

Schematics Page Index (Title / Revision / Change Date)

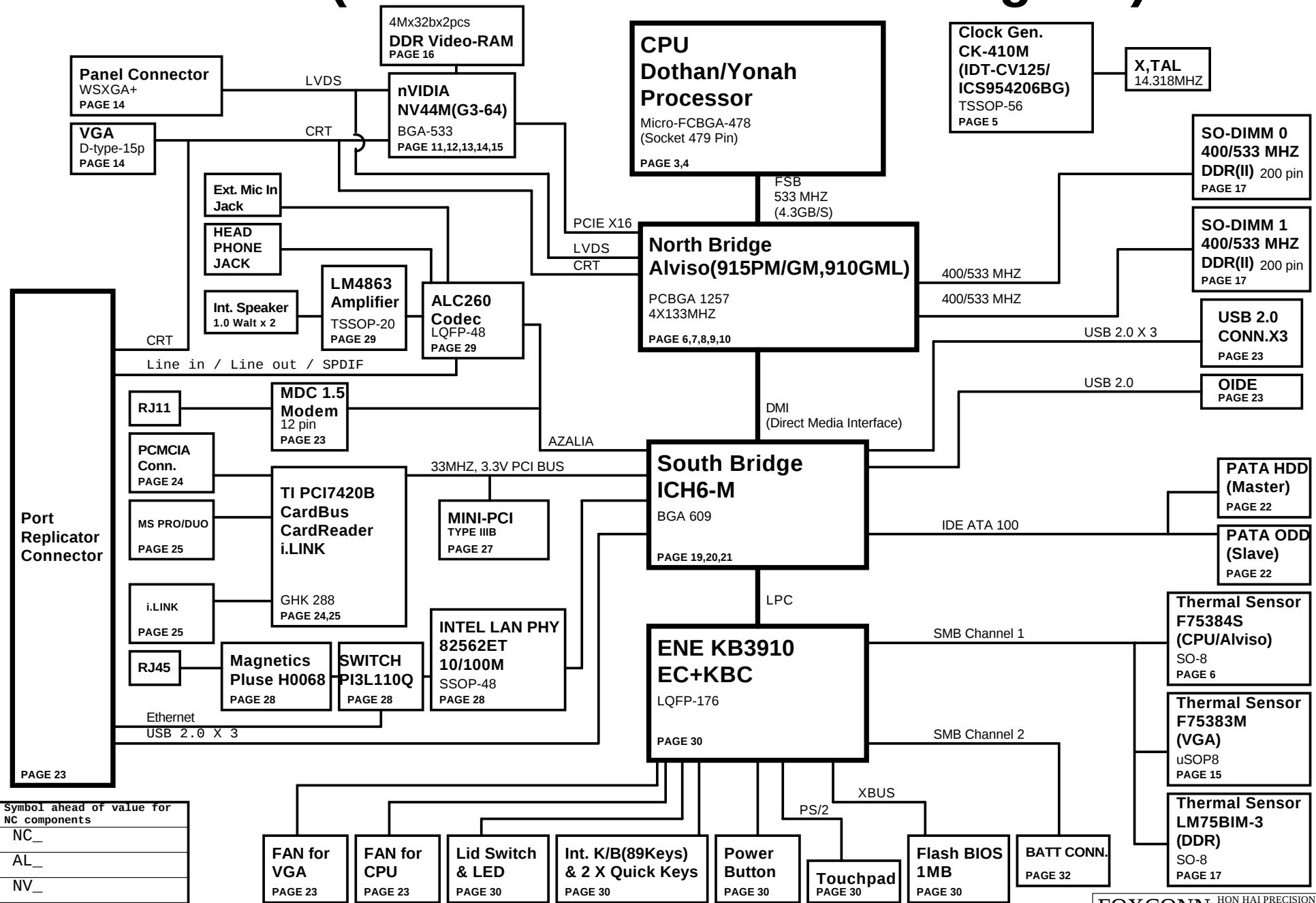
Page	Title of Schematics Page	Rev.	Date	Page	Title of Schematics Page	Rev.	Date
01	Title	0.2	050523	26	SCREW HOLE & PAD	0.2	050523
02	BLOCK DIAGRAM	0.2	050523	27	MINI-PCI	0.2	050523
03	Dothan(HOST BUS) 1/2	0.2	050523	28	LAN (82562ET)	0.2	050523
04	Dothan(Power/Gnd) 2/2	0.2	050523	29	AZALIA CODEC	0.2	050523
05	CLOCK GEN(CK-410M)	0.2	050523	30	KB3910 KBC	0.2	050523
06	Alviso (HOST) 1/5	0.2	050523	31	Power design diagram	0.2	050523
07	Alviso (VGA,DMI) 2/5	0.2	050523	32	DCIN&Charger	0.2	050523
08	Alviso (DDR) 3/5	0.2	050523	33	D/D Power	0.2	050523
09	Alviso (POWER) 4/5	0.2	050523	34	1.8V/0.9V_1.5V/1.05V	0.2	050523
10	Alviso (VSS,NCTF) 5/5	0.2	050523	35	CPU_Vcore	0.2	050523
11	VGA(nVIDIA NV44M) 1/5	0.2	050523	36	VGA 1.25/1.2V	0.2	050523
12	VGA(nVIDIA NV44M) 2/5	0.2	050523	37	VRAM 2.5V/1.25V	0.2	050523
13	VGA(nVIDIA NV44M) 3/5	0.2	050523	38	STEP-UP	0.2	050523
14	VGA(nVIDIA NV44M) 4/5	0.2	050523	39	other power plan	0.2	050523
15	VGA(nVIDIA NV44M) 5/5	0.2	050523	40	OVP protection	0.2	050523
16	NV44M(DDR F_A B_1)	0.2	050523	41	History(1)	0.2	050523
17	DDR(II)SO-DIMM	0.2	050523	42	History(2)	0.2	050523
18	DDR(II)Termination	0.2	050523	43	Revision History	0.2	050523
19	ICH6-M(CPU,PCI,IDE)	0.2	050523				
20	ICH6-M(USB,HUB,LPC)	0.2	050523				
21	ICH6-M(POWER&GND)	0.2	050523				
22	IDE (HDD&CD_ROM)	0.2	050523				
23	USB2.0/OIDE/FAN/DOCKING	0.2	050523				
24	PCI7420B(PCMCIA)	0.2	050523				
25	PCI7420B(iLink,MS)/MDC	0.2	050523				

P. Leader	Appr. by	Check by	Design by
			Alex

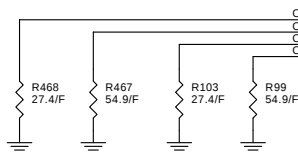
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Title MS03 DVT_M/B			
Size	Document Number MS03-1-01		Rev 0.2
Date:	Monday, May 23, 2005	Sheet 1	of 43

Project Code & Schematics Subject:	MS03 M/B-FUBAI	PCB P/N:	1P-0055100-80SB
Project Code & Schematics Subject:	MS03 M/B-HANNSTAR	PCB P/N:	1P-0055500-80SB
Project Code & Schematics Subject:	MS03 M/B-NAN YA	PCB P/N:	1P-0055200-80SB

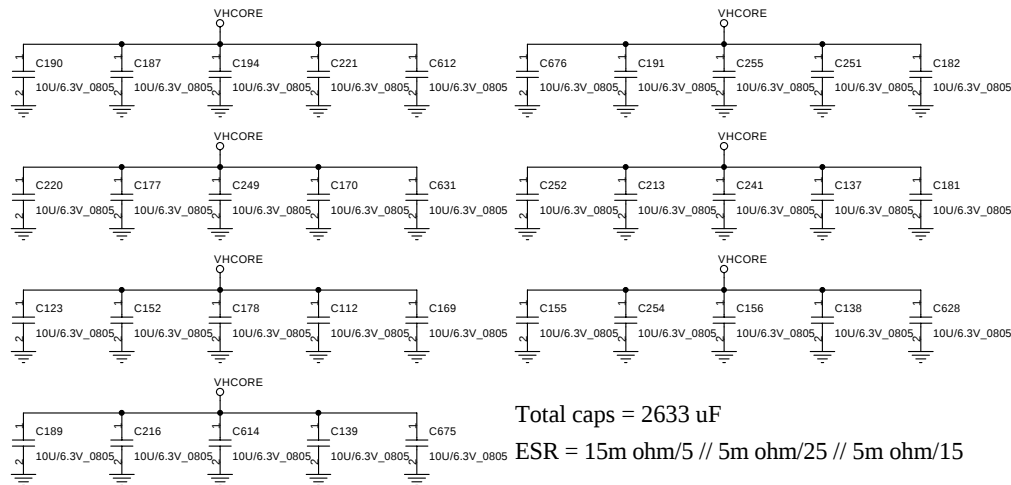
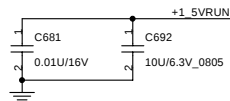
MS03(915PM/GM+Gfx Block Diagram)



BOM configuration

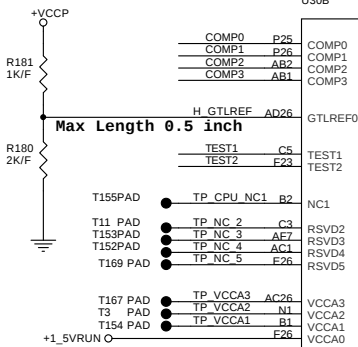
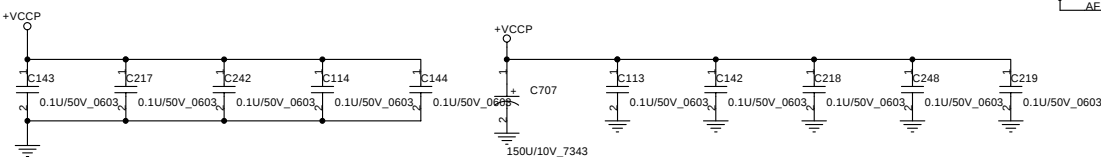


Place pull-down resistors
within 0.5" of COMP pins



Total caps = 2633 uF

ESR = 15m ohm/5 // 5m ohm/25 // 5m ohm/15



Max Length 0.5 inch

COMP0	P25
COMP1	P26
COMP2	AB2
COMP3	AB1

H_GTLREF	AD26
TEST1	C5
TEST2	F23

T155PAD	TP_CPU_NC1	B2
T11 PAD	TP_NC_2	C3
T153PAD	TP_NC_3	AF7
T152PAD	TP_NC_4	AC1
T169 PAD	TP_NC_5	F26

T167 PAD	TP_VCCA3	AC26
T3 PAD	TP_VCCA2	M1
T154 PAD	TP_VCCA1	F1
		F26

VHCORE	D6	VCC00
	D8	VCC01
	D18	VCC02
	D20	VCC03
	D22	VCC04
	E5	VCC05
	E7	VCC06
	E9	VCC07
	F17	VCC08
	F19	VCC09
	F21	VCC10
	F6	VCC11
	F8	VCC12
	F18	VCC13
	F20	VCC14
	F22	VCC15
	G5	VCC16
	G21	VCC17
	H6	VCC18
	H22	VCC19
	J5	VCC20
	J21	VCC21
	K22	VCC22
	U5	VCC23
	V6	VCC24
	V22	VCC25
	V5	VCC26
	W21	VCC27
	Y6	VCC28
	Y22	VCC29
	AA5	VCC30
	AA7	VCC31
	AA9	VCC32
	AA11	VCC33
	AA13	VCC34
	AA15	VCC35
	AA17	VCC36
	AA19	VCC37
	AA21	VCC38
	AB6	VCC39
	AB8	VCC40
	AB10	VCC41
	AB12	VCC42
	AB14	VCC43
	AB16	VCC44
	AB18	VCC45
	AB20	VCC46
	AB22	VCC47
	AC9	VCC48
	AC11	VCC49
	AC13	VCC50
	AC15	VCC51
	AC17	VCC52
	AC19	VCC53
	AD8	VCC54
	AD10	VCC55
	AD12	VCC56
	AD14	VCC57
	AD16	VCC58
	AD18	VCC59
	AE9	VCC60
	AE11	VCC61
	AE13	VCC62
	AE15	VCC63
	AE17	VCC64
	AE19	VCC65
	AE8	VCC66
	AE10	VCC67
	AE12	VCC68
	AE14	VCC69
	AE16	VCC70
	AE18	VCC71

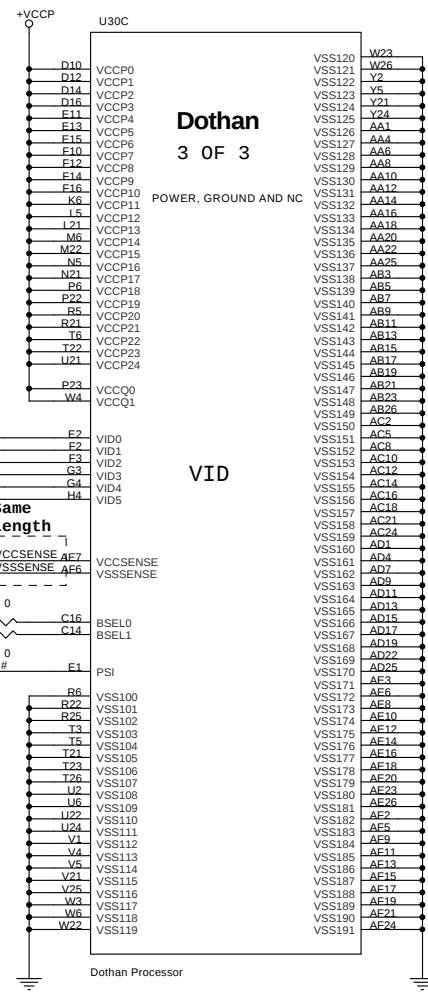
U30B

Dothan
2 OF 3

POWER,
GROUND,
RESERVED
SIGNALS

VSS00	A2
VSS01	A5
VSS02	A8
VSS03	A11
VSS04	A14
VSS05	A17
VSS06	A20
VSS07	A23
VSS08	A26
VSS09	B3
VSS10	B6
VSS11	B9
VSS12	B12
VSS13	B15
VSS14	B18
VSS15	B21
VSS16	B24
VSS17	C1
VSS18	C4
VSS19	C7
VSS20	C10
VSS21	C13
VSS22	C16
VSS23	C19
VSS24	C22
VSS25	C25
VSS26	C28
VSS27	D2
VSS28	D5
VSS29	D8
VSS30	D11
VSS31	D14
VSS32	D17
VSS33	D20
VSS34	D23
VSS35	D26
VSS36	E3
VSS37	E6
VSS38	E9
VSS39	E12
VSS40	E15
VSS41	E18
VSS42	E21
VSS43	E24
VSS44	E27
VSS45	F1
VSS46	F4
VSS47	F7
VSS48	F10
VSS49	F13
VSS50	F16
VSS51	F19
VSS52	F22
VSS53	F25
VSS54	G1
VSS55	G4
VSS56	G7
VSS57	G10
VSS58	G13
VSS59	G16
VSS60	G19
VSS61	G22
VSS62	G25
VSS63	G28
VSS64	G31
VSS65	G34
VSS66	H1
VSS67	H4
VSS68	H7
VSS69	H10
VSS70	H13
VSS71	H16
VSS72	H19
VSS73	H22
VSS74	H25
VSS75	I1
VSS76	I4
VSS77	I7
VSS78	I10
VSS79	I13
VSS80	I16
VSS81	I19
VSS82	I22
VSS83	I25
VSS84	J1
VSS85	J4
VSS86	J7
VSS87	J10
VSS88	J13
VSS89	J16
VSS90	J19
VSS91	J22
VSS92	J25
VSS93	K1
VSS94	K4
VSS95	K7
VSS96	K10
VSS97	K13
VSS98	K16
VSS99	K19

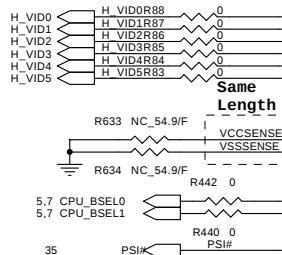
Dothan Processor



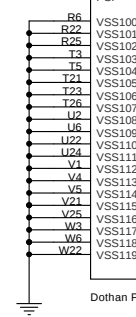
Dothan
3 OF 3

POWER, GROUND AND NC

VID



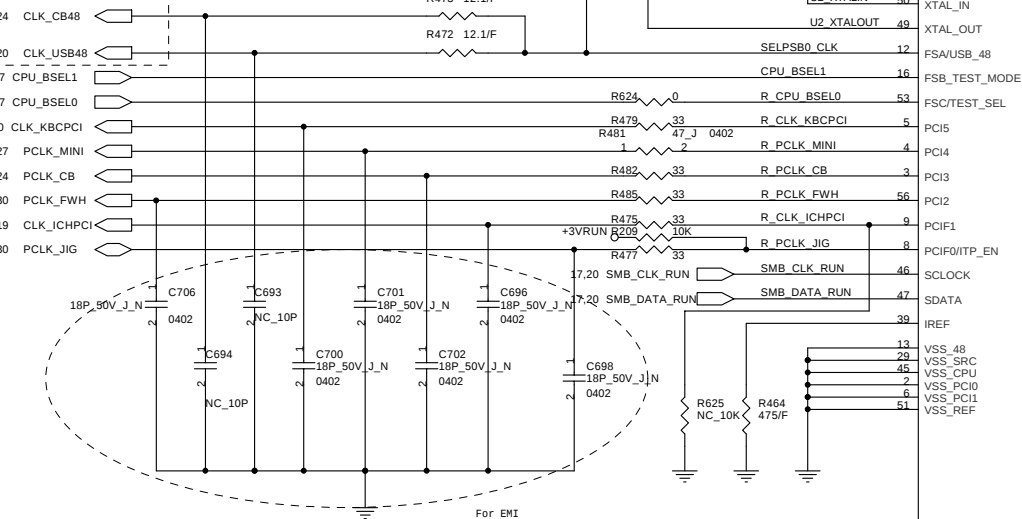
Same
Length



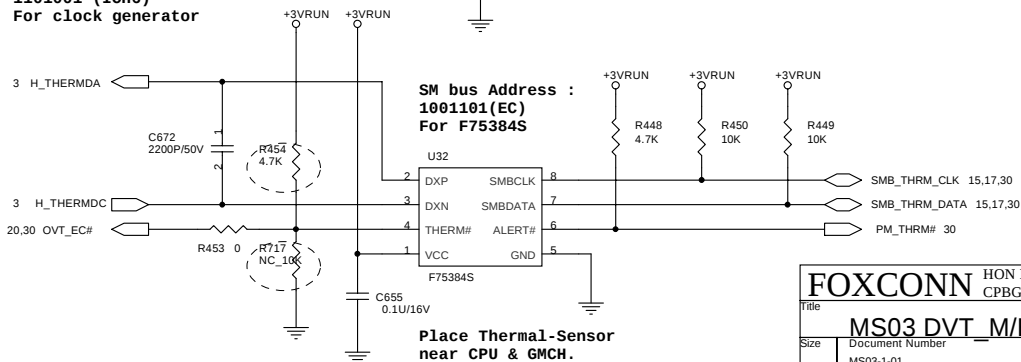
FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33

Placed within
500mils of Y1

Length as short
as possible.



IDTCV125 / ICS954206BG
SM bus Address :
1101001 (ICH6)
For clock generator



**Place Thermal-Sensor
near CPU & GMCH.**

**Alviso Chip
HOST**

CPU

Alviso Chip

**ICH6
DMI**

**Graphic
NV44M**

ALVISO SSCK

CLK_XDP_BCLK# R460 NC 49.9/F
CLK_XDP_BCLK# R458 NC 49.9/F
CLK_MCH_BCLK# R465 49.9/F
CLK_MCH_BCLK# R463 49.9/F
CLK_CPU_BCLK# R471 49.9/F
CLK_CPU_BCLK# R469 49.9/F
CLK_MCH_3GPLL R457 49.9/F
CLK_MCH_3GPLL# R455 49.9/F

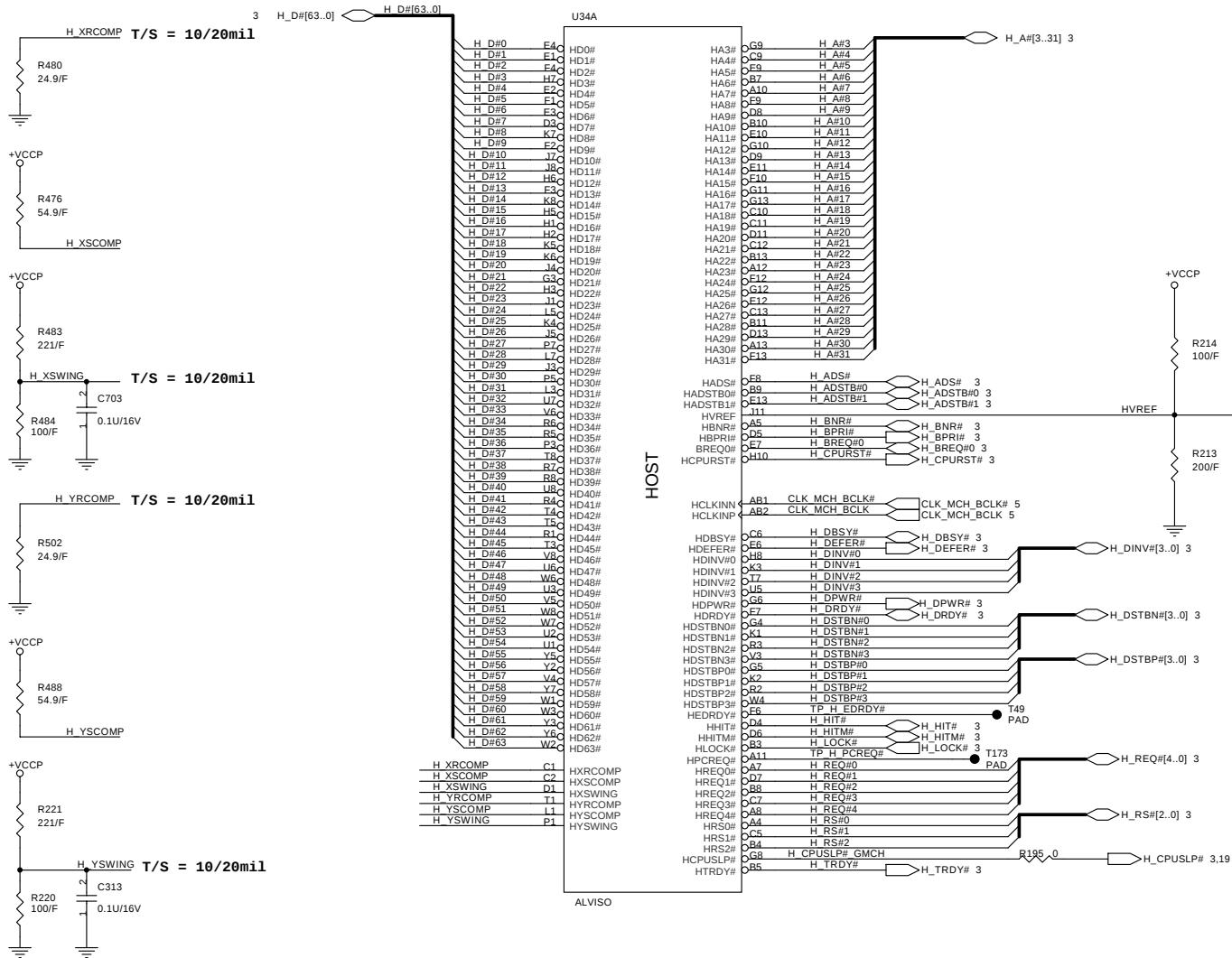
CLK_PCIE_ICH# R459 49.9/F
CLK_PCIE_ICH# R456 49.9/F

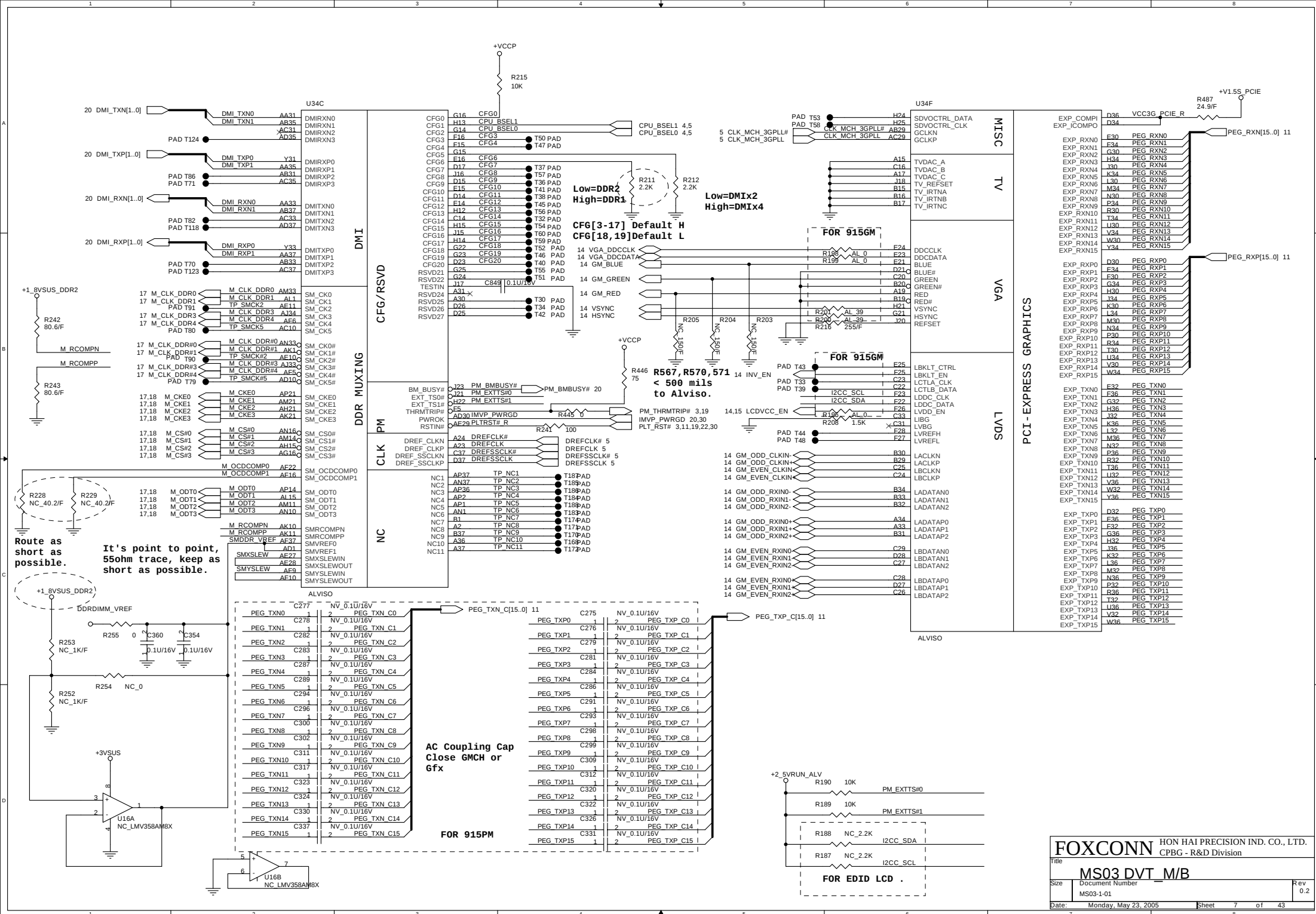
CLK_PCIE_PEG# R462 NV 49.9/F
CLK_PCIE_PEG# R461 NV 49.9/F
DREFCLK# R470 AL 49.9/F
DREFSSCLK# R466 NV 0
DREFSSCLK# R185 AL 49.9/F
DREFSSCLK# R183 NV 0
DREFCLK# R631 AL 49.9/F
DREFSSCLK# R632 AL 49.9/F

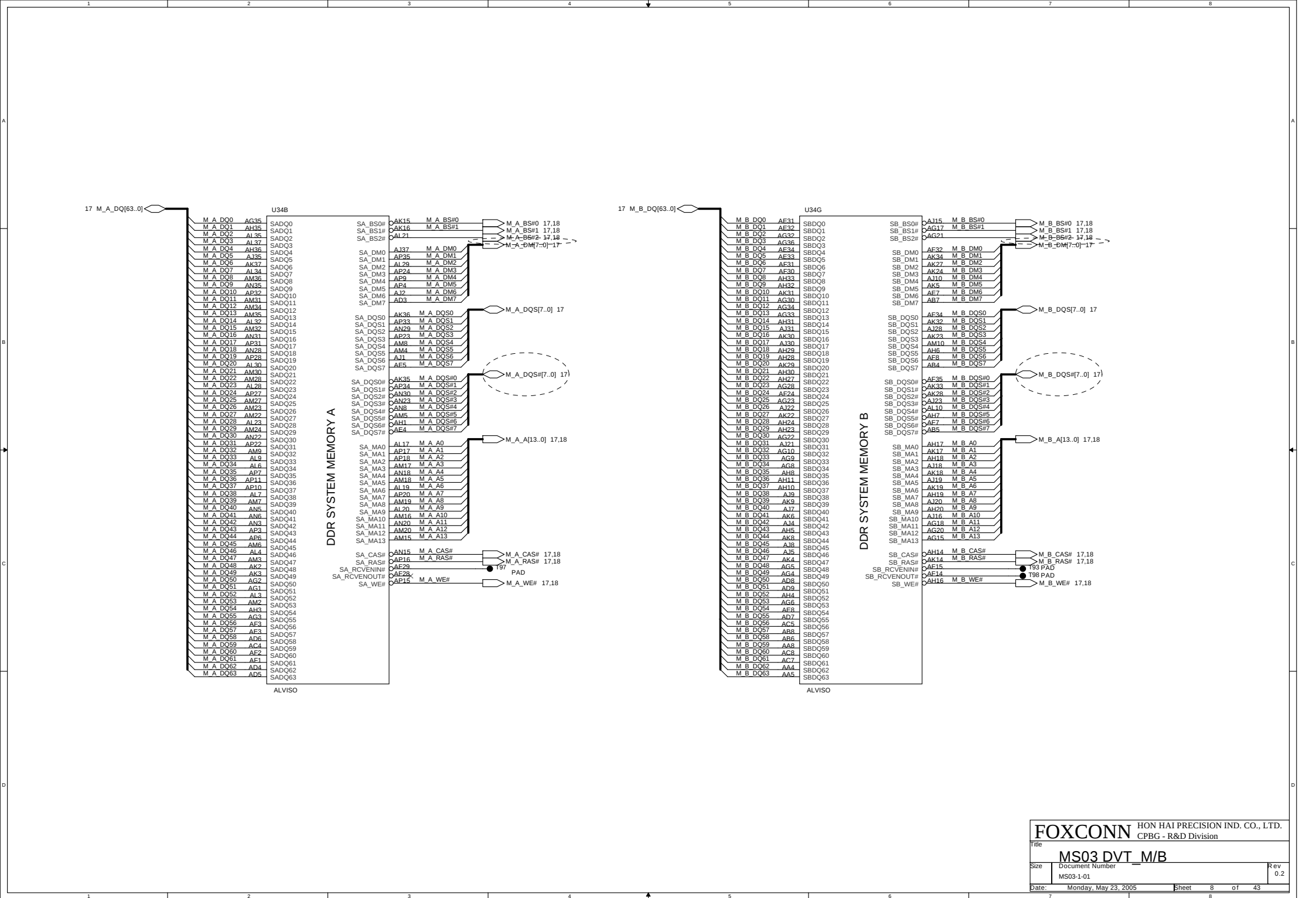
For NV44M & Alviso option
R_CLK_KBCPCI R626 NC 10K
R_PCLK_MINI R627 NC 10K

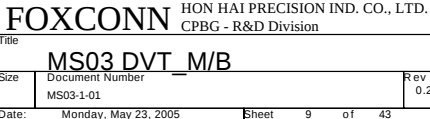
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Size: Document Number: MS03-1-01 Rev: 0.2
Date: Monday, May 23, 2005 Sheet: 5 of 43



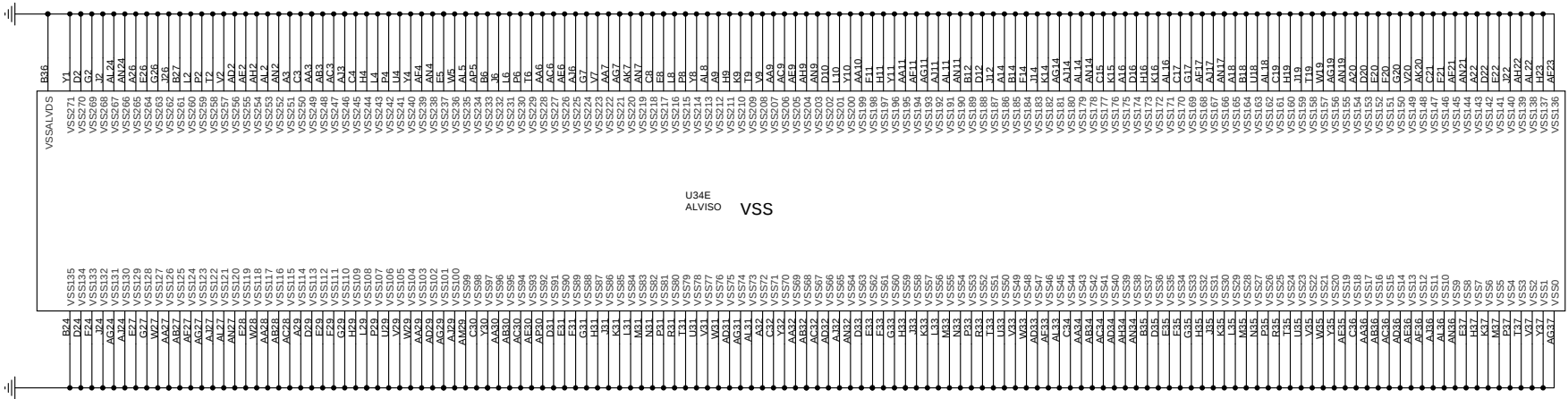
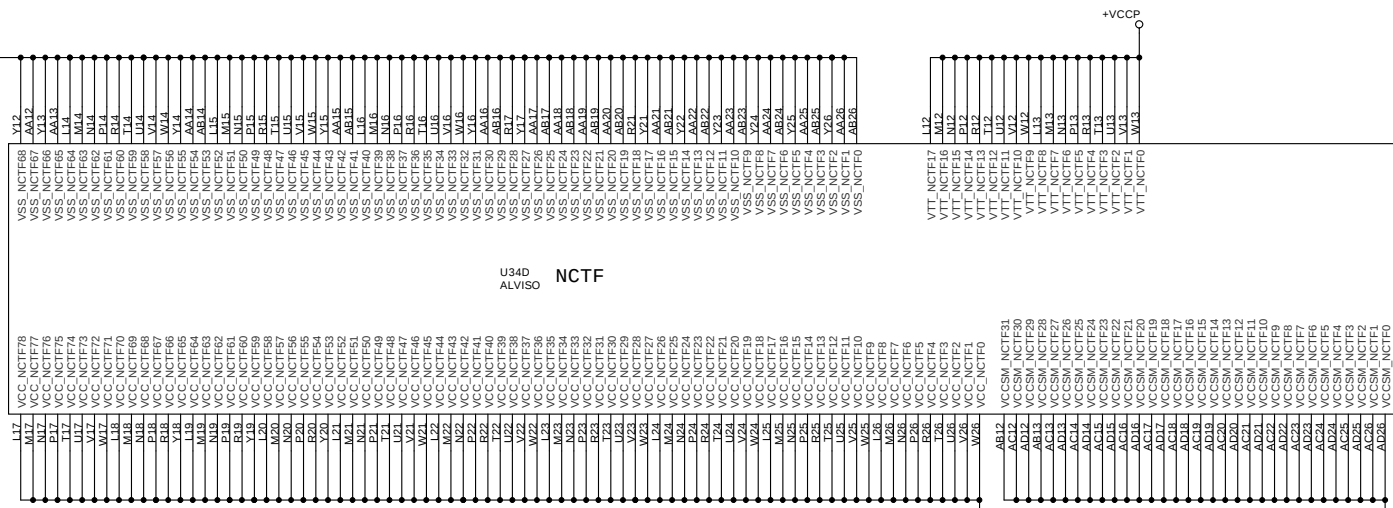






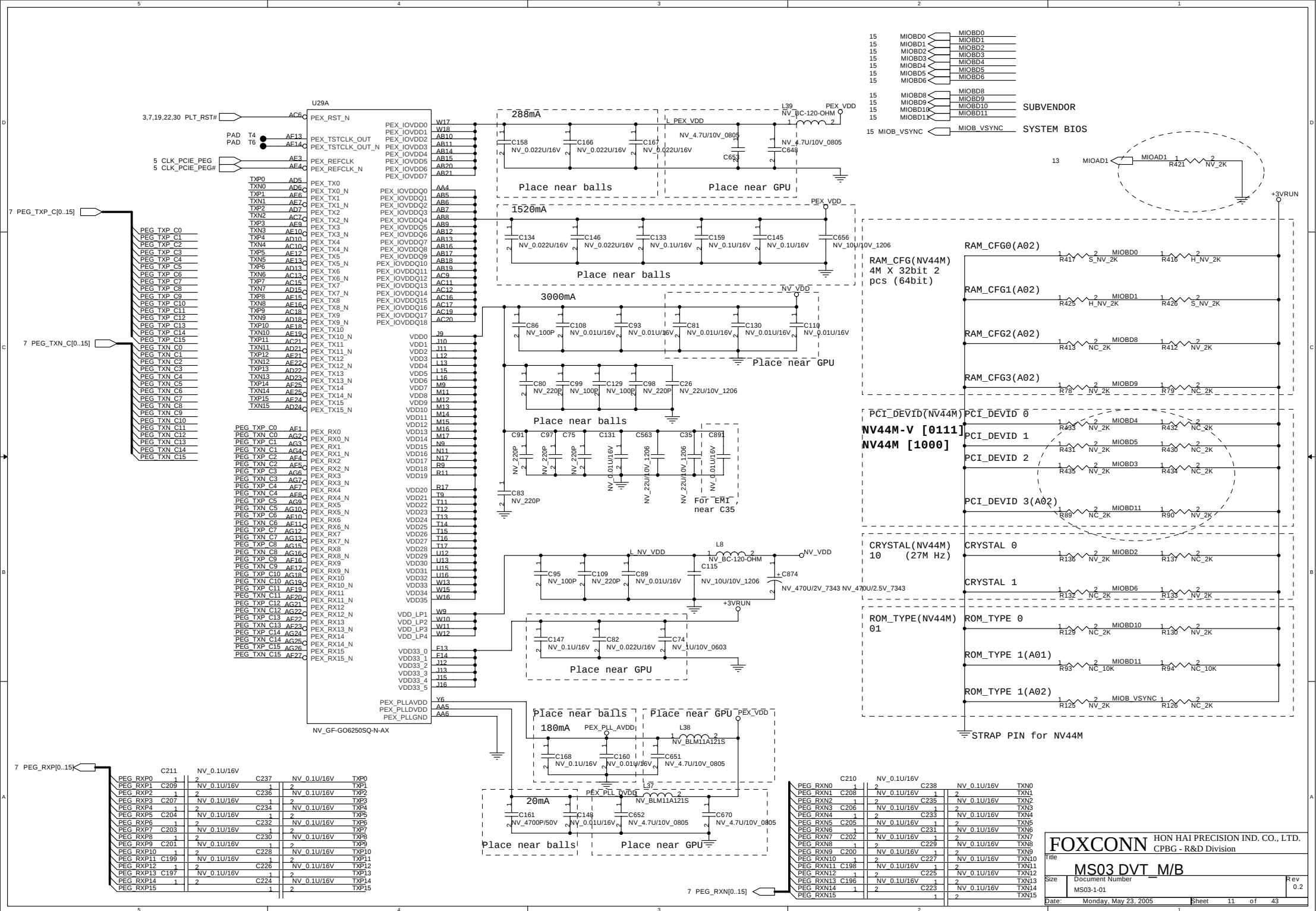
+1_BVSUS_DDR2

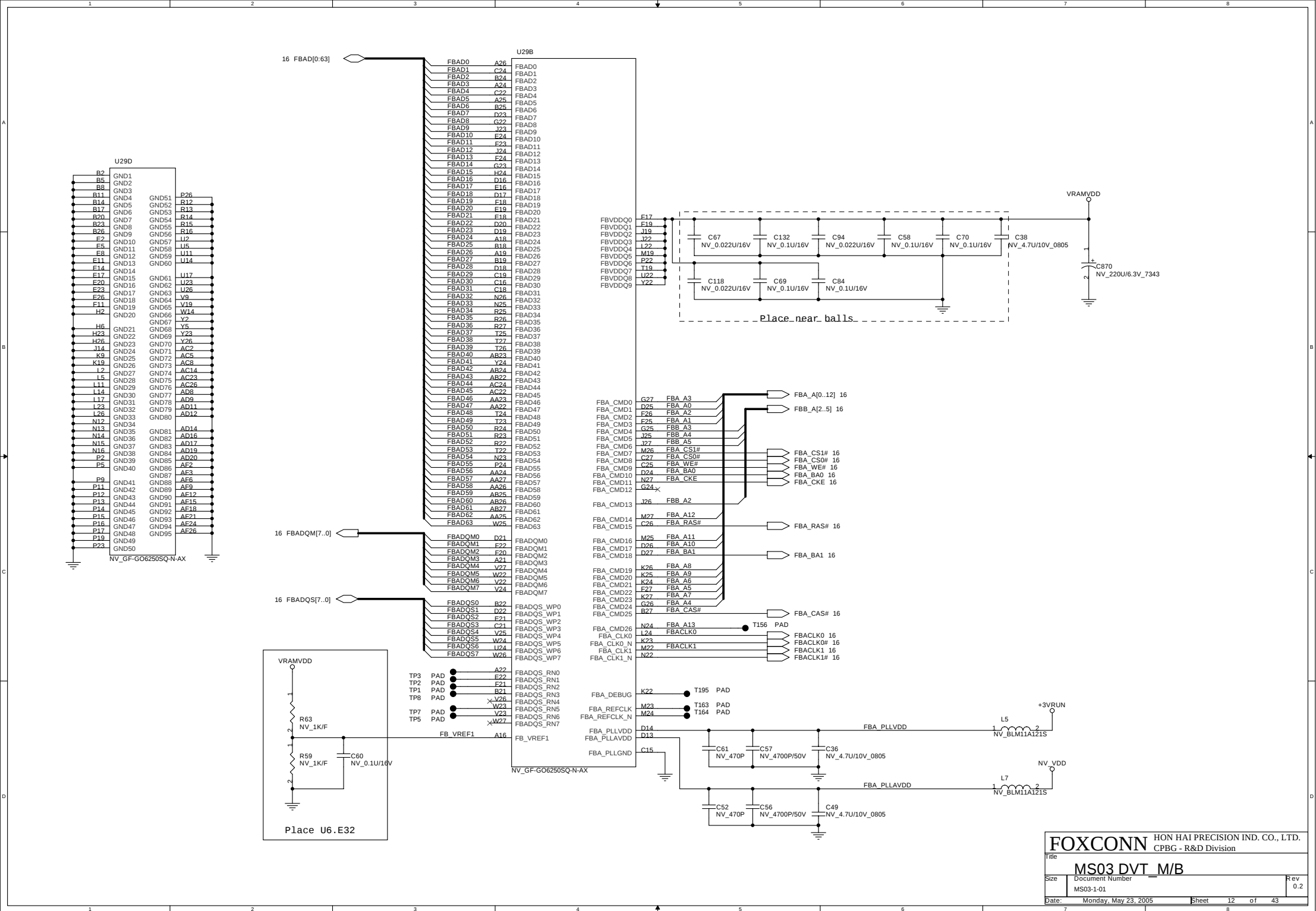
MCH_VTT

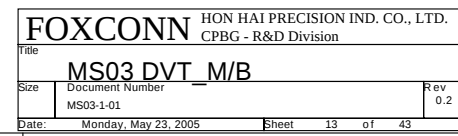
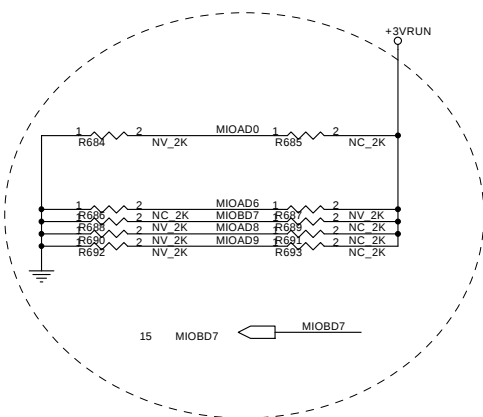


U34E
ALVISO

VSS



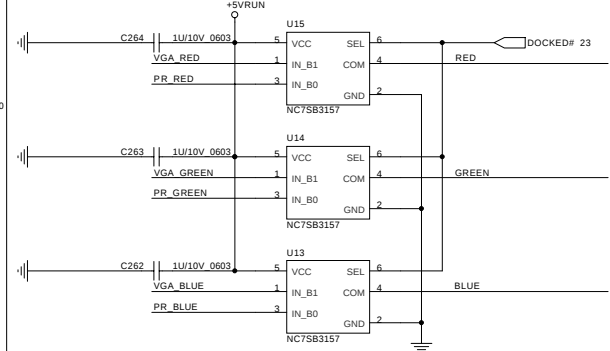
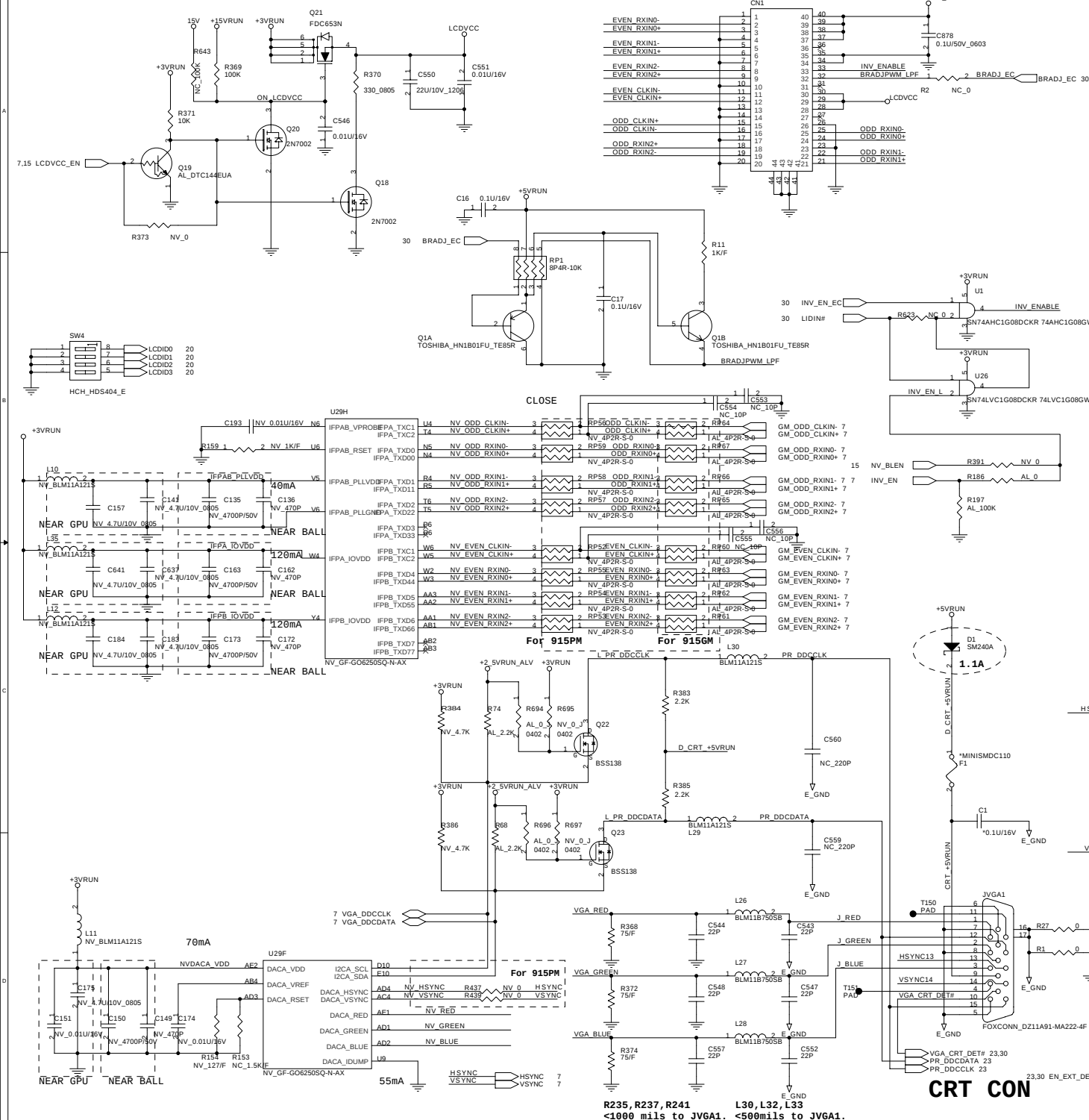




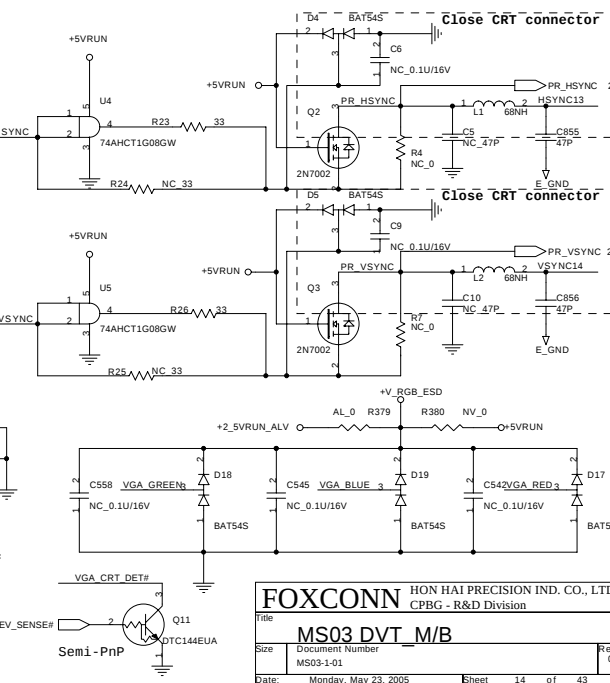
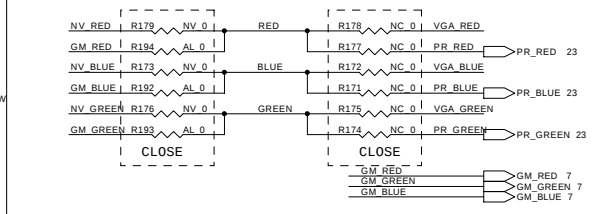
LVDS CONNECTOR

FOXCONN_GS12401_1011

H : NOTEBOOK
L : PORT REPLICATOR



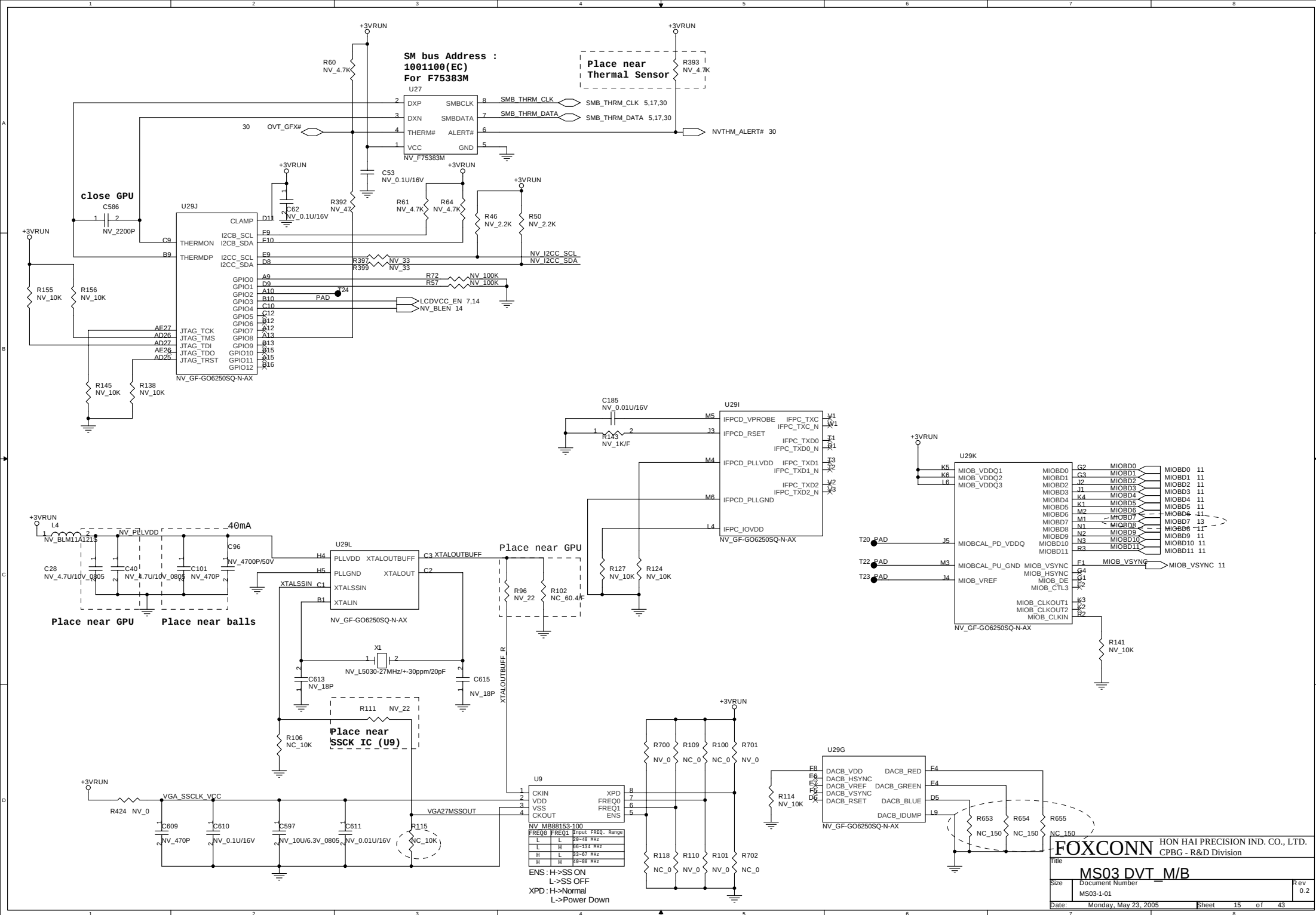
RGB ANALOG SWITCH

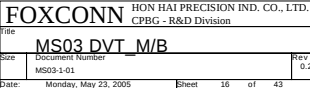


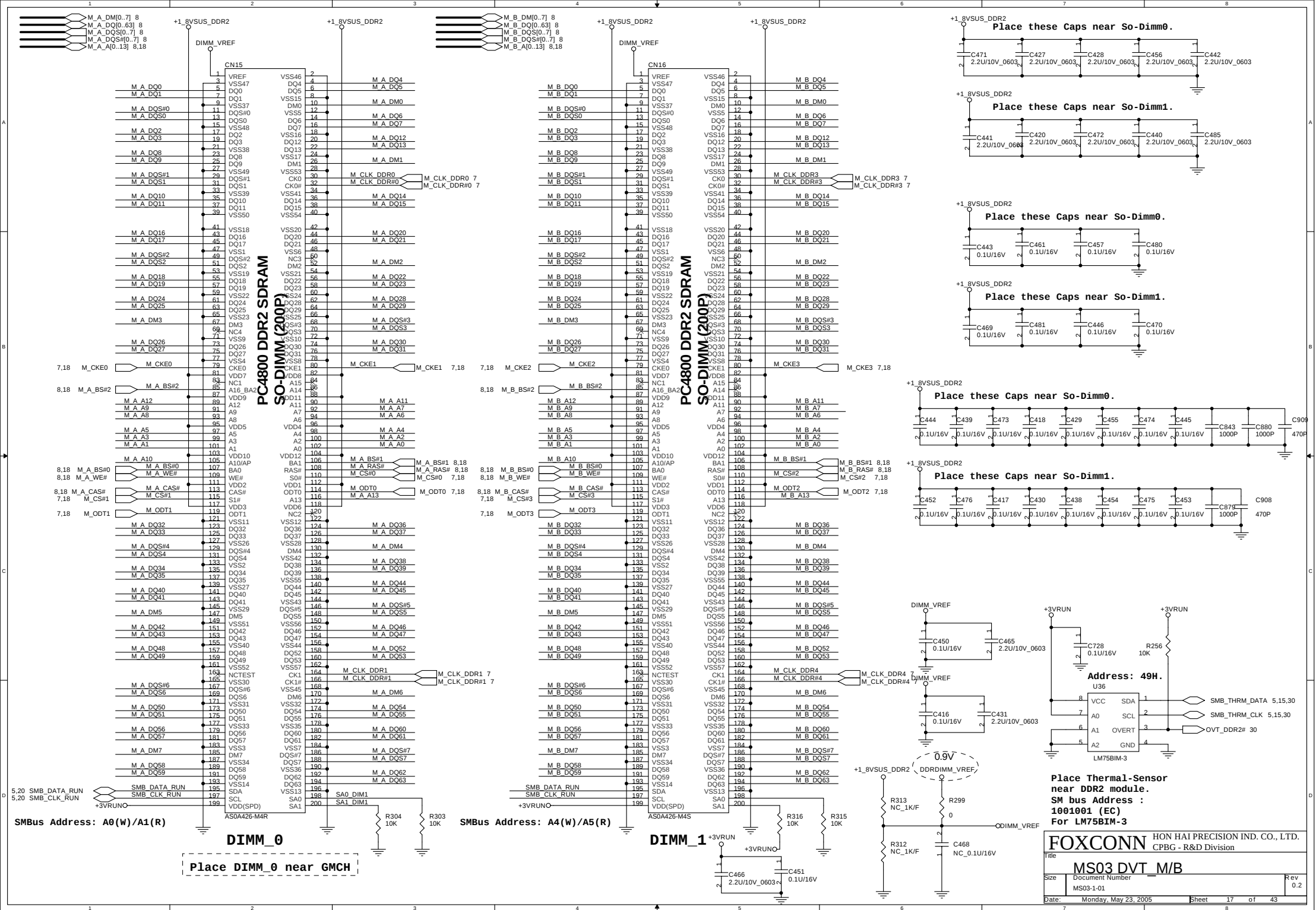
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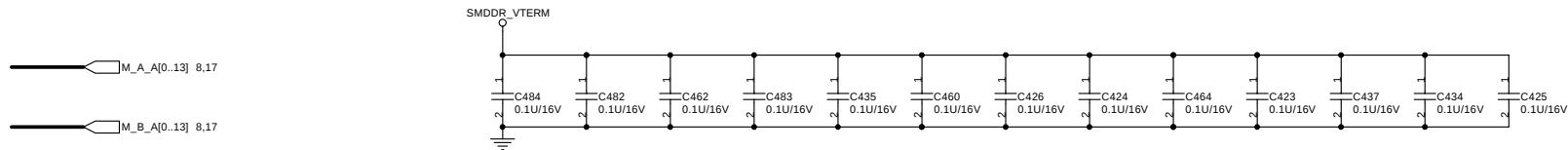
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MS03-1-01

Date: Monday, May 23, 2005 Sheet 14 of 43



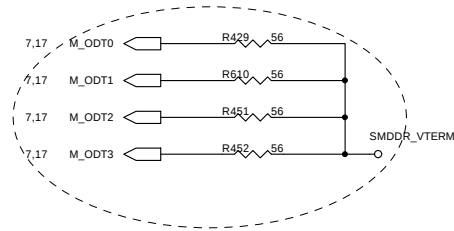
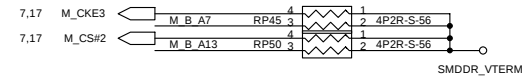
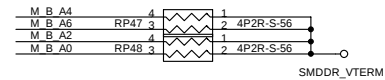
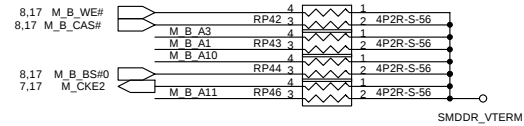
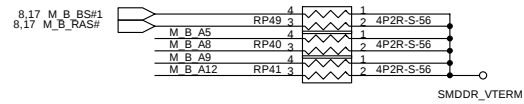
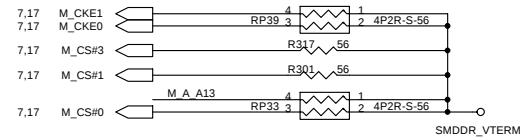
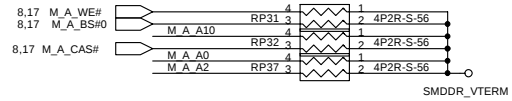
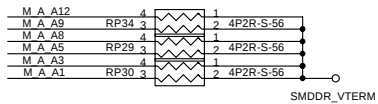
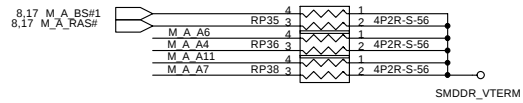


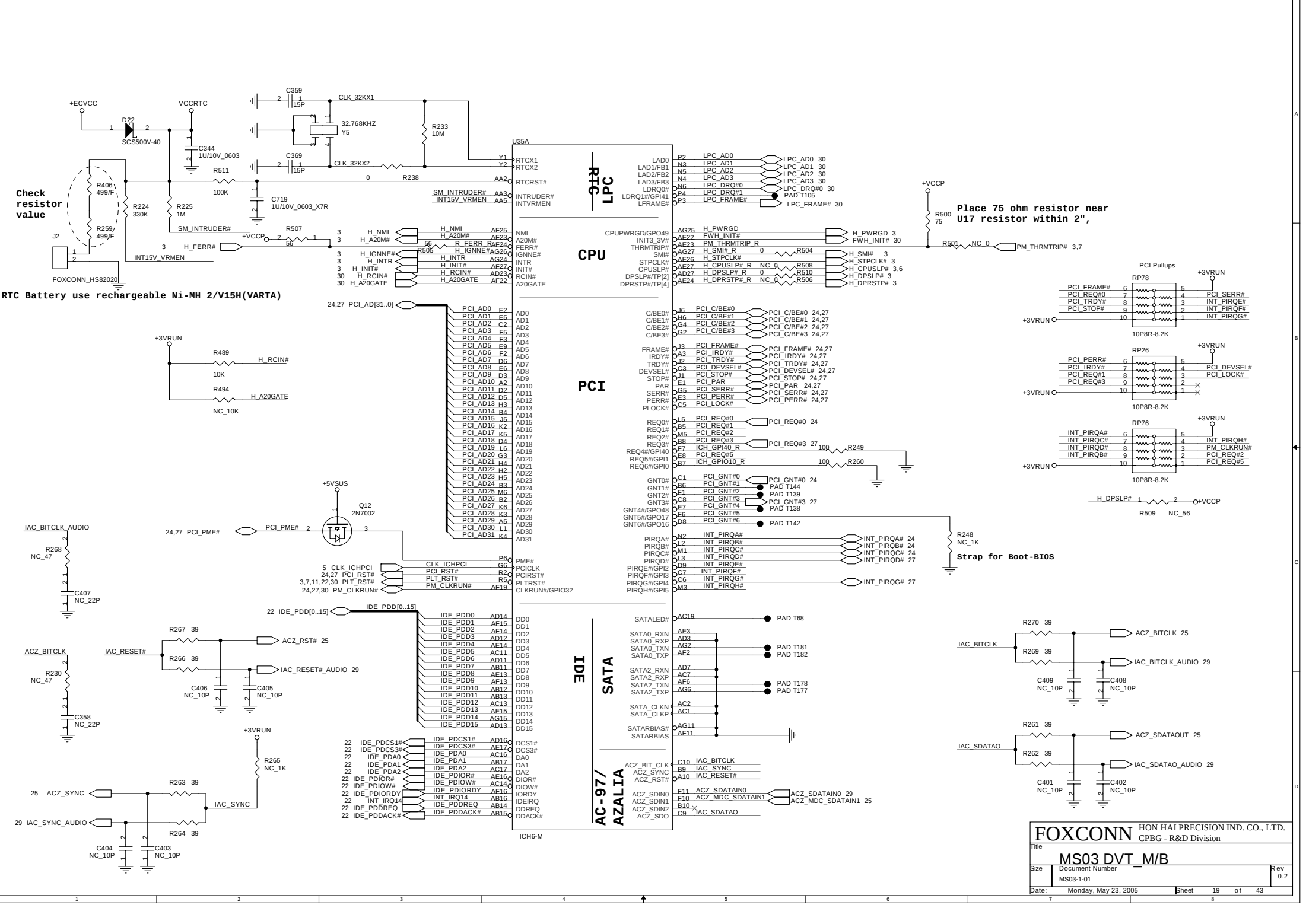


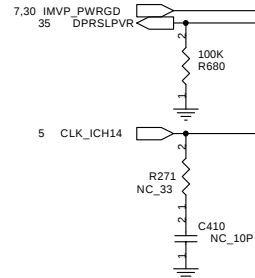
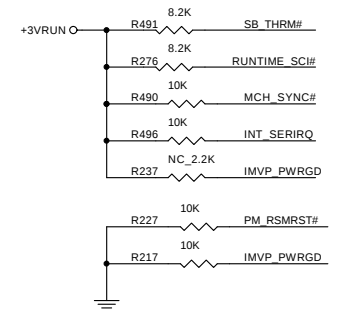
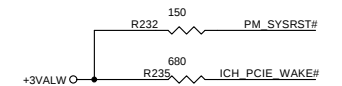
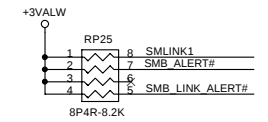
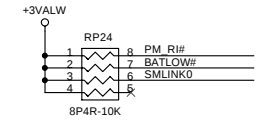
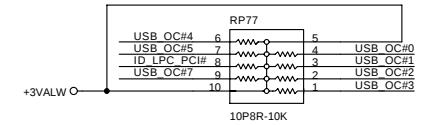
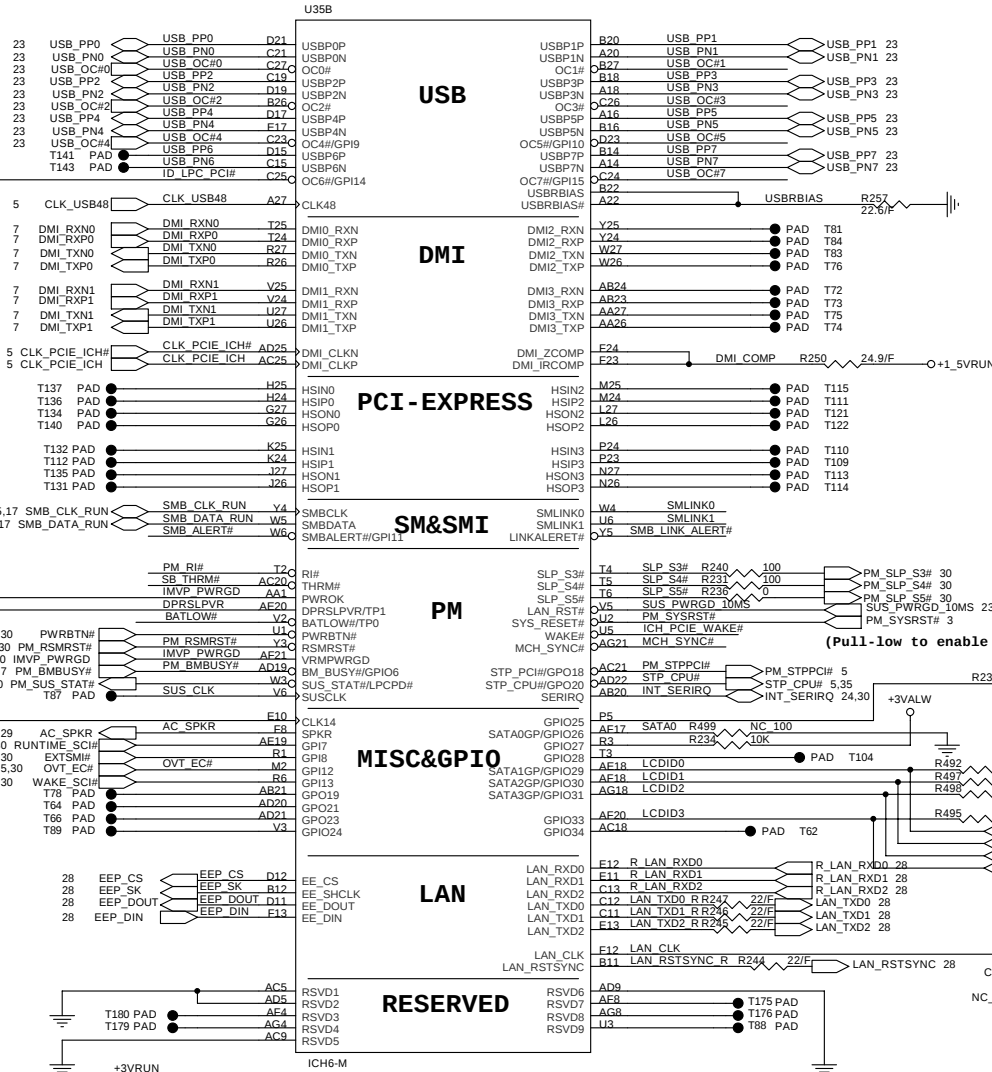
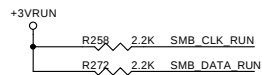


Layout note: Place 1 cap close to every 1 R-pack terminated to SMDDR_VTERM.

Layout note: Place 1 cap close to every 1 R-pack terminated to SMDDR_VTERM.



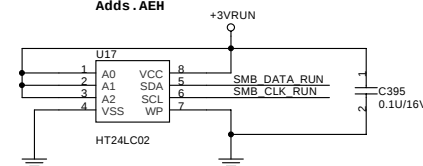




Strap for No-reboot



Adds .AEH

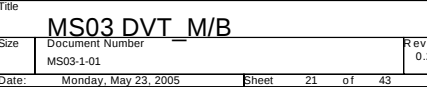


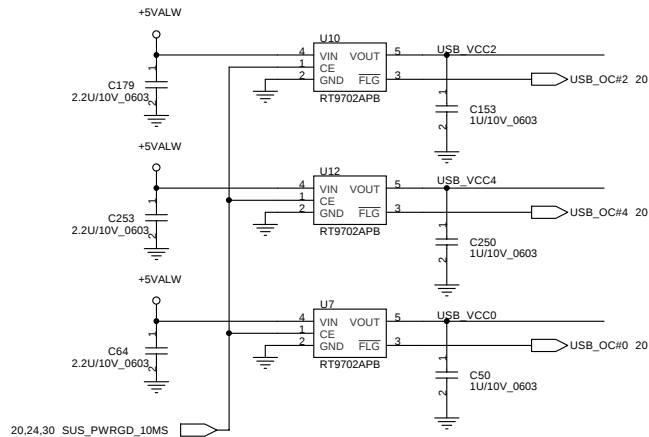
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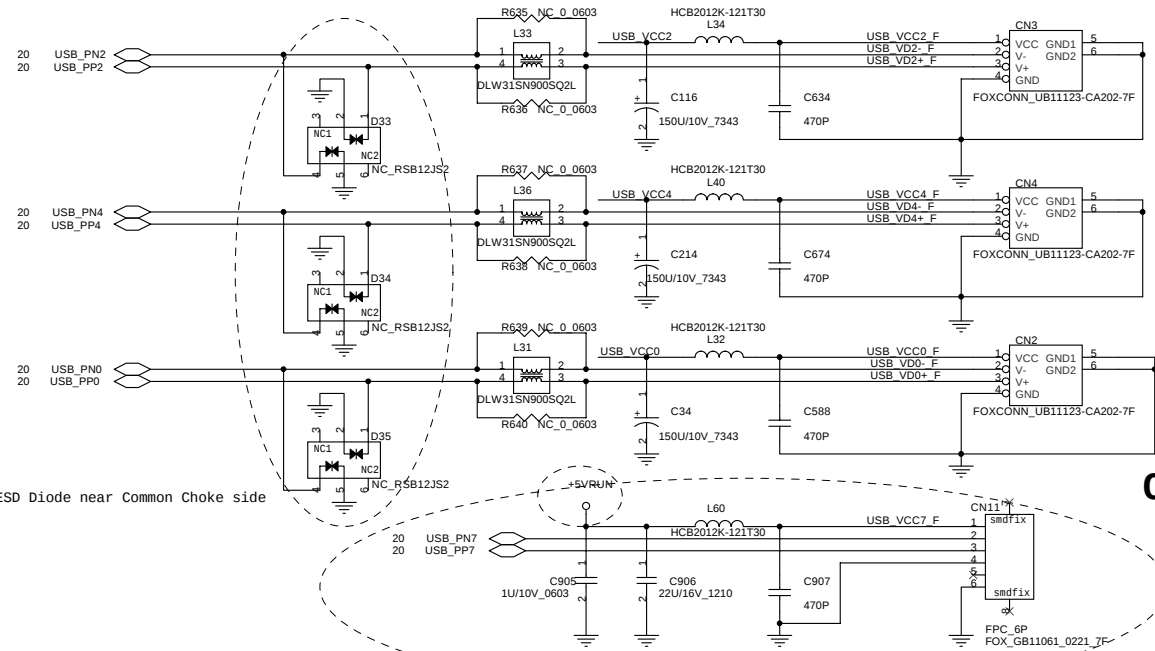
Size Document Number MS03-1-01 Rev 0.2

Date: Monday, May 23, 2005 Sheet 20 of 43



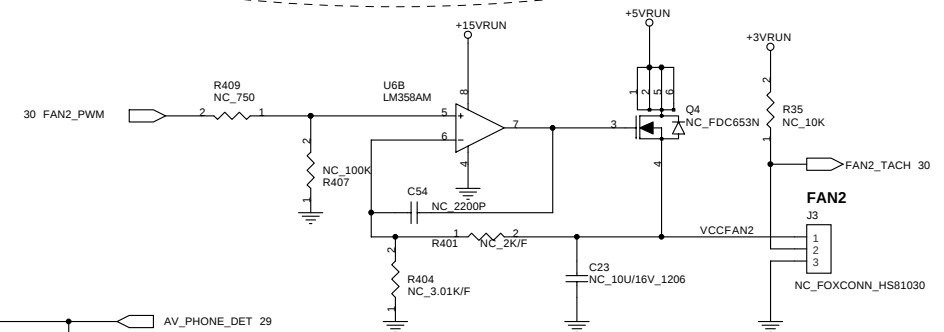
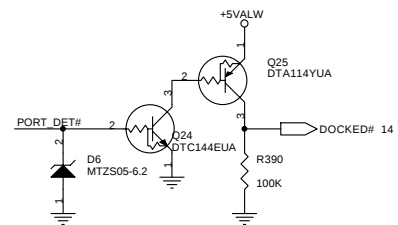


Place ESD Diode near Common Choke side

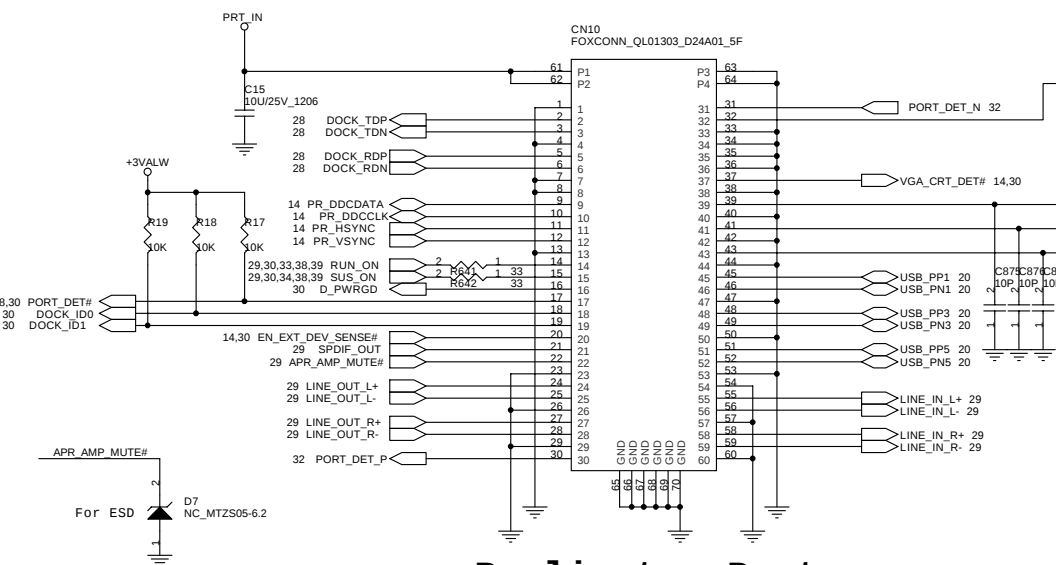


USB2.0 X 3

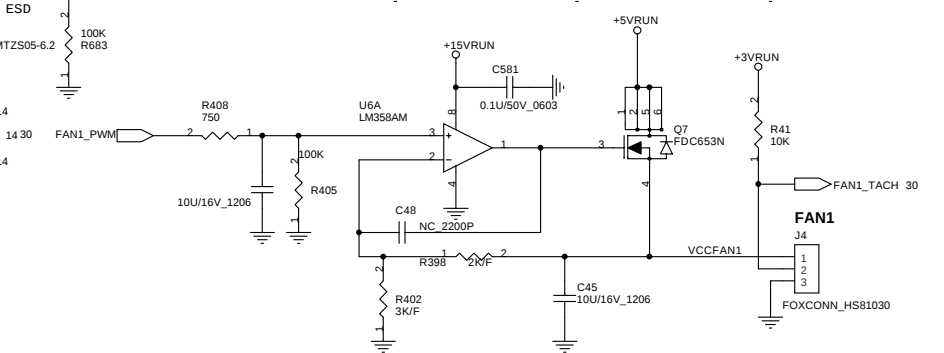
OIDE



FAN2
J3
1
2
3
NC_FOXCONN_HS81030



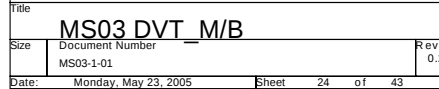
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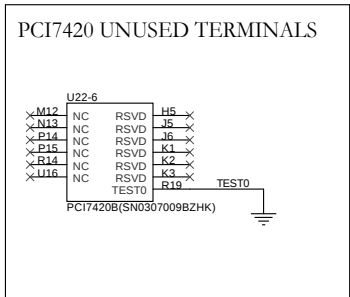
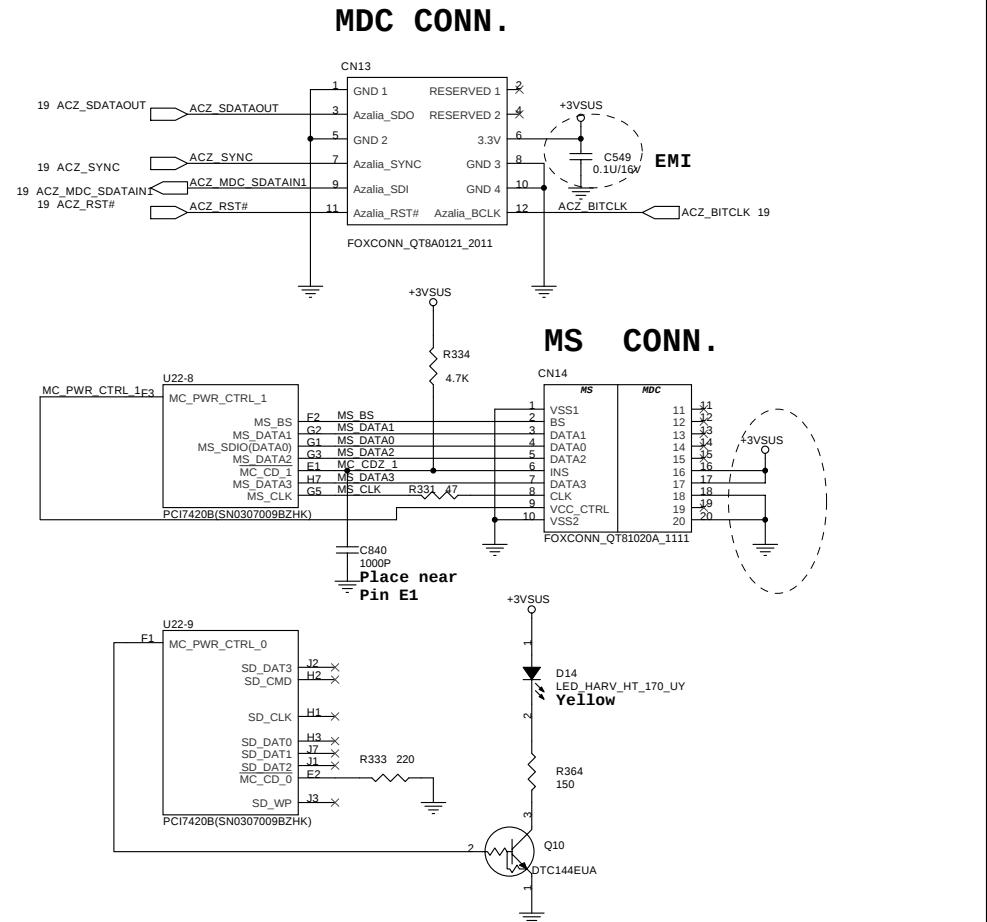
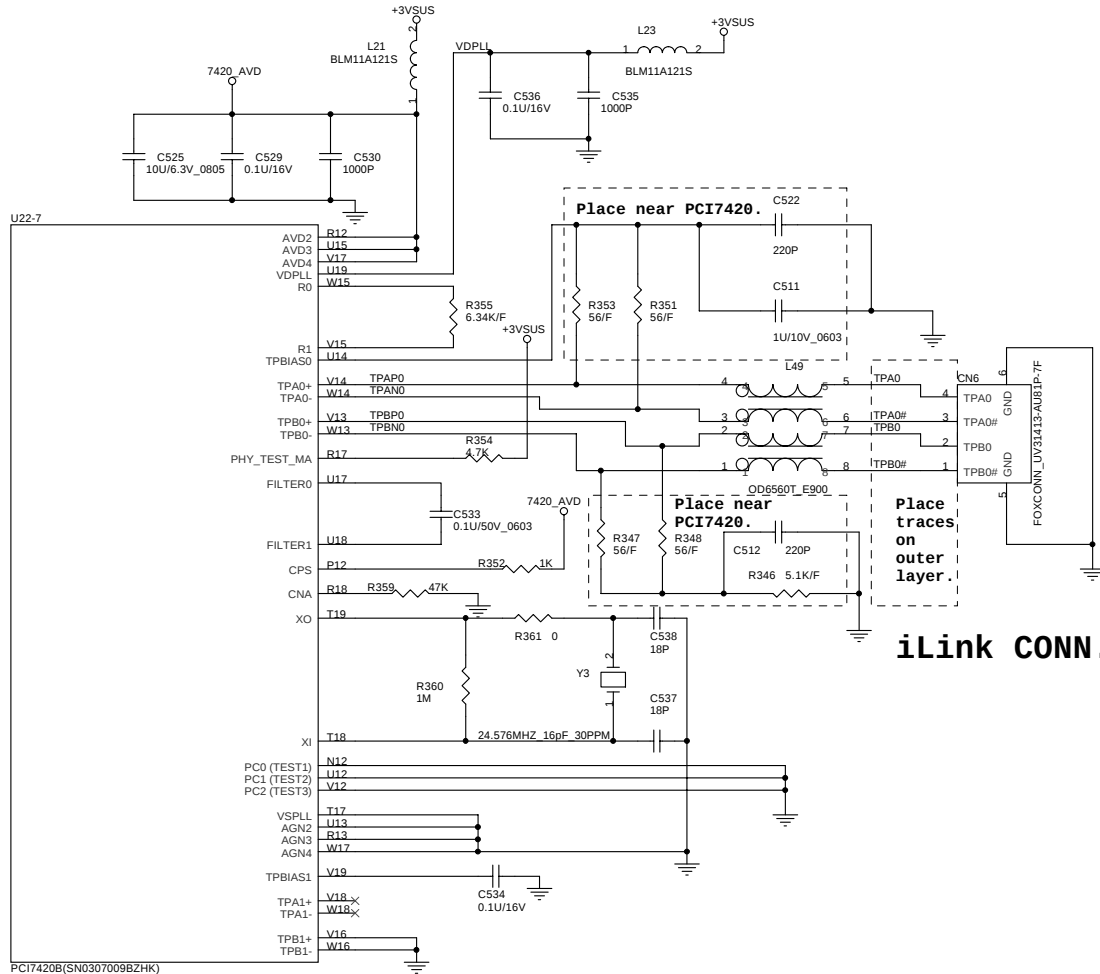


FAN1
J4
1
2
3
FOXCONN_HS81030

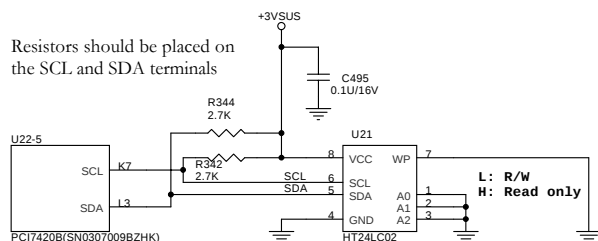
FAN

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Title MS03 DVT_M/B	
Size	Document Number MS03-1-01
Date	Monday, May 23, 2005
Sheet	23 of 43
Rev	0.2

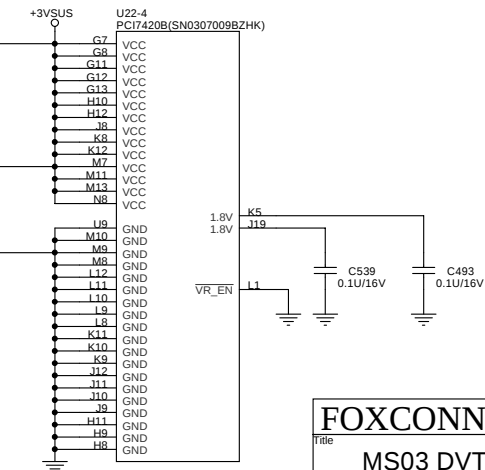


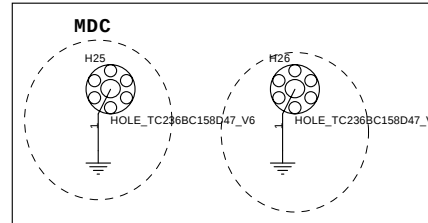
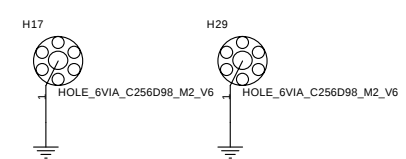
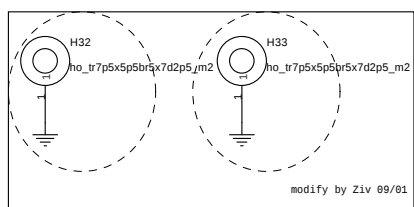
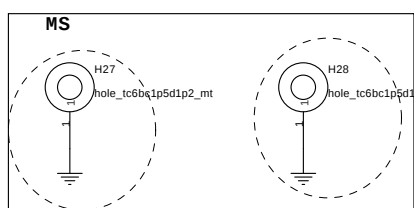
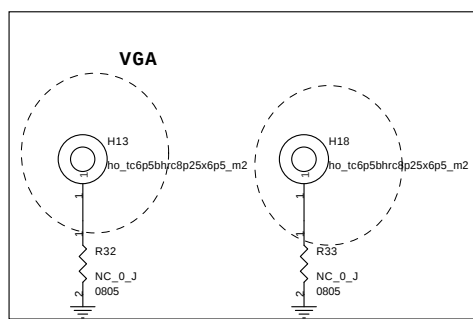
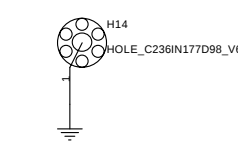
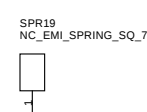
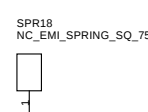
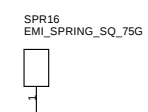
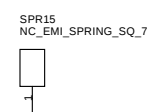
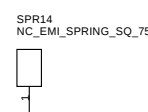
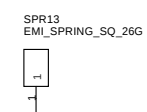
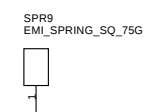
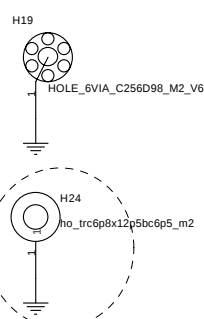
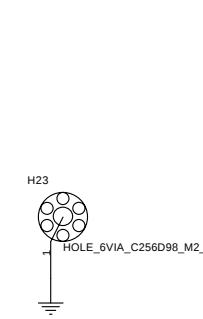
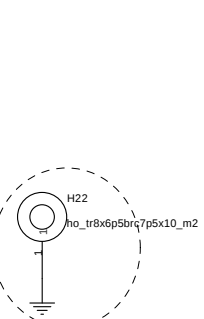
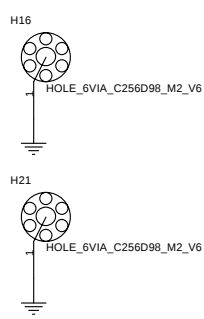
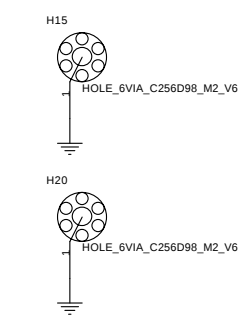
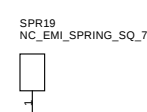
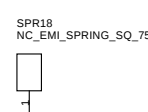
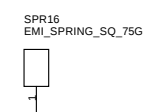
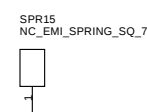
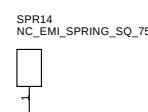
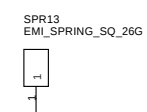
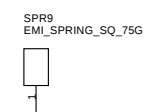
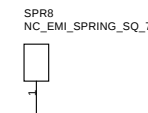
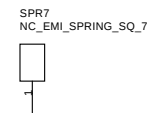
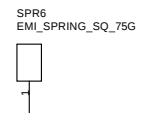
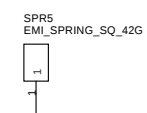
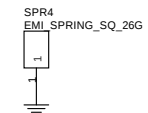
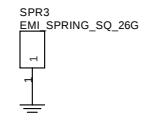
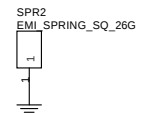
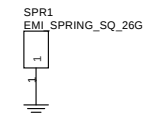
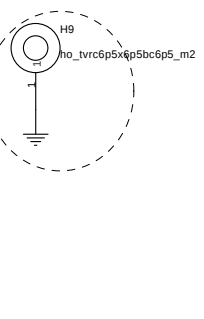
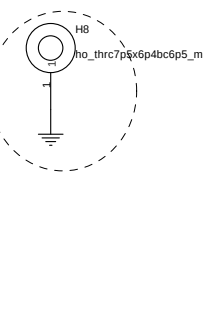
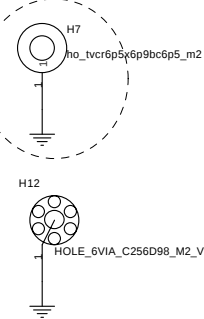
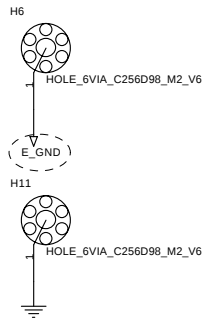
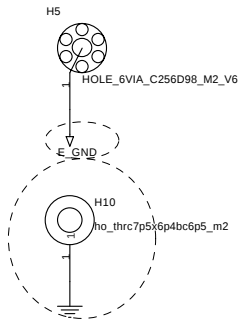
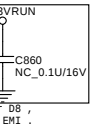
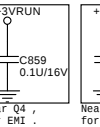
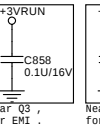
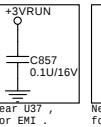
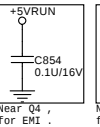
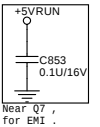
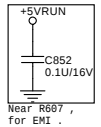
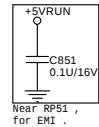
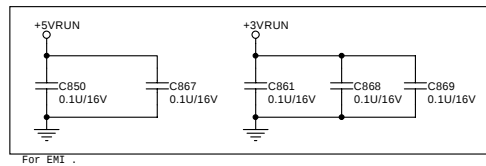


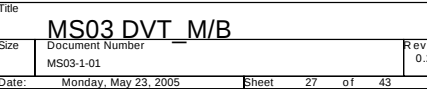
Resistors should be placed on the SCL and SDA terminals



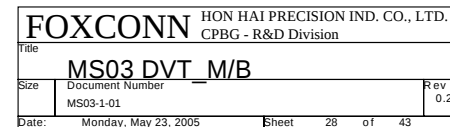
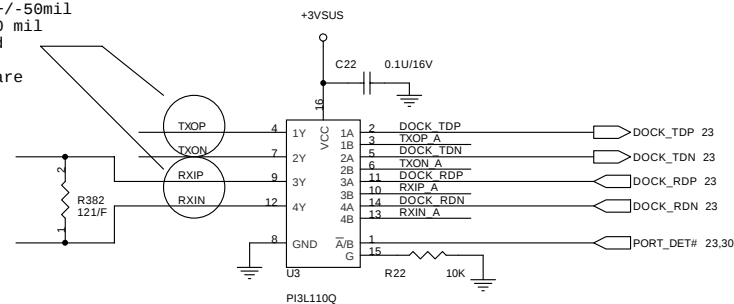
PCI7420 Power Terminals

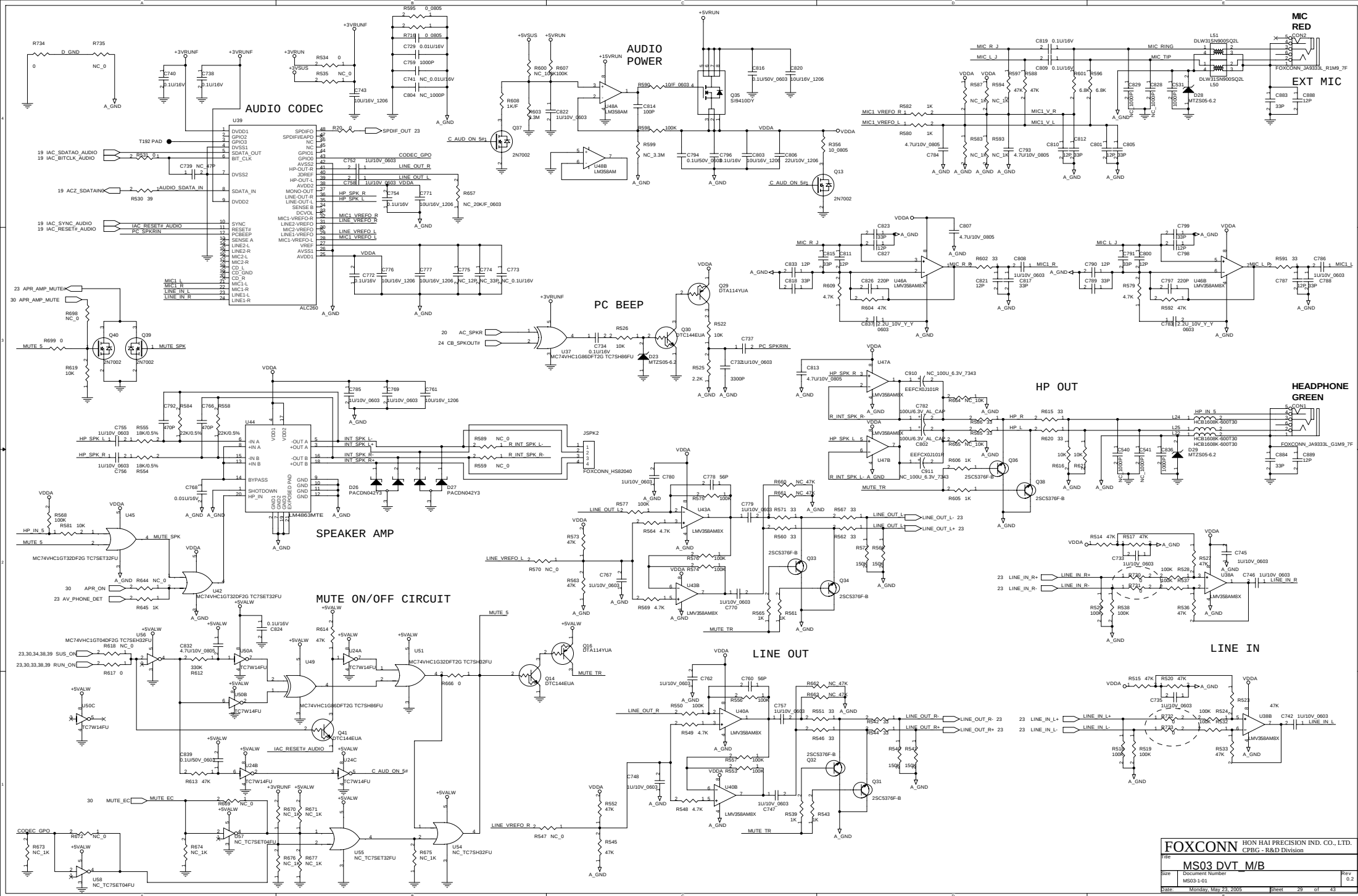


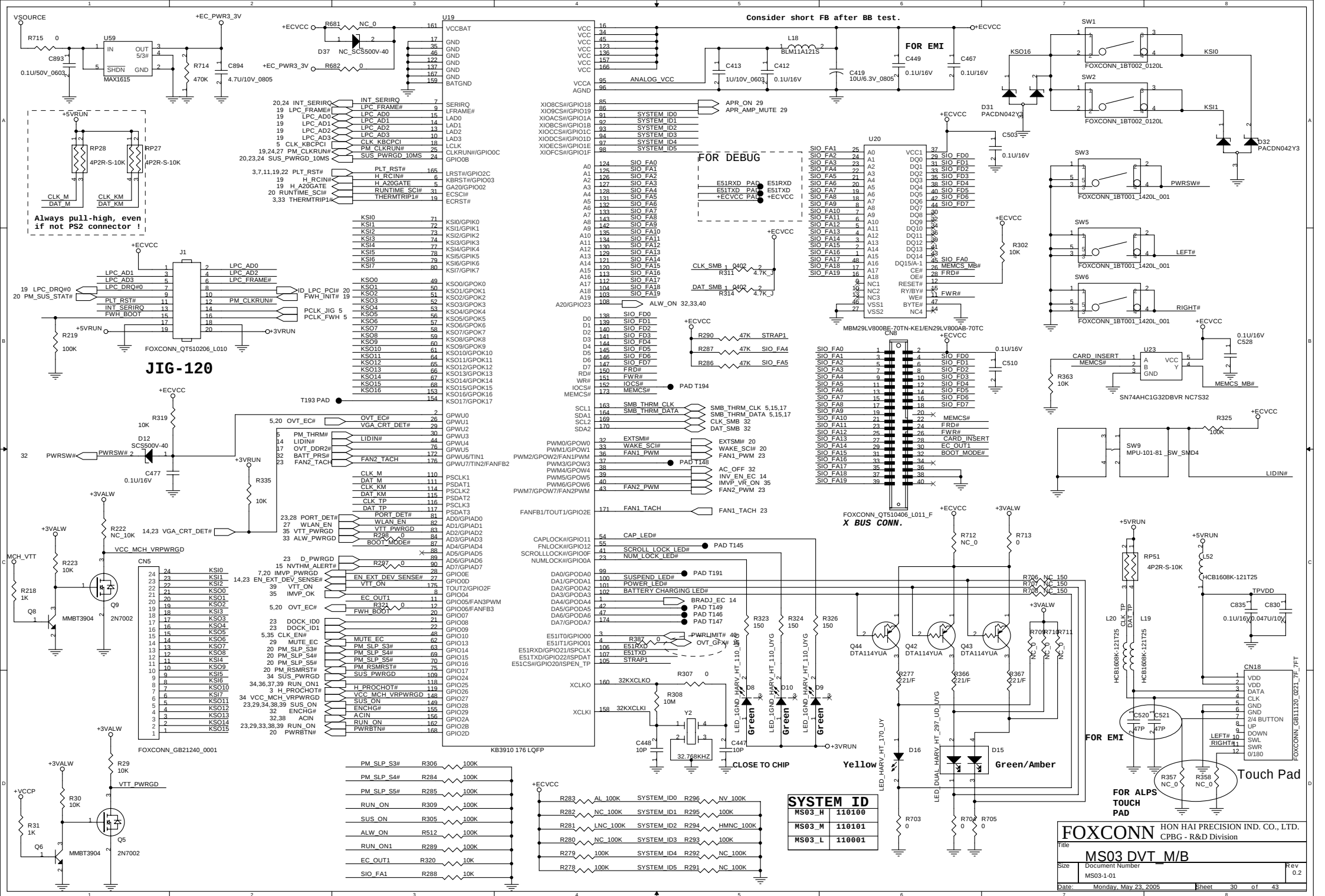


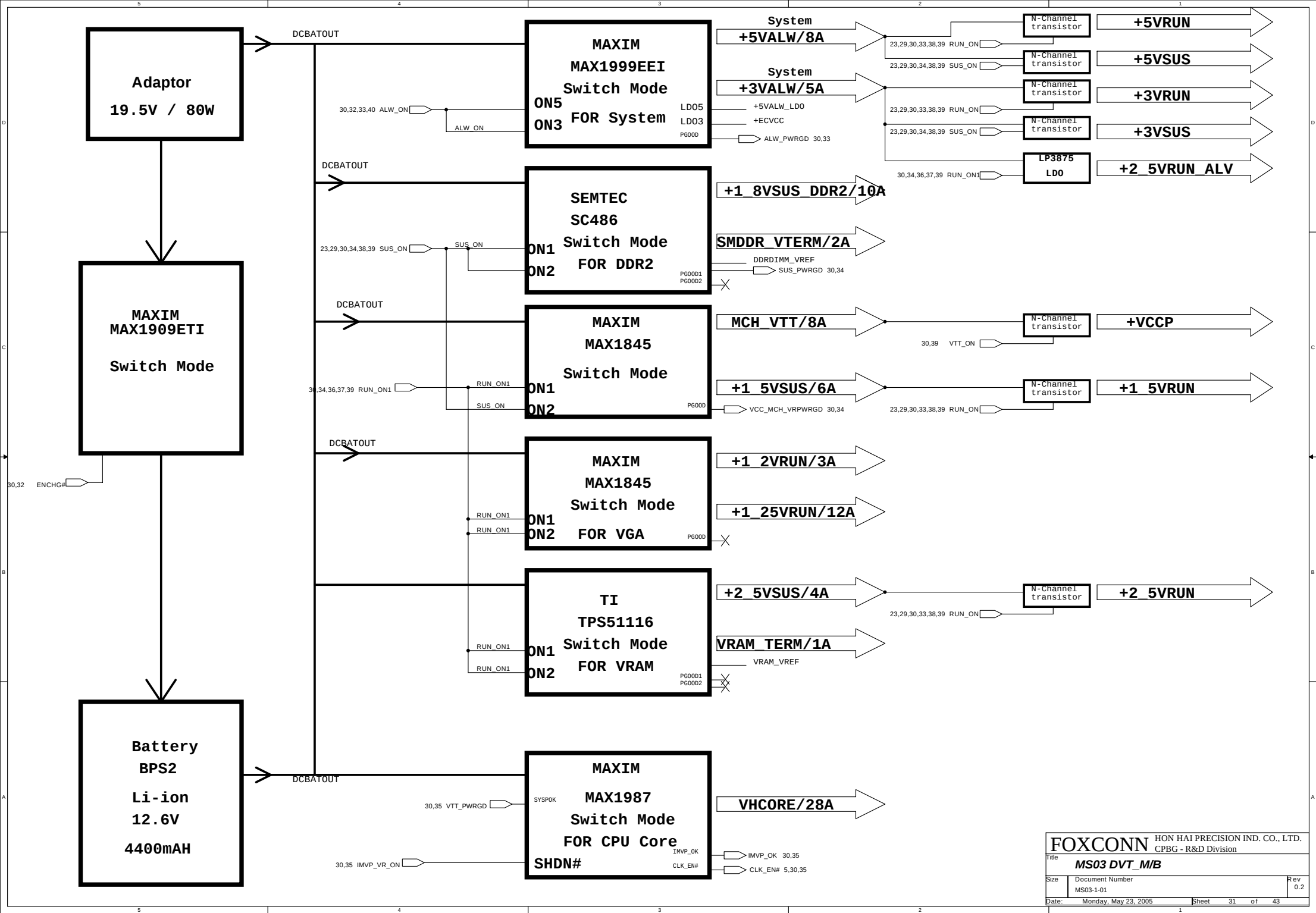


LAYOUT NOTES:
Match total length of chip side Rx and Tx pair traces +/- 50mil
Match length of cable side Rx and Tx pair traces +/- 50 mil
Total line TX+ to TX- and RX- and RX+ should be matched within 50 mils.
Keep 50mil space between pairs and other traces. Pairs are 100ohm differential,



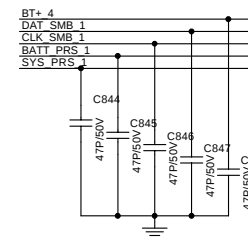




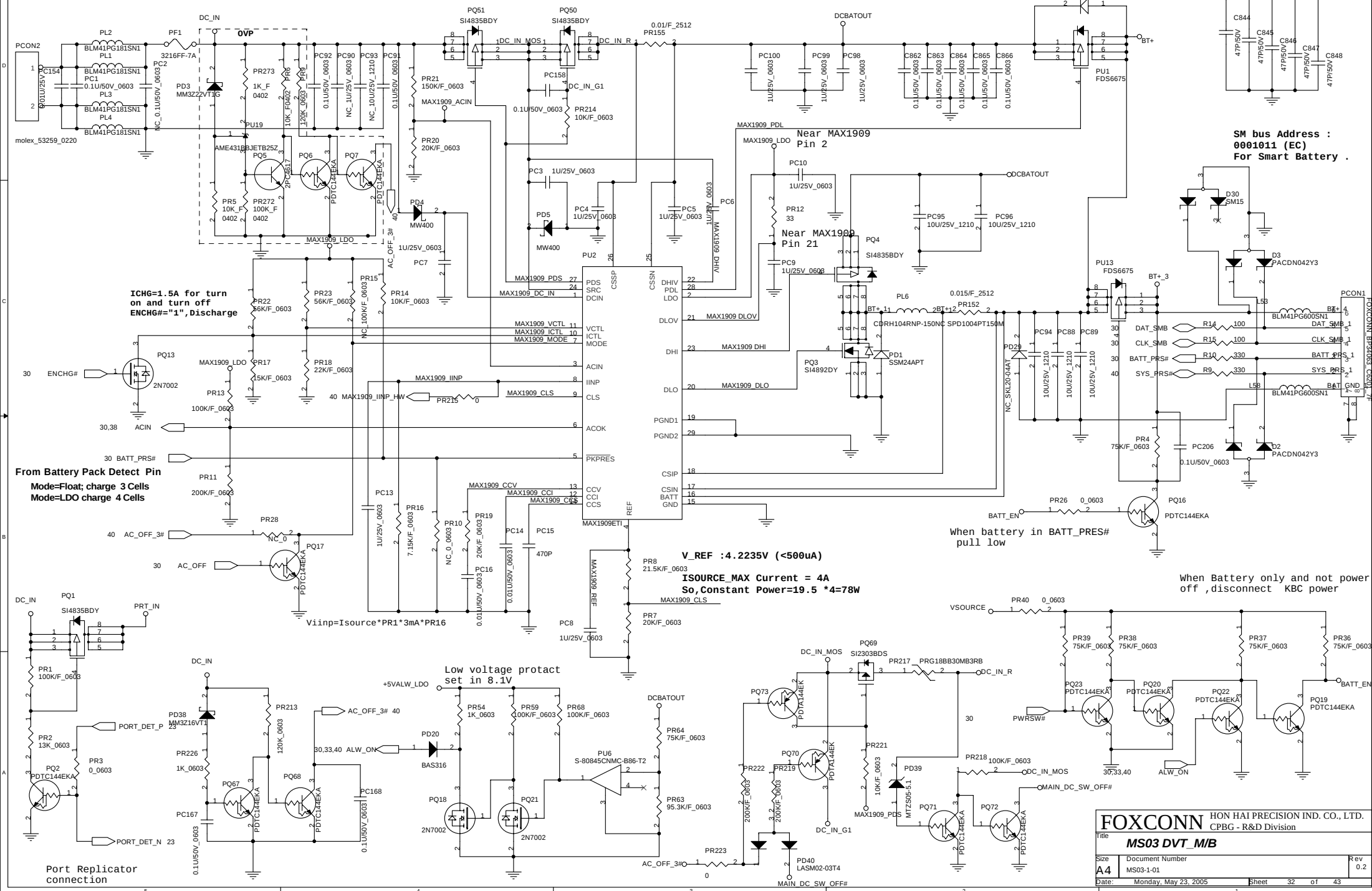


DC_IN from port replicator

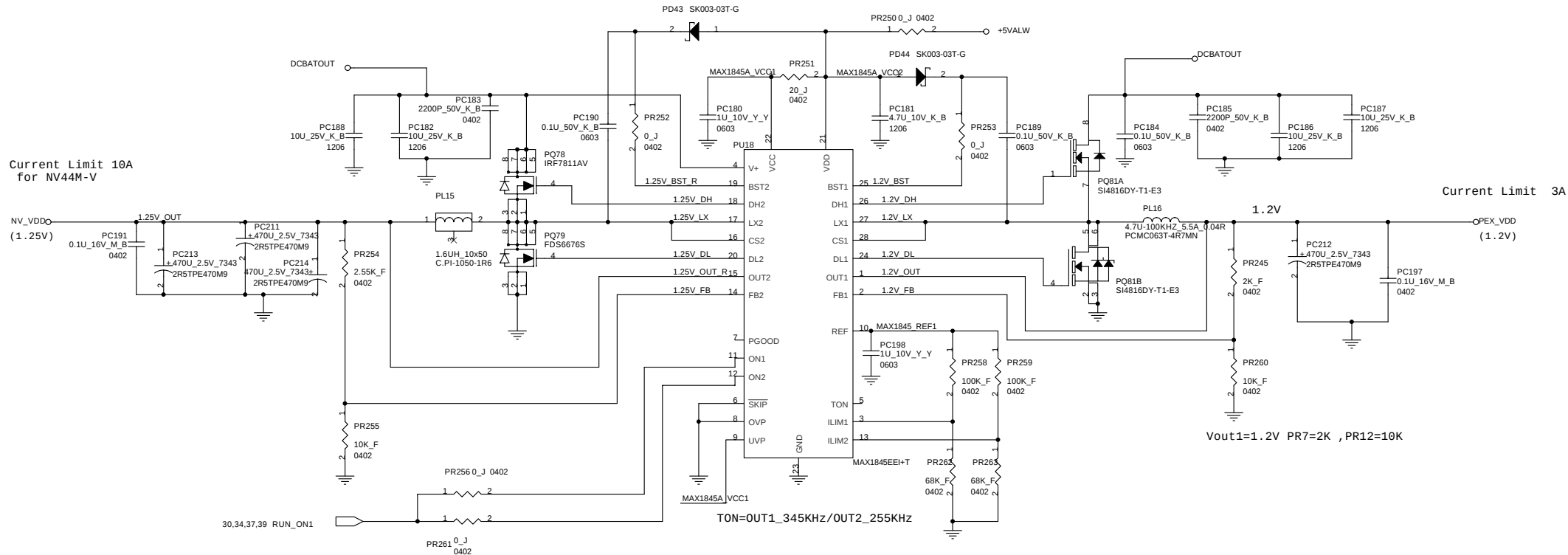
AC_IN Threshold 2.089V Max.
AC_IN > 2.089V -> AC DETECT



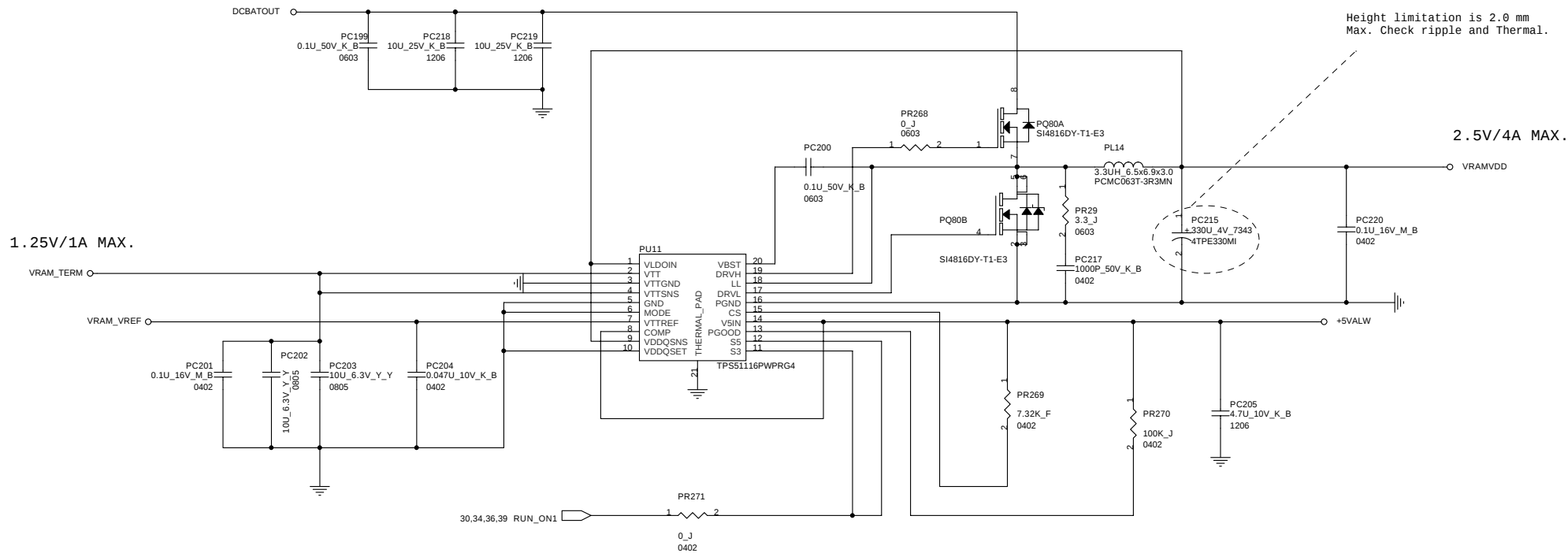
SM bus Address :
0001011 (EC)
For Smart Battery .



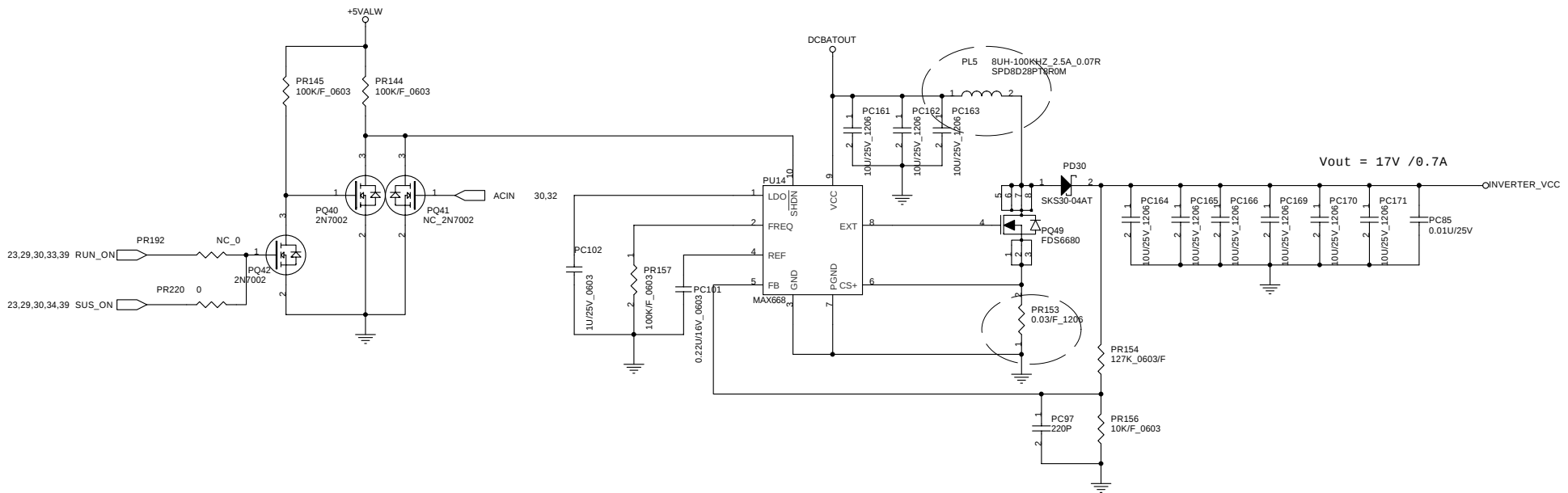
Current Limit 10A
for NV44M-V



Power daughter board for VGA



Change PL5 and PR153 for
improving the step-up
circuit



HISTORY

EVT board start .

(2005/03/31)
P14: Change D1 from NC to mount.
P15: Change R115 from mount to NC.

(2005/04/01)
P40: Rotate PD10, PD11.

(2005/04/12)
P14: Correct LVDS Bus relative of connection (swap Data+/Data-, CLK+/CLK-).
P25: Change CN14 pin16, pin17 from NC to +3VSUS, change CN14 pin18, pin20 from NC to GND.
P30: Delete SW7, Q46, R396, R721.

(2005/04/25)
P12: Add T195 for measure VRAM Timing.

(2005/04/26)
P14: Delete the right side dot of L1.

(2005/04/29)
P14: Change Q22, Q23 from 2N7002 to BSS138.

(2005/05/04)
P14: Change R694, R695, R696, R697 from 2.2K to 0 ohm.

(2005/05/09)
P26: Change H14 part from HOLE_6VIA_C256IN177D98_M2_V6(6.5mm) to HOLE_C236IN177D98_V6(6.0mm).
P15: Change R701 from NC to mount, change R702 from mount to NC.

(2005/05/10)
P32: Change PD3 from P4SSMJ24APT to MM3Z22VT1G.
P32: Change PQ5 from PUTC144EKA to 2PC4617.
P32: Change PR5 from 75K/F_0603 to 10K/F_0402.
P32: Change PR6 from 120K_0603 to 10K/F_0402.
P32: Add PU19 AME, AME431BBJETB25Z.
P32: Add PR272 100K/F_0402.
P32: Add PR273 1K/F_0402.
P36: Change PR262 from 15.8K/F_0402 to 68K/F_0402.
P36: Change PR263 from 40.2K/F_0402 to 68K/F_0402.
P36: Change PL15 footprint from CHOKe_3P_348_409X409_2 to CHOKe_3P_315_394X394_2.
P36: Delete PJ11, PJ12.
P37: Delete PJ13, PJ14.
P39: Delete PJ8, PR178.
P39: Add PC221 1000P_50V_0402.
P39: Change PU16 from LP3875 to AME8816AEHA250Z.
P05: Change R478, R481 from 33ohm to 56ohm for rising edge rate and falling edge rate.
P05: Change C696, C698, C700, C701, C702, C706 from NC to 18pF (EMI solution).
P22: Add C730, C731 (EMI solution).
P22: Connect CN17.20, CN17.32, CN17.44 to GND.
P26: Change SPR7, SPR15 from mount to NC (EMI solution).

(2005/05/11)
P23: Add D33,D34 and D35 for ESD(Not mount).
P36: Change PL15 footprint from CHOKe_3P_348_409X409_2 to L_3P_315_394X394.

(2005/05/13)
P26: Change H25, H26 footprint from ho_tc236bc158d47_v6 to ho_tc236bc158d47_mt.
P26: Change H27, H28 footprint from ho_tc1p5bc6d1p2_m2 to ho_tc1p5bc6d1p2_mb.

(2005/05/16)
P02: Update symbol ahead table, add LNC_ and HMNC_.
P30: Change R280 from mount to NC.
P30: Change R281 from AL_100K to LNC_100K.
P30: Change R293 from NC to mount.
P30: Change R294 from NV_100K to HMNC_100K.

(2005/05/17)
P26: Add R32, R33 NC_0_J (EMI solution).

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		CPBG - R&D Division	
Title			
MS03 DVT_M/B			
Size	Document Number		Rev
	MS03-1-01		0.2
Date:	Monday, May 23, 2005	Sheet	41 of 43
7		8.	

HISTORY
(2005/05/18)

P29: Change C783, C837 from 1U/10V_0603 to 2.2U_10V_Y_Y.
P26: Change H27, H28 from ho_tc1p5bc6d1p2_m2(ho_tc1p5bc6d1p2_mb) to hole_tc6bc1p5d1p2_mt(ho_tc6bc1p5d1p2_mt).
P40: Change PR91 from 31.6K to 25.5K, change PR109 from 49.9K to 31.6K.
P29: Delete R611, R622, R628, R629, R647, R648, R649, R650, JSPK1.
P29: Add C910, C911 NC_100U_6.3V_7343.

(2005/05/19)

P29: Add R734,R735 for anti-digital noise interference.

(2005/05/20)

P30: Change R311, R314 from 10K to 4.7K_J.
P29: Change R735 from mount to NC.
P05: Change R481 from 56ohm to 47ohm.
P05: Change R478 from 56ohm to 47ohm.

[illegible][illegible]

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	MS03-1-01	0.2	
Date:	Monday, May 23, 2005	Sheet	43 of 43