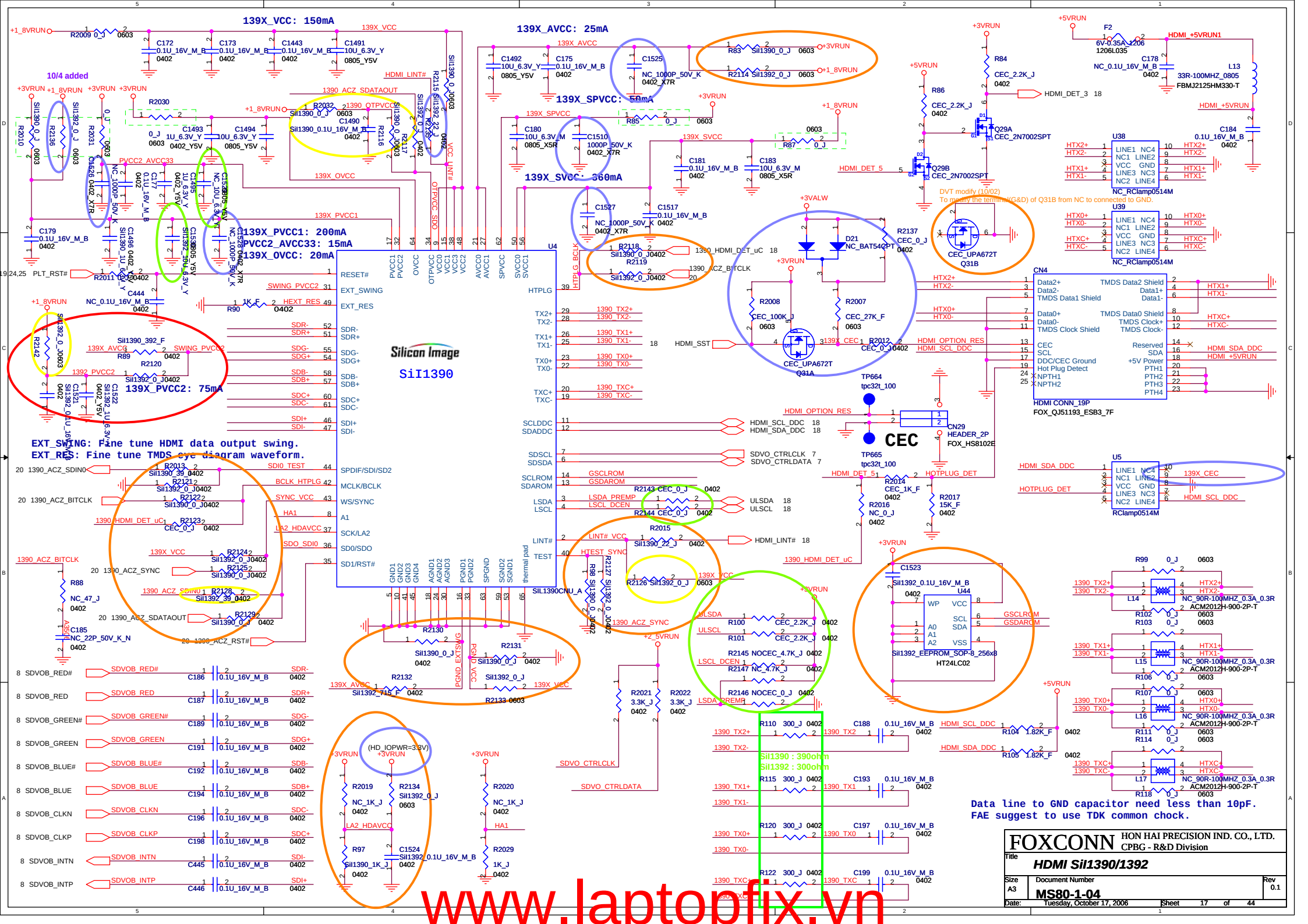
139X_VCC: 150mA
139X_AVCC: 25mA
139X_SPVCC: 50mA
139X_SVCC: 360mA
139X_PVCC1: 200mA
PVCC2_AVCC33: 15mA
139X_OVCC: 20mA
139X_PVCC2: 75mA
10/4 added
Silicon Image
SiI1390
EXT_SWING: Fine tune HDMI data output swing.
EXT_RES: Fine tune TMDS eye diagram waveform.
CEC
DVT modify (10/02)
To modify the terminal(G&D) of Q31B from NC to connected to GND.
Data line to GND capacitor need less than 10pF.
FAE suggest to use TDK common chock.
Sil1390 : 390ohm
Sil1392 : 300ohm
(HD_IOPWR=3.3V)
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HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
HDMI Sil1390/1392
MS80-1-04
Tuesday, October 17, 2006
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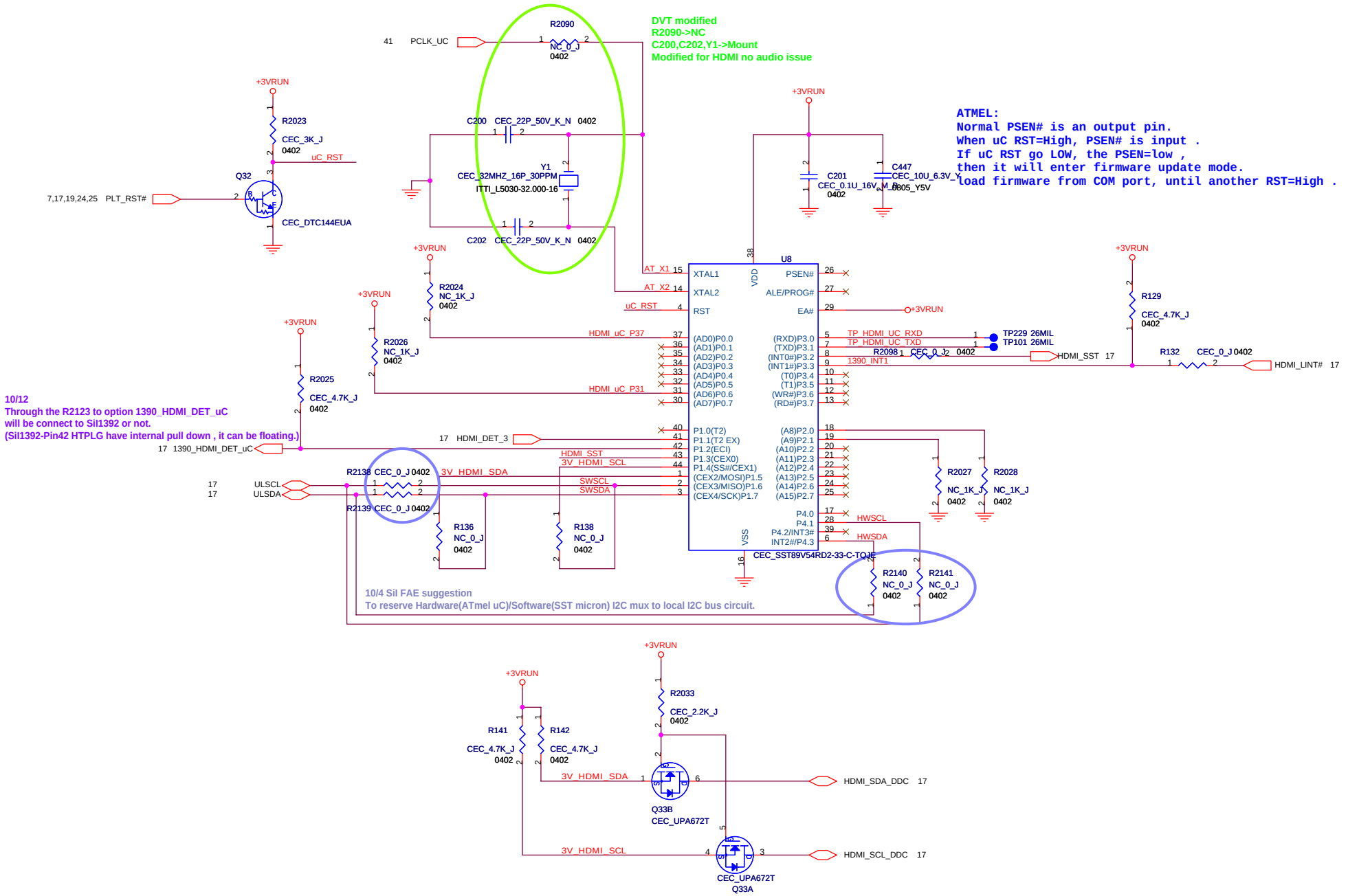

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FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division
Title	HDMI MICROCONTROLLER
Size	A3
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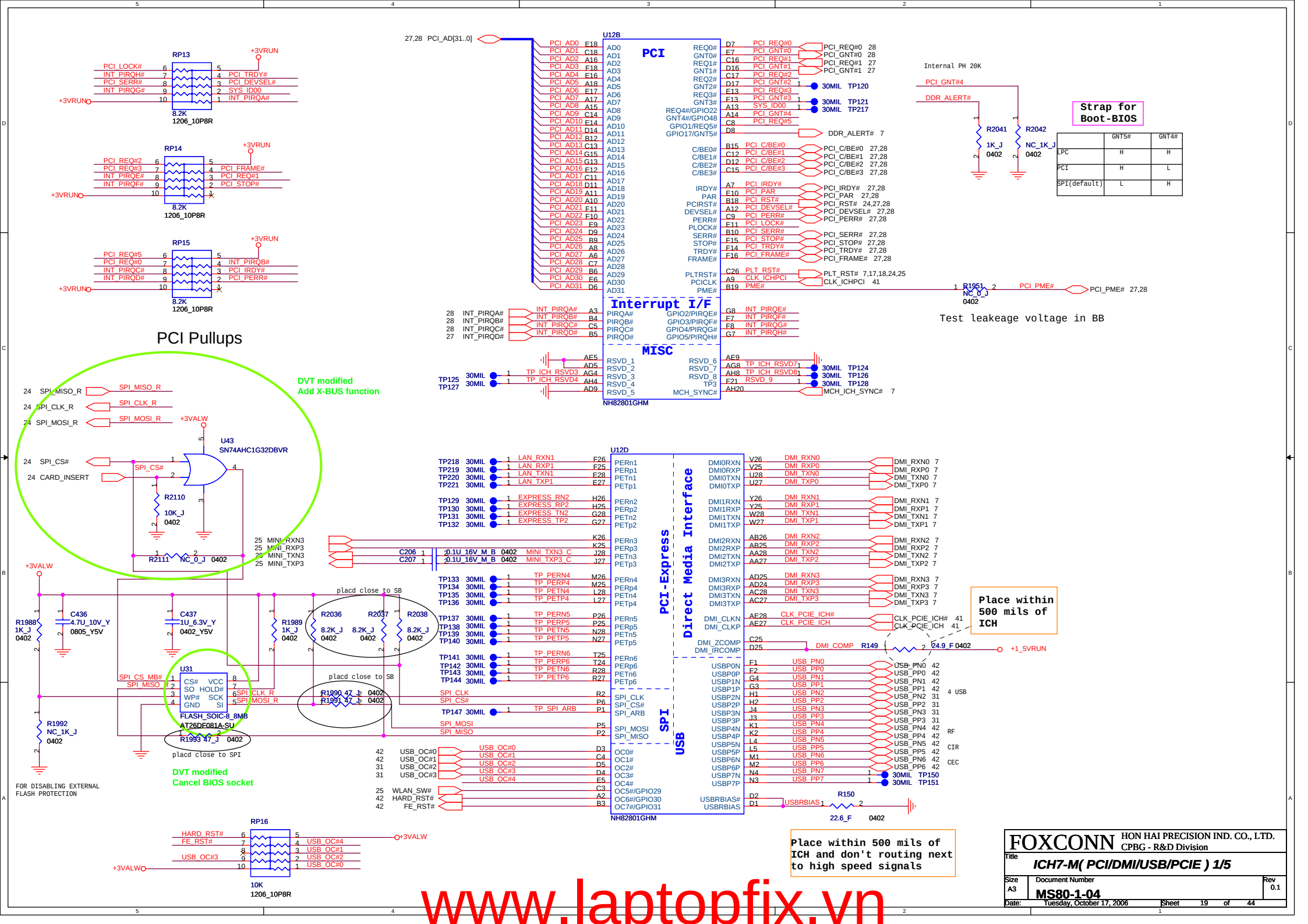
PCI Pullups
DVT modified
Add X-BUS function
DVT modified
Cancel BIOS socket
FOR DISABLING EXTERNAL
FLASH PROTECTION
Test leakeage voltage in BB
Strap for
Boot-BIOS
Place within
500 mils of
ICH
Place within 500 mils of
ICH and don't routing next
to high speed signals
PCI
Interrupt I/F
MISC
PCI-Express
Direct Media Interface
USB
SPI
NH82801GHM
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH7-M(PCI/DMI/USB/PCIE) 1/5
MS80-1-04
Tuesday, October 17, 2006
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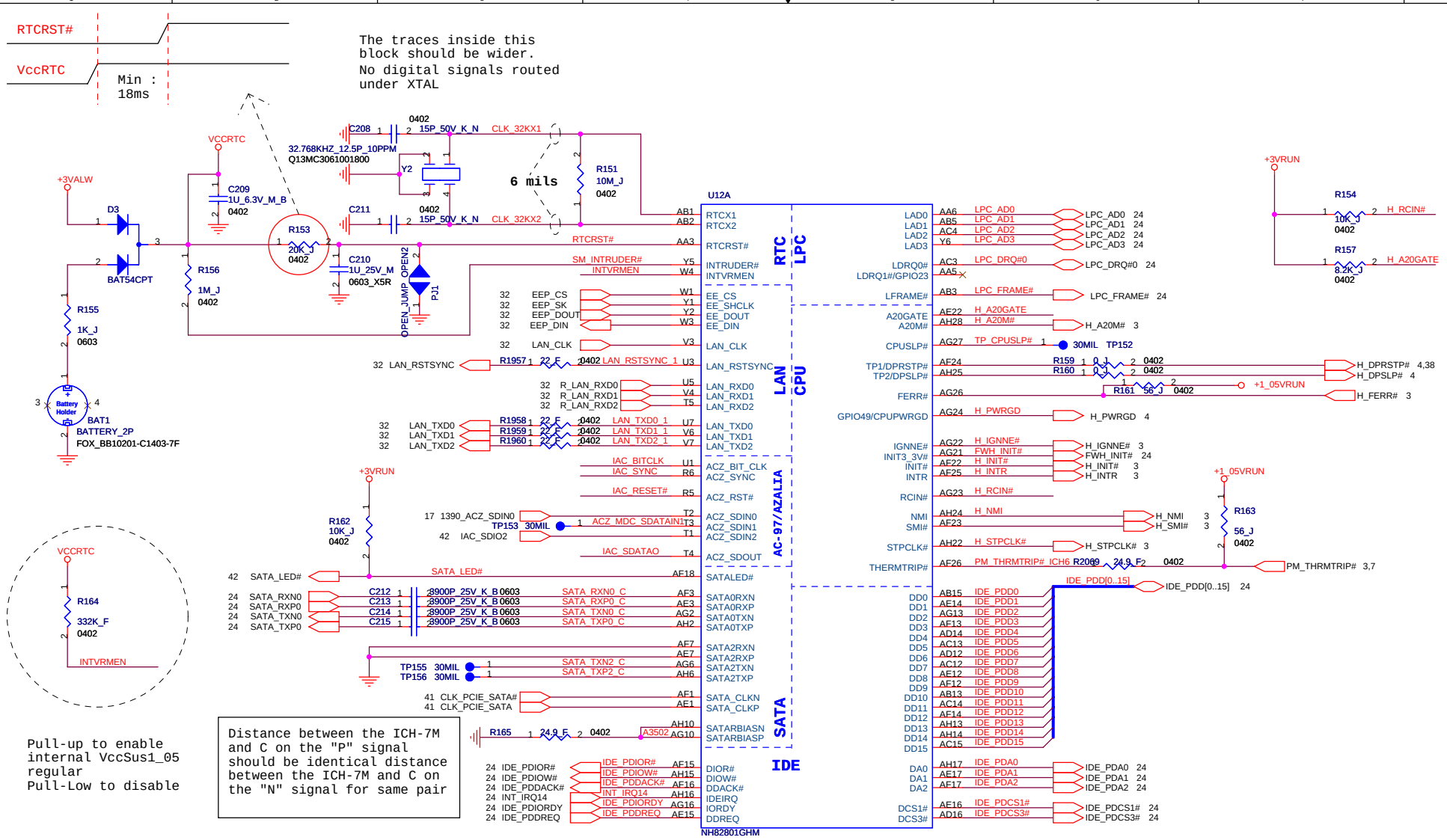

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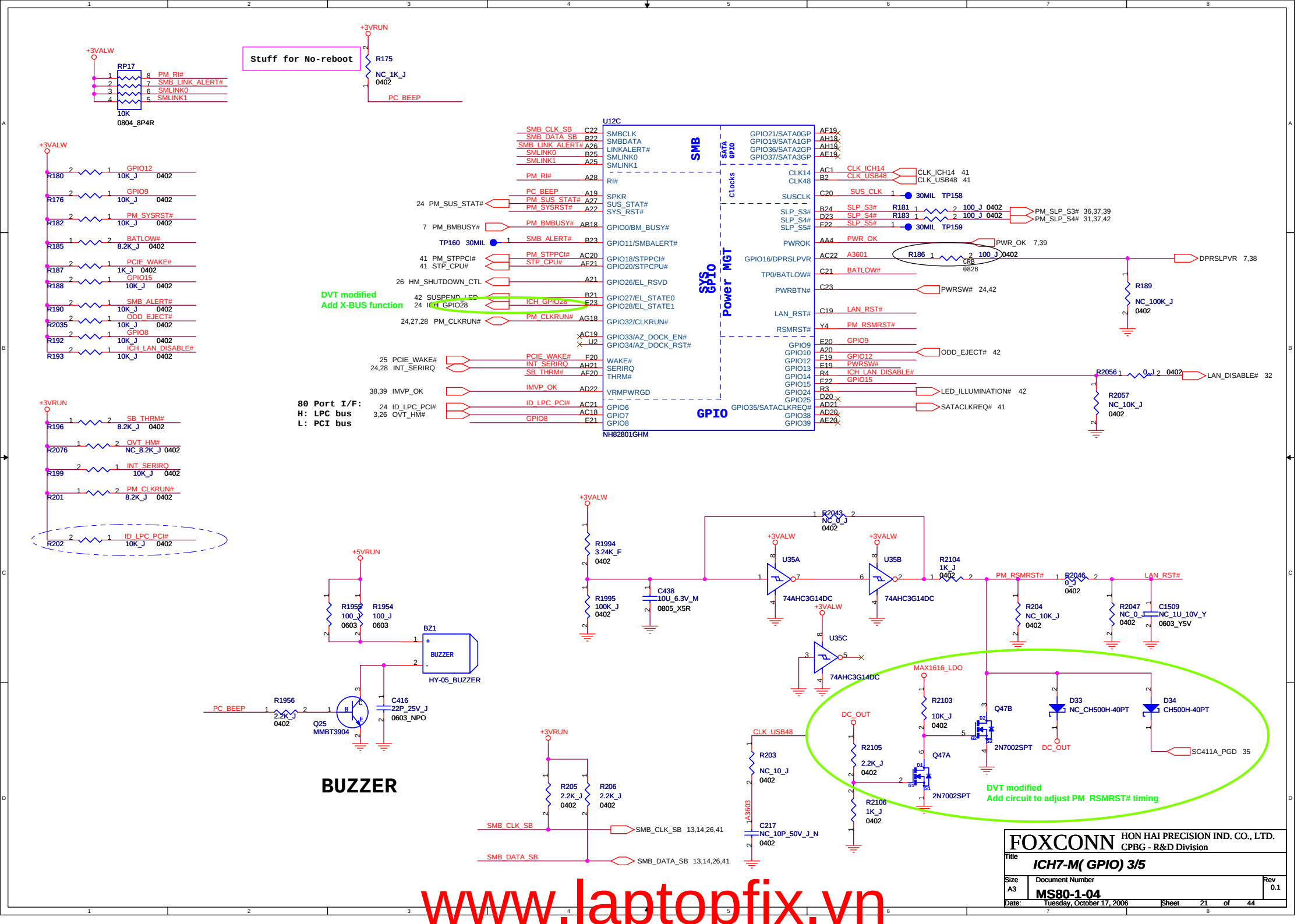
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: ICH7-M(LPC,IDE,SATA) 2/5

Size: A3 | Document Number: MS80-1-04 | Rev: 0.1

Date: Tuesday, October 17, 2006 | Sheet 20 of 44



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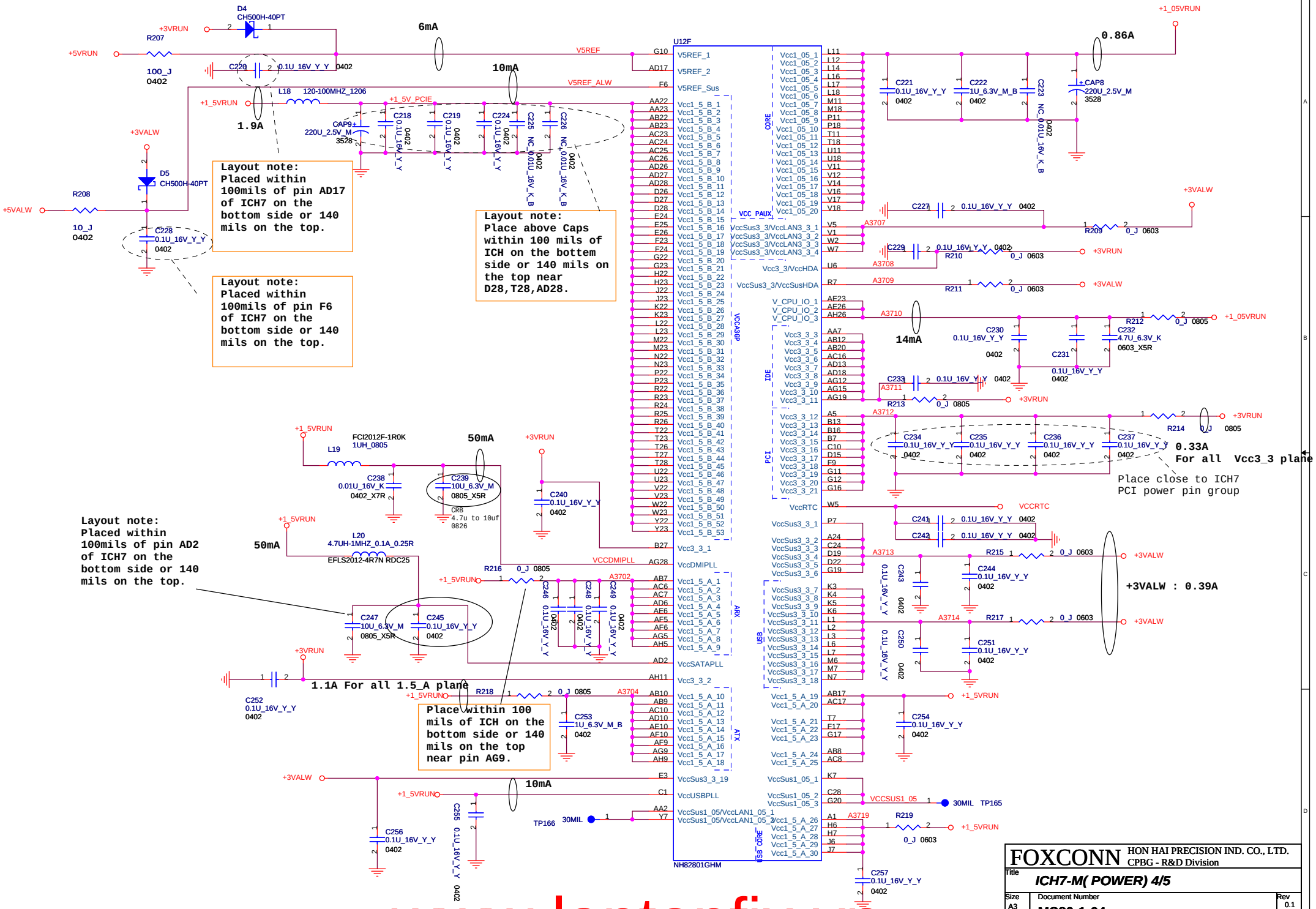
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: ICH7-M(GPIO) 3/5

Size: A3 | Document Number: MS80-1-04 | Rev: 0.1

Date: Tuesday, October 17, 2006 | Sheet 21 of 44


U12F
NH82801GHM
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 AD2 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
+3VALW : 0.39A
1.1A For all 1.5_A plane
0.86A
14mA
6mA
10mA
50mA
1.9A
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HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
ICH7-M(POWER) 4/5
MS80-1-04
Rev 0.1
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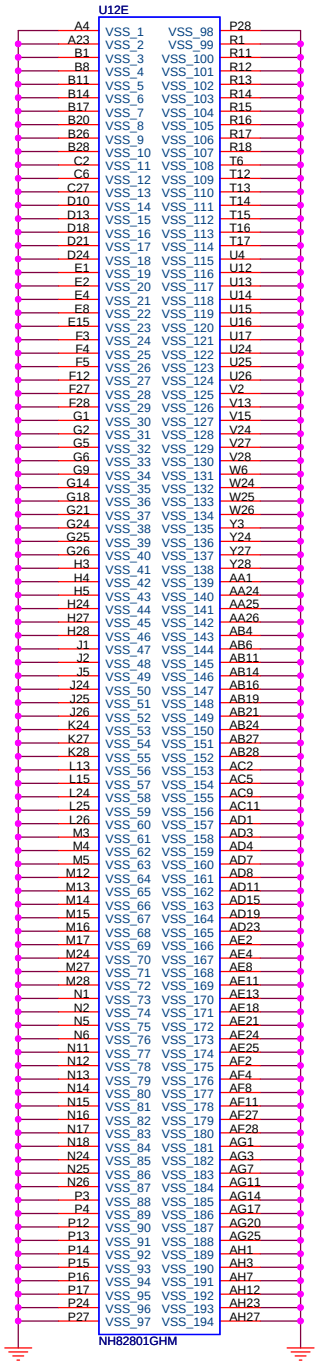

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	*ICH7-M(GND) 5/5*	
Size A3	Document Number **MS80-1-04**	Rev 0.1
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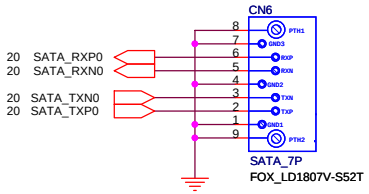
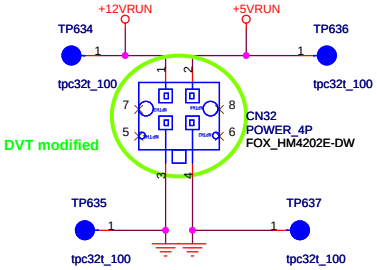
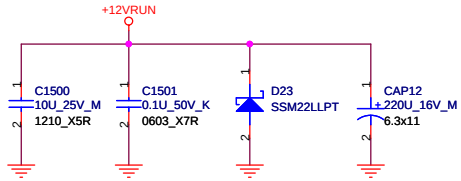
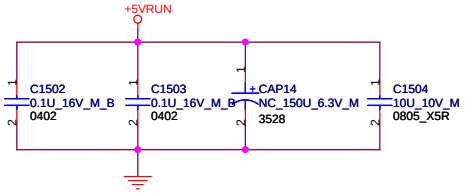
SATA HDD CONN



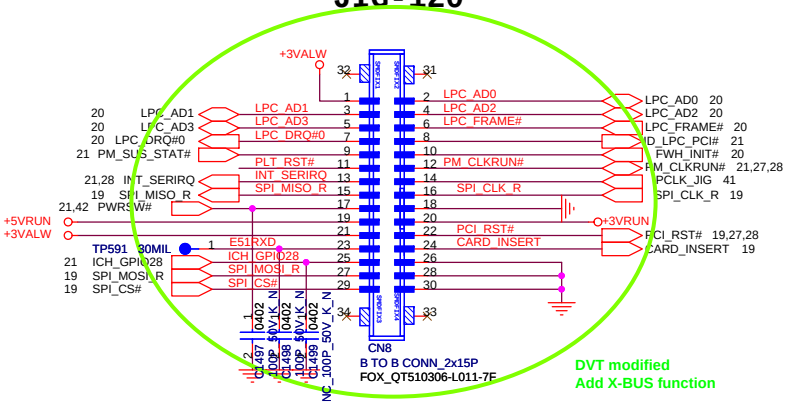
SATA HDD PWR



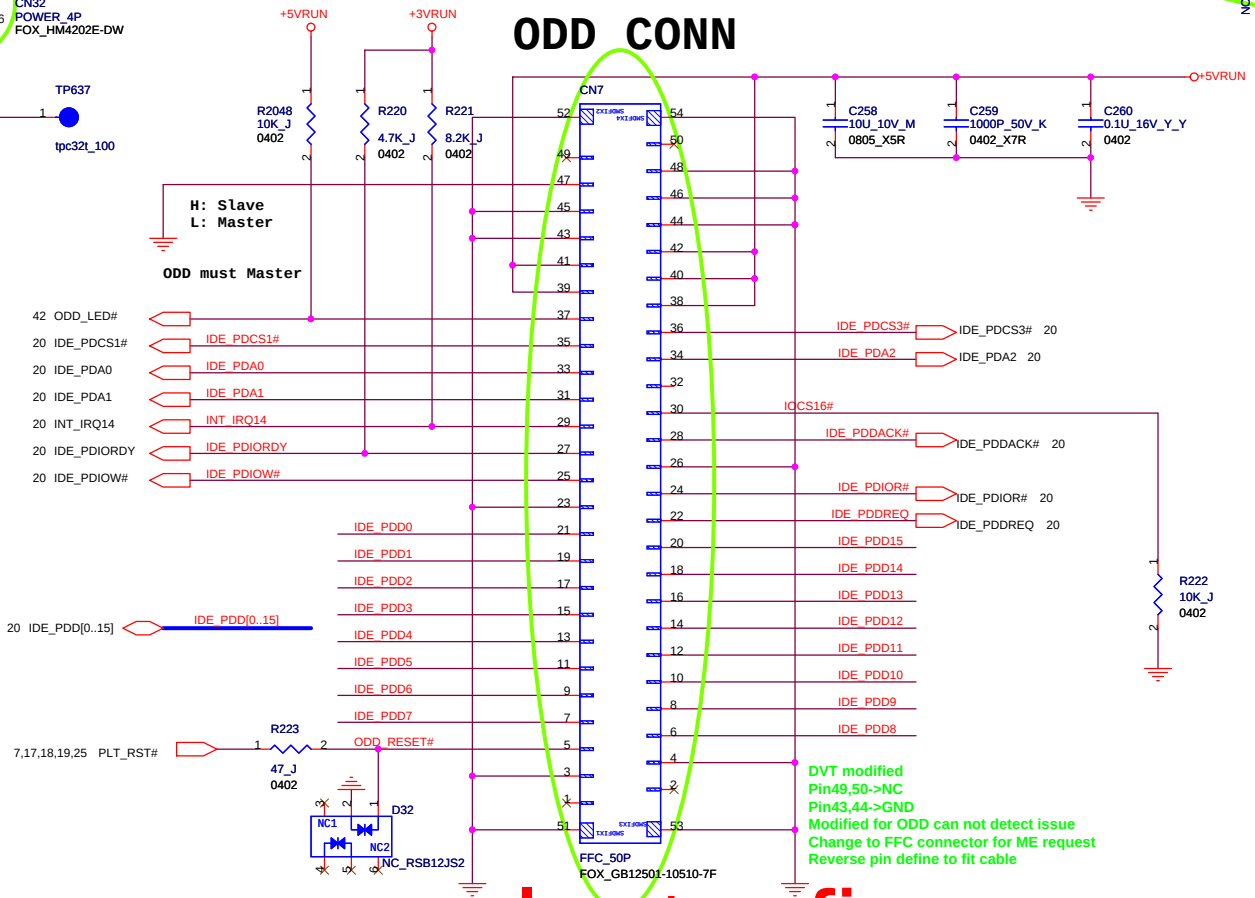




JIG-120



ODD CONN



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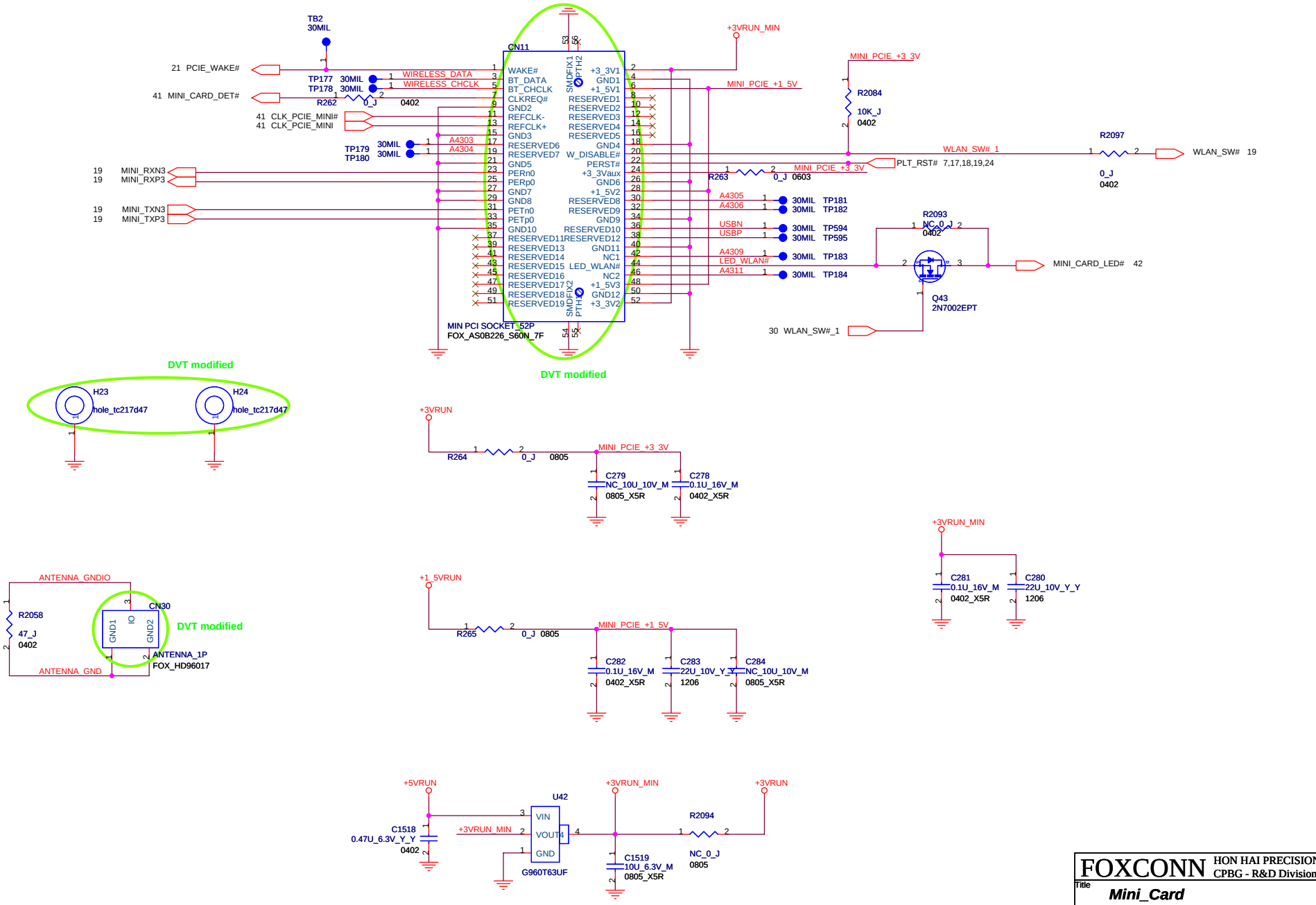
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	SATA HDD/CD-ROM/DEBUGPORT	
Size A3	Document Number MS80	Rev 0.1
Date: Wednesday, October 18, 2006	Sheet 24 of 44	



FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *Mini_Card*		
Size: A3	Document Number: MS80-1-04	Rev: 0.1
Date: Thursday, November 02, 2006	Sheet 25 of 44	

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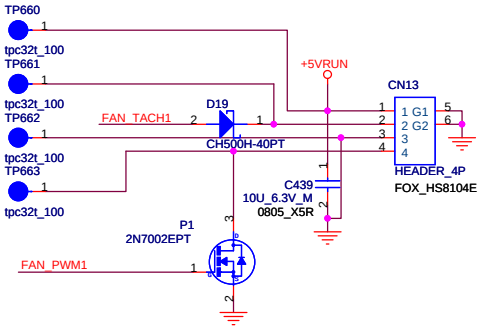
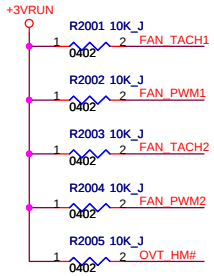
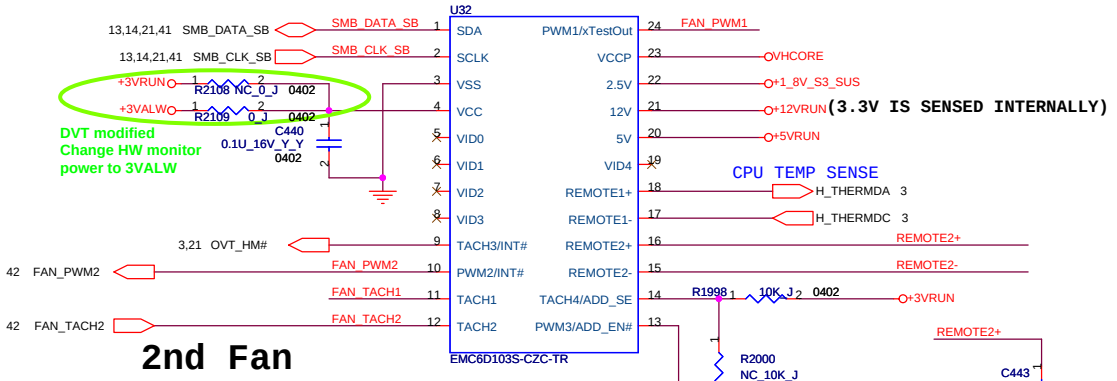


CPU FAN CONN

CHECK PIN DEFINITION WITH THERMAL TEAM





DVT modified
Change HW monitor power to 3VALW

CPU TEMP SENSE

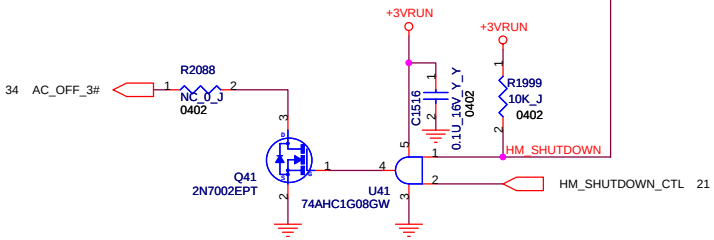
(3.3V IS SENSED INTERNALLY)

2nd Fan

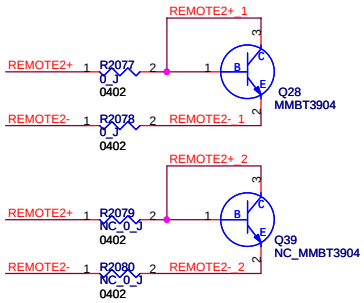
HW MONITOR

CLOSE TO EMC6D103S

CLOSE TO EMC6D103S

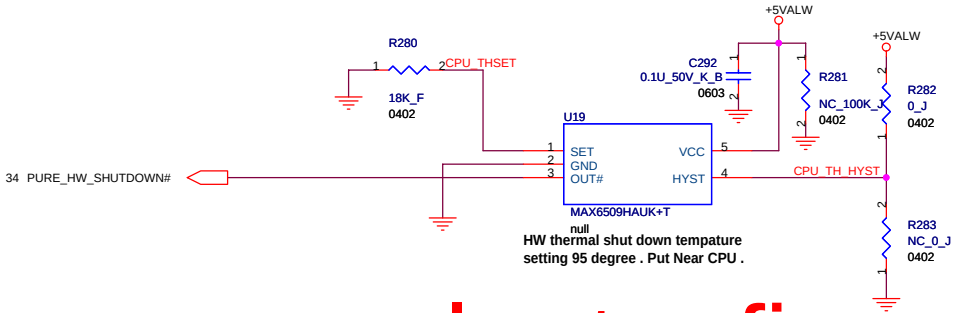


SYSTEM TEMP SENSE



For 0 degaree to +125 degree
Rset(kohm)=[(8.3793 x 10000)/T]-211.3569+[(1.2989 x 100000)/ T x T]
T=kelvin temperature

HW THERMAL PROTECTION



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

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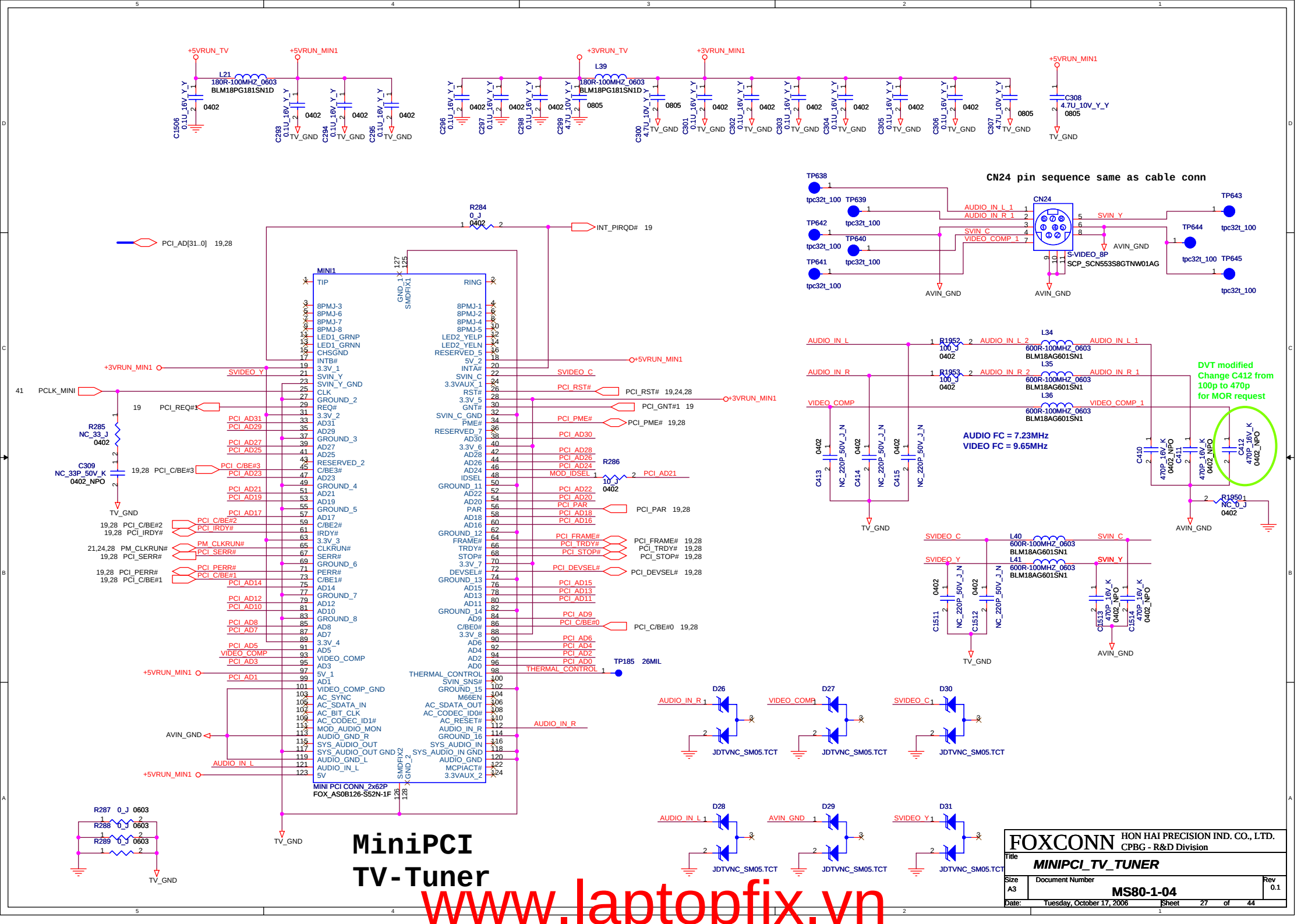
FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	HWMONITOR/FAN/HWPROTECT	
Size A3	Document Number MS80-1-04	Rev 0.1
Date: Tuesday, October 17, 2006	Sheet 26 of 44	



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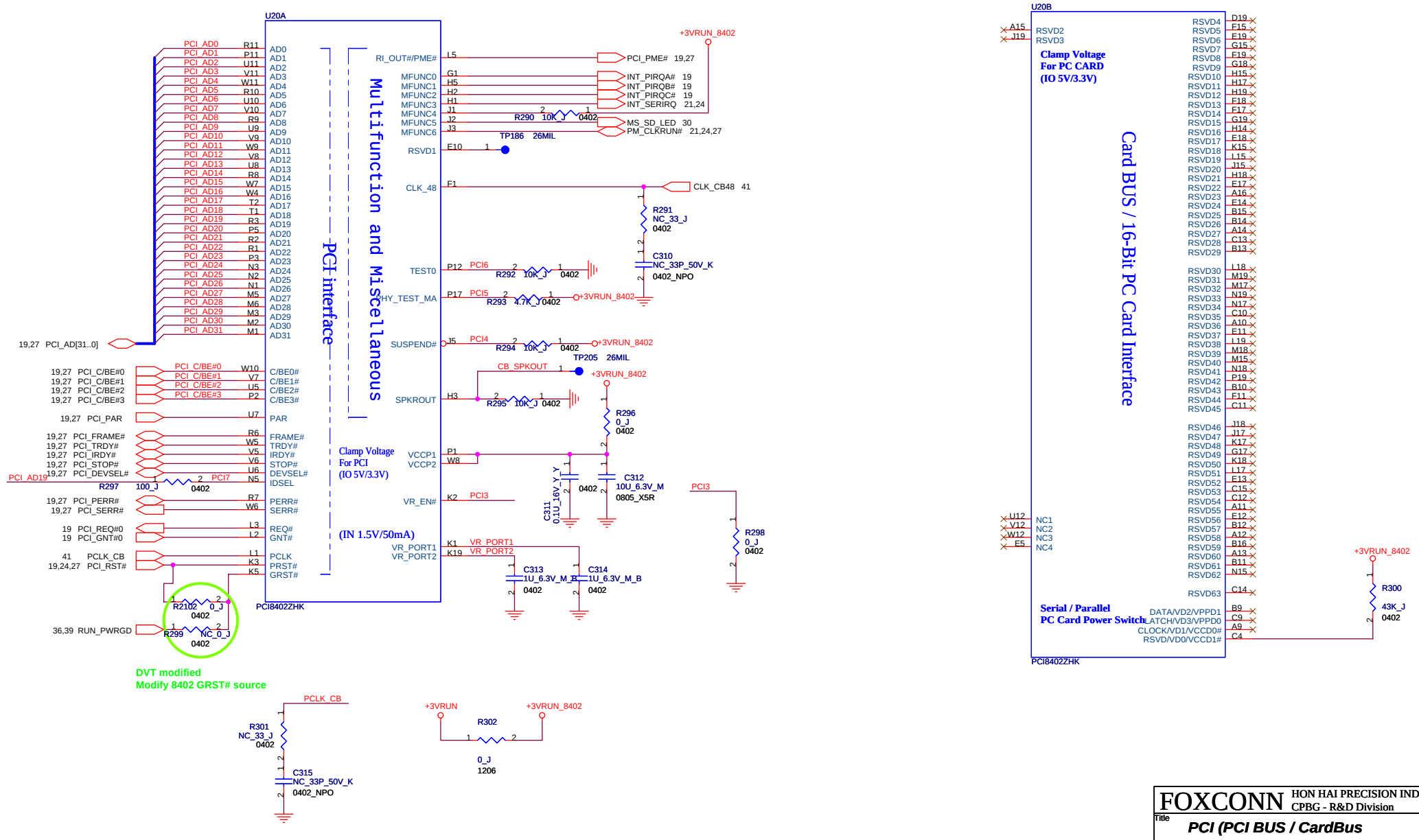

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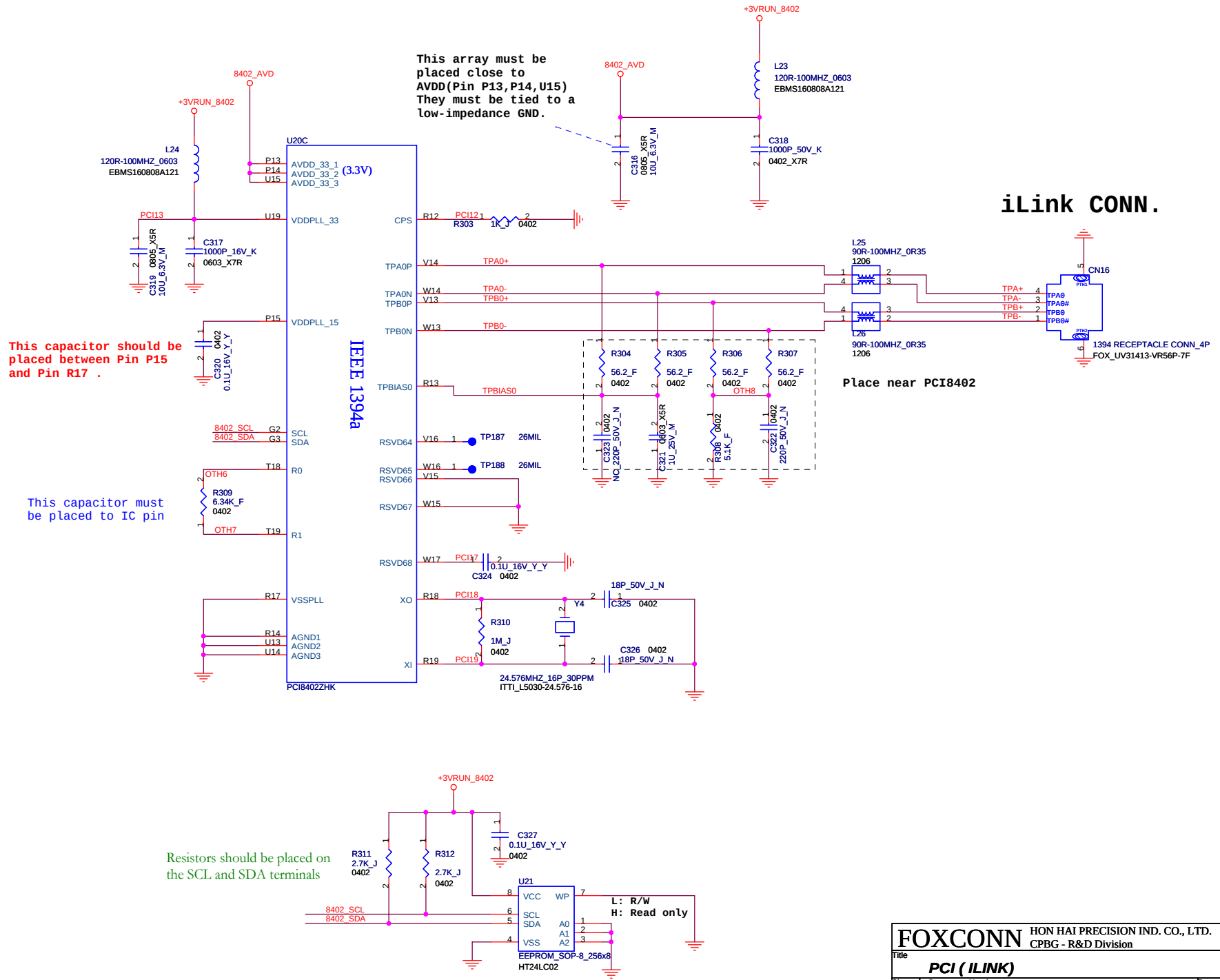

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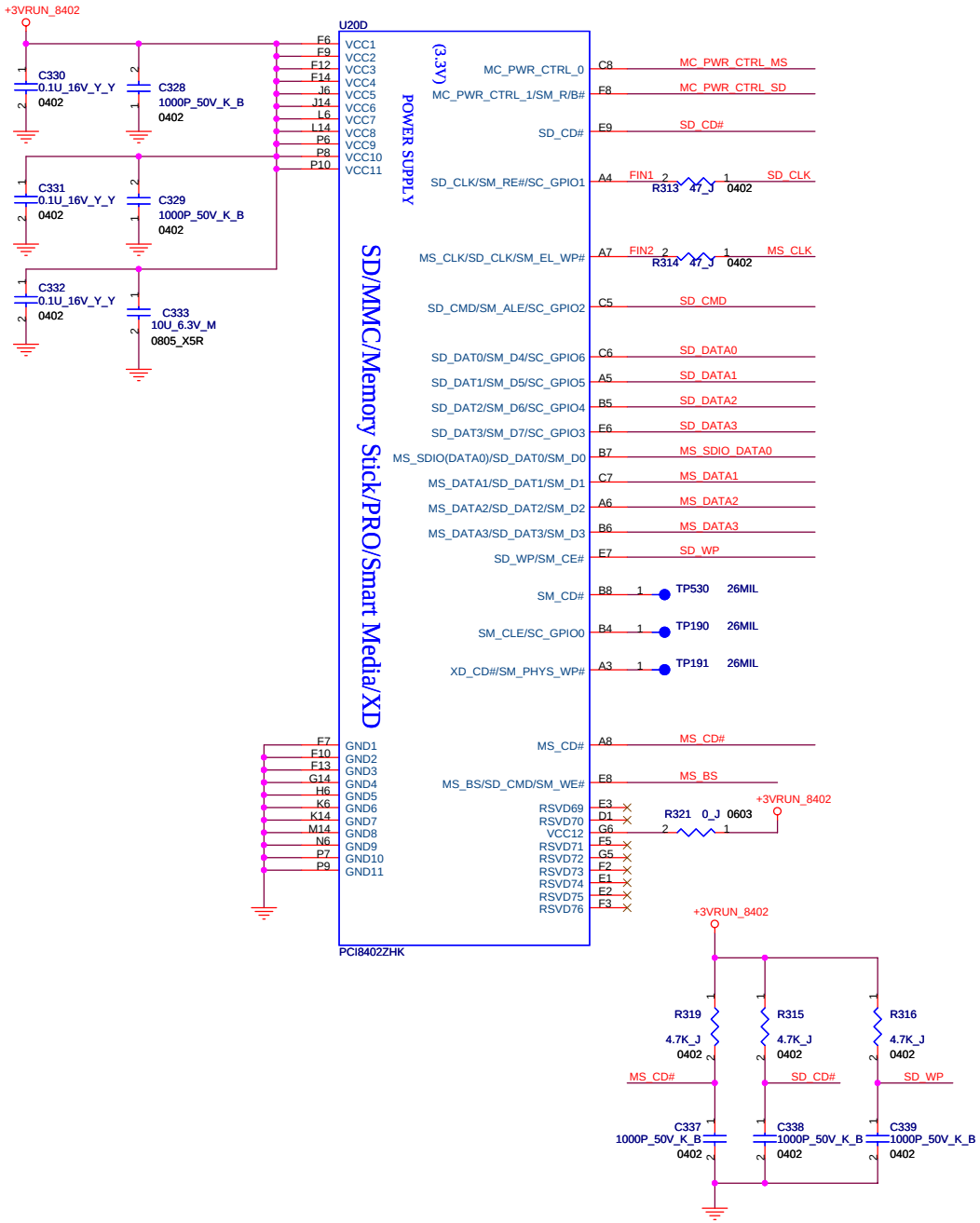
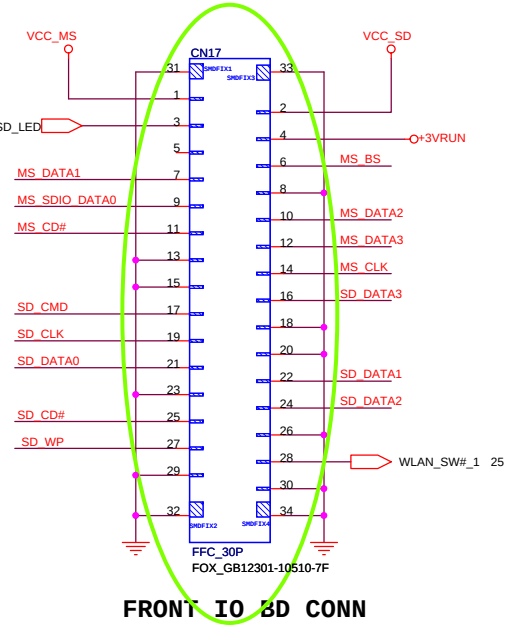
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title: PCI (ILINK)

Size: A3 | Document Number: MS80-1-04 | Rev: 0.1

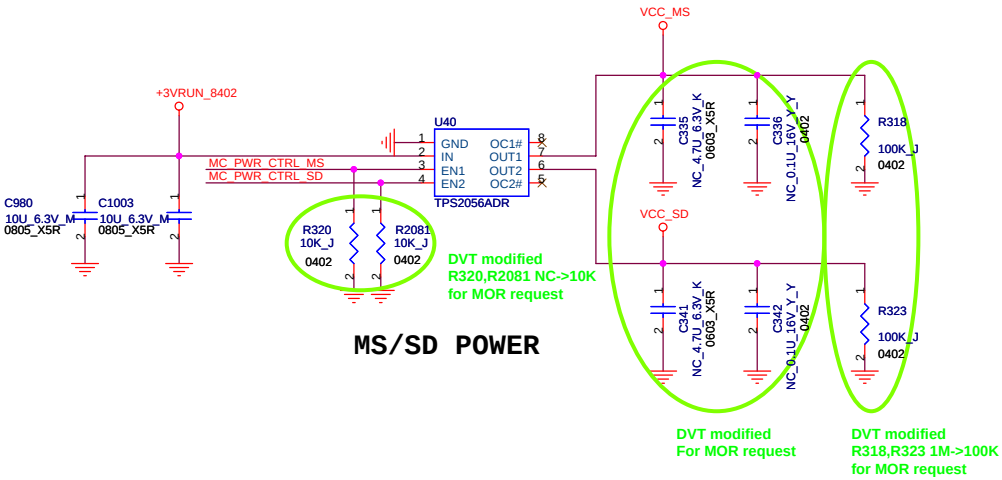
Date: Tuesday, October 17, 2006 | Sheet 29 of 44





FRONT IO BD CONN

DVT modified
For ME request



MS/SD POWER

DVT modified
R320,R2081 NC->10K
for MOR request

DVT modified
For MOR request

DVT modified
R318,R323 1M->100K
for MOR request

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Title	PCI (MS-DUO/SD)	
Size A3	Document Number MS80-1-04	Rev 0.1
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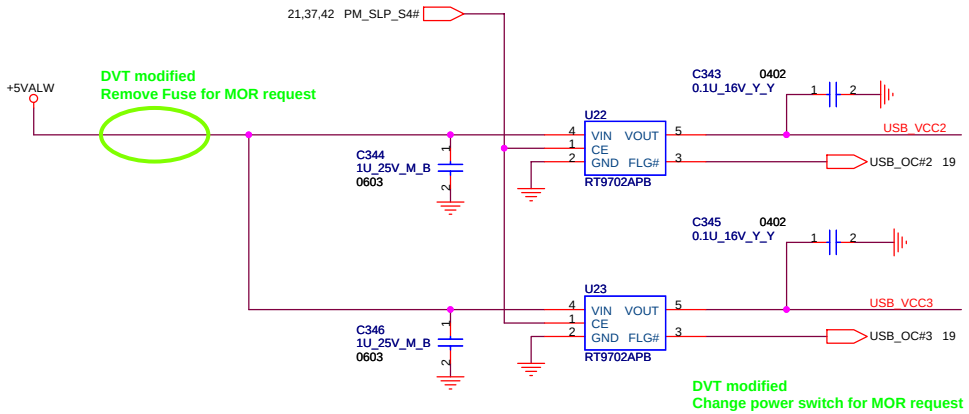
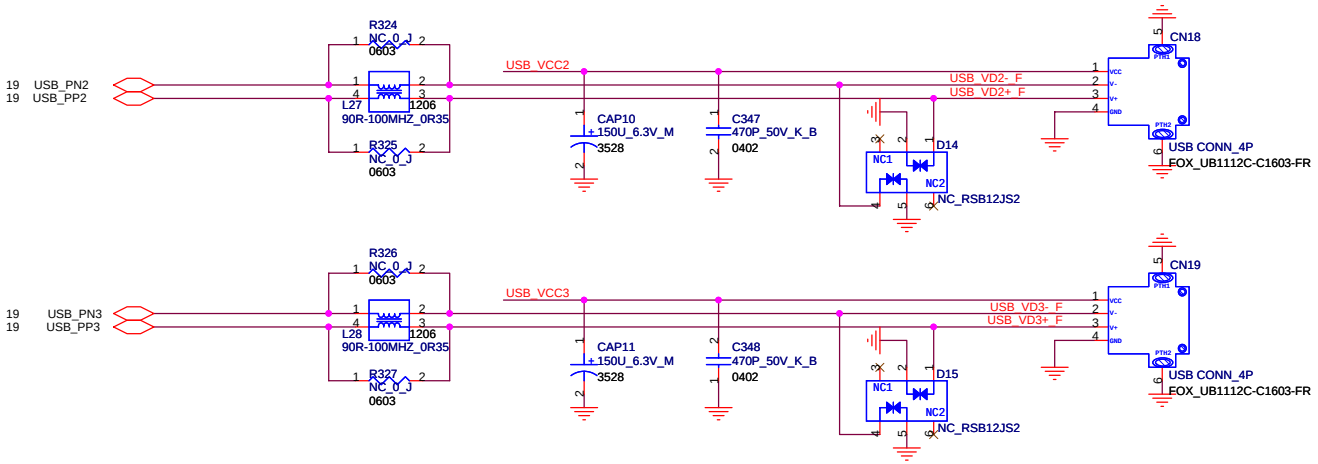


USB Power Switch



USB

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title: *USB2.0*		
Size: A3	Document Number: MS80-1-04	Rev: 0.1
Date: Tuesday, October 17, 2006	Sheet 31 of 44	

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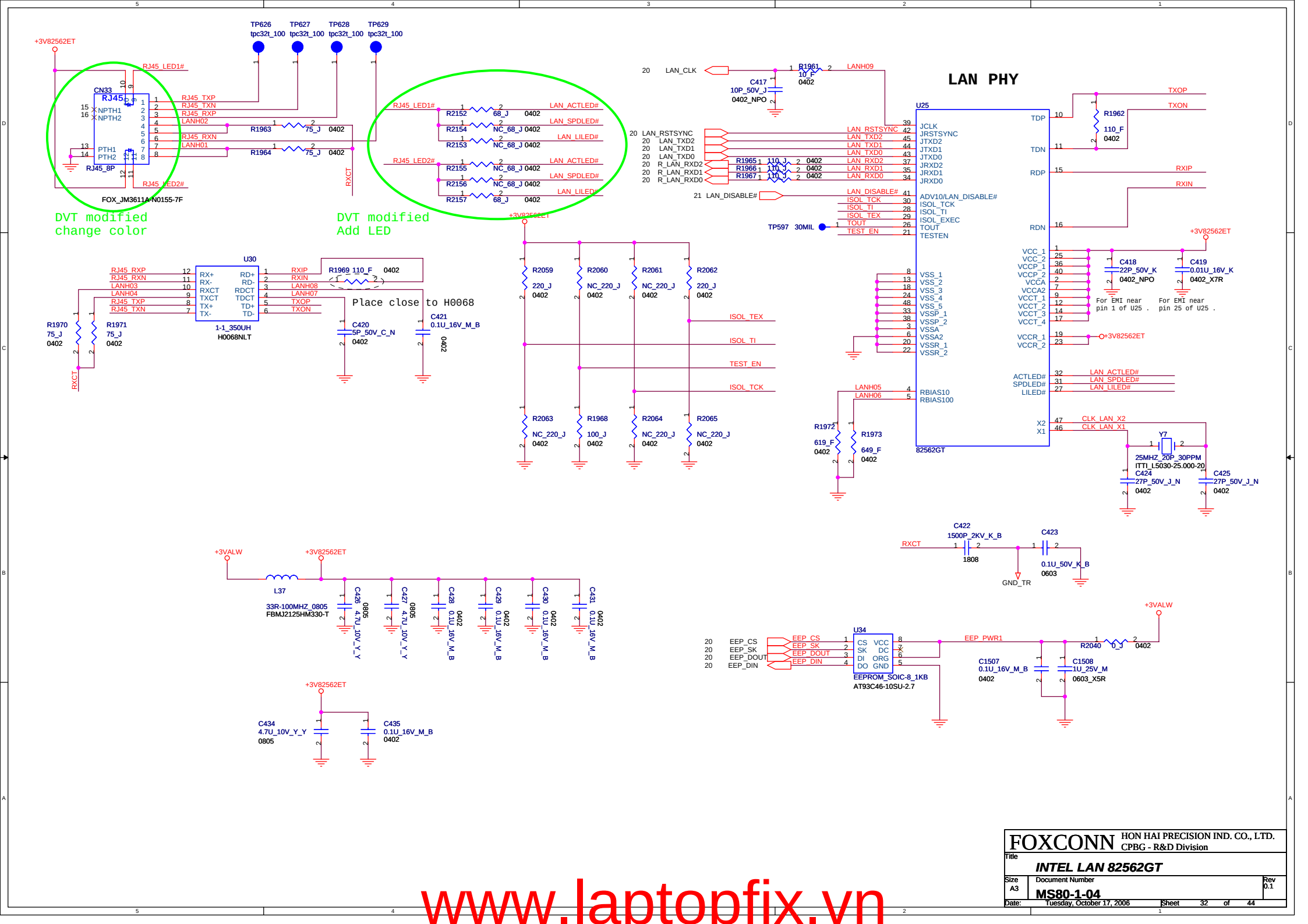
LAN PHY
DVT modified
change color
DVT modified
Add LED
Place close to H0068
FOX_JM3611A-N0155-7F
RJ45_8P
1-1_350UH
H0068NLT
82562GT
EEPROM_SOIC-8_1KB
AT93C46-10SU-2.7
33R-100MHZ_0805
FBMJ2125HM330-T
25MHZ_20P_30PPM
ITTI_L5030-25.000-20
For EMI near pin 1 of U25 .
For EMI near pin 25 of U25 .
FOXCONN
HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division
INTEL LAN 82562GT
MS80-1-04
Tuesday, October 17, 2006
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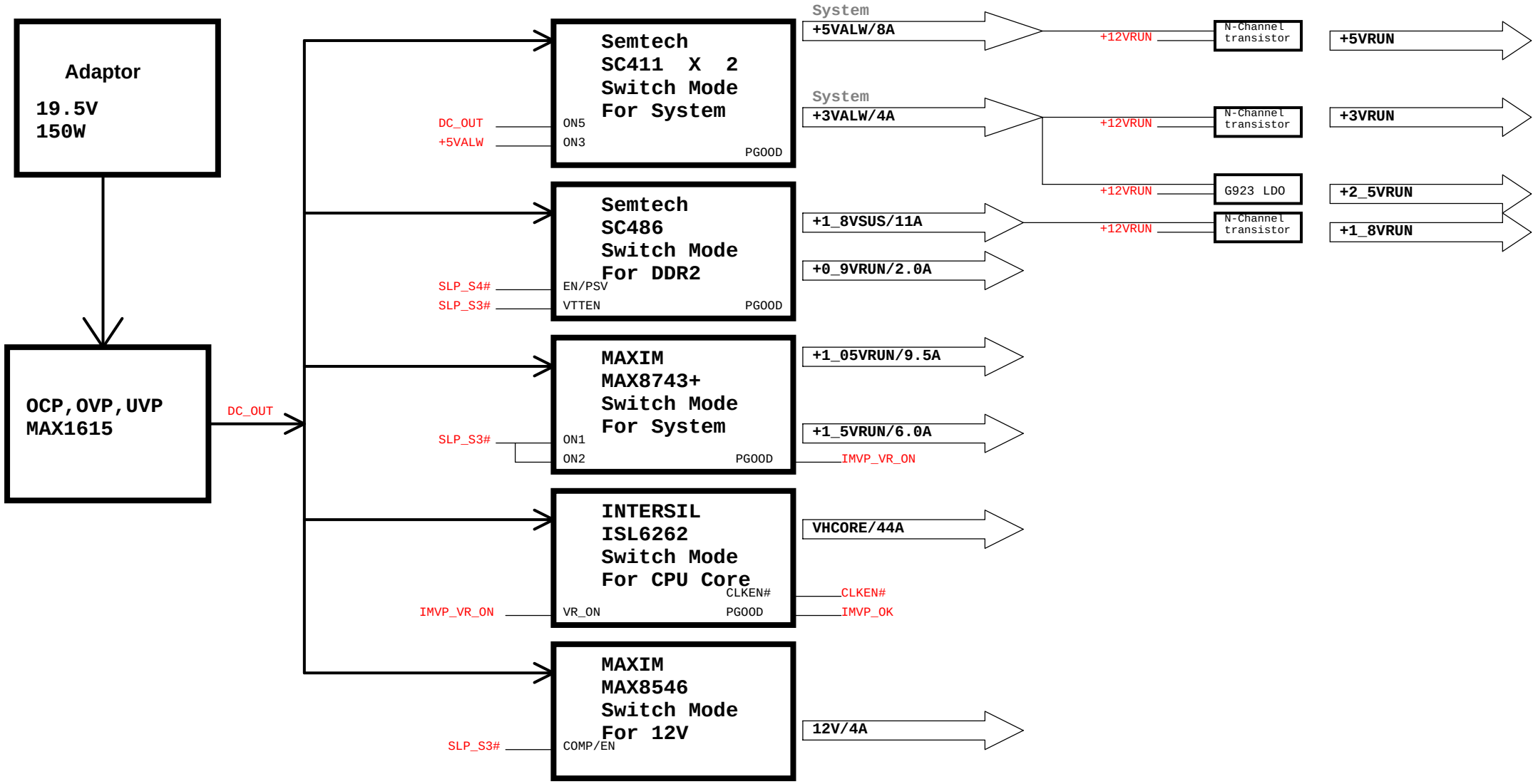

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	*Power Design Diagram-ZG*	
Size A3	Document Number MS80-1-04	Rev 0.1
Date: Tuesday, October 17, 2006	Sheet 33 of 44	

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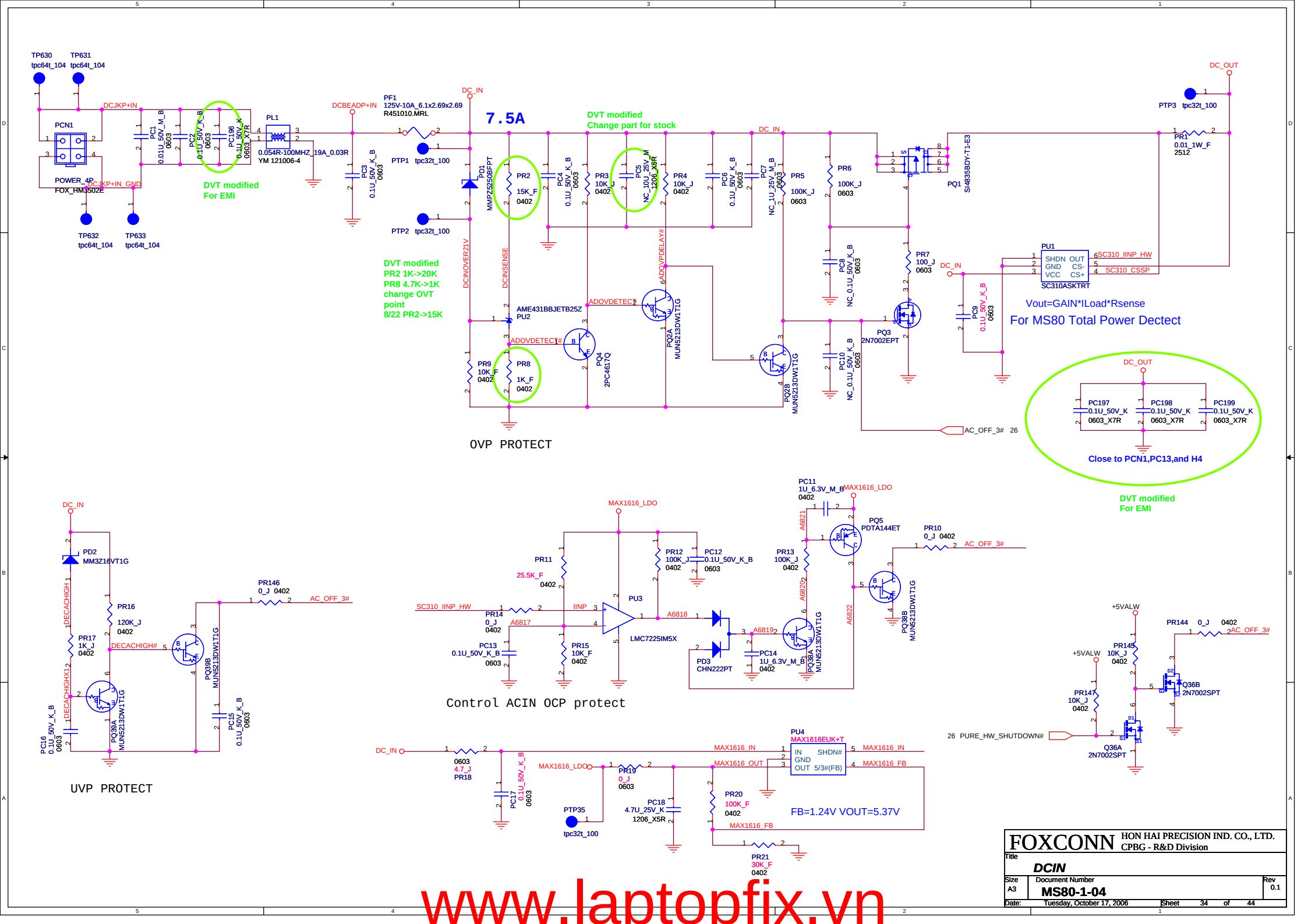

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FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	DCIN	
Size A3	Document Number MS80-1-04	Rev 0.1
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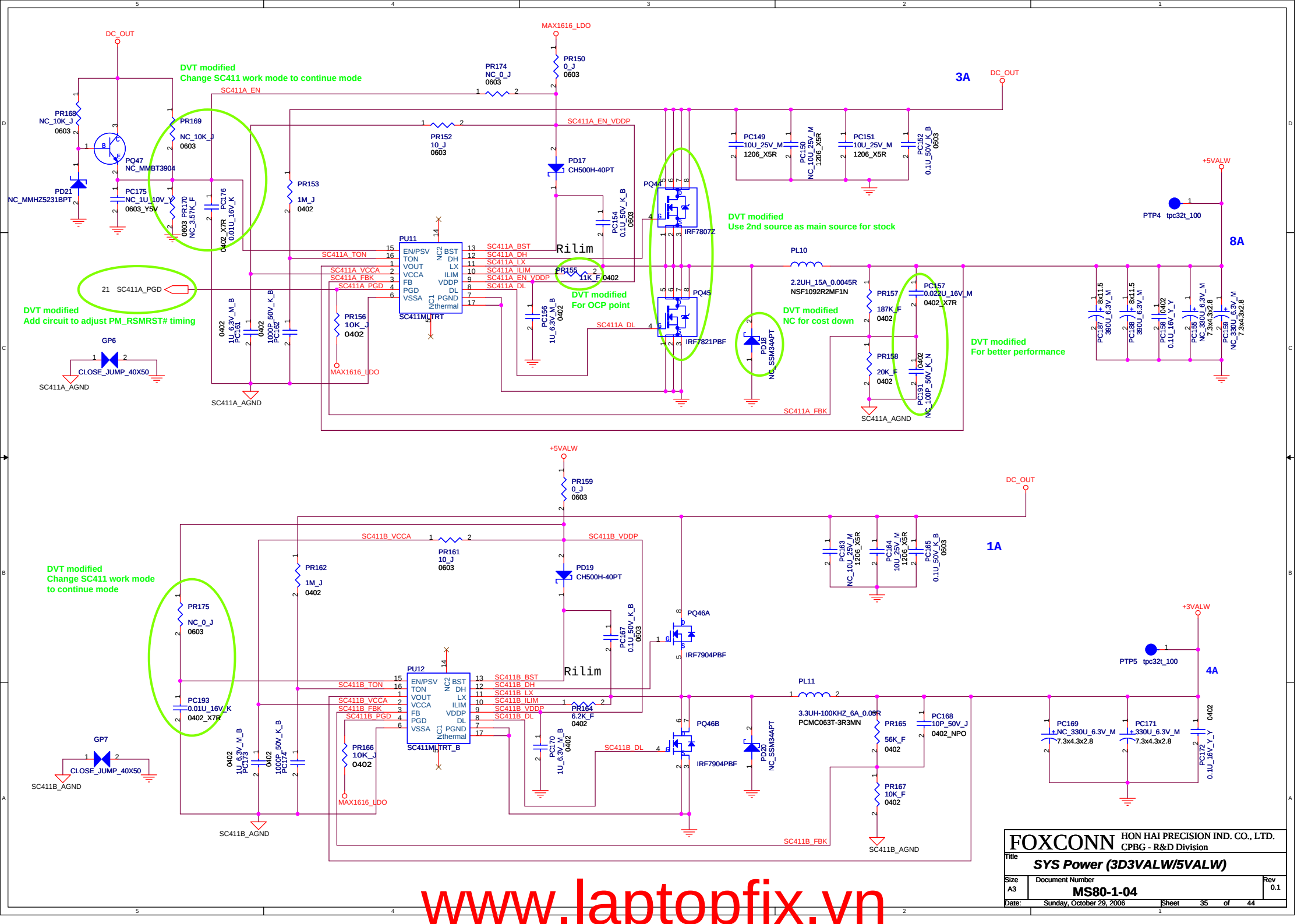

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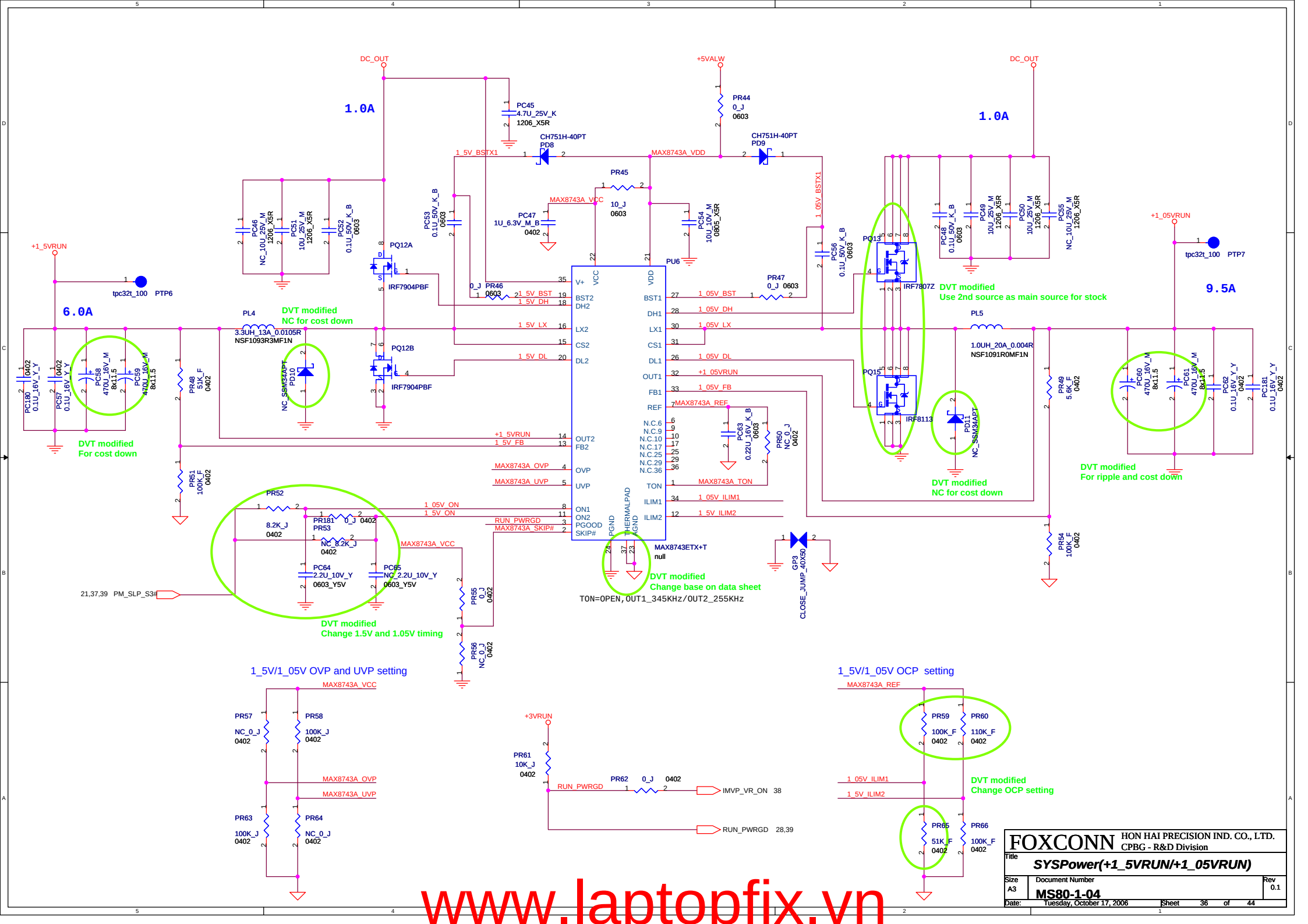

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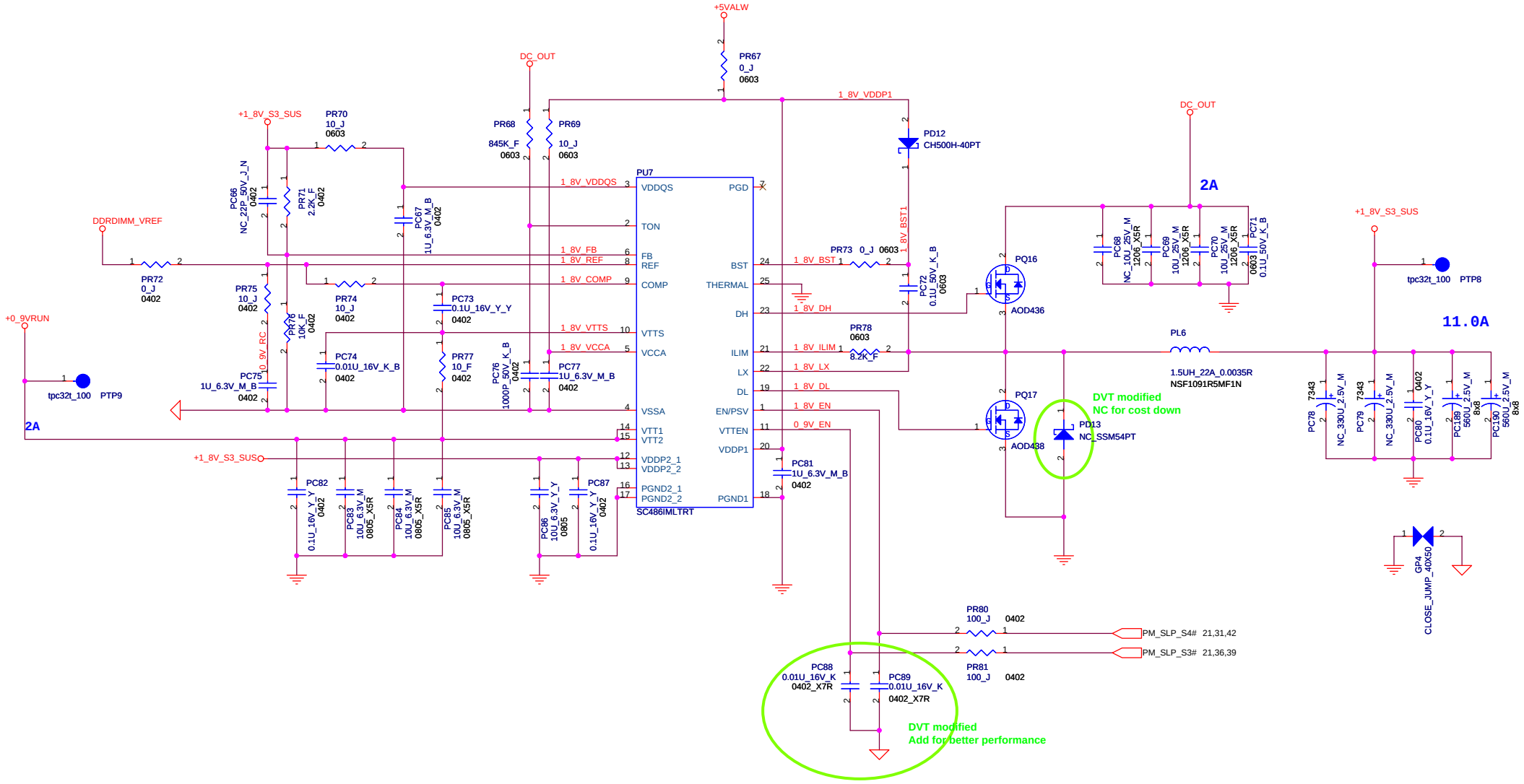

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	DDR2Power(+1_8V_S3_SUS/+0_9VRUN)	
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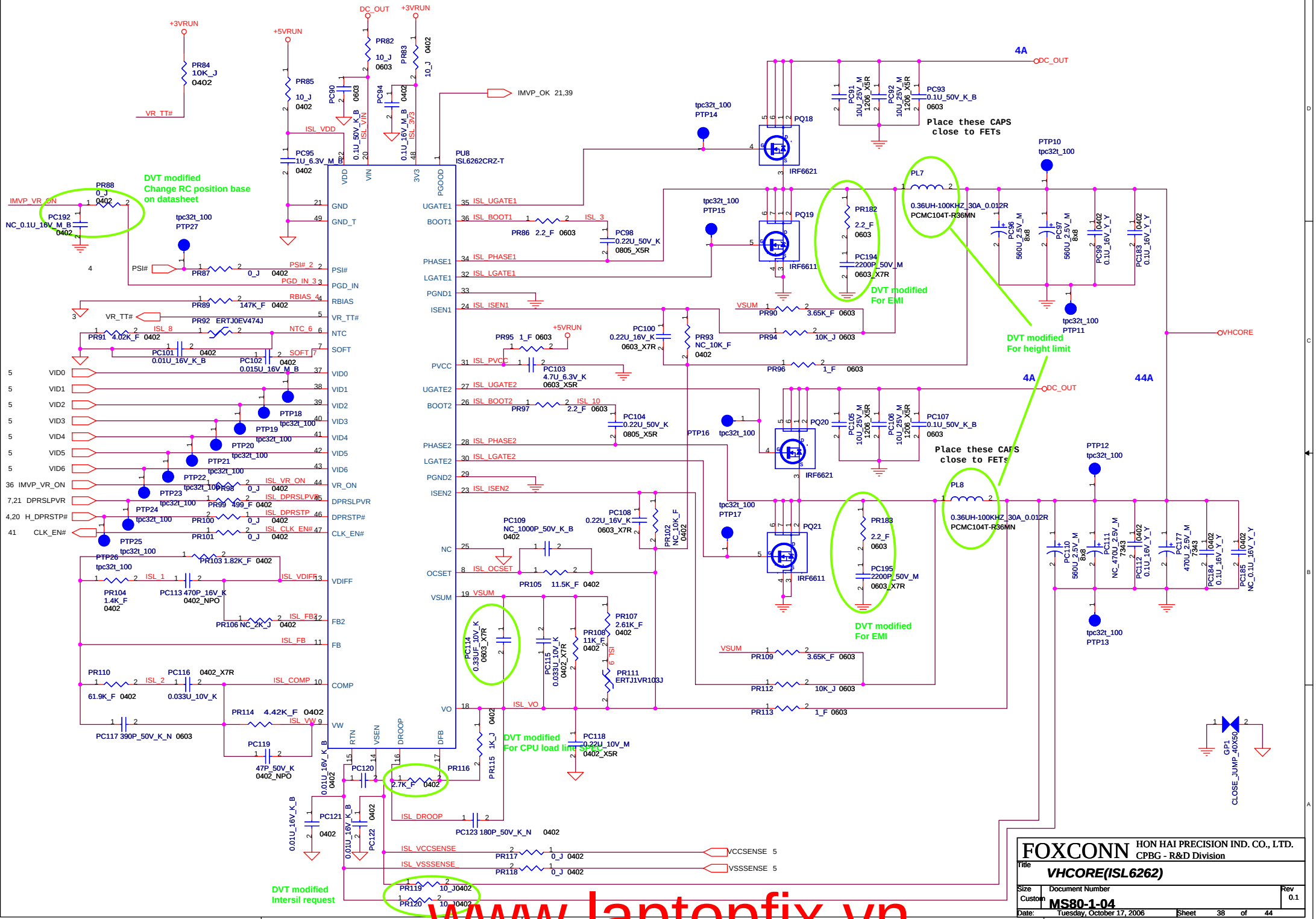

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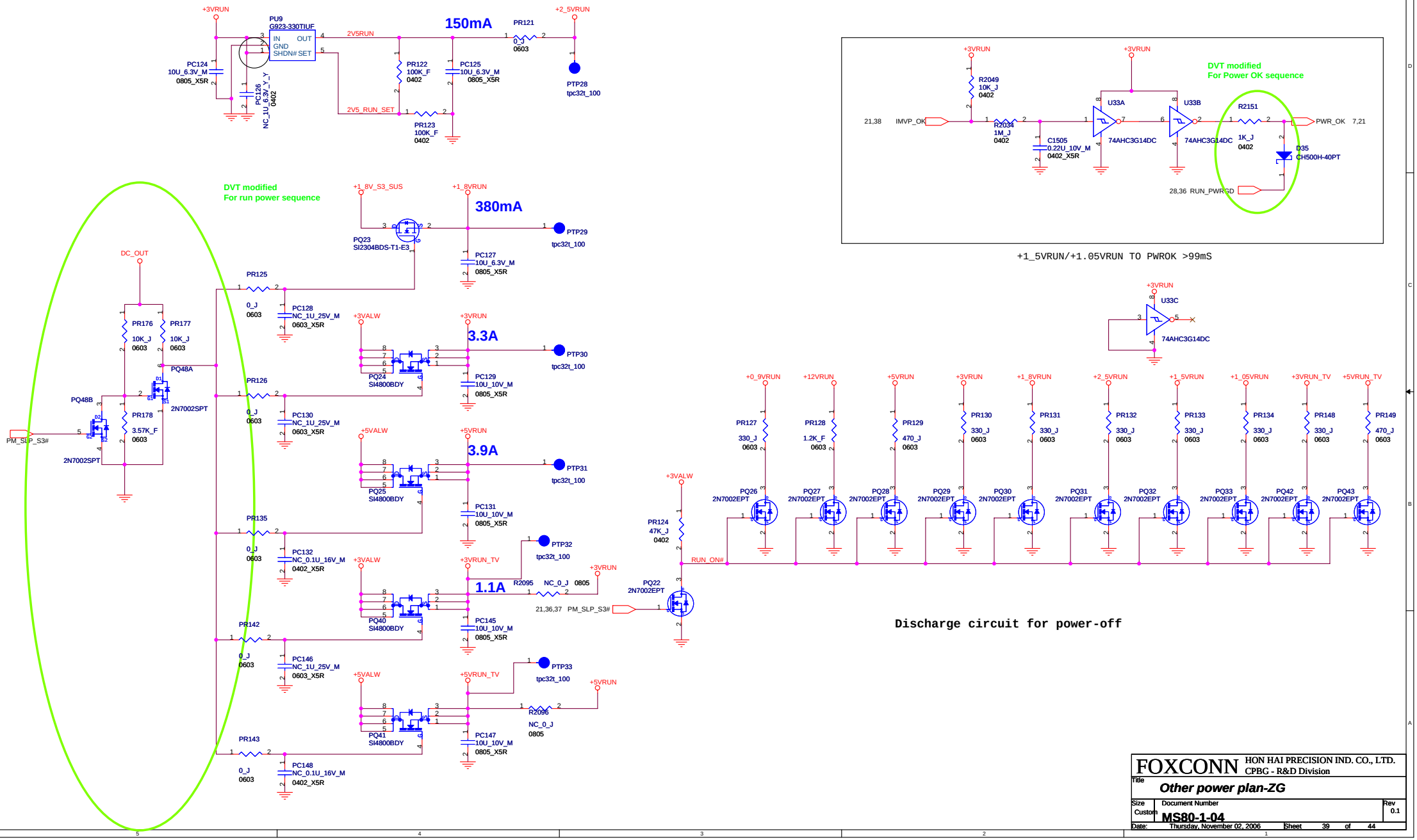

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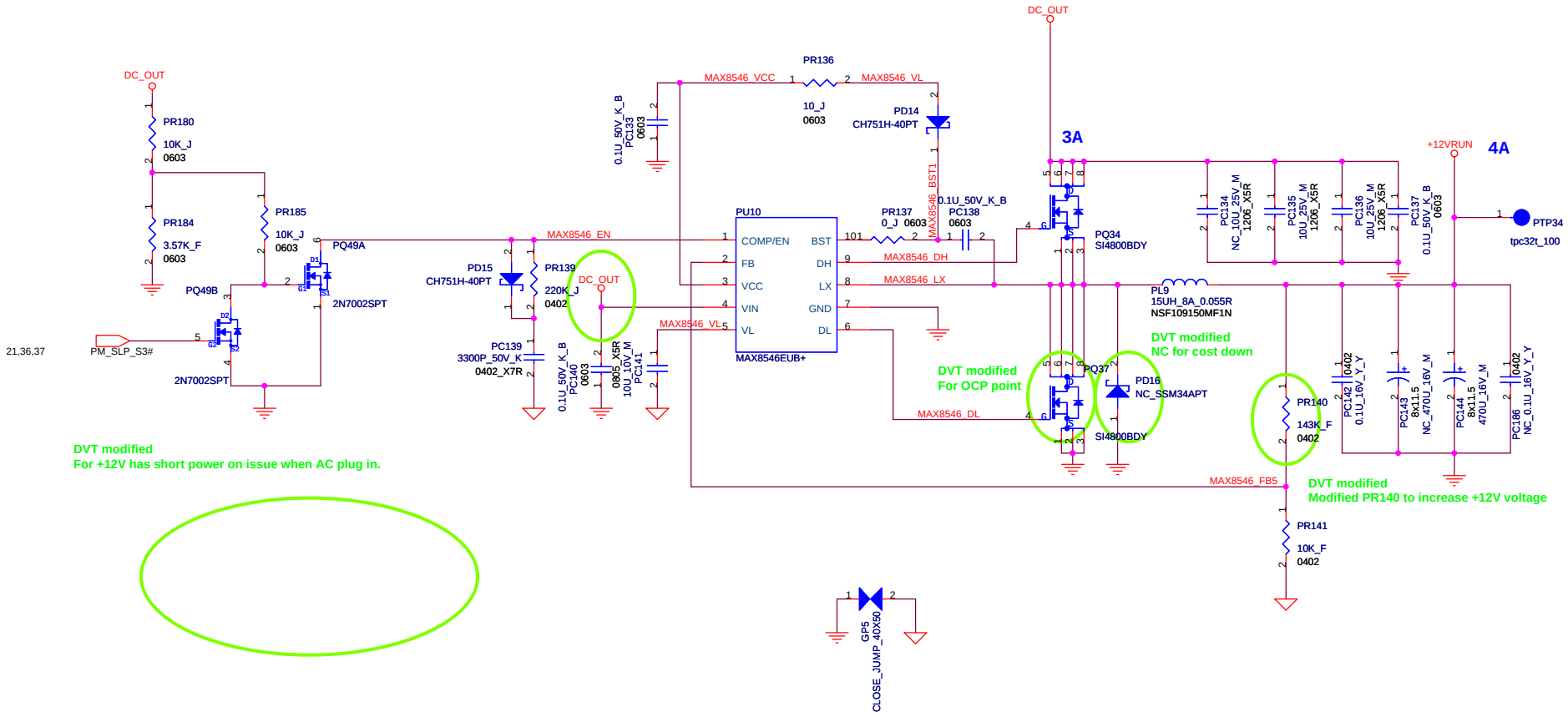

FOXCONN	HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division	
Title	*+12VRUN POWER(MAX8546)*	
Size A3	Document Number **MS80-1-04**	Rev 0.1
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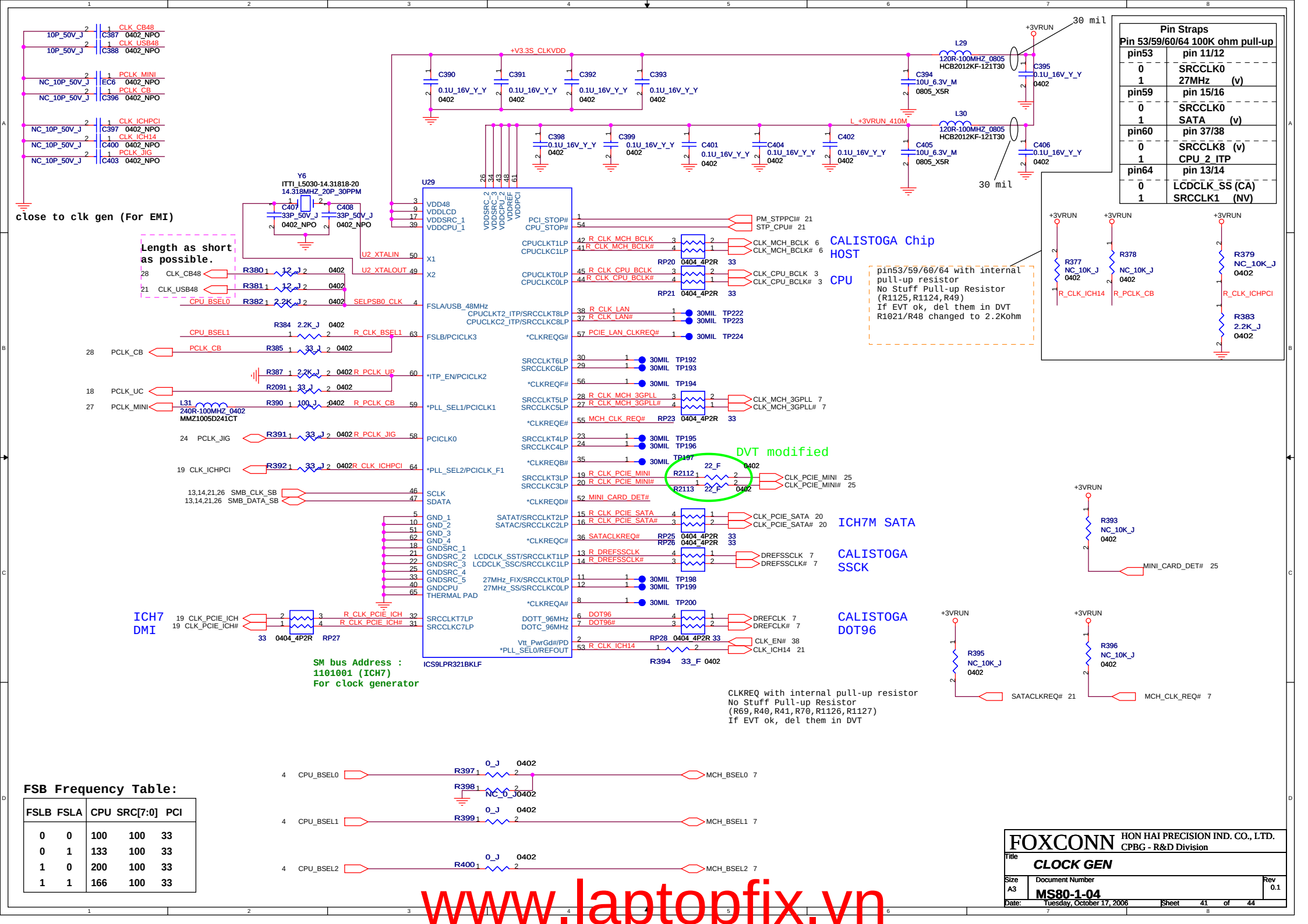

Pin Straps	
Pin 53/59/60/64 100K ohm pull-up	
pin53	pin 11/12
0	SRCCLK0
1	27MHz (v)
pin59	pin 15/16
0	SRCCLK0
1	SATA (v)
pin60	pin 37/38
0	SRCCLK8 (v)
1	CPU_2_ITP
pin64	pin 13/14
0	LCDCLK_SS (CA)
1	SRCCLK1 (NV)

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
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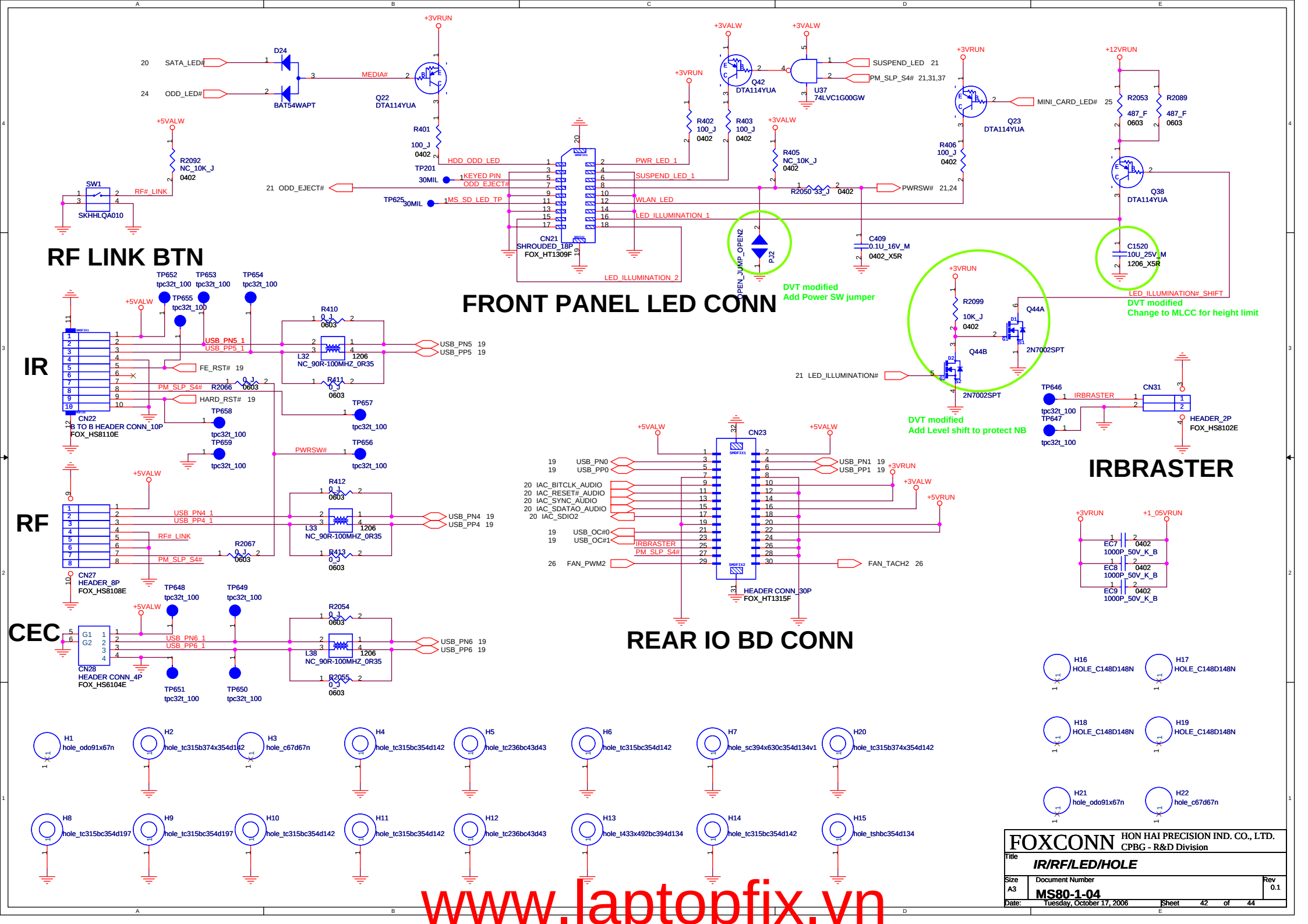
RF LINK BTN
FRONT PANEL LED CONN
IR
RF
CEC
IRBRASTER
REAR IO BD CONN
DVT modified
Add Power SW jumper
DVT modified
Change to MLCC for height limit
DVT modified
Add Level shift to protect NB
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CPBG - R&D Division
IR/RF/LED/HOLE
MS80-1-04
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HISTORY
REV.: 0.10 (2006/07/18)

0718
P19,P21 change ODD_EJECT# from GPIO5 to GPIO10
P21 change SUSPEND_LED# from GPIO8 to GPIO25
P21 delete GPIO9 SB_RST#
P19 add GPIO17 as DDR_ALERT#

change thermal policy
P34,P3 delete PR173,Q35A,Q35B,PR171,PR172 and connect OVT_HM# to VR_TT# by adding R2087
P26,P21 add R2088,Q41,U41,C1516 and HM_SHUTDOWN_CTL(GPIO26) for thermal policy

P27 add R287,R288,R289 for TV_GND

0719
P13-15 swap DDR signals for layout]
P42 change R2052,R2053,R2082,R2083 from 0ohm to 150 ohm
P42 connect CN22,CN27 pin4 to PM_SLP_S4# for anykey wake up in S3
P42 update H4,H5,H7,H10,H11,H15 for ME
P42 change R401,R407,R406 to 100ohm
P39 change PC132,PC148 to 0.1u_16v
P39 change PR148 to 330ohm
P21 change SUSPEND_LED from GPIO 25 to GPIO27
P42 add Q42 and change U37 to 74LVC1G00GW for SUSPEND LED

0720
P42 delete R2052,R2082,R2083,Q40 ;add CAP16 for ILLUMINATION LED
P38 reserve PC177 for VHCORE
P31 change F3 to PTTC SMD1206P110TF
P26 change D19 from 1N4148 to CH500H-40PT for Vf

0721

Vendor review
P17 (1)delete D21,D22,R2018 and short,change Q31 to UPA672 for avoid capacitance effect 500pf for DDC bus
(2)NC U5,U38,U39 pin3 for capacitance concern
(3)change R110,R115,R120,R122 to 390 ohm
P18 (1)R2023 changed from 1K to 3K
(2)Q33A,Q33B changed from 2n7002 to UPA672T for capacitance concern

BOM modify for common parts
P26 U41 change to 74AHC1G08GW.125
P21 change Q25 to MMBT3904(SECOS)
P26 change Q28,Q39 to MMBT3904(SECOS)
P35 change PQ47 to MMBT3904(SECOS)
P40 cahnge PC139 to 3300P YAGEO
P39 change R2034 to 10M_J TA-I
P21 change R1956 to 2.2k_J 0402
P17 R2007,R2008 change to 27K_F 0603
P17 R104,R105 change to 1.82k_F 0402
P3 change R2 to 150_F
P3 update R1
P15 update R77,R78,R79,R80
P20 update R163,R161

P37 delete PR79 for duplicate with GP4
P42 change R2053 to 931_F and add R2089 for power rating
P6-12 change U2 to 12-0G82945-A300

0724
P41,P18 add R2090,R2091 for 33M clk input of microp from clk gen path
P40 dummy PC134,PC143 by power team
P42 swap L38,L32,L33(mirror veritical) for Layout
p35 change PL11 to 4.7U-100KHZ_5.5A_0.04R(CYNTEC)
P28 change U20A pinJ2 to High active
P42 MS/SD LED move to FIO BOARD, CN21 pin 11 change to test pad
P25 connect WLAN_SW# to CN11 pin20
P18 connect P1.3 to INT0# by customer from vendor suggestion
P26 change CN13(fan) define to pin1~4 +5VRUN,TACH, GND,PWM by thermal team9(compatible with old models)

0725
P35 change PD19,PD20 to SSM34APT and dummy PD20 by power team
P24 update CN17 symbol and vendor P/N
P42 add SW1,R2092 for RF LINK BUTTON
P21 GPIO30 connect to HARD_RST#,GPIO 31 connect to FE_RST#

0726
P17 add C1517,D21 by vendor suggestion
P19 GPIO29 connect to WLAN_SW# for TE
P42 mount CN28

0727
P21 GPIO7 connect to OVT_HM#,NC R2076 for OS shutdown
P38 dummy PC111,mountPC177 by power team
P37 change PC78,PC79 to 560U_2.5V_M (lower hight parts) for layout
P35 change PC169,PC171 to 330U_6.3V_M (NEC) (lower height) for layout
P36 Add PC181 for power ripple noise (for dip caps)
P38 Add PC183,PC184,PC185 for power ripple noise (for dip caps)
P40 add PC186 for power ripple noise (for dip caps)

0728
P38 change PC108 to 0.22u_16V_K 0603 size by power team
P35 change PC155,PC159,PC160 to 330U_6.3V_M ,SMD by power team(semtech)
P37 change PC78,PC70 to 330U_2.5V_M by power team(semtech)
P36 change PQ12 to IRF7904(PQ12A),change PQ14 to IRF7904(PQ12B)

0731
wlan power ldo
(1)add C1518,c1519,U42,by customer request for Intel module susceptibility to ripple noise
(2)MINI_PCIE_+3_3V change to +3VRUn source
wlan led
P25 add Q43,R2093 by customer for avoid LED_WLAN# abnormal behavior from wlan module
P35 remove PC160 by power team

0801
P35 add PC191 by power team(vendor suggestion)
P36 NC PR50 by power team
P38 add PC192 by power team
P35 change PR155 to 16K_F,change PR164 o 6.2K_F for ocp
P36 change PR59 to 110K_F ,PR60 to 68K_F for OCP
P42 add EC7,EC8,EC9 for cpu,nb clk cross moat
P39 add R2095,R2096 for cost down
P25 (1)add R2094 for cost down,
(2)add R2097 by customer request
P17 change R2008 to 100K_J by customer

0803
P18 add R2098 by vendor suggestion
P42 change H13,H14 by ME

0804
P17 change CN29 to HS8102 cause of HS6102 not available

0816
P40 change PR140 from 140K to 143K to increase +12V voltage
P38 change PR119,PR120 from NC to 10ohm for intersil request
P30 change R320,R2081 from NC to 10K,change R318 from 1M to 100K for MOR request to avoid SD/MS issue
P34 change PR2 from 1K to 20K,change PR8 from 4.7K to 1K to change OVP point
P35 change PR155 from 16K to 11K for adjusting OCP point
P36 change PR59 from 110K to 100K,change PR65 from 100K to 51K PR60 from 68K to 110K for adjusting OCP point
P40 change PQ37 from SI4892DYT to SI4800BDY for OCP
P42 add Q44 for level shift of LED_ILLUMINATION#
P40 change PD16 from SSM34APT to NC for cost down
P36 change PD10,PD11 from SSM34APT to NC for cost down
P37 change PD13 from SSM54PT to NC for cost down
P35 change PD18 from SSM34APT to NC for cost down

0817
P24 CN7 Pin49,50->NC;Pin43,44->GND; for ODD can not detect issue
P18 R2090->NC,C200,C202,Y1->Mount; for HDMI no audio issue
P35 PQ44,PQ45 use 2nd source as main source for stock
P36 PQ13,PQ15 use 2nd source as main source for stock

0822
P35 PR169,PR170 change to NC to change SC411 work mode to continue mode
P34 PR2 20K->15K for OVP point change

0905
P42 Add PJ2(Power SW jumper for TE request
P19 Cancel BIOS socket(U31) and add BIOS chip
P28 PCI8402 GRST# signal change to PCIRST# for can not program GUID issue
P36 Change 1.5V and 1.05V timing for power good glitch issue
P21,35 Add circuit to adjust PM_RSMRST# timing
P26 Change HW monitor power to 3VALW

0918
P35 PC176 change from 0.1u to 0.01u for Mode change to continue
Add PR175(NC_0ohm) and PC193(0.01u) for mode change
Change PC157 to 22nF and NC PC191 for better performance
P37 Add PC88,PC89 for better power performance
P38 Change PR88,PC192 position base on datasheet
Change PR116,PC114 for CPU load line SPEC
Change PL7,PL8 for height limit
P39 Change enable circuit or run power sequence
P40 Change for +12V power sequence
P36 Change PC60,PC61, add PC147 for ripple and cost down
Change PC58,PC59 for cost down
ALL input 1210 MLCC(PC5,149,150,151,163,164,46,51,49,50,55,68,69, 70,91,92,105,106,134,135,136) change to 1206 with 1210 pad

0919
P31 USB power switch changed for MOR request

0921
P42 Del CAP16 and Add C1520 for height limit

0925
P19,21,24 Add X-BUS function on JIG connector

0926
PCN1,CN32,CN29,CN24,CN25,CN13,CN28,CN31,CN22 Add test point
P25 Modified WLAN connector and terminator type for mechanical
P16 CN3 change D-SUB conn color for ME requirement
P32 CN25 change RJ45 conn color for ME requirement
P24 CN32 change to HM4202E-DW for ME requirement

0927
P27 CN24 change to SCN553S8GTNW01AG for ME requirement

0928
H2, H7, H13, H15, H20 change screw hole footprint for ME requirement

1002
P37 PC88 pin2 and PC89 pin2 change connection to GND_SC486 in order to improve 1.8V unstable for power requirement.
P38 Remove PR182,PR183,PR184,PR185 to release layout space.
P41 Change CLK_PCIE_MINI damping resistor from 33ohm to 22ohm for signal quality improvement.

1004
P17 Modify for sil1390 and sil1392 co-design.
P18 Add R2138,R2139,R2140,R2141 to connect I2C bus for FAE recommended.
P39 U33 change to Schmitt trigger part for MOR requirement.
P40 Remove PR179,PR180,add 12V_EN for power requirement.
P40 Del MAX8546_DC net and connect DC_OUT for PU10 VIN.

1005
P17 Modified Sil139X circuit
P21 Add D35 on PowerOK signal for ICH sequence timing

1009
P17 Modified Sil139X circuit
P34 Add PC196,197,198,199 for EMI
P38 Add PR182,PR183 PC194,PC195 for EMI

1010
P24 ODD CONN(CN7)change to FFC and pin swaped for ME
P30 Front IO board CONN(CN7)change type for ME request
C335,336,341,342 change to NC for MOR request

1011
P34 Change DC_IN test point size

1013
P16 CRT CONN(CN3) pin10 connect to GND according to SONY SPEC
P27 C412 change from 100p to 470p for MOR request
P30 R323 change to 100K for MOR request
P31 Remove USB power fuse for MOR request
P39 Add R2151 for PWR_OK sequence

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Title: History

Size	Document Number	Rev
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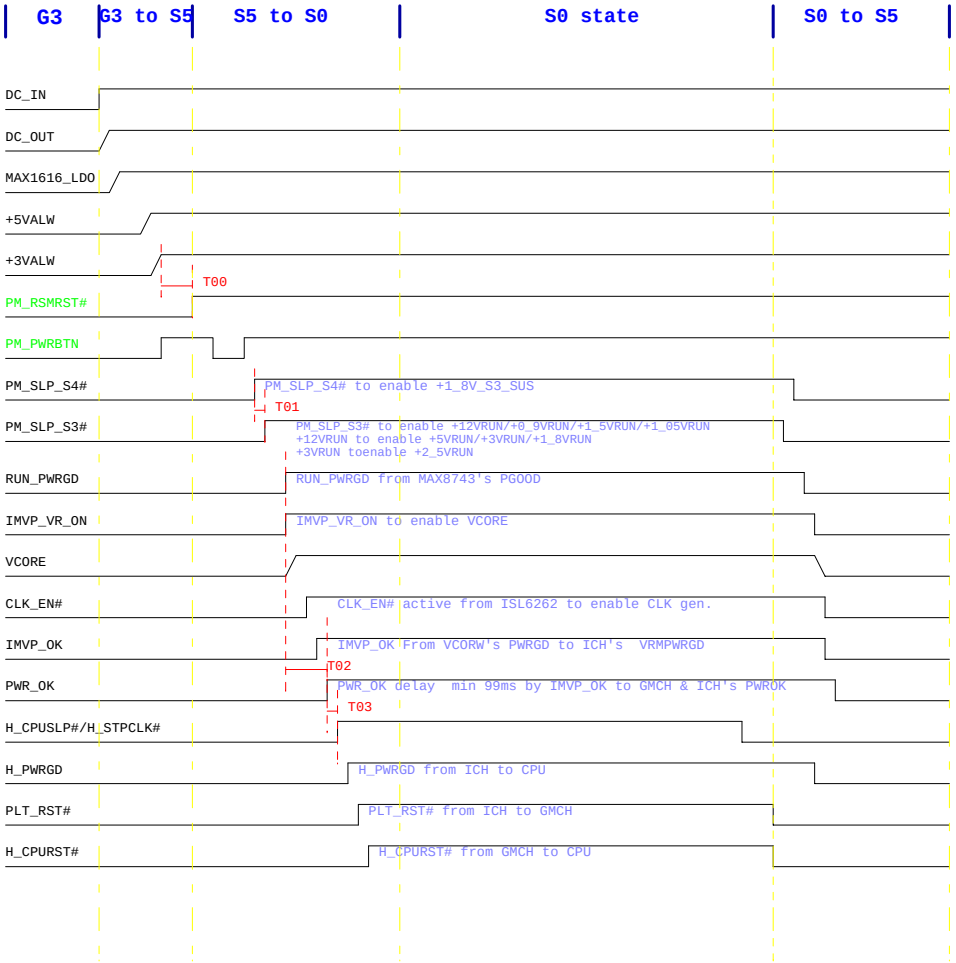
MS80 Power On Sequerce Timing

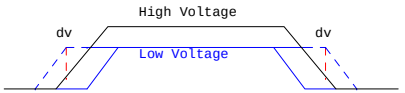
Version : 0.0
Modified date : 8/11/2006



T00 : (Min 10ms) ALW power supply to PM_RSMRST# at least 10ms (Please refer to ICH7 EDS of t204 timing)
T01 : (1 - 2 RTCCLK) PM_SLP4# to PM_SLP3# (Please refer to ICH7 EDS of t234 timing)
T02 : (Min 99ms) RUN_PWRGD to IMVP_OK (Please refer to ICH7 EDS of t214 timing)
T03 : (Max 50ns) PWR_OK active to H_CPUSLP# and H_STPCLK#

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



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Title: Power Sequence

Size: C | Document Number: MS80-1-04 | Rev: 0.1

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