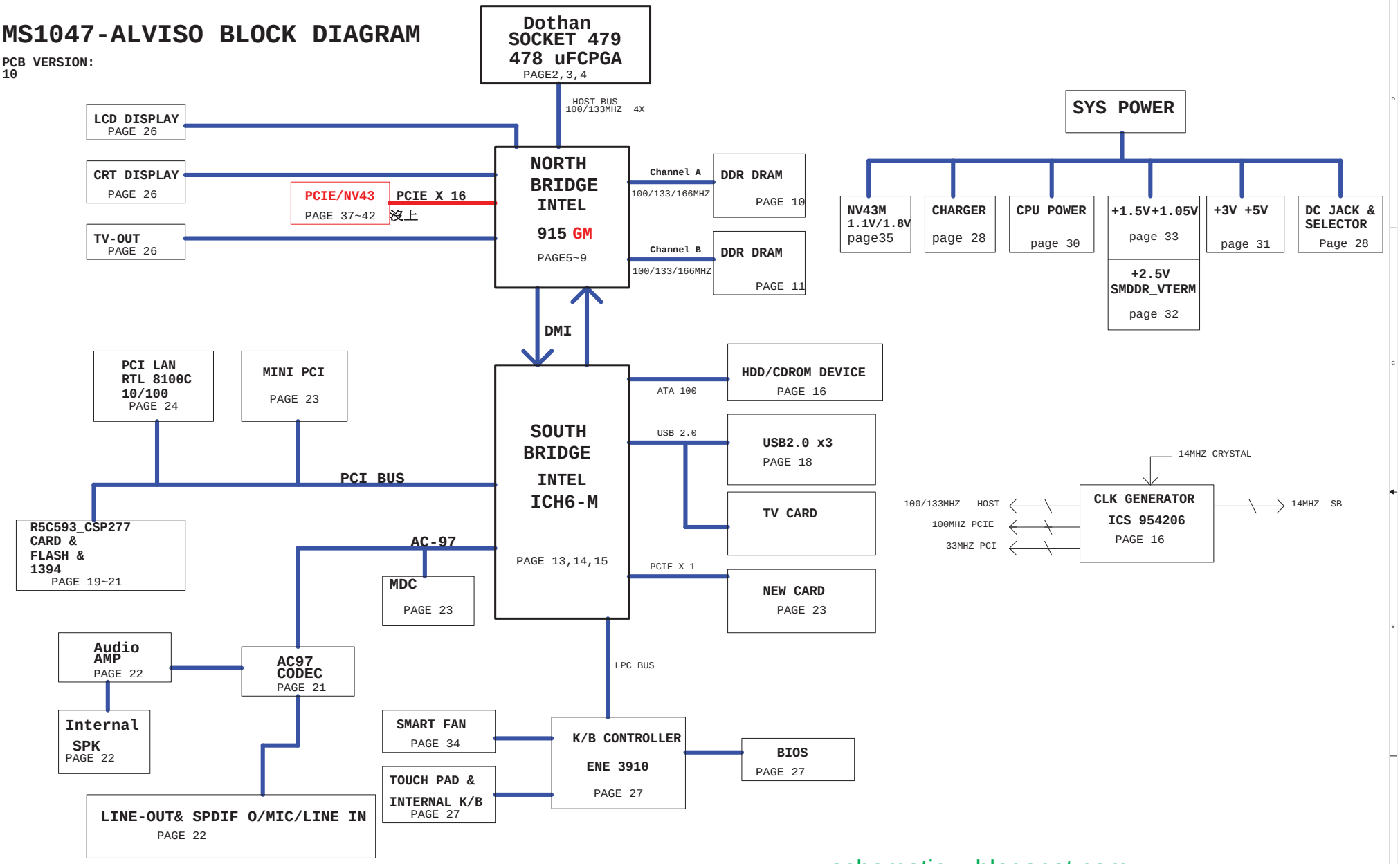
MS1047-ALVISO BLOCK DIAGRAM

PCB VERSION:
10

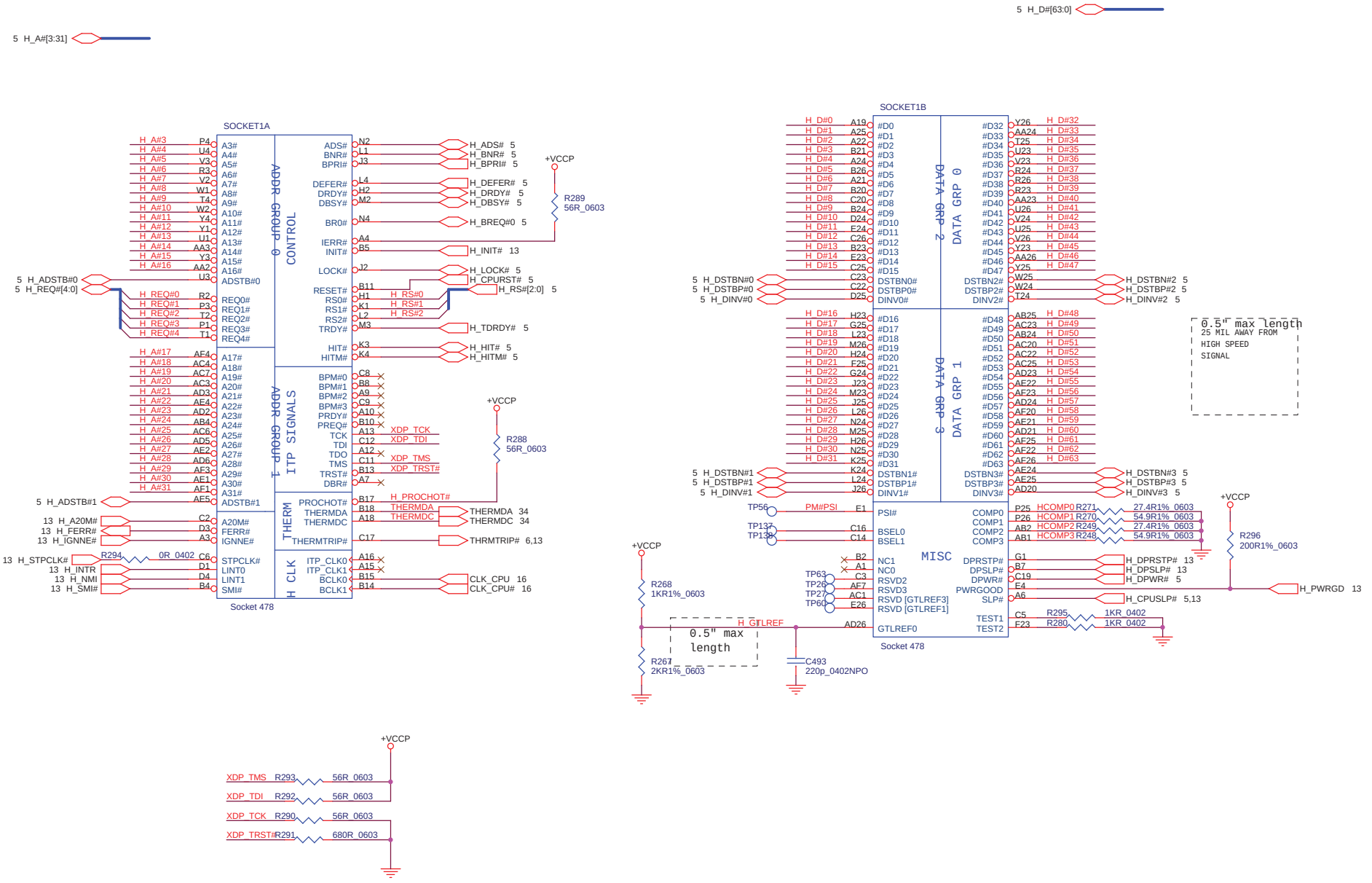


MSI CORPORATION

Title: ***BLOCK DIAGRAM***

Size: C | Document Number | Rev: 02S

Date: Friday, August 19, 2005 | Sheet 1 of 47



MSI CORPORATION

Title: **CPU1**

Size: Custom | Document Number | Rev: 0A

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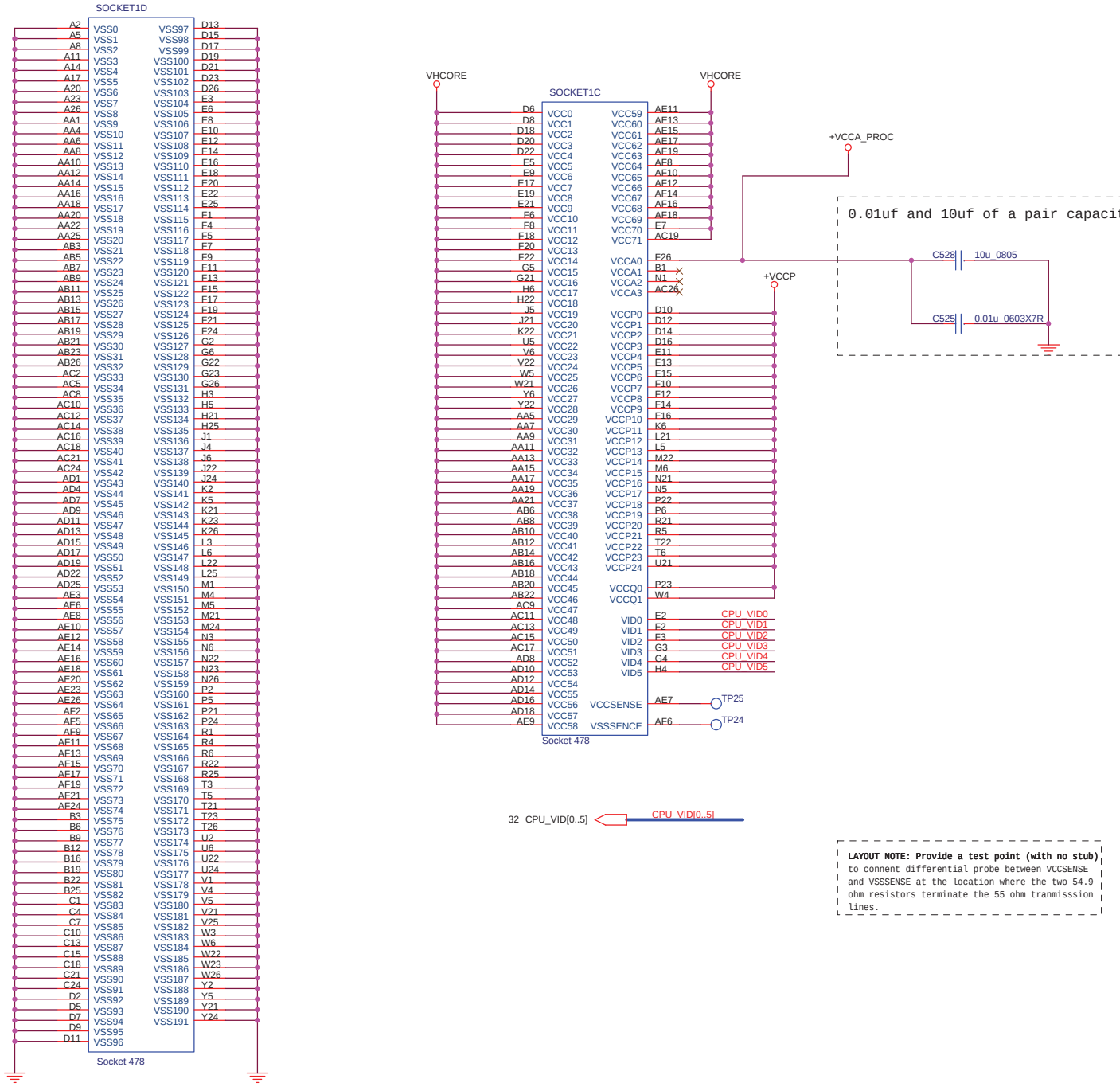
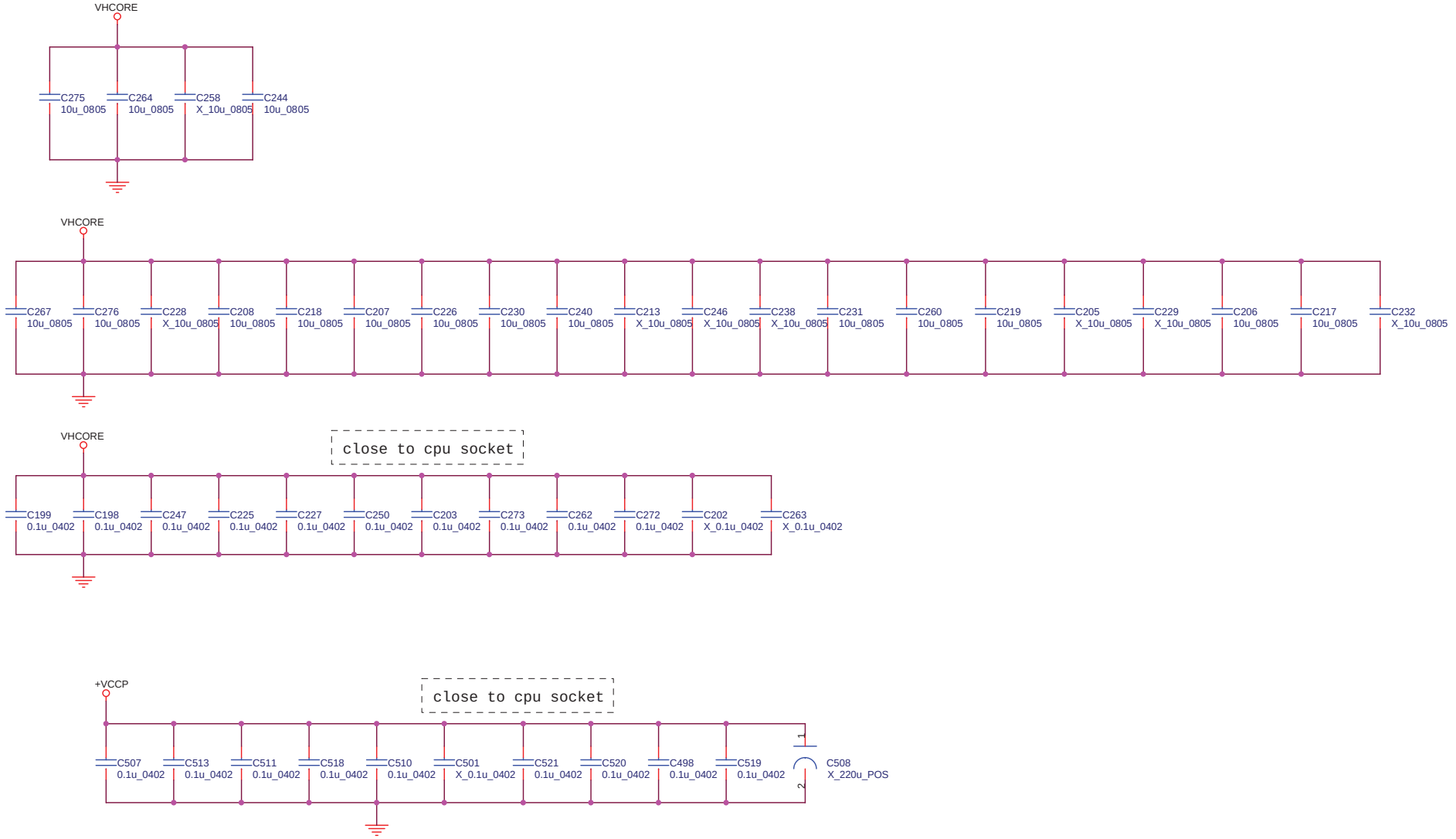
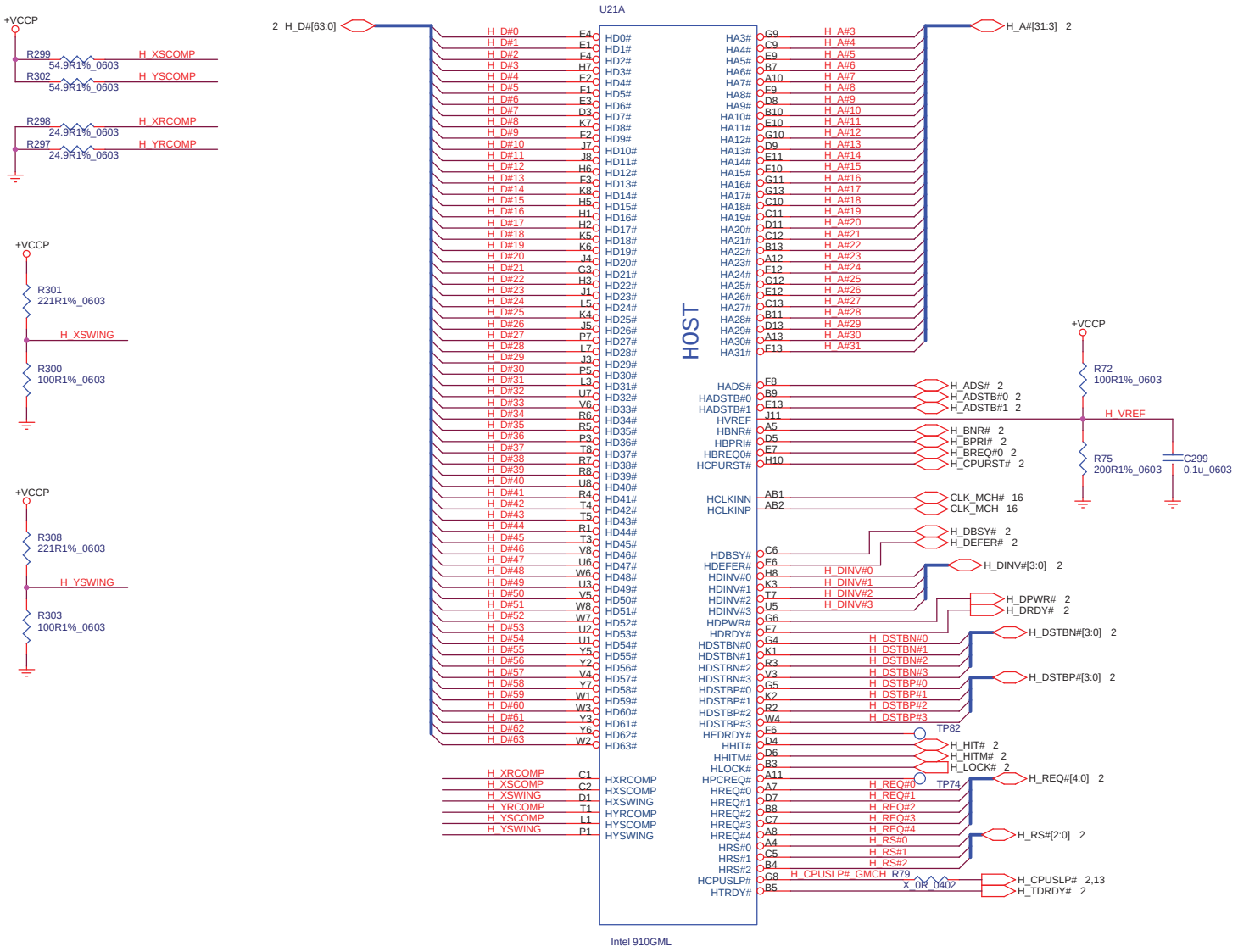


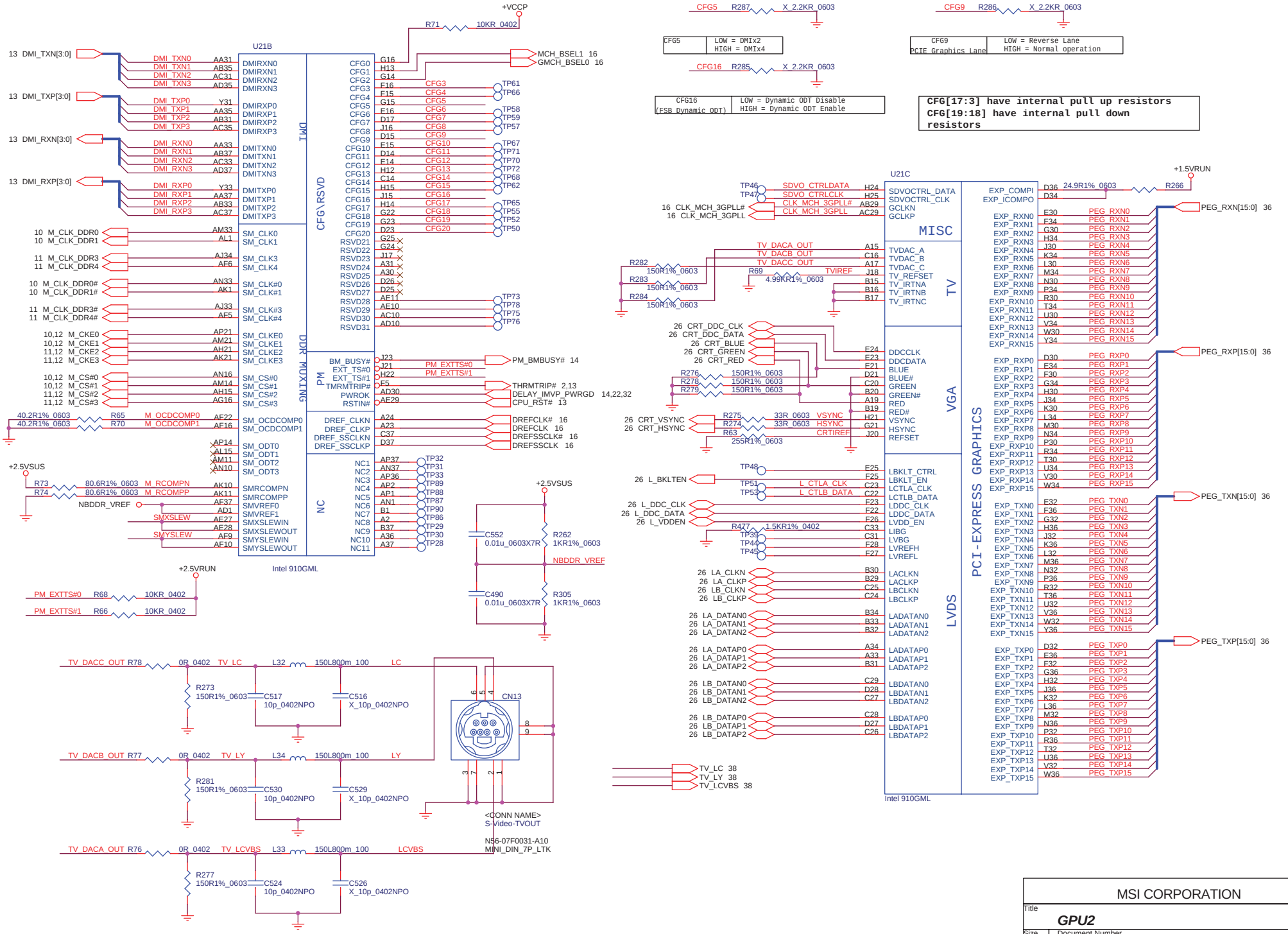
MSI CORPORATION		
Title: CPU2		
Size: Custom	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 3 of 47	



MSI CORPORATION		
Title: ***CPU3***		
Size: B	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 4 of 47	



MSI CORPORATION		
Title: **GPU1**		
Size: A3	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 5 of 47	


U21B
DMI
CFG\RSVD
DDR MUXING
PM
NC
Intel 910GML
+VCCP
R71 10KR 0402
MCH_BSEL1 16
GMCH_BSEL0 16
+2.5VSUS
+2.5VRUN
PM_BMBUSY# 14
THRMTRIP# 2,13
DELAY_IMVP_PWRGD 14,22,32
CPU_RST# 13
DREFCLK# 16
DREFCLK 16
DREFSSCLK# 16
DREFSSCLK 16
NBDDR_VREF
SMXSLEW
SMYSLEW
R262 1KR1%_0603
R305 1KR1%_0603
C552 0.01u_0603X7R
C490 0.01u_0603X7R
TV_DACC_OUT R78
TV_DACB_OUT R77
TV_DACA_OUT R76
TV_LC
TV_LY
TV_LCVBS
L32 150L800m_100
L34 150L800m_100
L33 150L800m_100
R273 150R1%_0603
R281 150R1%_0603
R277 150R1%_0603
C517 10p_0402NPO
C530 10p_0402NPO
C524 10p_0402NPO
C516 X_10p_0402NPO
C529 X_10p_0402NPO
C526 X_10p_0402NPO
CN13
<CONN NAME>
S-Video-TVOUT
N56-07F0031-A10
MINI_DIN_7P_LTK
CFG5 R287 X_2.2KR_0603
CFG16 R285 X_2.2KR_0603
CFG9 R286 X_2.2KR_0603
CFG5 LOW = DMIx2 HIGH = DMIx4
CFG16 (FSB Dynamic ODT) LOW = Dynamic ODT Disable HIGH = Dynamic ODT Enable
CFG9 PCIE Graphics Lane LOW = Reverse Lane HIGH = Normal operation
CFG[17:3] have internal pull up resistors
CFG[19:18] have internal pull down resistors
U21C
MISC
TV
VGA
LVDS
PCI-EXPRESS GRAPHICS
Intel 910GML
+1.5VRUN
R266 24.9R1%_0603
PEG_RXN[15:0] 36
PEG_RXP[15:0] 36
PEG_TXN[15:0] 36
PEG_TXP[15:0] 36
MSI CORPORATION
Title
GPU2
Size A3
Document Number
Rev 0A
Date: Friday, August 19, 2005
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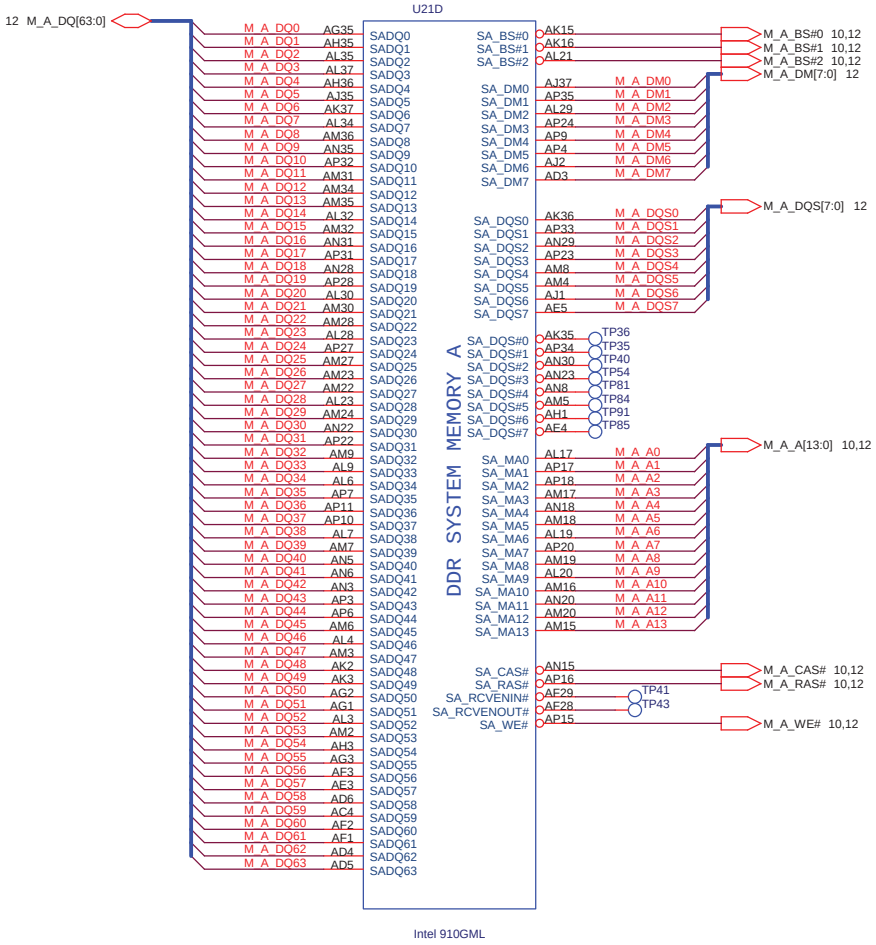
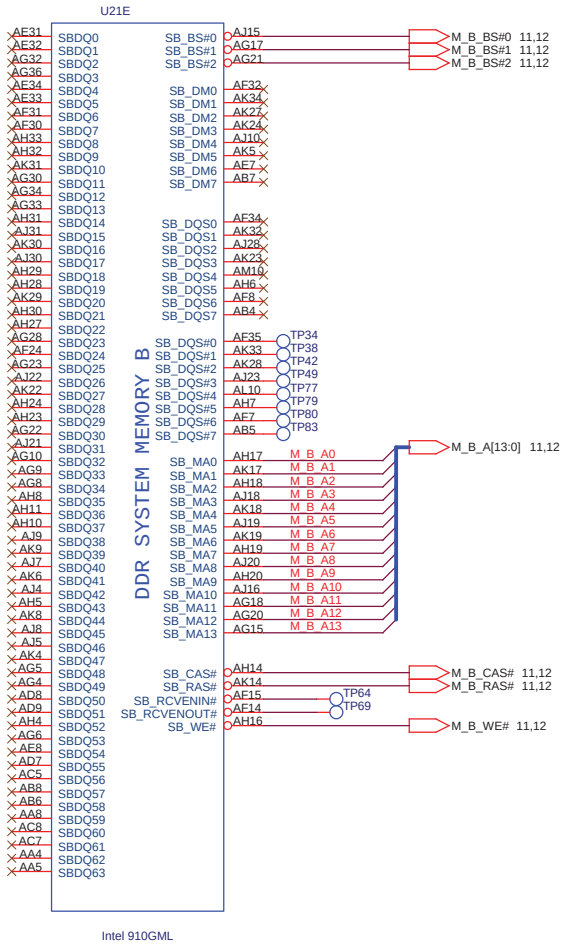
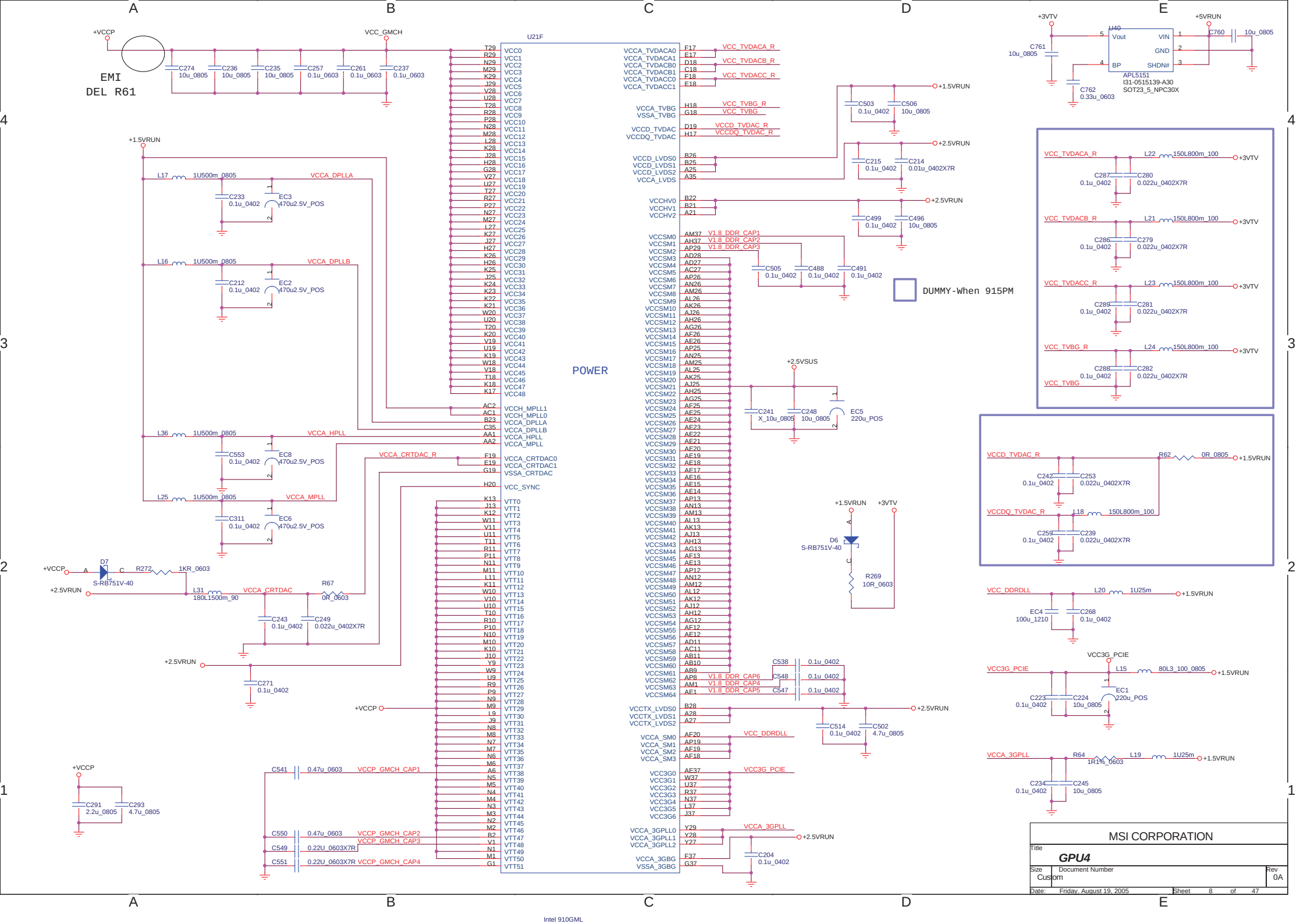




MSI CORPORATION		
Title: *GPU3*		
Size: A3	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 7 of 47	


U21F
POWER
+VCCP
VCC_GMCH
EMI
DEL R61
C274 10u_0805
C236 10u_0805
C235 10u_0805
C257 0.1u_0603
C261 0.1u_0603
C237 0.1u_0603
+1.5VRUN
L17 1U500m_0805
VCCA_DPLLA
C233 0.1u_0402
EC3 470u2.5V_POS
L16 1U500m_0805
VCCA_DPLLB
C212 0.1u_0402
EC2 470u2.5V_POS
L36 1U500m_0805
VCCA_HPLL
C553 0.1u_0402
EC8 470u2.5V_POS
L25 1U500m_0805
VCCA_MPLL
C311 0.1u_0402
EC6 470u2.5V_POS
VCCA_CRTDAC_R
D7
S-RB751V-40
R272 1KR_0603
+2.5VRUN
L31 180L1500m_90
VCCA_CRTDAC
R67 0R_0603
C243 0.1u_0402
C249 0.022u_0402X7R
C271 0.1u_0402
+VCCP
C291 2.2u_0805
C293 4.7u_0805
C541 0.47u_0603
VCCP_GMCH_CAP1
C550 0.47u_0603
VCCP_GMCH_CAP2
C549 0.22u_0603X7R
VCCP_GMCH_CAP3
C551 0.22U_0603X7R
VCCP_GMCH_CAP4
T29 R29 N29 M29 K29 J29 V28 U28 T28 R28 P28 N28 M28 L28 K28 J28 H28 G28 V27 U27 T27 R27 P27 N27 M27 L27 K27 J27 H27 K26 H26 K25 J25 K24 K23 K22 K21 W20 U20 T20 K20 V19 U19 K19 W18 V18 T18 K18 K17
VCC0 VCC1 VCC2 VCC3 VCC4 VCC5 VCC6 VCC7 VCC8 VCC9 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15 VCC16 VCC17 VCC18 VCC19 VCC20 VCC21 VCC22 VCC23 VCC24 VCC25 VCC26 VCC27 VCC28 VCC29 VCC30 VCC31 VCC32 VCC33 VCC34 VCC35 VCC36 VCC37 VCC38 VCC39 VCC40 VCC41 VCC42 VCC43 VCC44 VCC45 VCC46 VCC47 VCC48
AC2 AC1 B23 C35 AA1 AA2
VCCH_MPLL1 VCCH_MPLL0 VCCA_DPLLA VCCA_DPLLB VCCA_HPLL VCCA_MPLL
F19 E19 G19
VCCA_CRTDAC0 VCCA_CRTDAC1 VSSA_CRTDAC
H20
VCC_SYNC
K13 J13 K12 W11 V11 U11 T11 R11 P11 N11 M11 L11 K11 W10 V10 U10 T10 R10 P10 N10 M10 K10 J10 Y9 W9 U9 R9 P9 N9 M9 L9 J9 N8 M8 N7 M7 N6 M6 A6 N5 M5 N4 M4 N3 M3 N2 M2 B2 V1 N1 M1 G1
VTT0 VTT1 VTT2 VTT3 VTT4 VTT5 VTT6 VTT7 VTT8 VTT9 VTT10 VTT11 VTT12 VTT13 VTT14 VTT15 VTT16 VTT17 VTT18 VTT19 VTT20 VTT21 VTT22 VTT23 VTT24 VTT25 VTT26 VTT27 VTT28 VTT29 VTT30 VTT31 VTT32 VTT33 VTT34 VTT35 VTT36 VTT37 VTT38 VTT39 VTT40 VTT41 VTT42 VTT43 VTT44 VTT45 VTT46 VTT47 VTT48 VTT49 VTT50 VTT51
F17 E17 D18 C18 F18 E18
VCC_TVDACA_R VCC_TVDACB_R VCC_TVDACC_R
VCCA_TVDACA0 VCCA_TVDACA1 VCCA_TVDACB0 VCCA_TVDACB1 VCCA_TVDACC0 VCCA_TVDACC1
H18 G18
VCC_TVBG_R VCC_TVBG
VCCA_TVBG VSSA_TVBG
D19 H17
VCCD_TVDAC_R VCCDQ_TVDAC_R
VCCD_TVDAC VCCDQ_TVDAC
B26 B25 A25 A35
VCCD_LVDS0 VCCD_LVDS1 VCCD_LVDS2 VCCA_LVDS
B22 B21 A21
VCCHV0 VCCHV1 VCCHV2
AM37 AH37 AP29
V1.8_DDR_CAP1 V1.8_DDR_CAP2 V1.8_DDR_CAP3
VCCSM0 VCCSM1 VCCSM2 AD28 VCCSM3 AD27 VCCSM4 AC27 VCCSM5 AP26 VCCSM6 AN26 VCCSM7 AM26 VCCSM8 AL26 VCCSM9 AK26 VCCSM10 AJ26 VCCSM11 AH26 VCCSM12 AG26 VCCSM13 AE26 VCCSM14 AE26 VCCSM15 AP25 VCCSM16 AN25 VCCSM17 AM25 VCCSM18 AL25 VCCSM19 AK25 VCCSM20 AJ25 VCCSM21 AH25 VCCSM22 AC25 VCCSM23 AF25 VCCSM24 AE25 VCCSM25 AE24 VCCSM26 AE23 VCCSM27 AE22 VCCSM28 AE21 VCCSM29 AE20 VCCSM30 AE19 VCCSM31 AE18 VCCSM32 AE17 VCCSM33 AE16 VCCSM34 AE15 VCCSM35 AE14 VCCSM36 AP13 VCCSM37 AN13 VCCSM38 AM13 VCCSM39 AL13 VCCSM40 AK13 VCCSM41 AJ13 VCCSM42 AH13 VCCSM43 AG13 VCCSM44 AE13 VCCSM45 AE13 VCCSM46 AP12 VCCSM47 AN12 VCCSM48 AM12 VCCSM49 AL12 VCCSM50 AK12 VCCSM51 AJ12 VCCSM52 AH12 VCCSM53 AG12 VCCSM54 AE12 VCCSM55 AE12 VCCSM56 AD11 VCCSM57 AC11 VCCSM58 AB11 VCCSM59 AB10 VCCSM60 AB9 VCCSM61 AP8 V1.8_DDR_CAP6 VCCSM62 AM1 V1.8_DDR_CAP4 VCCSM63 AE1 V1.8_DDR_CAP5 VCCSM64
C505 0.1u_0402
C488 0.1u_0402
C491 0.1u_0402
DUMMY-When 915PM
C538 0.1u_0402
C548 0.1u_0402
C547 0.1u_0402
B28 A28 A27
VCCTX_LVDS0 VCCTX_LVDS1 VCCTX_LVDS2
C514 0.1u_0402
C502 4.7u_0805
AE20 AP19 AF19 AF18
VCCA_SM0 VCCA_SM1 VCCA_SM2 VCCA_SM3
VCC_DDRDLL
AE37 W37 U37 R37 N37 L37 J37
VCC3G0 VCC3G1 VCC3G2 VCC3G3 VCC3G4 VCC3G5 VCC3G6
VCC3G_PCIE
Y29 Y28 Y27
VCCA_3GPLL0 VCCA_3GPLL1 VCCA_3GPLL2
VCCA_3GPLL
C204 0.1u_0402
F37 G37
VCCA_3GBG VSSA_3GBG
+2.5VSUS
C241 X_10u_0805
C248 10u_0805
EC5 220u_POS
D6 S-RB751V-40
R269 10R_0603
+3VTV
C503 0.1u_0402
C506 10u_0805
C215 0.1u_0402
C214 0.01u_0402X7R
C499 0.1u_0402
C496 10u_0805
U40
APL5151
I31-0515139-A30
SOT23_5_NPC30X
C761 10u_0805
C762 0.33u_0603
C760 10u_0805
VCC_TVDACA_R L22 150L800m_100
C287 0.1u_0402
C280 0.022u_0402X7R
VCC_TVDACB_R L21 150L800m_100
C286 0.1u_0402
C279 0.022u_0402X7R
VCC_TVDACC_R L23 150L800m_100
C289 0.1u_0402
C281 0.022u_0402X7R
VCC_TVBG_R L24 150L800m_100
C288 0.1u_0402
C282 0.022u_0402X7R
VCC_TVBG
VCCD_TVDAC_R R62 0R_0805
C242 0.1u_0402
C253 0.022u_0402X7R
VCCDQ_TVDAC_R L18 150L800m_100
C259 0.1u_0402
C239 0.022u_0402X7R
VCC_DDRDLL L20 1U25m
EC4 100u_1210
C268 0.1u_0402
VCC3G_PCIE L15 80L3_100_0805
C223 0.1u_0402
C224 10u_0805
EC1 220u_POS
VCCA_3GPLL R64 1R1%_0603 L19 1U25m
C234 0.1u_0402
C245 10u_0805
MSI CORPORATION
Title
GPU4
Size Custom
Document Number
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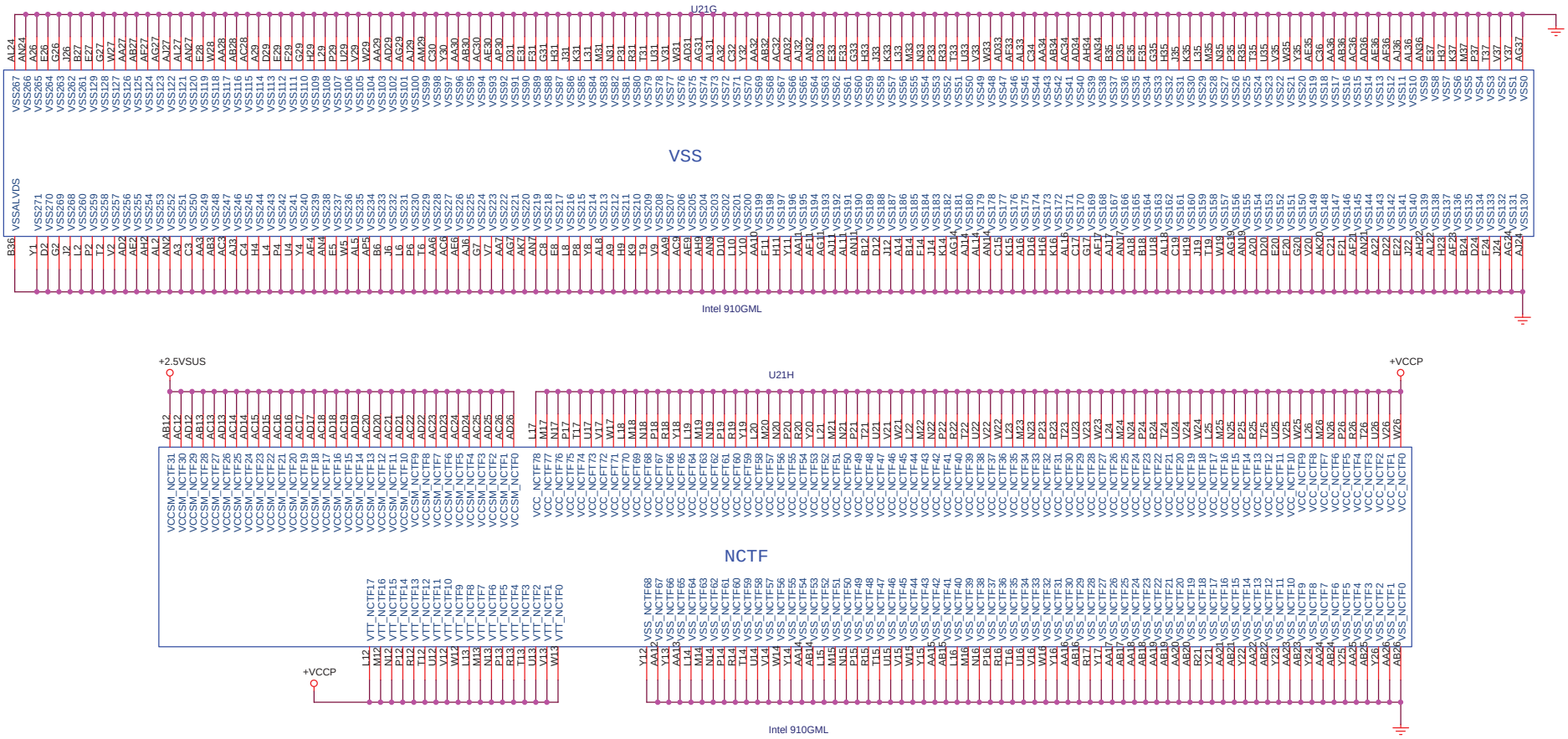
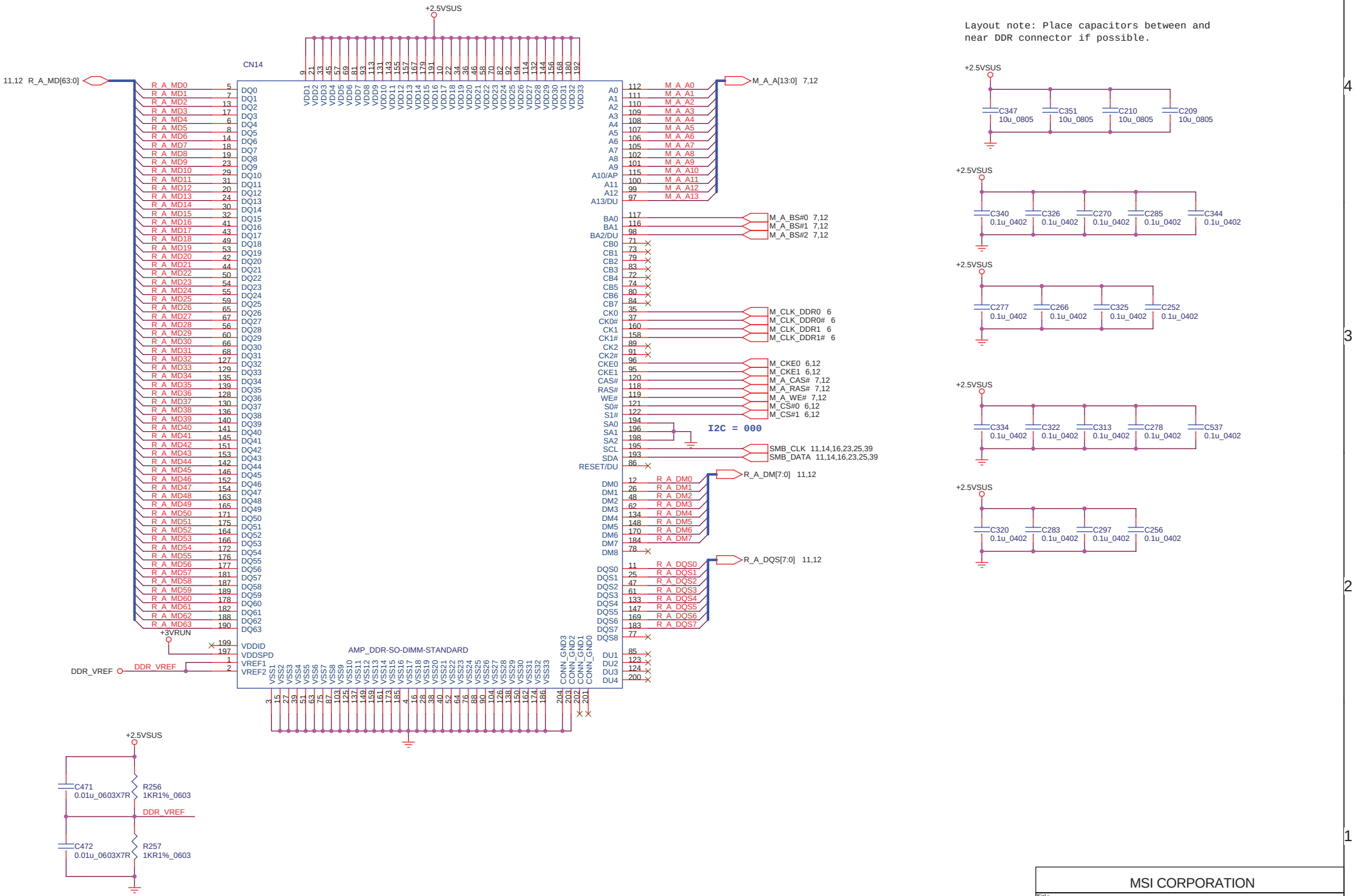
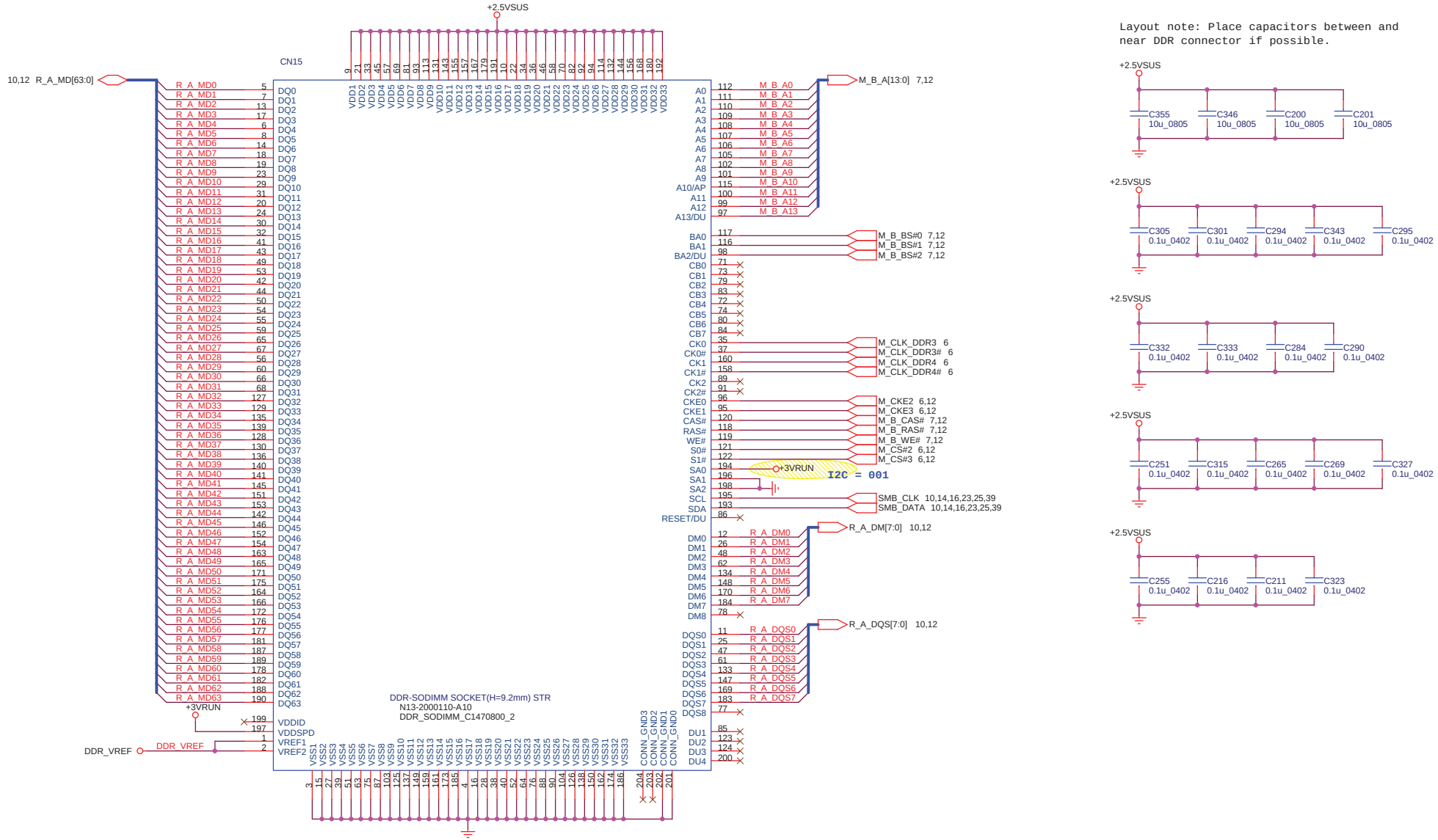
Intel 910GML



MSI CORPORATION				
Title: GPU5				
Size: A3	Document Number			Rev: 0A
Date: Friday, August 19, 2005		Sheet 9 of 47		

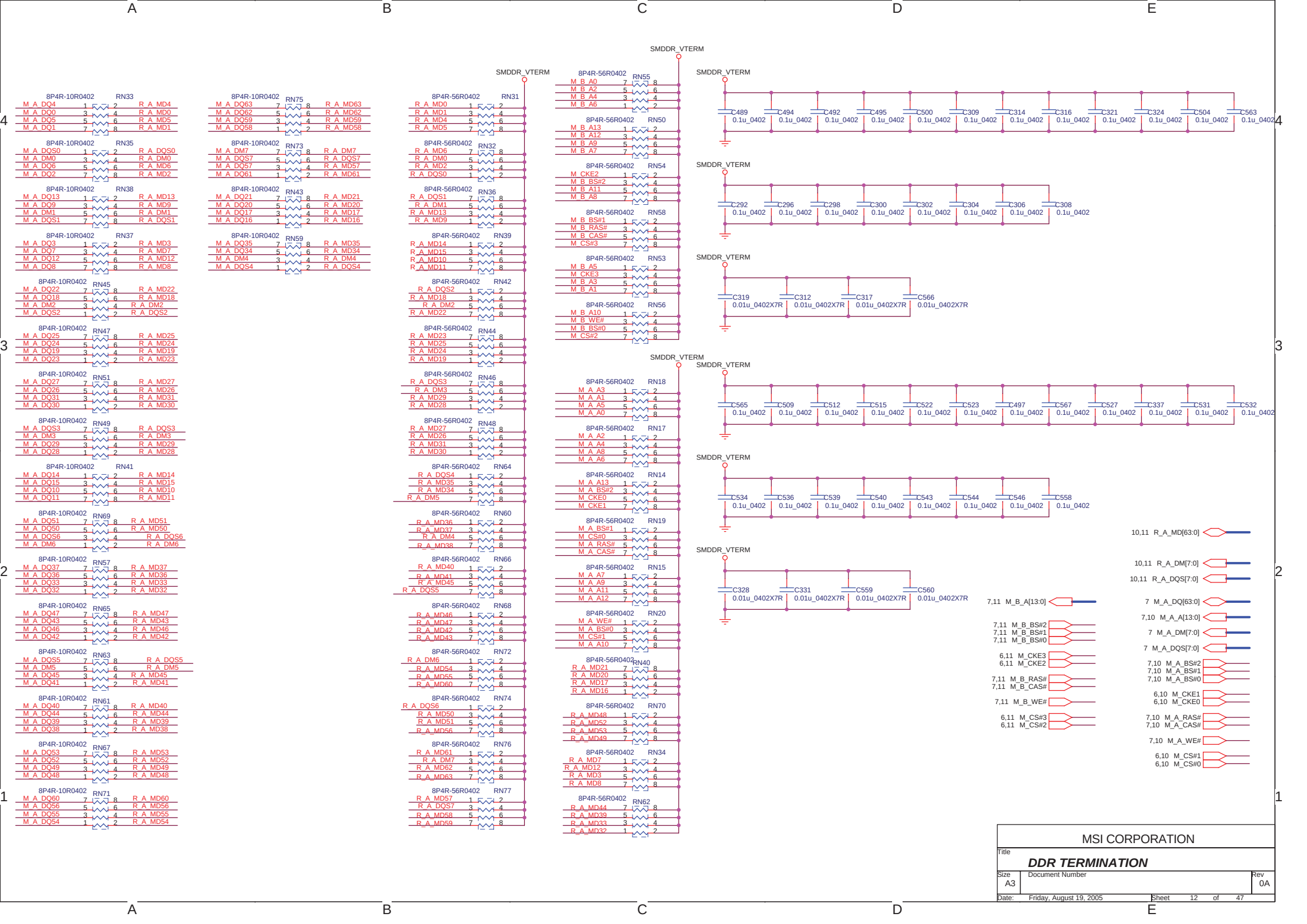


MSI CORPORATION	
Title	***DDRA***
Size: A3	Document Number
Rev: 0A	
Date: Friday, August 19, 2005	Sheet 10 of 47



Layout note: Place capacitors between and near DDR connector if possible.

MSI CORPORATION		
Title: ***DDRB***		
Size: A3	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 11 of 47	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M_A_DQ4 R_A_MD4
M_A_DQ0 R_A_MD0
M_A_DQ5 R_A_MD5
M_A_DQ1 R_A_MD1
8P4R-10R0402 RN35
M_A_DQS0 R_A_DQS0
M_A_DM0 R_A_DM0
M_A_DQ6 R_A_MD6
M_A_DQ2 R_A_MD2
8P4R-10R0402 RN38
M_A_DQ13 R_A_MD13
M_A_DQ9 R_A_MD9
M_A_DM1 R_A_DM1
M_A_DQS1 R_A_DQS1
8P4R-10R0402 RN37
M_A_DQ3 R_A_MD3
M_A_DQ7 R_A_MD7
M_A_DQ12 R_A_MD12
M_A_DQ8 R_A_MD8
8P4R-10R0402 RN45
M_A_DQ22 R_A_MD22
M_A_DQ18 R_A_MD18
M_A_DM2 R_A_DM2
M_A_DQS2 R_A_DQS2
8P4R-10R0402 RN47
M_A_DQ25 R_A_MD25
M_A_DQ24 R_A_MD24
M_A_DQ19 R_A_MD19
M_A_DQ23 R_A_MD23
8P4R-10R0402 RN51
M_A_DQ27 R_A_MD27
M_A_DQ26 R_A_MD26
M_A_DQ31 R_A_MD31
M_A_DQ30 R_A_MD30
8P4R-10R0402 RN49
M_A_DQS3 R_A_DQS3
M_A_DM3 R_A_DM3
M_A_DQ29 R_A_MD29
M_A_DQ28 R_A_MD28
8P4R-10R0402 RN41
M_A_DQ14 R_A_MD14
M_A_DQ15 R_A_MD15
M_A_DQ10 R_A_MD10
M_A_DQ11 R_A_MD11
8P4R-10R0402 RN69
M_A_DQ51 R_A_MD51
M_A_DQ50 R_A_MD50
M_A_DQS6 R_A_DQS6
M_A_DM6 R_A_DM6
8P4R-10R0402 RN57
M_A_DQ37 R_A_MD37
M_A_DQ36 R_A_MD36
M_A_DQ33 R_A_MD33
M_A_DQ32 R_A_MD32
8P4R-10R0402 RN65
M_A_DQ47 R_A_MD47
M_A_DQ43 R_A_MD43
M_A_DQ46 R_A_MD46
M_A_DQ42 R_A_MD42
8P4R-10R0402 RN63
M_A_DQS5 R_A_DQS5
M_A_DM5 R_A_DM5
M_A_DQ45 R_A_MD45
M_A_DQ41 R_A_MD41
8P4R-10R0402 RN61
M_A_DQ40 R_A_MD40
M_A_DQ44 R_A_MD44
M_A_DQ39 R_A_MD39
M_A_DQ38 R_A_MD38
8P4R-10R0402 RN67
M_A_DQ53 R_A_MD53
M_A_DQ52 R_A_MD52
M_A_DQ49 R_A_MD49
M_A_DQ48 R_A_MD48
8P4R-10R0402 RN71
M_A_DQ60 R_A_MD60
M_A_DQ56 R_A_MD56
M_A_DQ55 R_A_MD55
M_A_DQ54 R_A_MD54
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M_A_DQ63 R_A_MD63
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M_A_DQ59 R_A_MD59
M_A_DQ58 R_A_MD58
8P4R-10R0402 RN73
M_A_DM7 R_A_DM7
M_A_DQS7 R_A_DQS7
M_A_DQ57 R_A_MD57
M_A_DQ61 R_A_MD61
8P4R-10R0402 RN43
M_A_DQ21 R_A_MD21
M_A_DQ20 R_A_MD20
M_A_DQ17 R_A_MD17
M_A_DQ16 R_A_MD16
8P4R-10R0402 RN59
M_A_DQ35 R_A_MD35
M_A_DQ34 R_A_MD34
M_A_DM4 R_A_DM4
M_A_DQS4 R_A_DQS4
SMDDR_VTERM
8P4R-56R0402 RN31
R_A_MD0 R_A_MD1 R_A_MD4 R_A_MD5
8P4R-56R0402 RN32
R_A_MD6 R_A_DM0 R_A_MD2 R_A_DQS0
8P4R-56R0402 RN36
R_A_DQS1 R_A_DM1 R_A_MD13 R_A_MD9
8P4R-56R0402 RN39
R_A_MD14 R_A_MD15 R_A_MD10 R_A_MD11
8P4R-56R0402 RN42
R_A_DQS2 R_A_MD18 R_A_DM2 R_A_MD22
8P4R-56R0402 RN44
R_A_MD23 R_A_MD25 R_A_MD24 R_A_MD19
8P4R-56R0402 RN46
R_A_DQS3 R_A_DM3 R_A_MD29 R_A_MD28
8P4R-56R0402 RN48
R_A_MD27 R_A_MD26 R_A_MD31 R_A_MD30
8P4R-56R0402 RN64
R_A_DQS4 R_A_MD35 R_A_MD34 R_A_DM5
8P4R-56R0402 RN60
R_A_MD36 R_A_MD37 R_A_DM4 R_A_MD38
8P4R-56R0402 RN66
R_A_MD40 R_A_MD41 R_A_MD45 R_A_DQS5
8P4R-56R0402 RN68
R_A_MD46 R_A_MD47 R_A_MD42 R_A_MD43
8P4R-56R0402 RN72
R_A_DM6 R_A_MD54 R_A_MD55 R_A_MD60
8P4R-56R0402 RN74
R_A_DQS6 R_A_MD50 R_A_MD51 R_A_MD56
8P4R-56R0402 RN76
R_A_MD61 R_A_DM7 R_A_MD62 R_A_MD63
8P4R-56R0402 RN77
R_A_MD57 R_A_DQS7 R_A_MD58 R_A_MD59
SMDDR_VTERM
8P4R-56R0402 RN55
M_B_A0 M_B_A2 M_B_A4 M_B_A6
8P4R-56R0402 RN50
M_B_A13 M_B_A12 M_B_A9 M_B_A7
8P4R-56R0402 RN54
M_CKE2 M_B_BS#2 M_B_A11 M_B_A8
8P4R-56R0402 RN58
M_B_BS#1 M_B_RAS# M_B_CAS# M_CS#3
8P4R-56R0402 RN53
M_B_A5 M_CKE3 M_B_A3 M_B_A1
8P4R-56R0402 RN56
M_B_A10 M_B_WE# M_B_BS#0 M_CS#2
SMDDR_VTERM
8P4R-56R0402 RN18
M_A_A3 M_A_A1 M_A_A5 M_A_A0
8P4R-56R0402 RN17
M_A_A2 M_A_A4 M_A_A8 M_A_A6
8P4R-56R0402 RN14
M_A_A13 M_A_BS#2 M_CKE0 M_CKE1
8P4R-56R0402 RN19
M_A_BS#1 M_CS#0 M_A_RAS# M_A_CAS#
8P4R-56R0402 RN15
M_A_A7 M_A_A9 M_A_A11 M_A_A12
8P4R-56R0402 RN20
M_A_WE# M_A_BS#0 M_CS#1 M_A_A10
8P4R-56R0402 RN40
R_A_MD21 R_A_MD20 R_A_MD17 R_A_MD16
8P4R-56R0402 RN70
R_A_MD48 R_A_MD52 R_A_MD53 R_A_MD49
8P4R-56R0402 RN34
R_A_MD7 R_A_MD12 R_A_MD3 R_A_MD8
8P4R-56R0402 RN62
R_A_MD44 R_A_MD39 R_A_MD33 R_A_MD32
SMDDR_VTERM
C489 C494 C492 C495 C500 C309 C314 C316 C321 C324 C504 C563
0.1u_0402
SMDDR_VTERM
C292 C296 C298 C300 C302 C304 C306 C308
0.1u_0402
SMDDR_VTERM
C319 C312 C317 C566
0.01u_0402X7R
SMDDR_VTERM
C565 C509 C512 C515 C522 C523 C497 C567 C527 C337 C531 C532
0.1u_0402
SMDDR_VTERM
C534 C536 C539 C540 C543 C544 C546 C558
0.1u_0402
SMDDR_VTERM
C328 C331 C559 C560
0.01u_0402X7R
7,11 M_B_A[13:0]
7,11 M_B_BS#2
7,11 M_B_BS#1
7,11 M_B_BS#0
6,11 M_CKE3
6,11 M_CKE2
7,11 M_B_RAS#
7,11 M_B_CAS#
7,11 M_B_WE#
6,11 M_CS#3
6,11 M_CS#2
10,11 R_A_MD[63:0]
10,11 R_A_DM[7:0]
10,11 R_A_DQS[7:0]
7 M_A_DQ[63:0]
7,10 M_A_A[13:0]
7 M_A_DM[7:0]
7 M_A_DQS[7:0]
7,10 M_A_BS#2
7,10 M_A_BS#1
7,10 M_A_BS#0
6,10 M_CKE1
6,10 M_CKE0
7,10 M_A_RAS#
7,10 M_A_CAS#
7,10 M_A_WE#
6,10 M_CS#1
6,10 M_CS#0
MSI CORPORATION
Title
DDR TERMINATION
Size A3
Document Number
Rev 0A
Date: Friday, August 19, 2005
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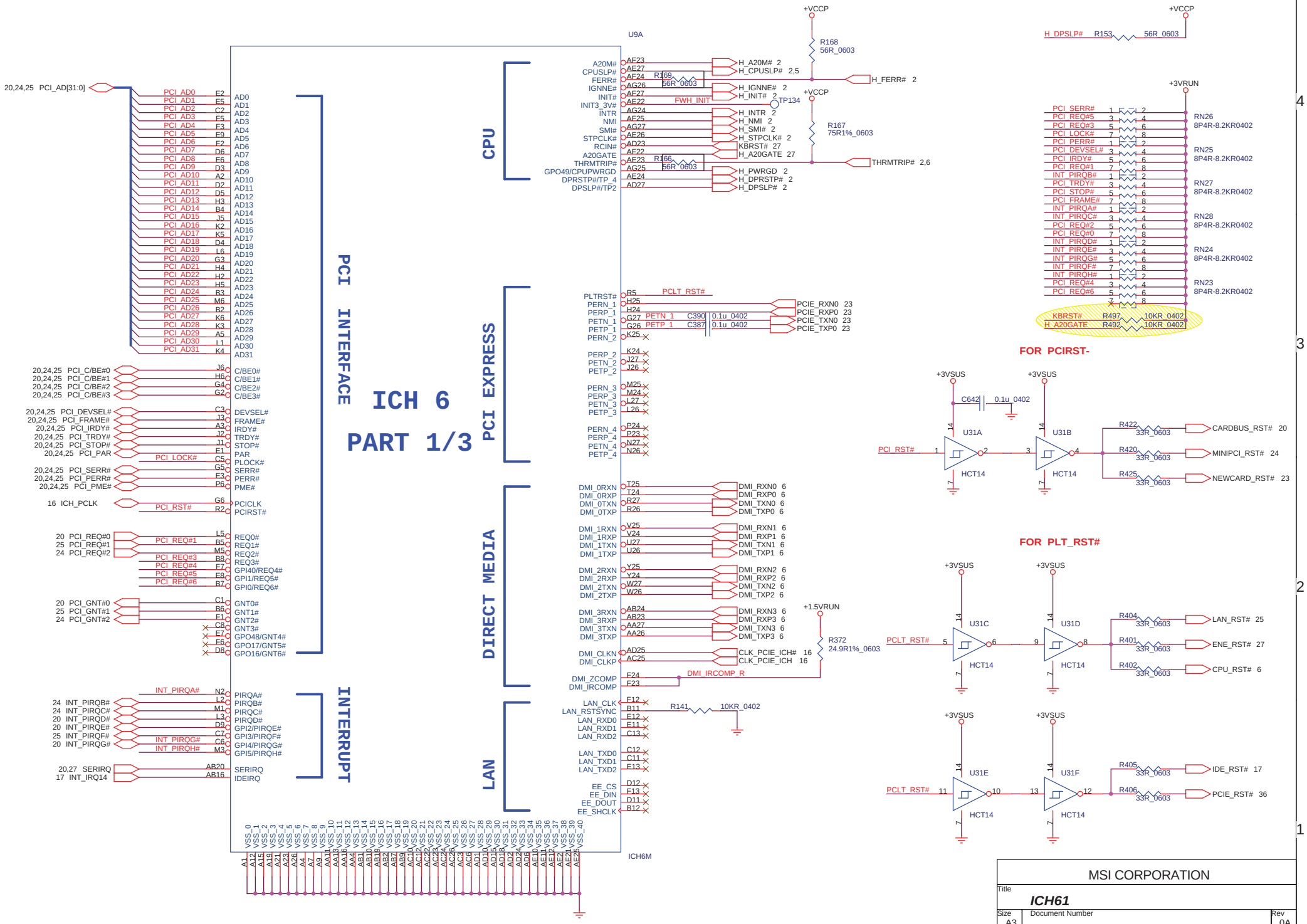
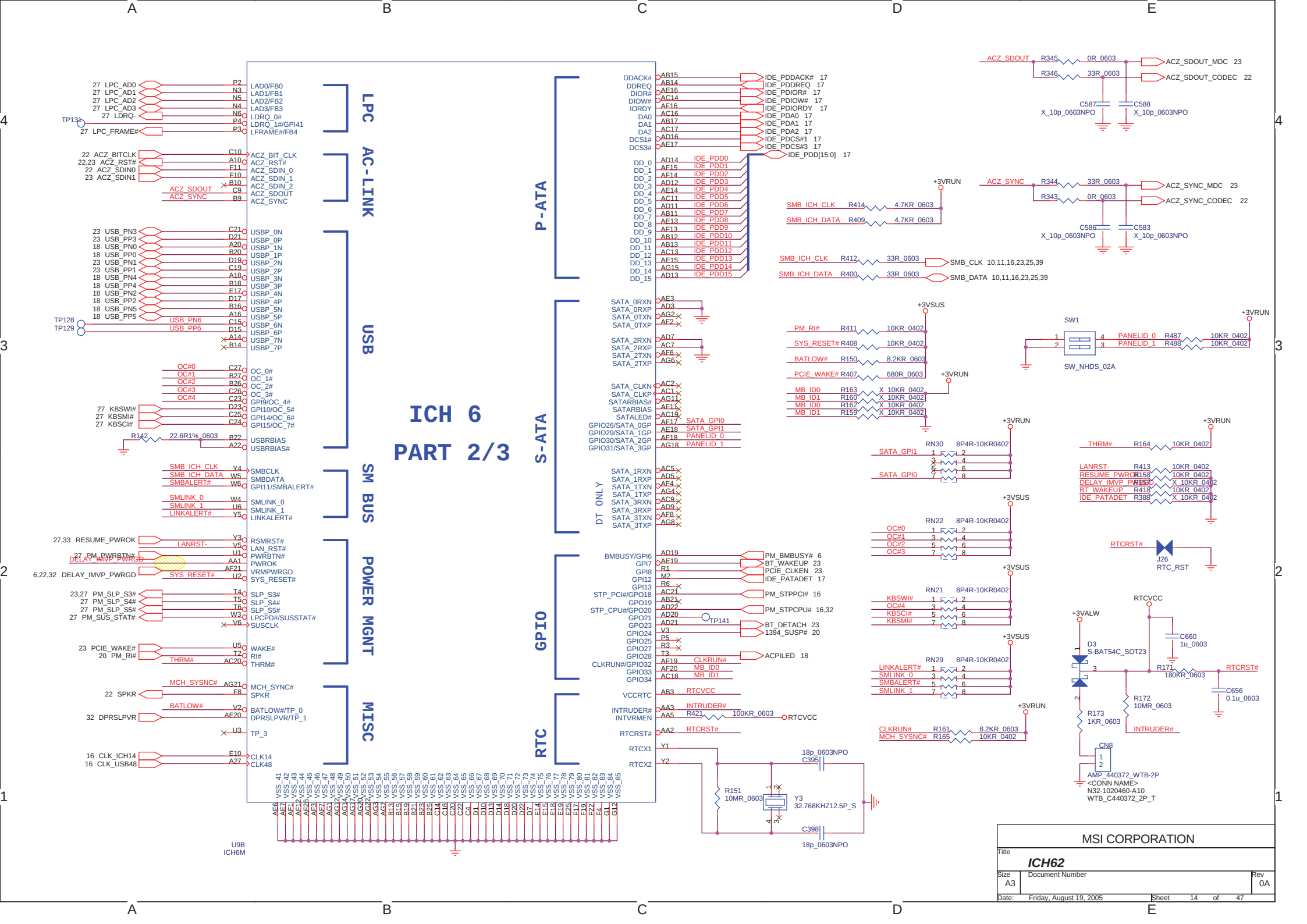

ICH 6
PART 1/3
U9A
ICH6M
CPU
PCI EXPRESS
DIRECT MEDIA
LAN
INTERRUPT
PCI INTERFACE
FOR PCIRST-
FOR PLT_RST#
MSI CORPORATION
ICH61
Friday, August 19, 2005


ICH 6
PART 2/3
LPC
AC-LINK
USB
SM BUS
POWER MGNT
MISC
P-ATA
S-ATA
DT ONLY
GPIO
RTC
U9B
ICH6M
MSI CORPORATION
ICH62
Size A3
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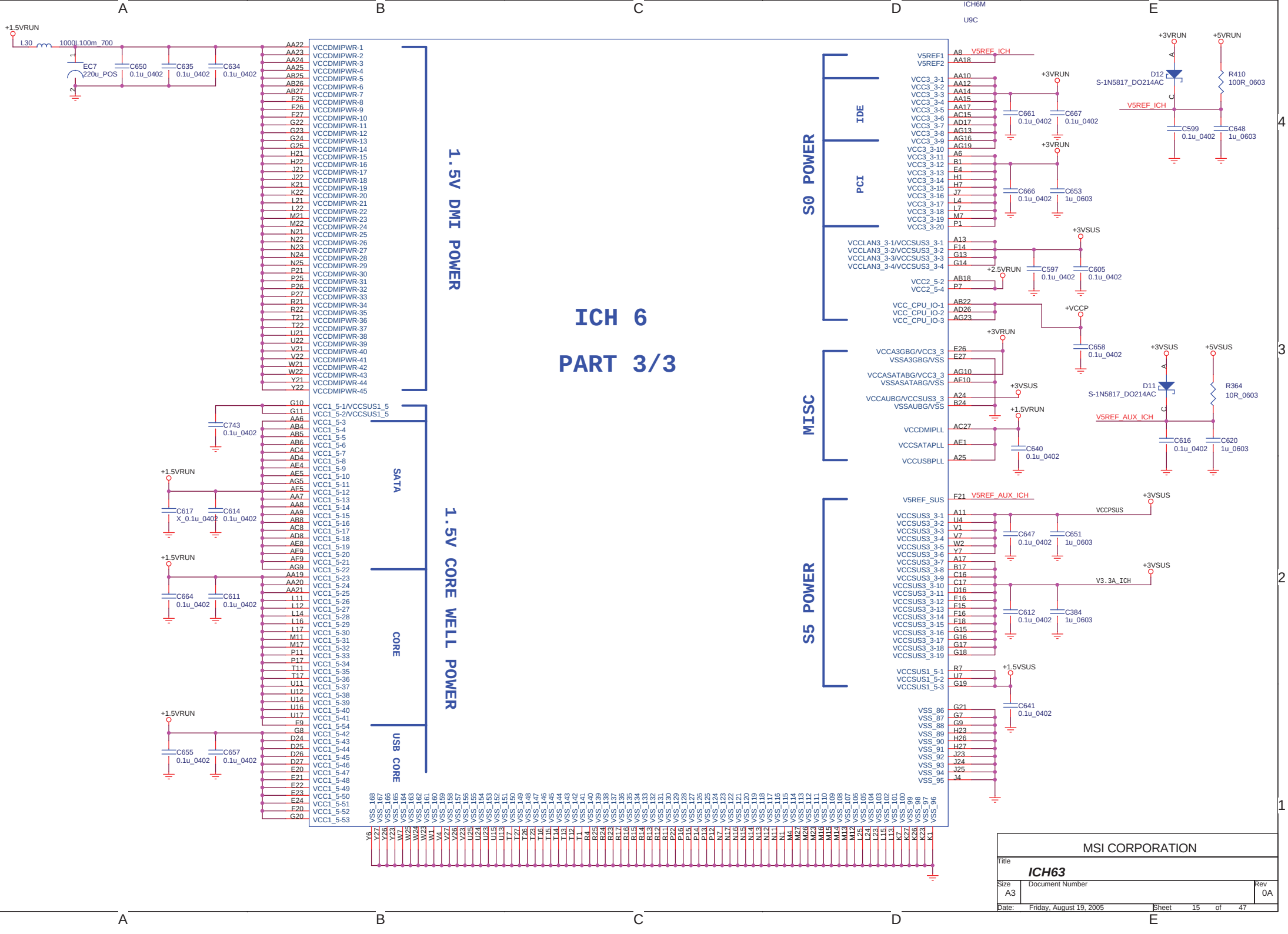
ICH 6
PART 3/3
1.5V DMI POWER
1.5V CORE WELL POWER
SATA
CORE
USB CORE
S0 POWER
IDE
PCI
MISC
S5 POWER
ICH6M
U9C
MSI CORPORATION
ICH63
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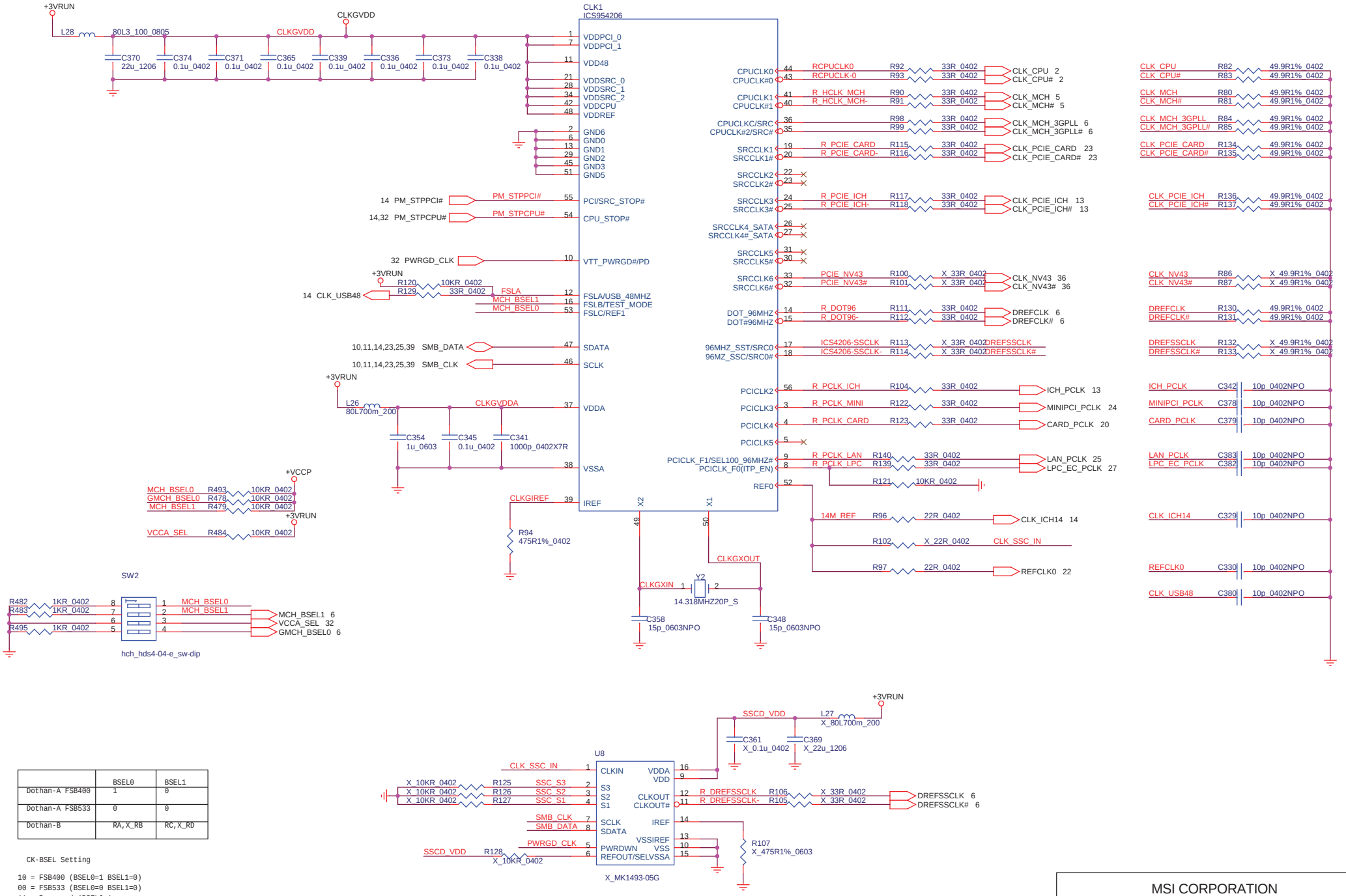


	BSEL0	BSEL1
Dothan-A FSB400	1	0
Dothan-A FSB533	0	0
Dothan-B	RA,X_RB	RC,X_RD

CK-BSEL Setting

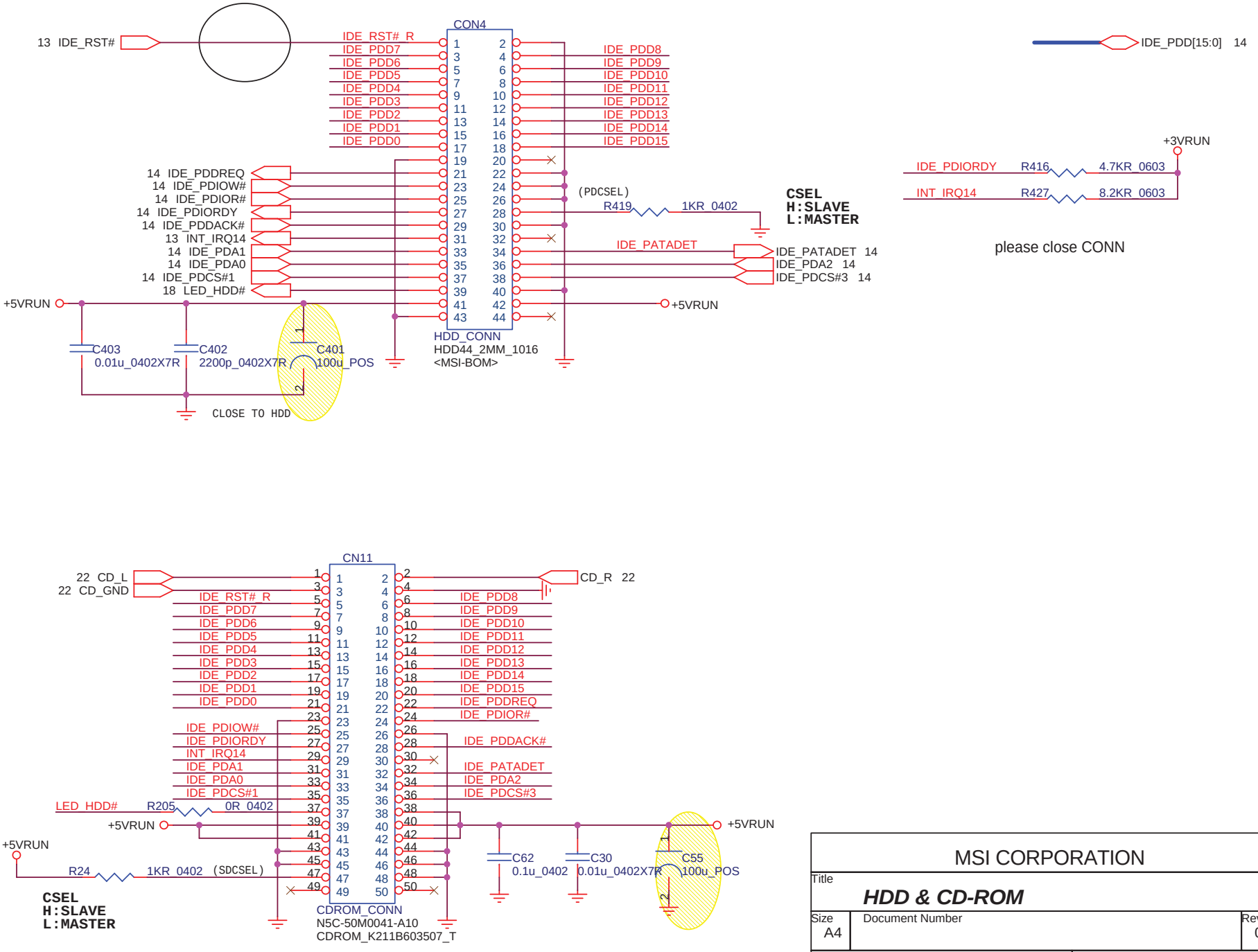
10 = FSB400 (BSEL0=1 BSEL1=0)
00 = FSB533 (BSEL0=0 BSEL1=0)
11 = Reserved (BSEL0=1 BSEL1=1)

MSI CORPORATION

Title: **CLOCK GEN.**

Size: A3 | Document Number | Rev: 0A

Date: Friday, August 19, 2005 | Sheet 16 of 47



MSI CORPORATION

Title

HDD & CD-ROM

Size	Document Number	Rev
A4		0A

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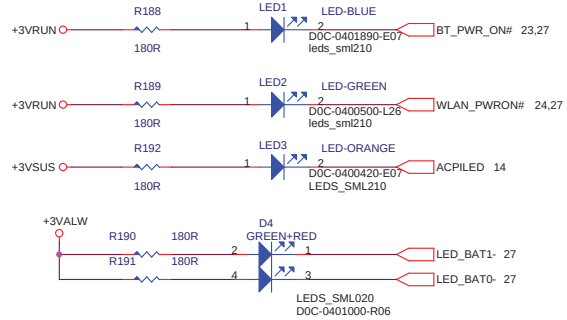

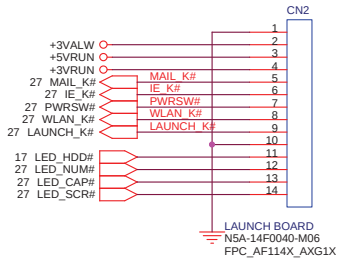

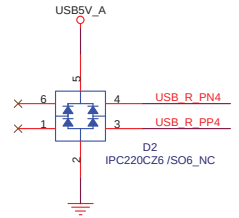

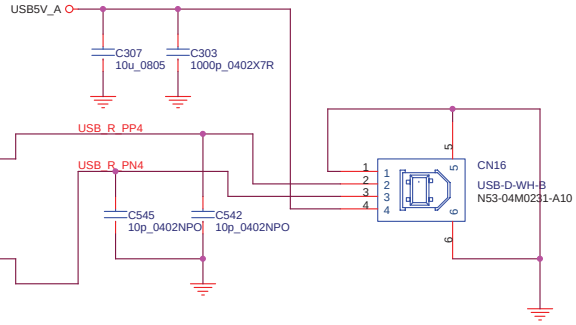

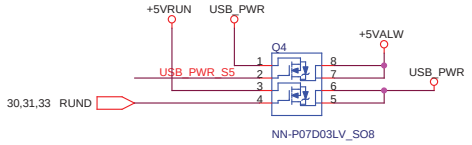

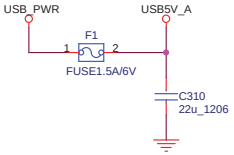

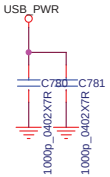

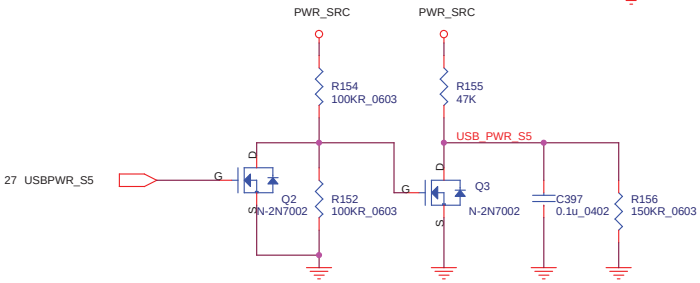

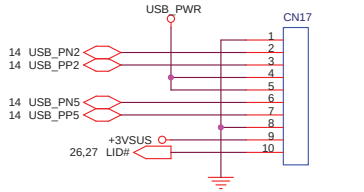

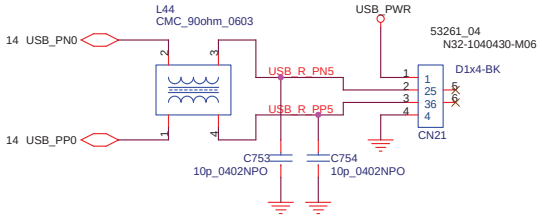

MSI CORPORATION

Title: **USB & LED & SW**

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Custom		0A

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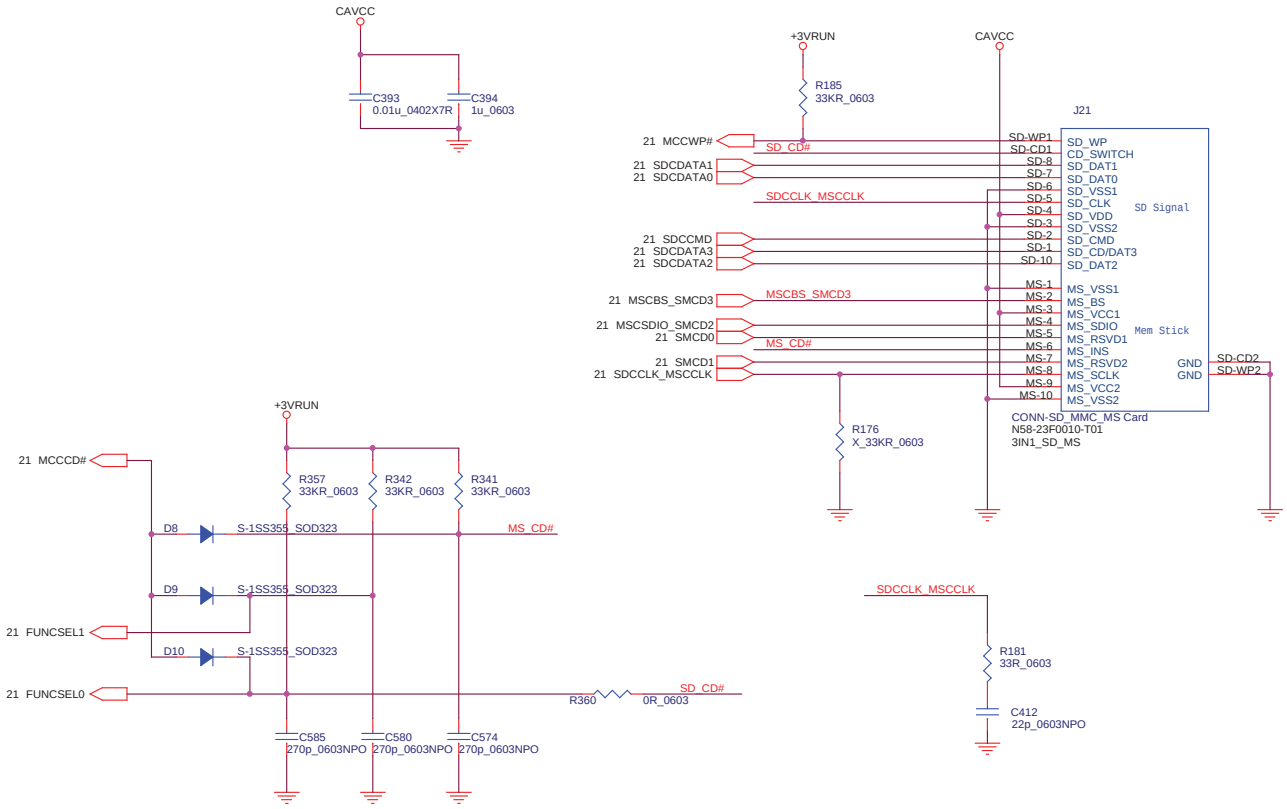
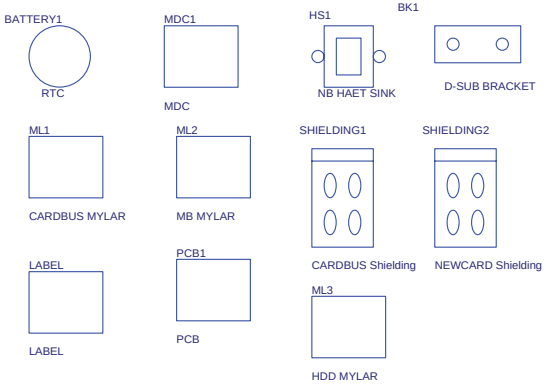


Memory Card Detect Logic Table

MS_CD#	SM_CD#	SD_CD#	->	Detected Card
0	0	0	->	INHIBIT
0	0	1	->	INHIBIT
0	1	0	->	INHIBIT
0	1	1	->	MemoryStick Detected
1	0	0	->	INHIBIT
1	0	1	->	SmartMedia Detected
1	1	0	->	SD/MMC Detected
1	1	1	->	Not Detected

DO NOT INSERT SMARTMEDIA, SD/MMC AND MEMORYSTICK SIMULTANEOUSLY.



MSI CORPORATION		
Title: *FLASH CARD CONN.*		
Size: Custom	Document Number	Rev: 0A
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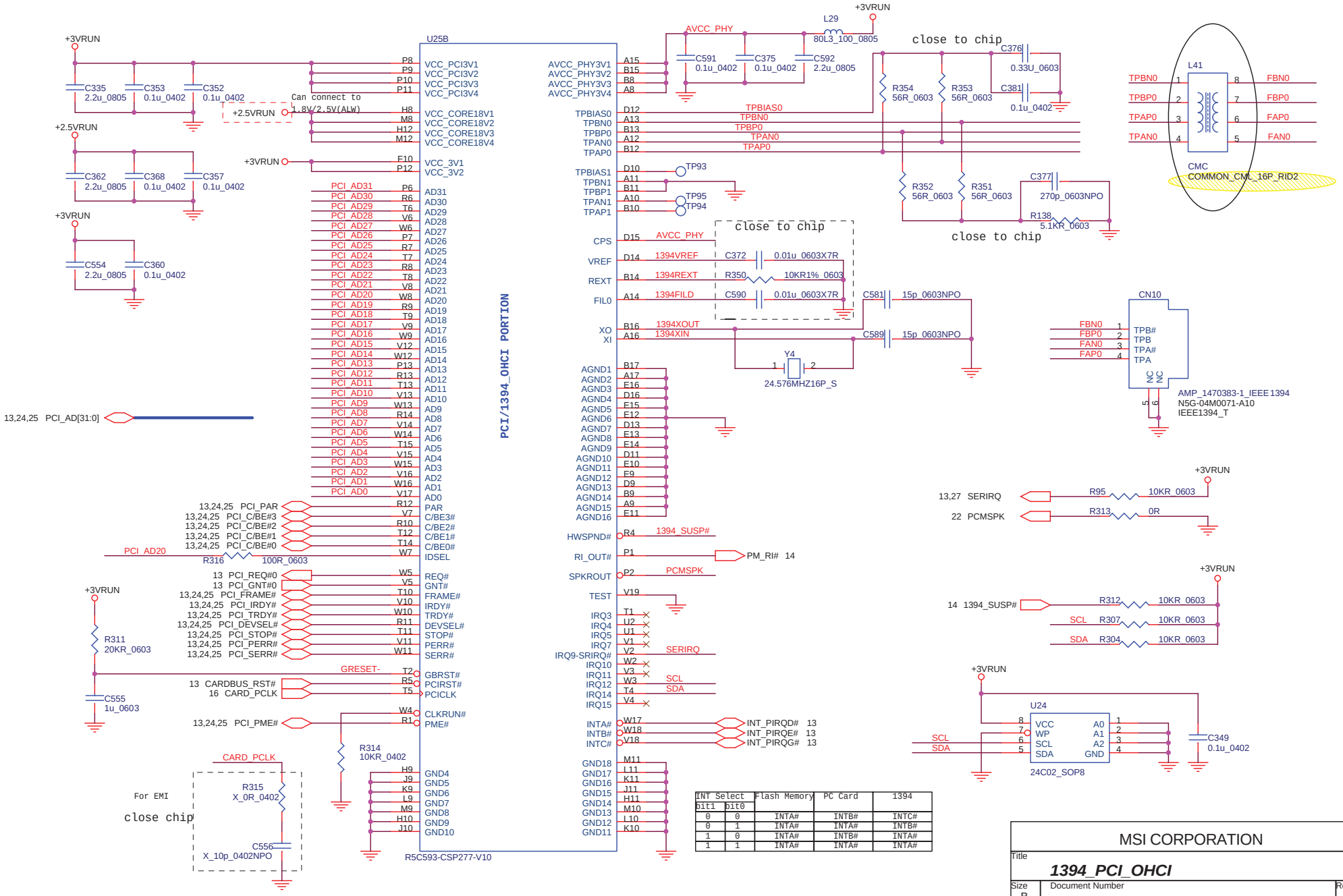

INT Select		Flash Memory	PC Card	1394
bit1	bit0			
0	0	INTA#	INTB#	INTC#
0	1	INTA#	INTA#	INTB#
1	0	INTA#	INTB#	INTA#
1	1	INTA#	INTA#	INTA#

MSI CORPORATION

Title: **1394_PCI_OHCI**

Size: B | Document Number | Rev: 0A

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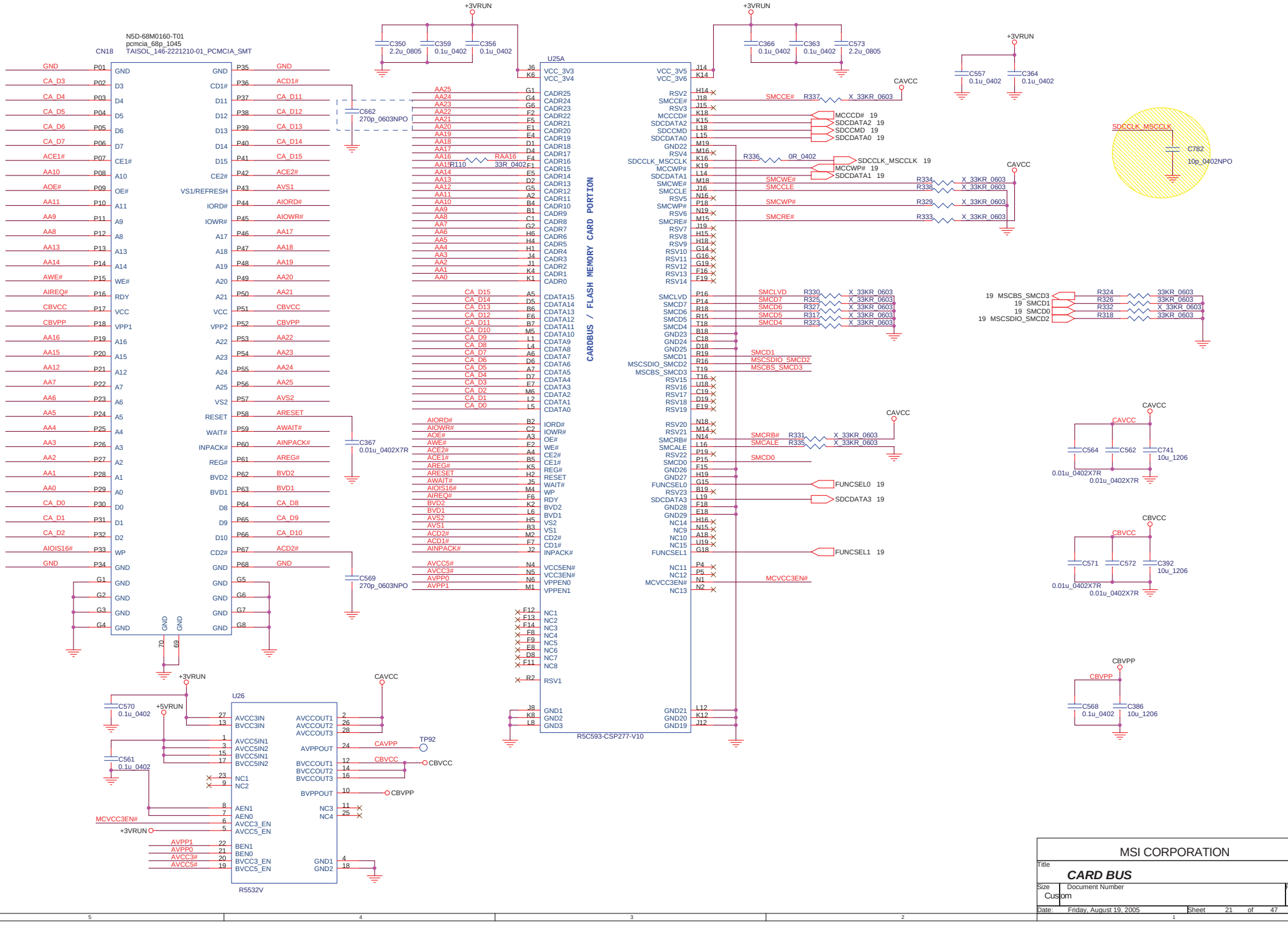
N5D-68M0160-T01
pcmcia_68p_1045
TAISOL_146-2221210-01_PCMCIA_SMT
CN18
U25A
CARDBUS / FLASH MEMORY CARD PORTION
R5C593-CSP277-V10
U26
R5532V
+3VRUN
+5VRUN
CAVCC
CBVCC
CBVPP
MSI CORPORATION
CARD BUS
Custom
0A
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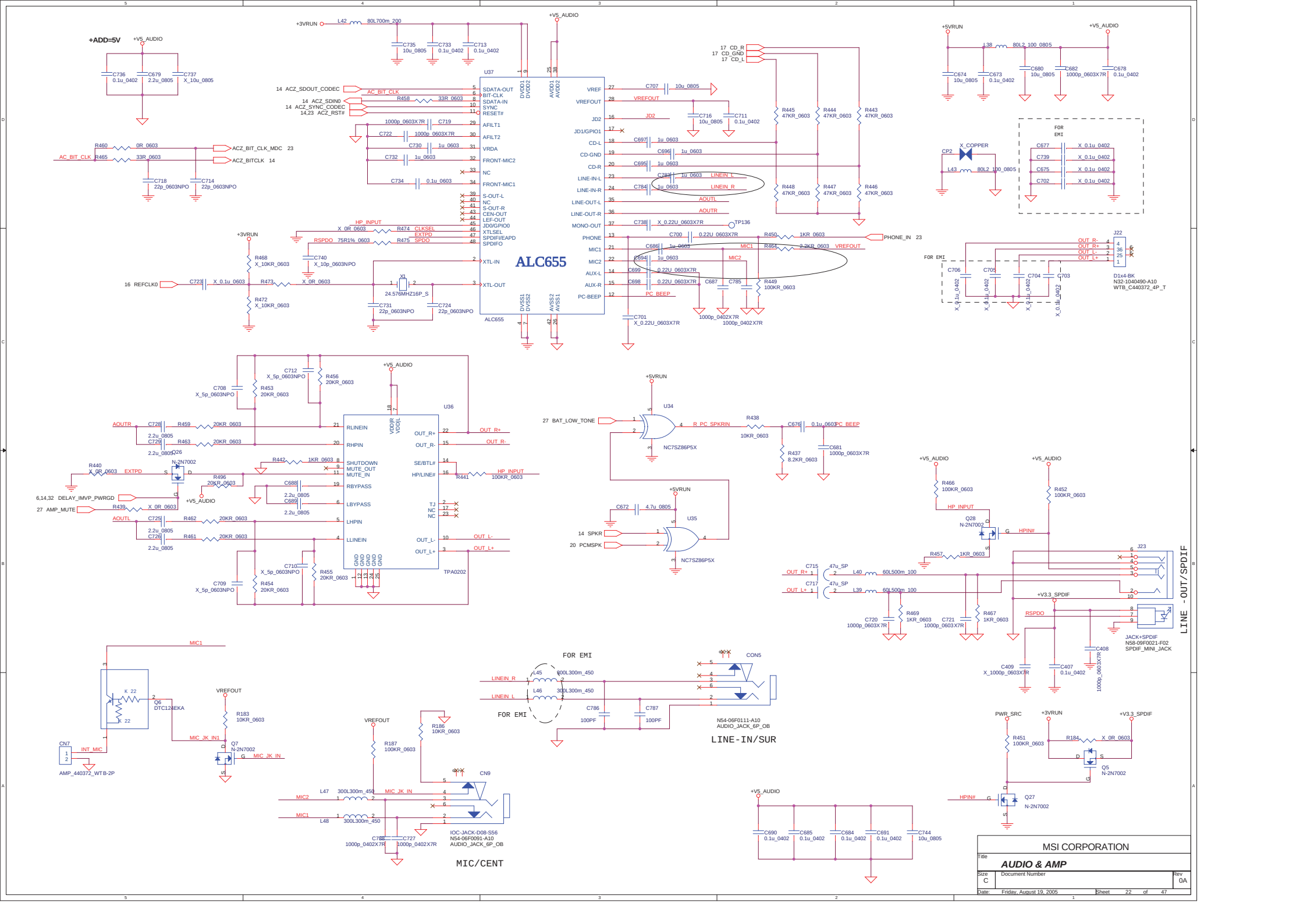
+ADD=5V
+V5_AUDIO
+3VRUN
ALC655
LINE-IN/SUR
MIC/CENT
LINE-OUT/SPDIF
FOR EMI
MSI CORPORATION
AUDIO & AMP
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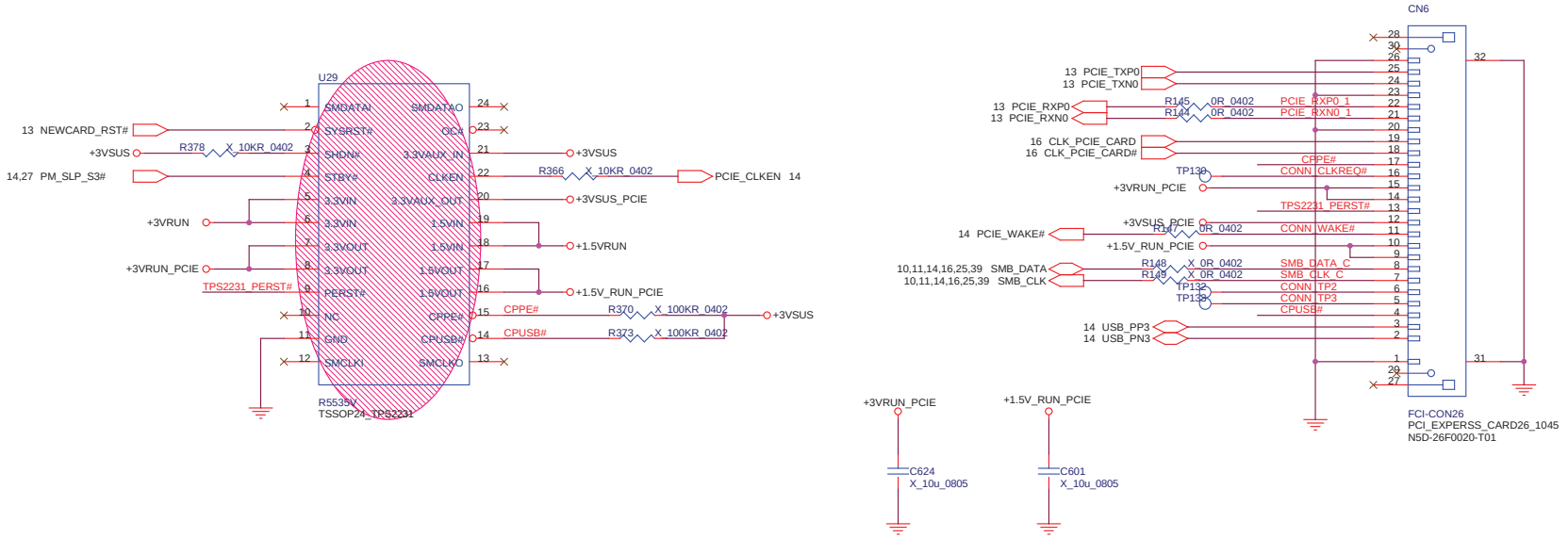
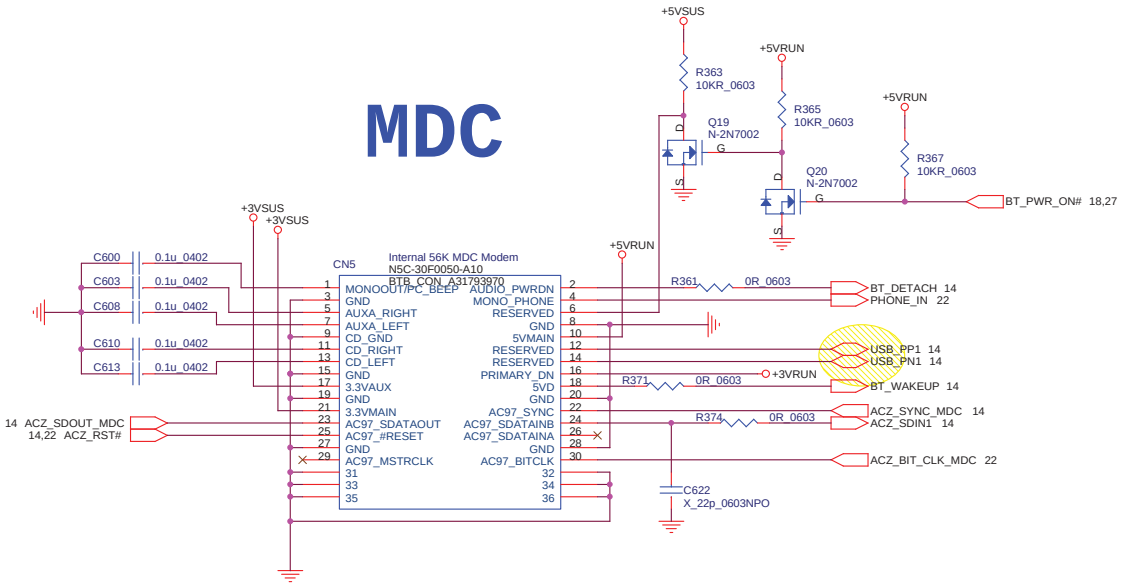
NEW CARD



MDC



MSI CORPORATION		
Title: ***MDC/NEW CARD***		
Size: Custom	Document Number	Rev: 0A
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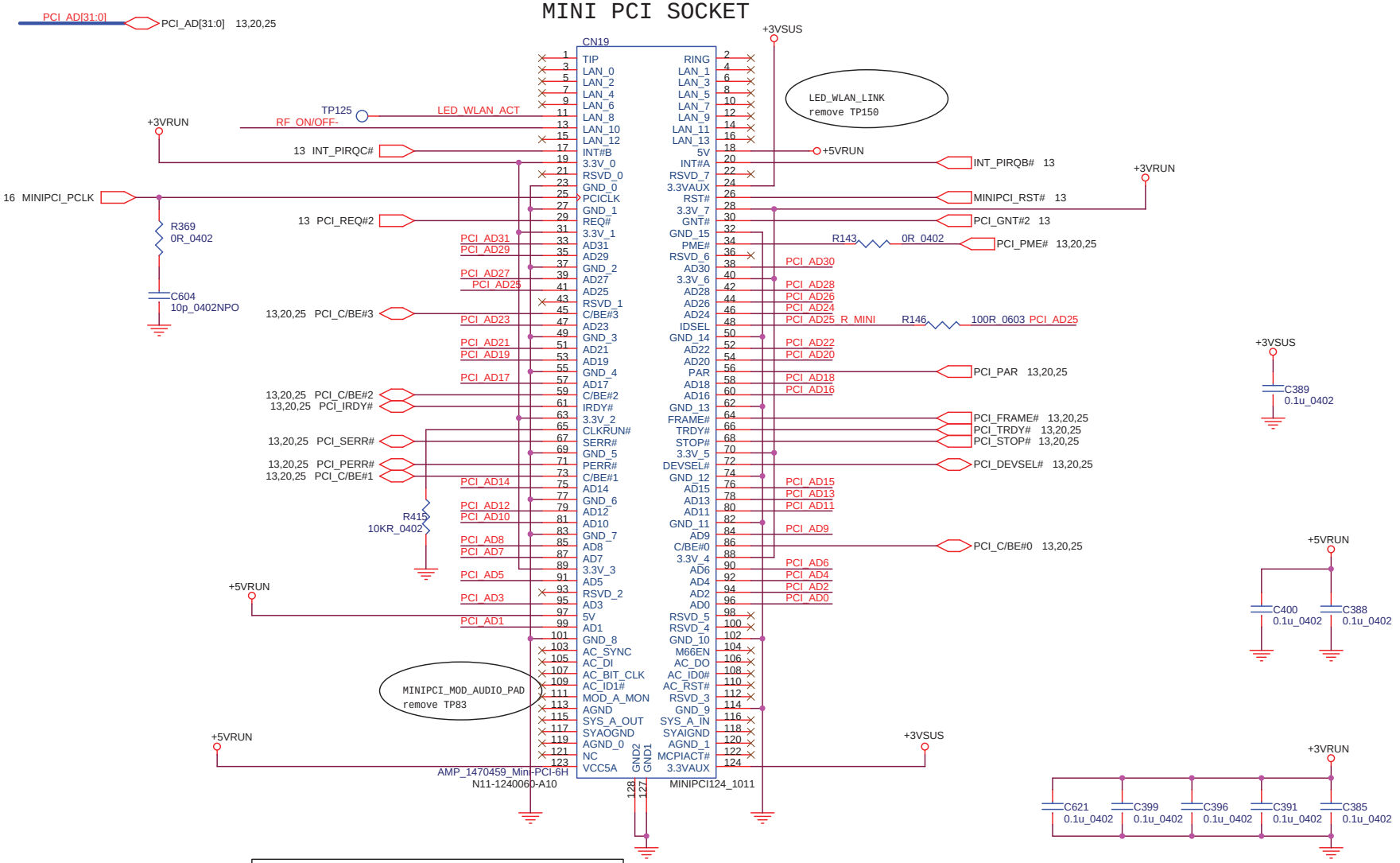
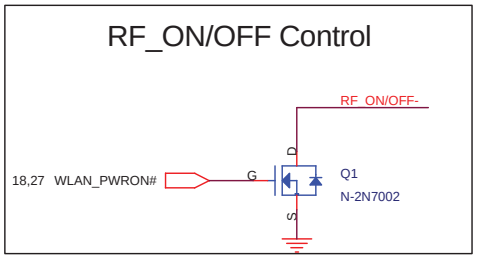
MINI PCI SOCKET



RF_ON/OFF Control



MSI CORPORATION		
Title: ***MINI-PCI***		
Size: B	Document Number	Rev: 0A
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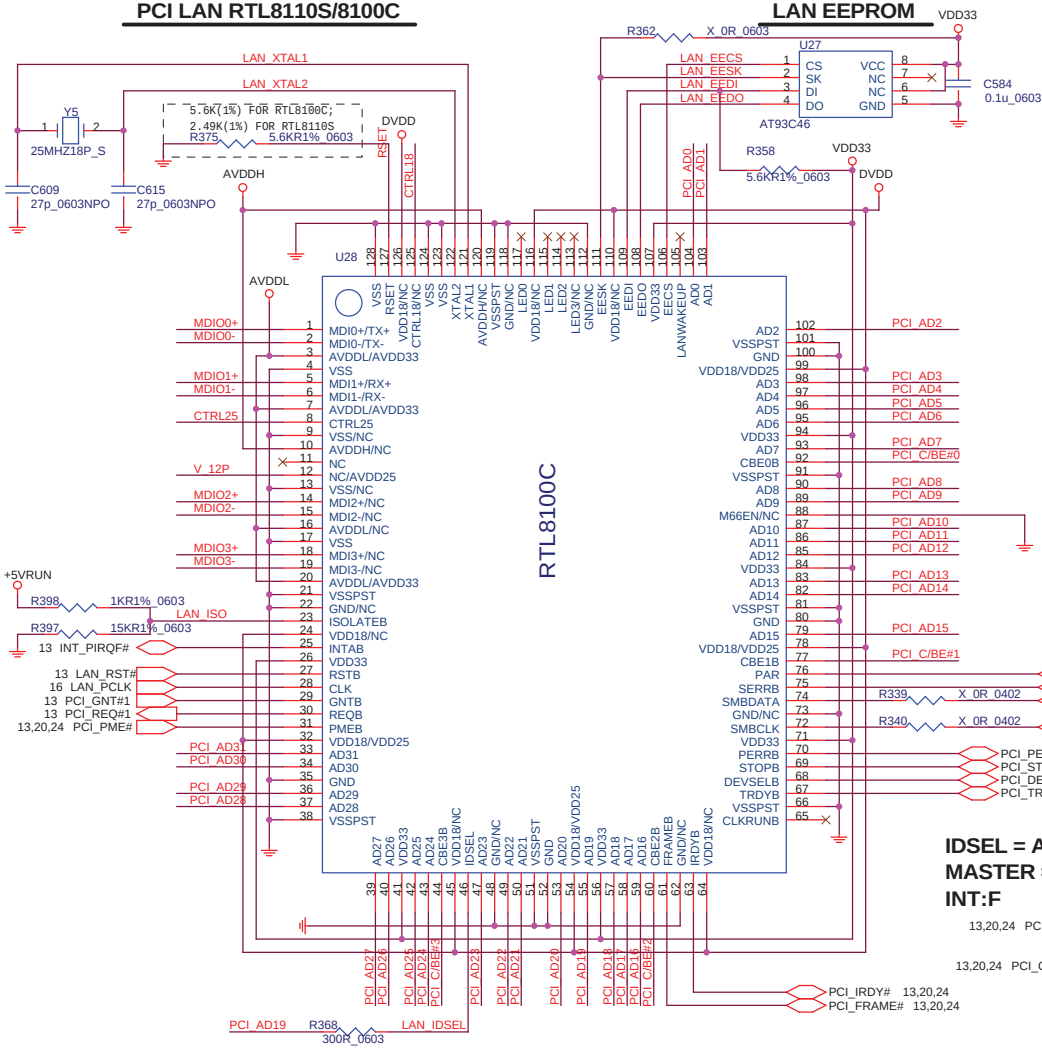
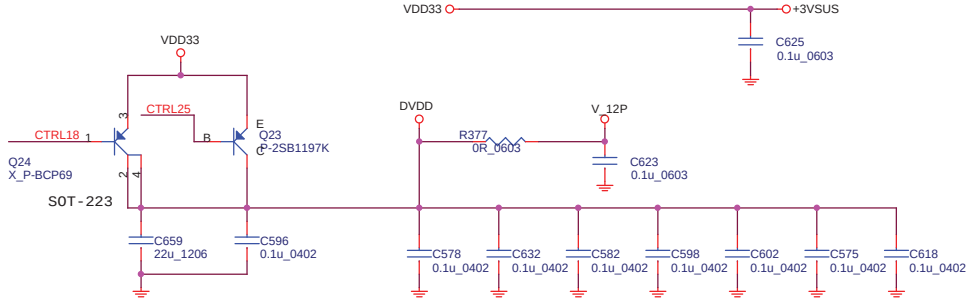
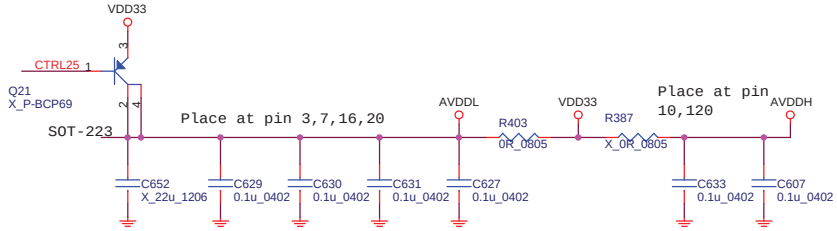
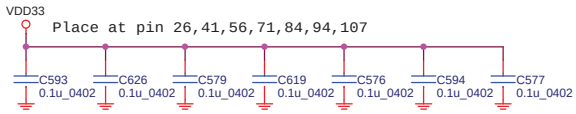
PCI LAN RTL8110S/8100C



LAN EEPROM







IDSEL = AD27
MASTER = PREQ#3
INT:F

13,20,24 PCI_AD[31:0]

13,20,24 PCI_C/BE#[3:0]

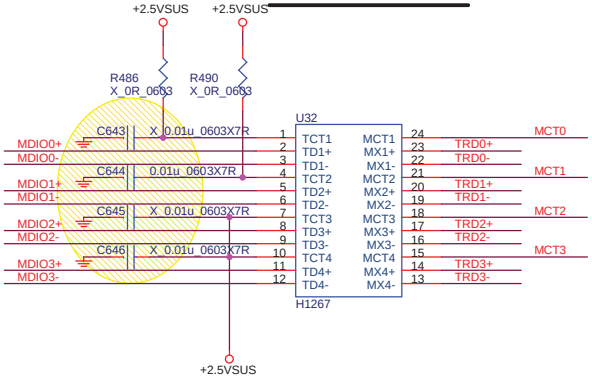
	DVDD	DVDDA	AVDDL	AVDDH	V-12P
8100C	2.5V	2.5V	3.3V	X	2.5V
8110S	1.8V	1.8V	2.5V	3.3V	X

Part Value Selection:

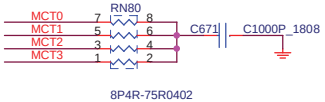
GbE: 8110S LAN(1000M)
TE: 8100C LAN(10/100M)
L: With LAN option
X: No Stuff

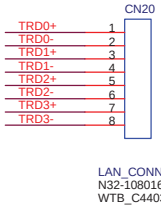
1- MDIO+ & MDIO- pairs should be 100-ohm differential impedance. Route equal length and symmetrically. Separate every pairs.

LAN MAGNETICS



	BCM4401
NOT INSTALL	C175,C178 R500,R501
Transformer	H1267





MSI CORPORATION

Title: **LAN**

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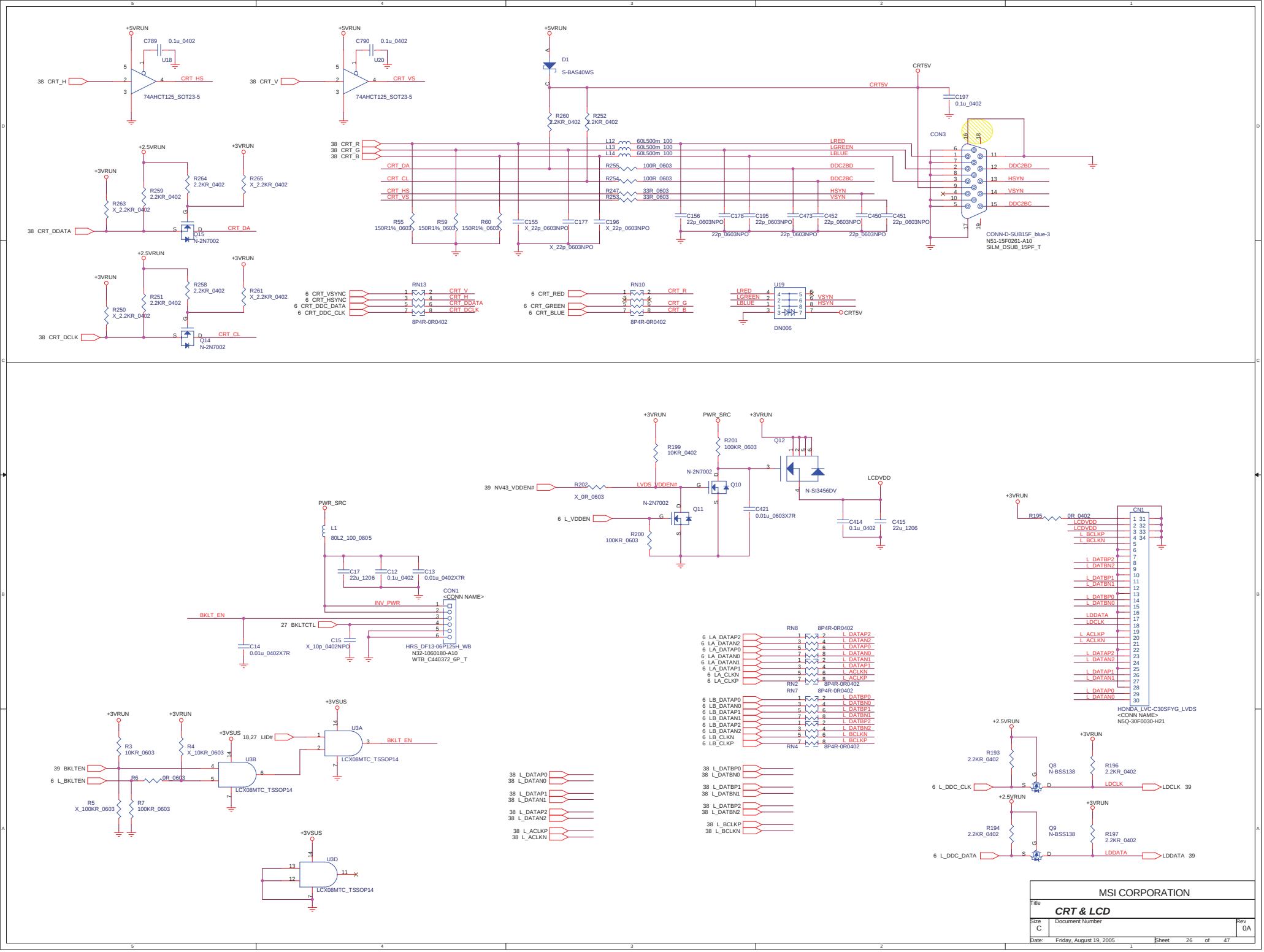
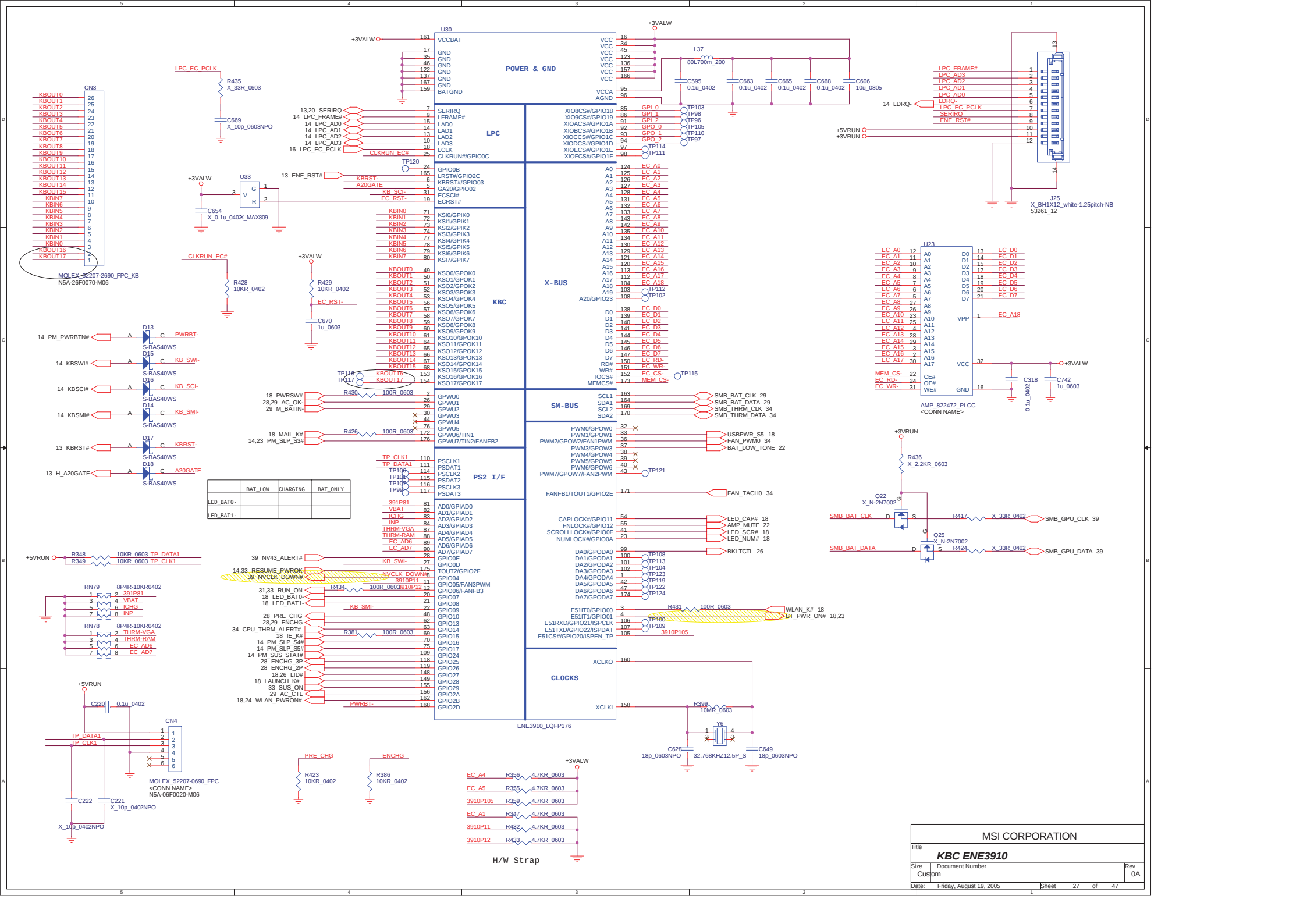


MSI CORPORATION			
Title	CRT & LCD		
Size C	Document Number		Rev 0A
Date: Friday, August 19, 2005	Sheet 26 of 47		


U30
POWER & GND
LPC
KBC
X-BUS
SM-BUS
PS2 I/F
CLOCKS
ENE3910_LQFP176
CN3
MOLEX_52207-2690_FPC_KB
N5A-26F0070-M06
U33
MAX809
U23
AMP_822472_PLCC
<CONN NAME>
J25
X_BH1X12_white-1.25pitch-NB
53261_12
CN4
MOLEX_52207-0690_FPC
<CONN NAME>
N5A-06F0020-M06
RN79
RN78
8P4R-10KR0402
Q22
X_N-2N7002
Q25
X_N-2N7002
Y6
32.768KHZ12.5P_S
H/W Strap
MSI CORPORATION
KBC ENE3910
Custom
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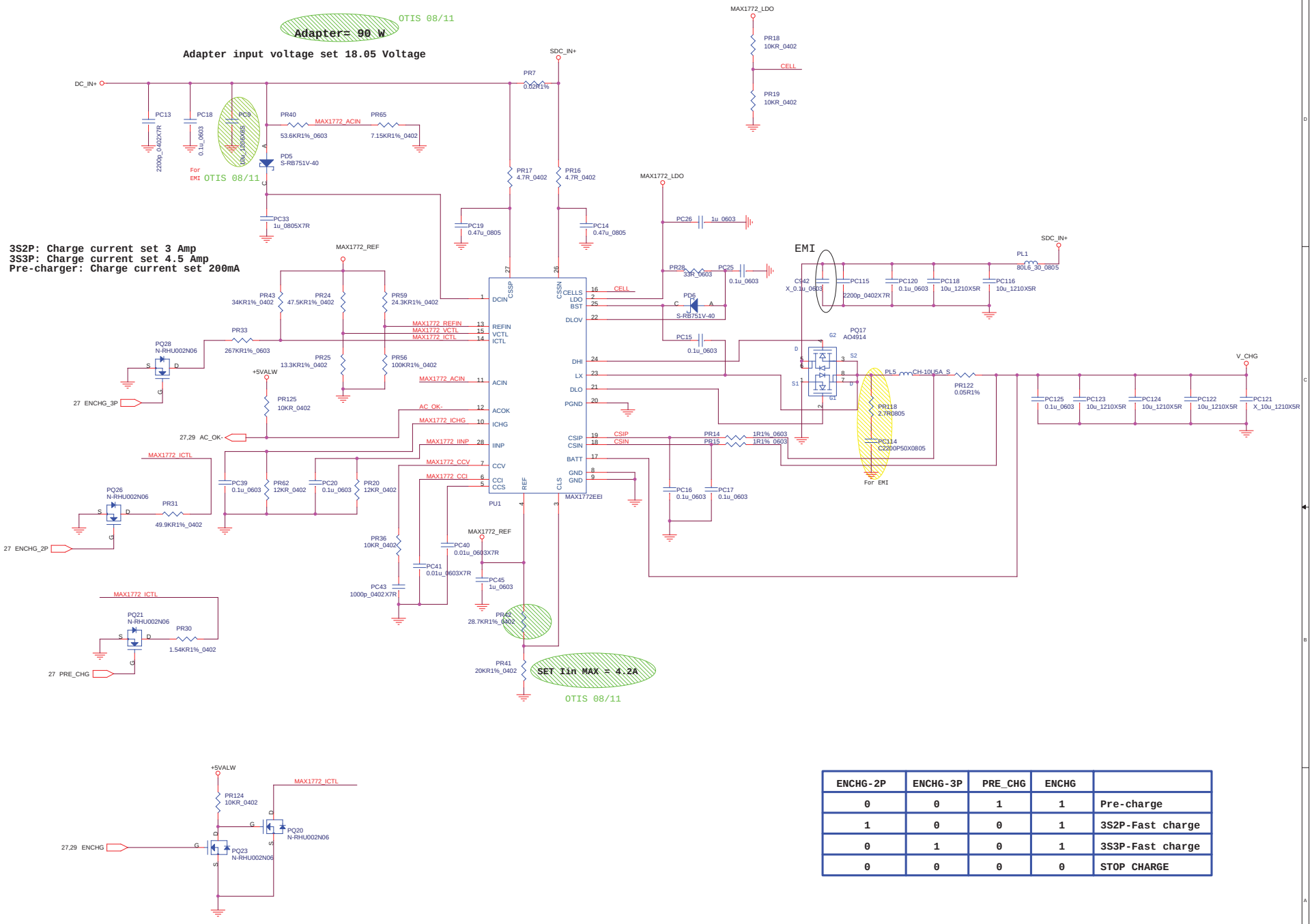

ENCHG-2P	ENCHG-3P	PRE_CHG	ENCHG	
0	0	1	1	Pre-charge
1	0	0	1	3S2P-Fast charge
0	1	0	1	3S3P-Fast charge
0	0	0	0	STOP CHARGE

MSI CORPORATION

Title: **Charger**

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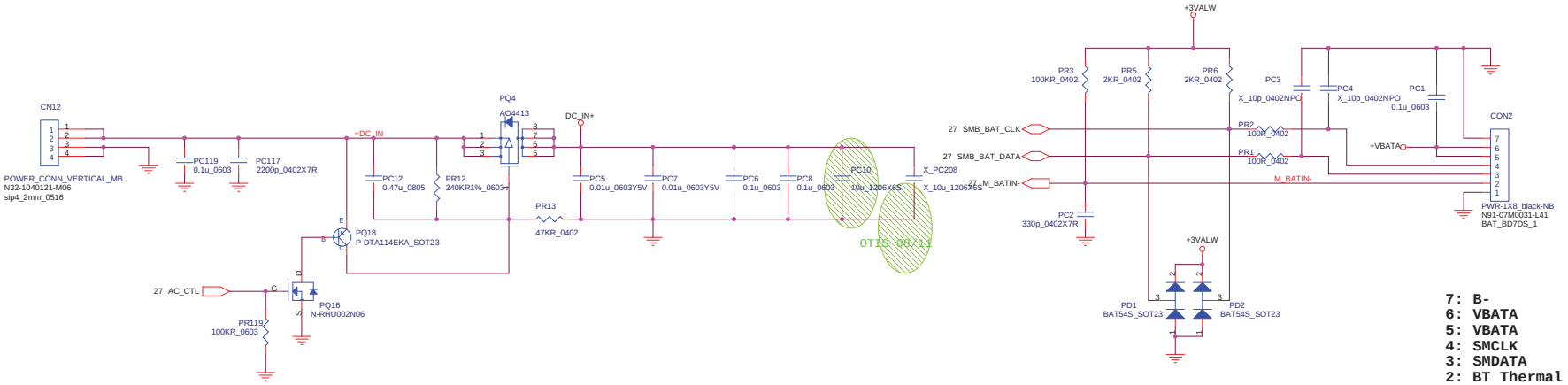
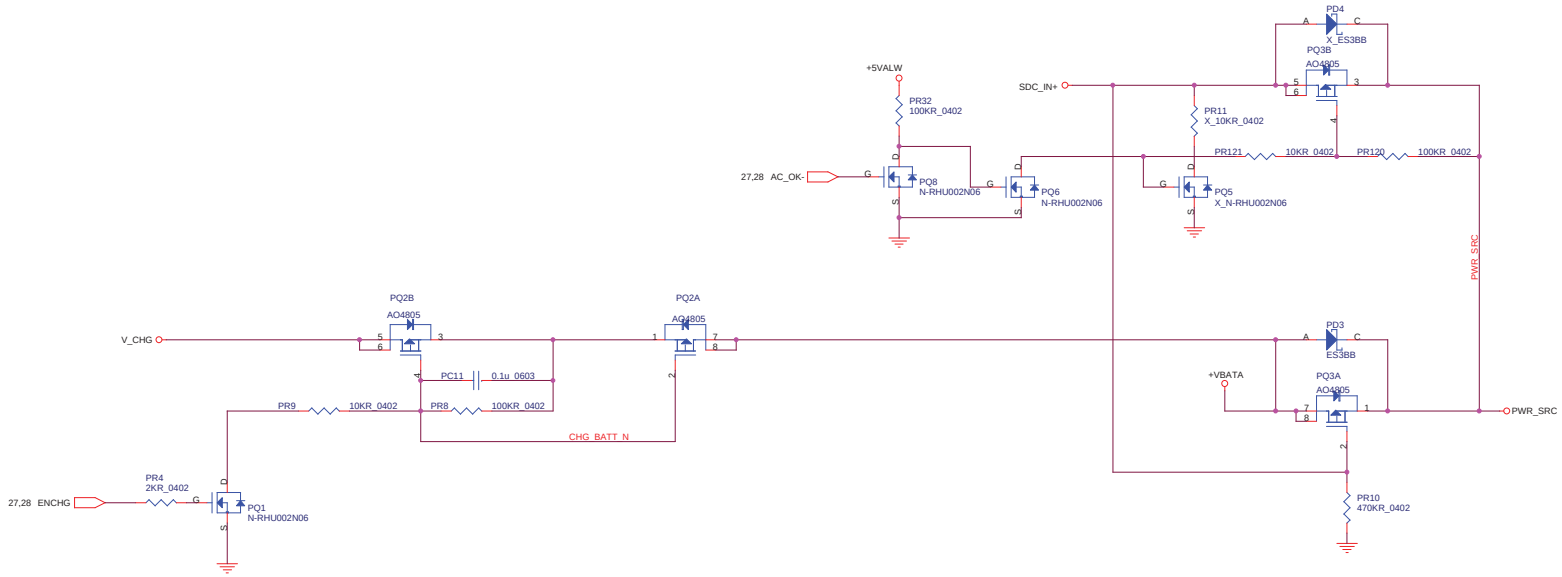
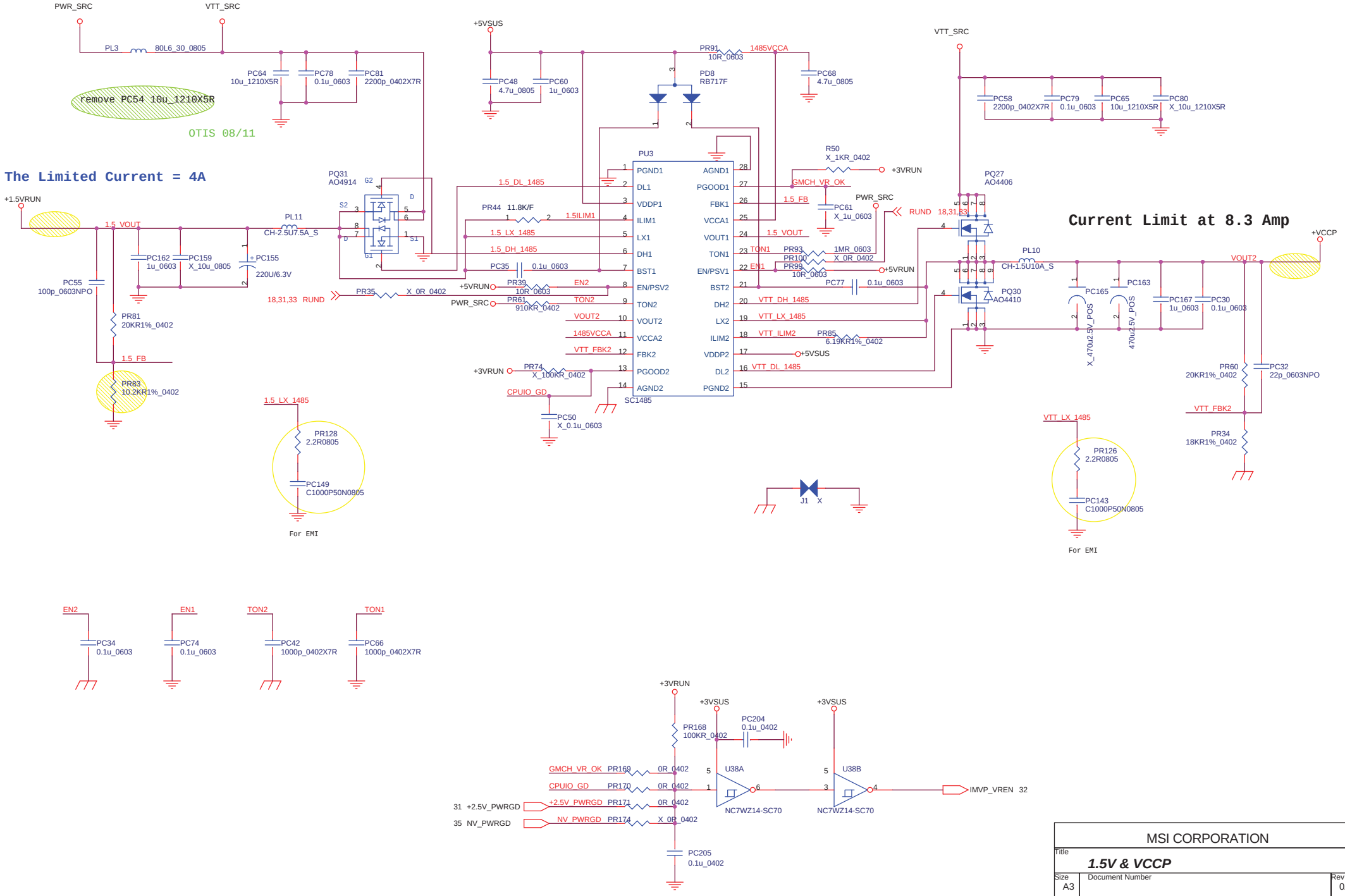


7: B-
6: VBATA
5: VBATA
4: SMCLK
3: SMDATA
2: BT Thermal
1: B-



MSI CORPORATION		
Title: ***Battery Select***		
Size: C	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 29 of 47	



MSI CORPORATION		
Title: *1.5V & VCCP*		
Size: A3	Document Number	Rev: 0A
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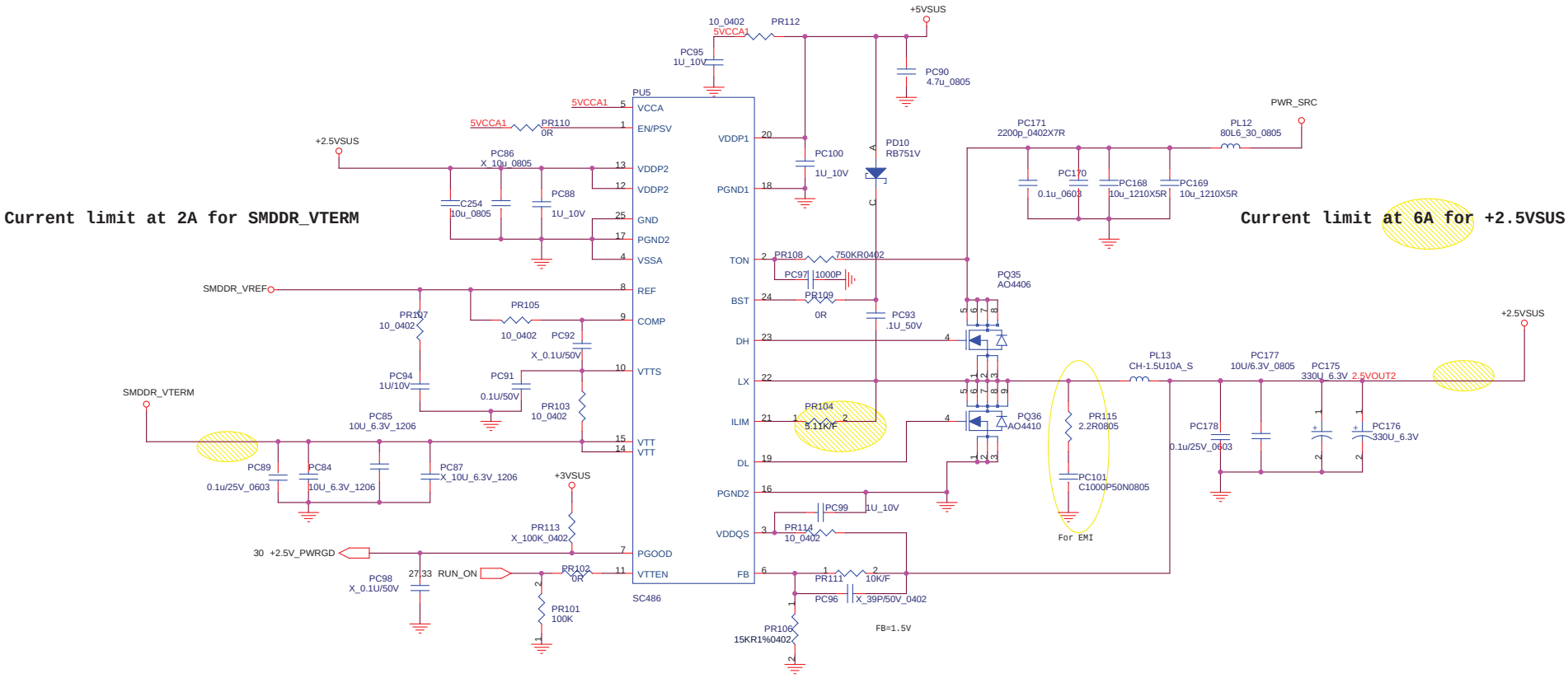
Current limit at 2A for SMDDR_VTERM
Current limit at 6A for +2.5VSUS
+5VSUS
PWR_SRC
+2.5VSUS
SMDDR_VREF
SMDDR_VTERM
+3VSUS
PU5
SC486
VCCA
EN/PSV
VDDP1
VDDP2
VDDP2
PGND1
GND
PGND2
VSSA
REF
COMP
VTTS
VTT
VTT
PGOOD
VTTEN
TON
BST
DH
LX
ILIM
DL
PGND2
VDDQS
FB
PD10 RB751V
PQ35 AO4406
PQ36 AO4410
PL12 80L6_30_0805
PL13 CH-1.5U10A_S
2.5VOUT2
PC171 2200p_0402X7R
PC170 0.1u_0603
PC168 10u_1210X5R
PC169 10u_1210X5R
PC177 10U/6.3V_0805
PC175 330U_6.3V
PC176 330U_6.3V
PC178 0.1u/25V_0603
PC101 C1000P50N0805
For EMI
PR115 2.2R0805
PR104 5.11K/F
PR108 750KR0402
PC97 1000P
PR109 0R
PC93 .1U_50V
PC100 1U_10V
PC95 1U_10V
PC90 4.7u_0805
PC99 1U_10V
PR114 10_0402
PR111 10K/F
PC96 X_39P/50V_0402
PR106 15KR1%0402
FB=1.5V
PR110 0R
PR107 10_0402
PR105 10_0402
PC92 X_0.1U/50V
PC94 1U/10V
PC91 0.1U/50V
PR103 10_0402
PC85 10U_6.3V_1206
PC89 0.1u/25V_0603
PC84 10U_6.3V_1206
PC87 X_10U_6.3V_1206
PC86 X_10u_0805
C254 10u_0805
PC88 1U_10V
PR113 X_100K_0402
PR102 0R
PC98 X_0.1U/50V
PR101 100K
30 +2.5V_PWRGD
27,33 RUN_ON
PQ13 AO6402
+2.5VRUN
PC102 4.7u_0805
18,30,33 RUND
RUND
MICRO-STAR INT'L CO.,LTD.
DDR POWER
Size Custom
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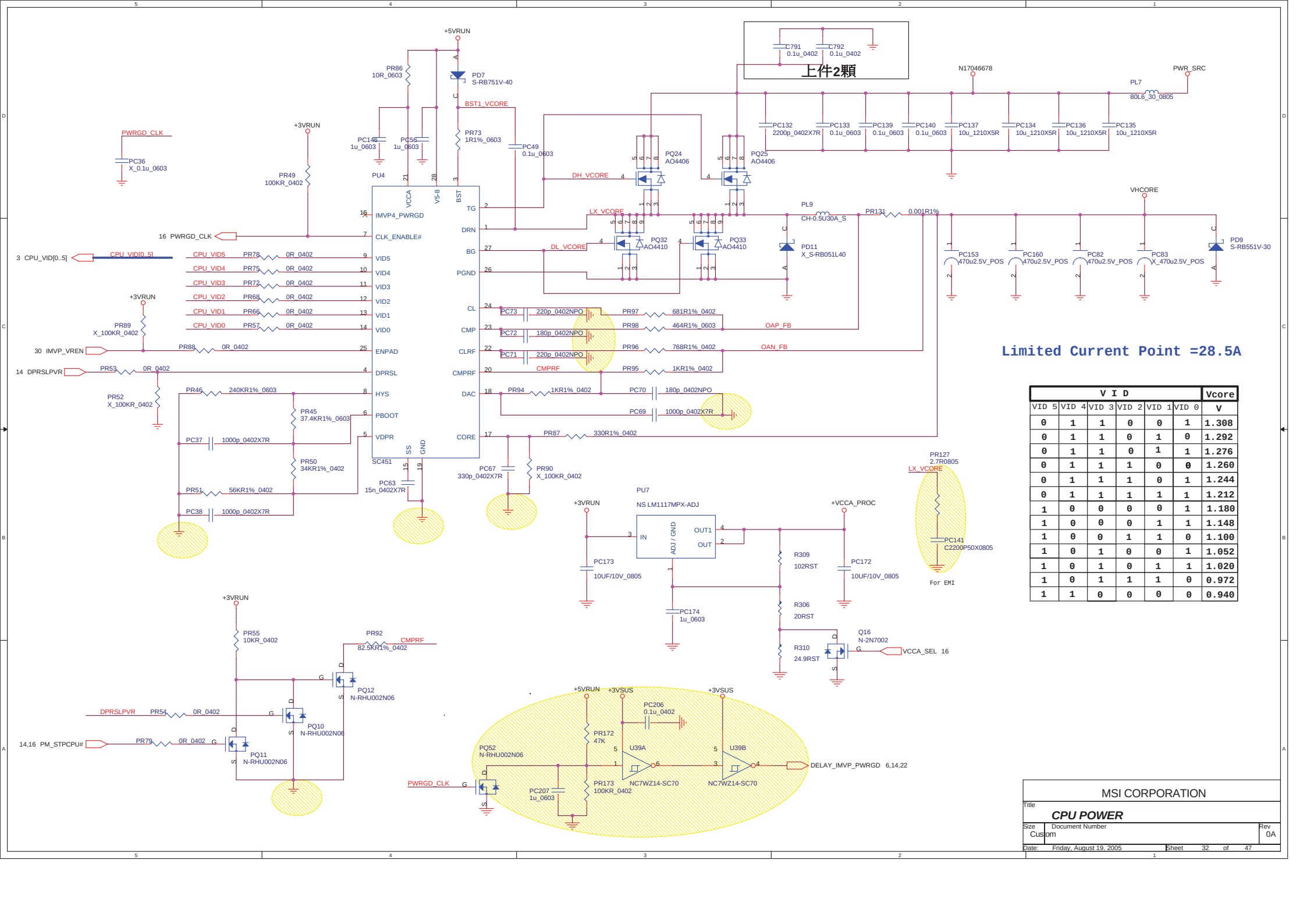

V I D						Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	V
0	1	1	0	0	1	1.308
0	1	1	0	1	0	1.292
0	1	1	0	1	1	1.276
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
1	0	1	1	1	0	0.972
1	1	0	0	0	0	0.940

MSI CORPORATION

Title: CPU POWER

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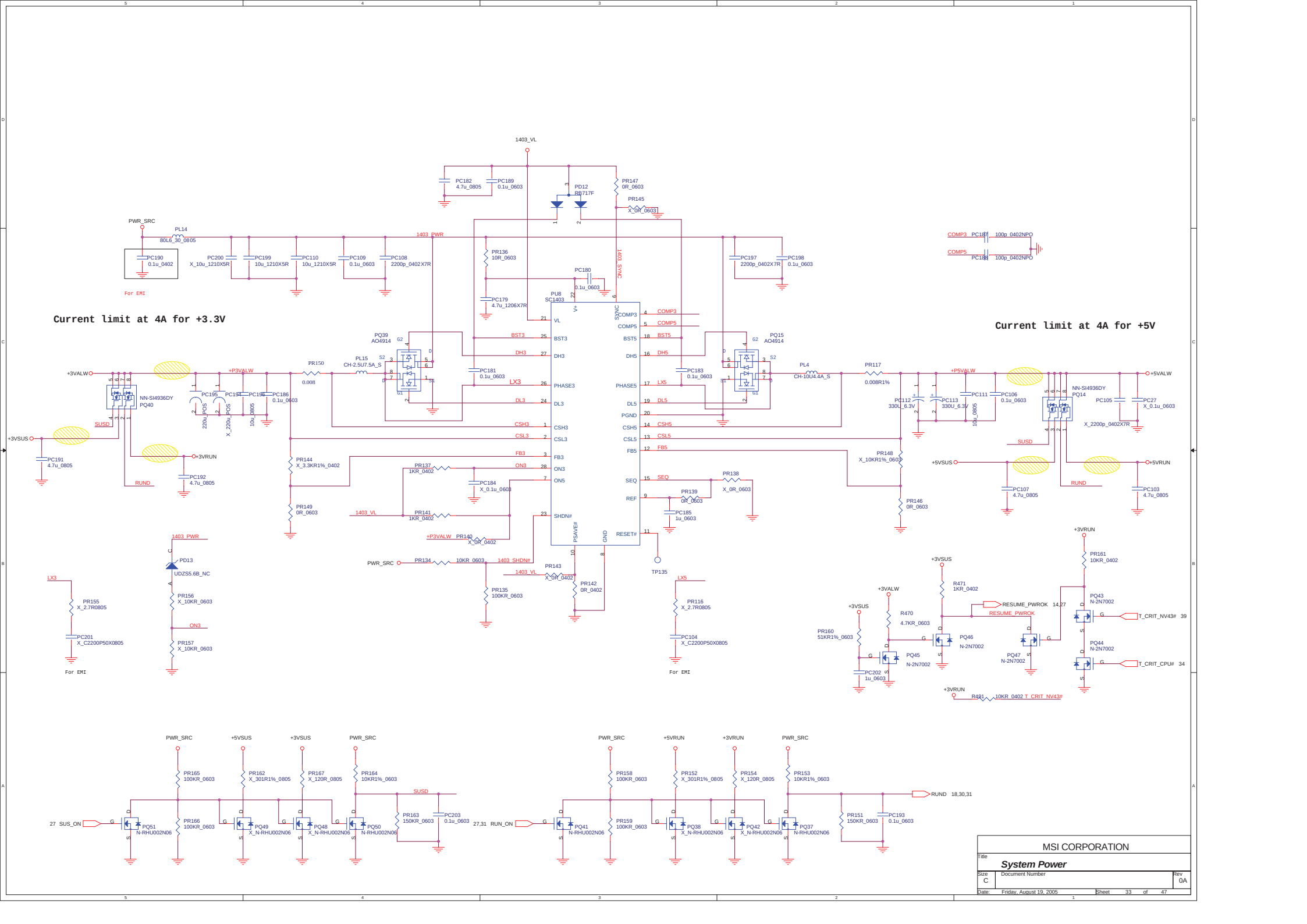
Current limit at 4A for +3.3V
Current limit at 4A for +5V
1403_VL
PWR_SRC
1403_PWR
PU8
SC1403
PD12
RB717F
PD13
UDZS5.6B_NC
PL14
80L6_30_0805
PL15
CH-2.5U7.5A_S
PL4
CH-10U4.4A_S
PQ39
AO4914
PQ15
AO4914
PQ40
NN-SI4936DY
PQ14
NN-SI4936DY
LX3
LX5
BST3
DH3
DL3
CSH3
CSL3
FB3
ON3
ON5
SHDN#
PSAVE#
SEQ
REF
RESET#
SYNC
COMP3
COMP5
BST5
DH5
DL5
PGND
CSH5
CSL5
FB5
VL
V+
GND
PHASE3
PHASE5
+3VALW
+P3VALW
+5VALW
+3VSUS
+5VSUS
+3VRUN
+5VRUN
SUSD
RUND
1403_SYNC
1403_SHDN#
RESUME_PWROK
T_CRIT_NV43#
T_CRIT_CPU#
RUN_ON
SUS_ON
For EMI
MSI CORPORATION
System Power
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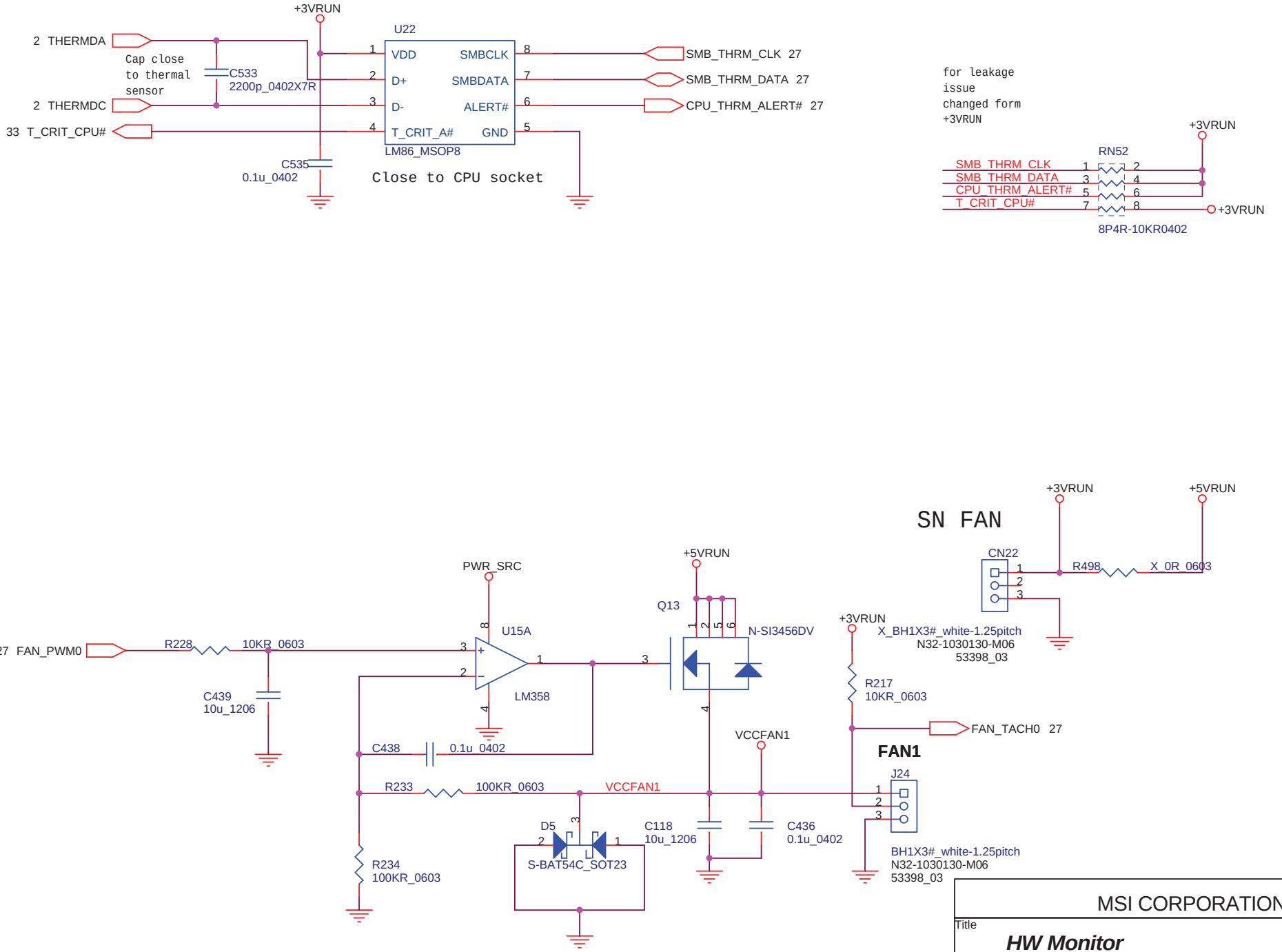

MSI CORPORATION

Title: **HW Monitor**

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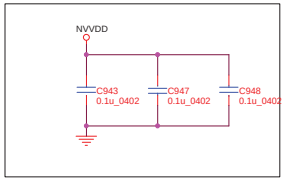
for EMI



Current Limit at 14 Amp

Current Limit at 6 Amp

POW_SW	NV43
1	1.05V
0	1.15V

MSI CORPORATION			
Title: *VGA POWER*			
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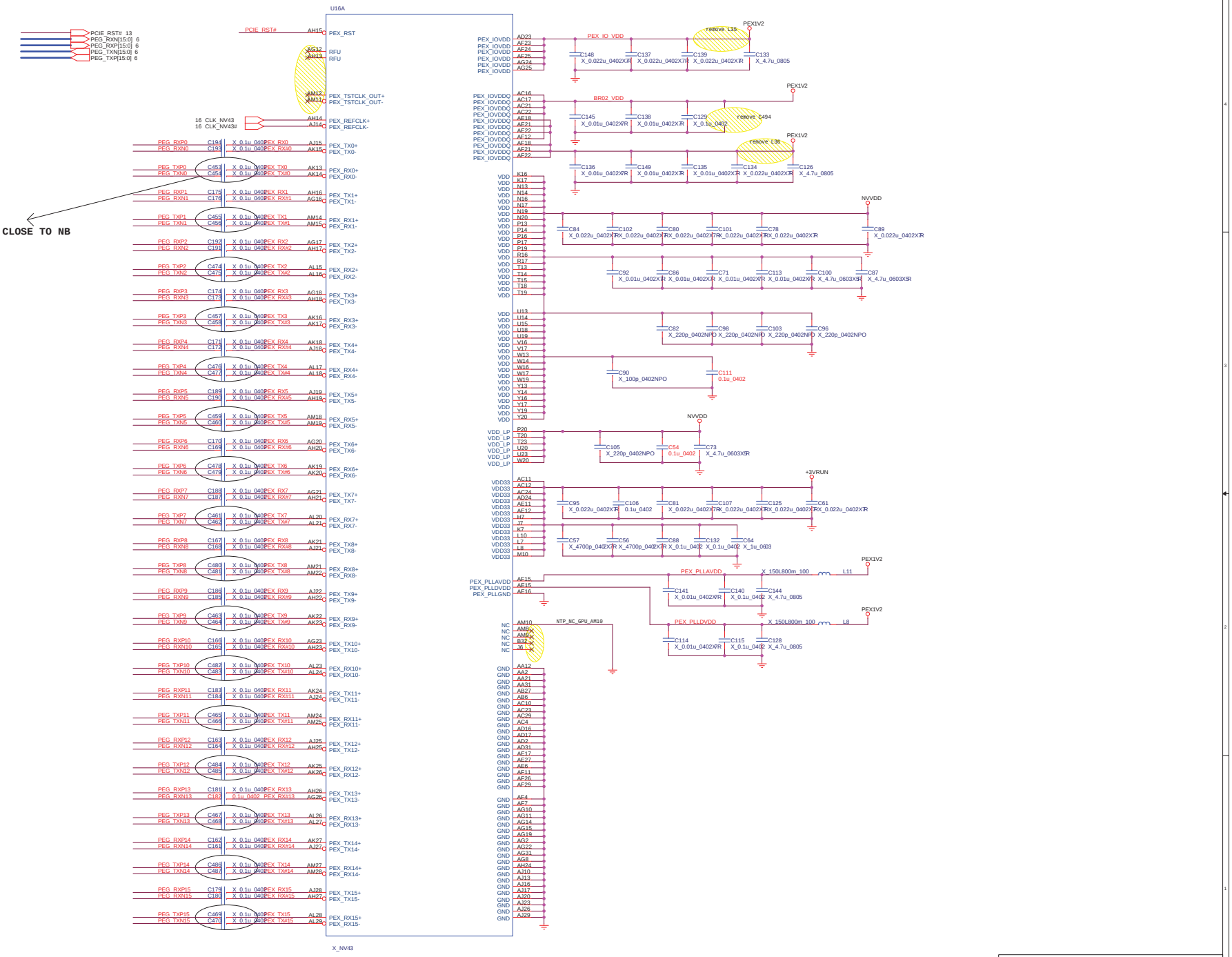
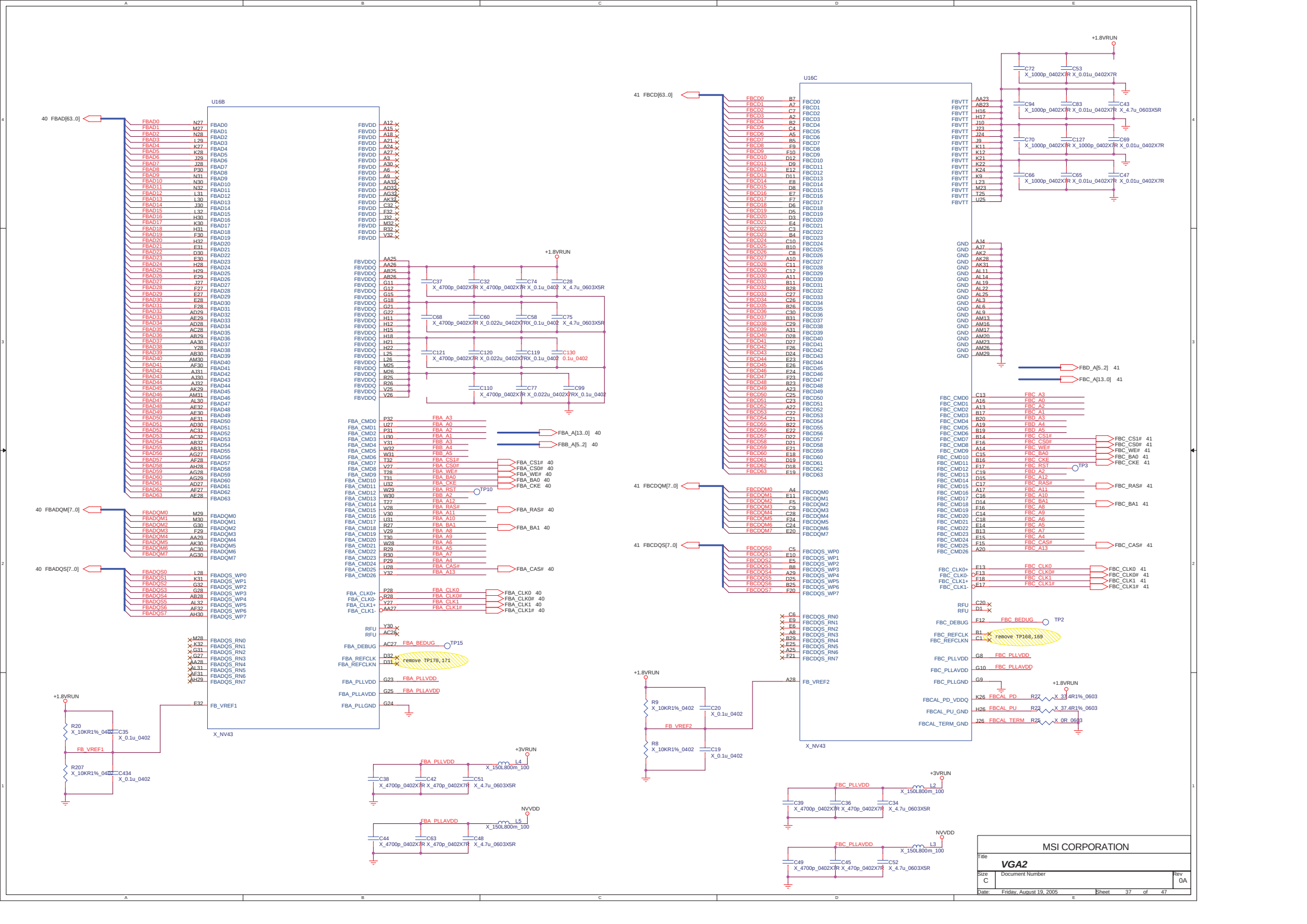


MSI CORPORATION

Title: **VGA1**

Size: Custom | Document Number | Rev: 0A

Date: Friday, August 19, 2005 | Sheet 36 of 47


U16B
X_NV43
40 FBAD[63..0]
40 FBADQM[7..0]
40 FBADQS[7..0]
+1.8VRUN
FB_VREF1
R20 X_10KR1%_0402
C35 X_0.1u_0402
R207 X_10KR1%_0402
C434 X_0.1u_0402
FBA_PLLVDD
FBA_PLLAVDD
FBA_PLLGND
FBA_REFCLK
FBA_REFCLKN
FBA_DEBUG
TP15
TP10
FBA_CLK0 40
FBA_CLK0# 40
FBA_CLK1 40
FBA_CLK1# 40
FBA_CS1# 40
FBA_CS0# 40
FBA_WE# 40
FBA_BA0 40
FBA_CKE 40
FBA_RAS# 40
FBA_BA1 40
FBA_CAS# 40
FBA_A[13..0] 40
FBB_A[5..2] 40
C37 X_4700p_0402X7R
C32 X_4700p_0402X7R
C74 X_0.1u_0402
C28 X_4.7u_0603X5R
C68 X_4700p_0402X7R
C60 X_0.022u_0402X7R
C58 X_0.1u_0402
C75 X_4.7u_0603X5R
C121 X_4700p_0402X7R
C120 X_0.022u_0402X7R
C119 X_0.1u_0402
C130 0.1u_0402
C110 X_4700p_0402X7R
C77 X_0.022u_0402X7R
C99 X_0.1u_0402
+3VRUN
NVDDD
L4 X_150L800m_100
L5 X_150L800m_100
C38 X_4700p_0402X7R
C42 X_470p_0402X7R
C51 X_4.7u_0603X5R
C44 X_4700p_0402X7R
C63 X_470p_0402X7R
C48 X_4.7u_0603X5R
U16C
41 FBCD[63..0]
41 FBCDQM[7..0]
41 FBCDQS[7..0]
FB_VREF2
R9 X_10KR1%_0402
C20 X_0.1u_0402
R8 X_10KR1%_0402
C19 X_0.1u_0402
FBD_A[5..2] 41
FBC_A[13..0] 41
FBC_CS1# 41
FBC_CS0# 41
FBC_WE# 41
FBC_BA0 41
FBC_CKE 41
FBC_RAS# 41
FBC_BA1 41
FBC_CAS# 41
FBC_CLK0 41
FBC_CLK0# 41
FBC_CLK1 41
FBC_CLK1# 41
FBC_BEDUG
FBC_REFCLK
FBC_REFCLKN
FBC_PLLVDD
FBC_PLLAVDD
FBC_PLLGND
FBCAL_PD_VDDQ
FBCAL_PU_GND
FBCAL_TERM_GND
FBCAL_PD
FBCAL_PU
FBCAL_TERM
X_37.4R1%_0603
X_0R_0603
C72 X_1000p_0402X7R
C53 X_0.01u_0402X7R
C94 X_1000p_0402X7R
C83 X_0.01u_0402X7R
C43 X_4.7u_0603X5R
C70 X_1000p_0402X7R
C127 X_1000p_0402X7R
C69 X_0.01u_0402X7R
C66 X_1000p_0402X7R
C65 X_0.01u_0402X7R
C47 X_0.01u_0402X7R
C39 X_4700p_0402X7R
C36 X_470p_0402X7R
C34 X_4.7u_0603X5R
C49 X_4700p_0402X7R
C45 X_470p_0402X7R
C52 X_4.7u_0603X5R
L2 X_150L800m_100
L3 X_150L800m_100
MSI CORPORATION
VGA2
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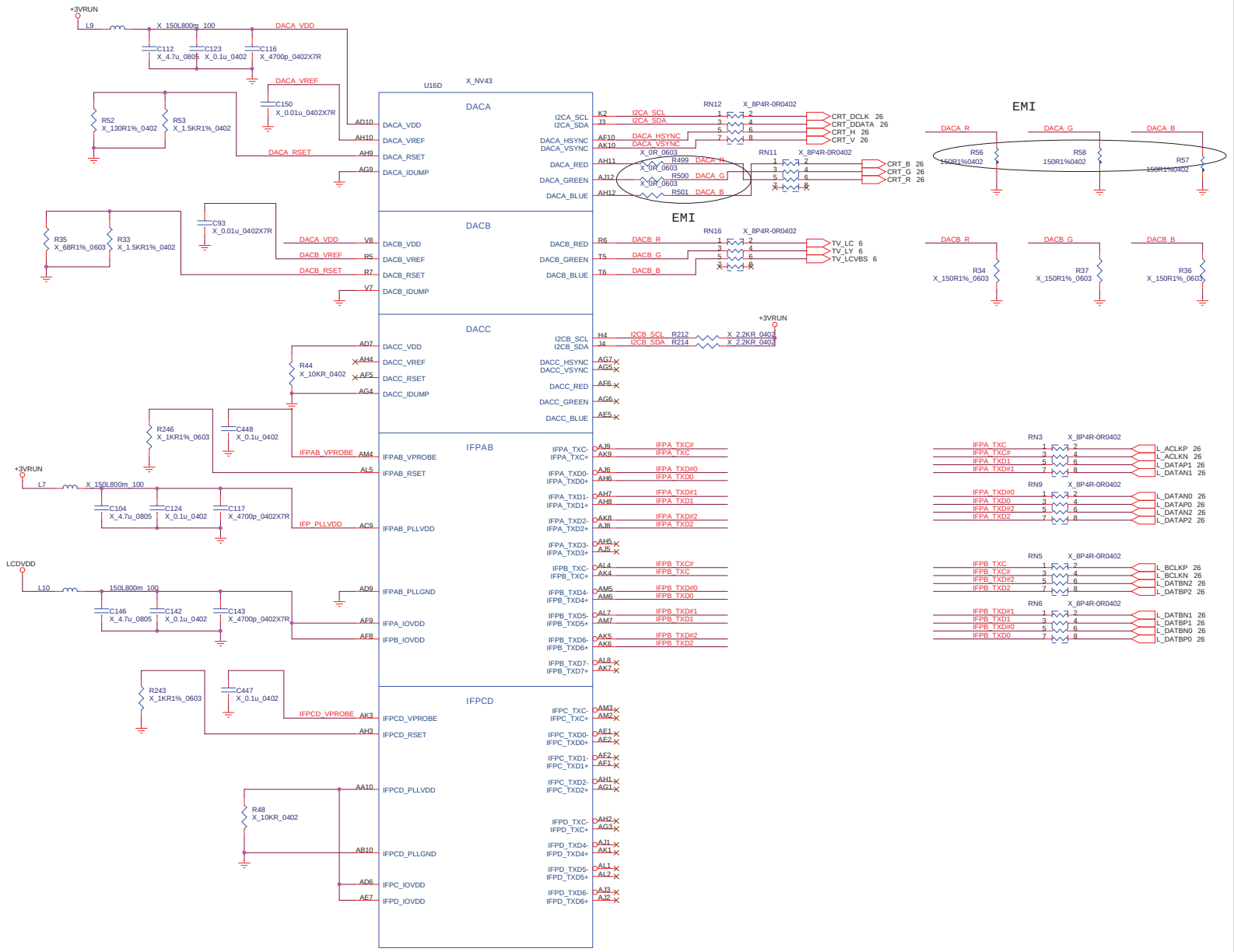

MSI CORPORATION

Title: ***VGA3***

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C		0A

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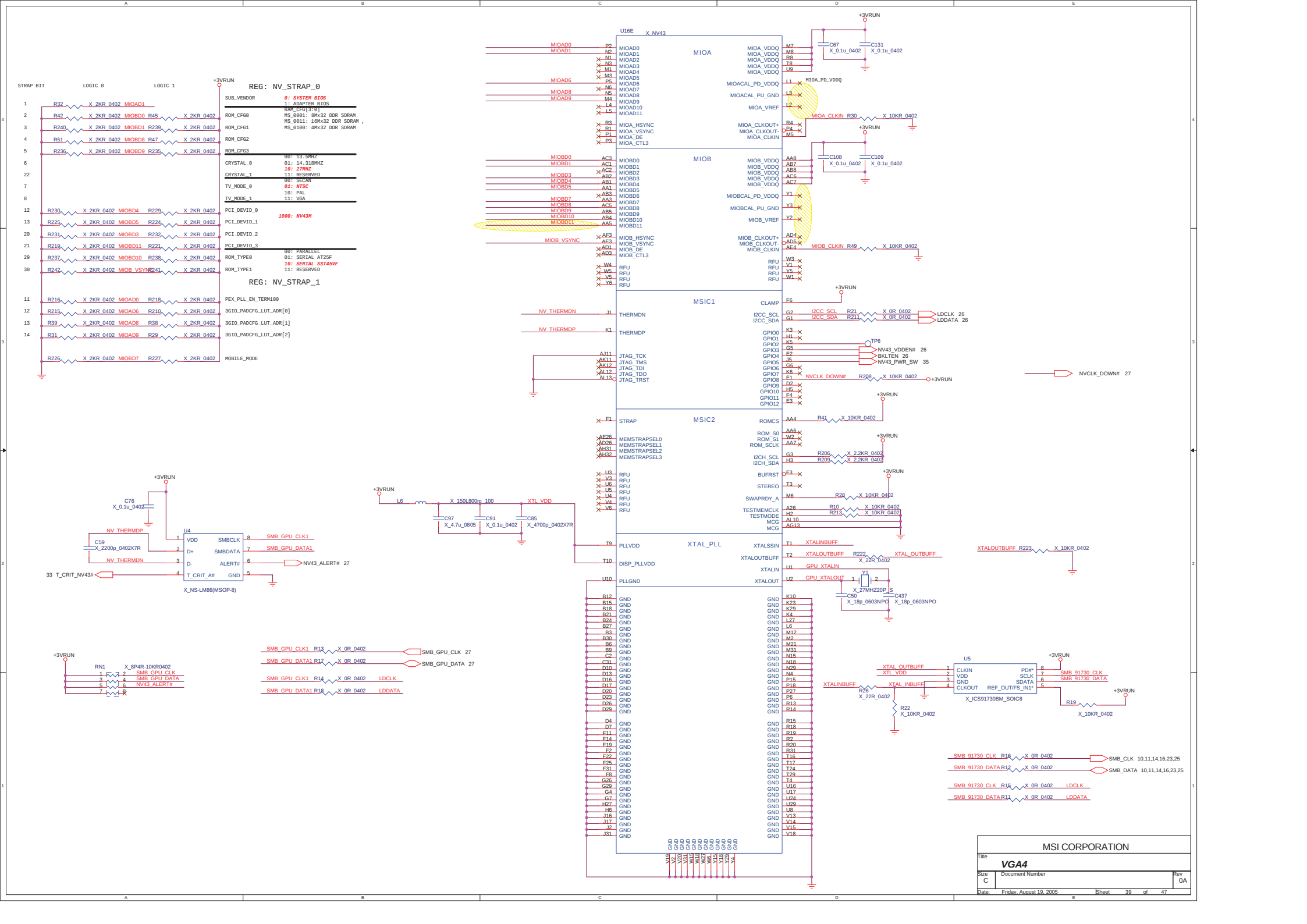
REG: NV_STRAP_0
REG: NV_STRAP_1
U16E
X_NV43
MIOA
MIOB
MSIC1
MSIC2
XTAL_PLL
+3VRUN
MIOA_CLKIN R30 X_10KR_0402
MIOB_CLKIN R49 X_10KR_0402
NVCLK_DOWN# R208 X_10KR_0402
NV_THERMDN
NV_THERMDP
LDCLK 26
LDDATA 26
NV43_VDDEN# 26
BKLTEN 26
NV43_PWR_SW 35
NVCLK_DOWN# 27
U4
X_NS-LM86(MSOP-8)
NV43_ALERT# 27
U5
X_ICS91730BM_SOIC8
RN1 X_8P4R-10KR0402
SMB_GPU_CLK 27
SMB_GPU_DATA 27
SMB_CLK 10,11,14,16,23,25
SMB_DATA 10,11,14,16,23,25
MSI CORPORATION
VGA4
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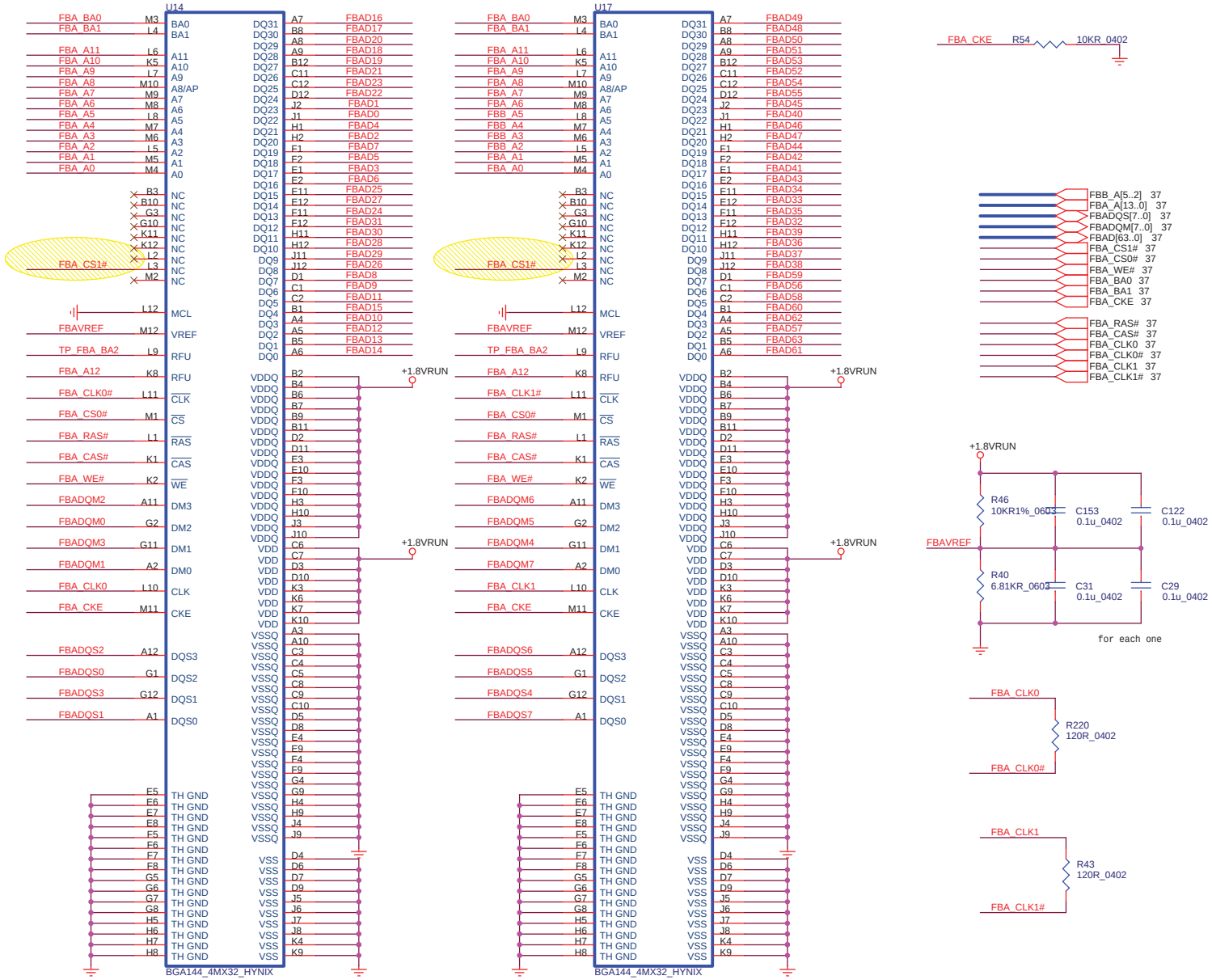

MSI CORPORATION			
Title: VARM1			
Size: A3	Document Number		Rev: 0A
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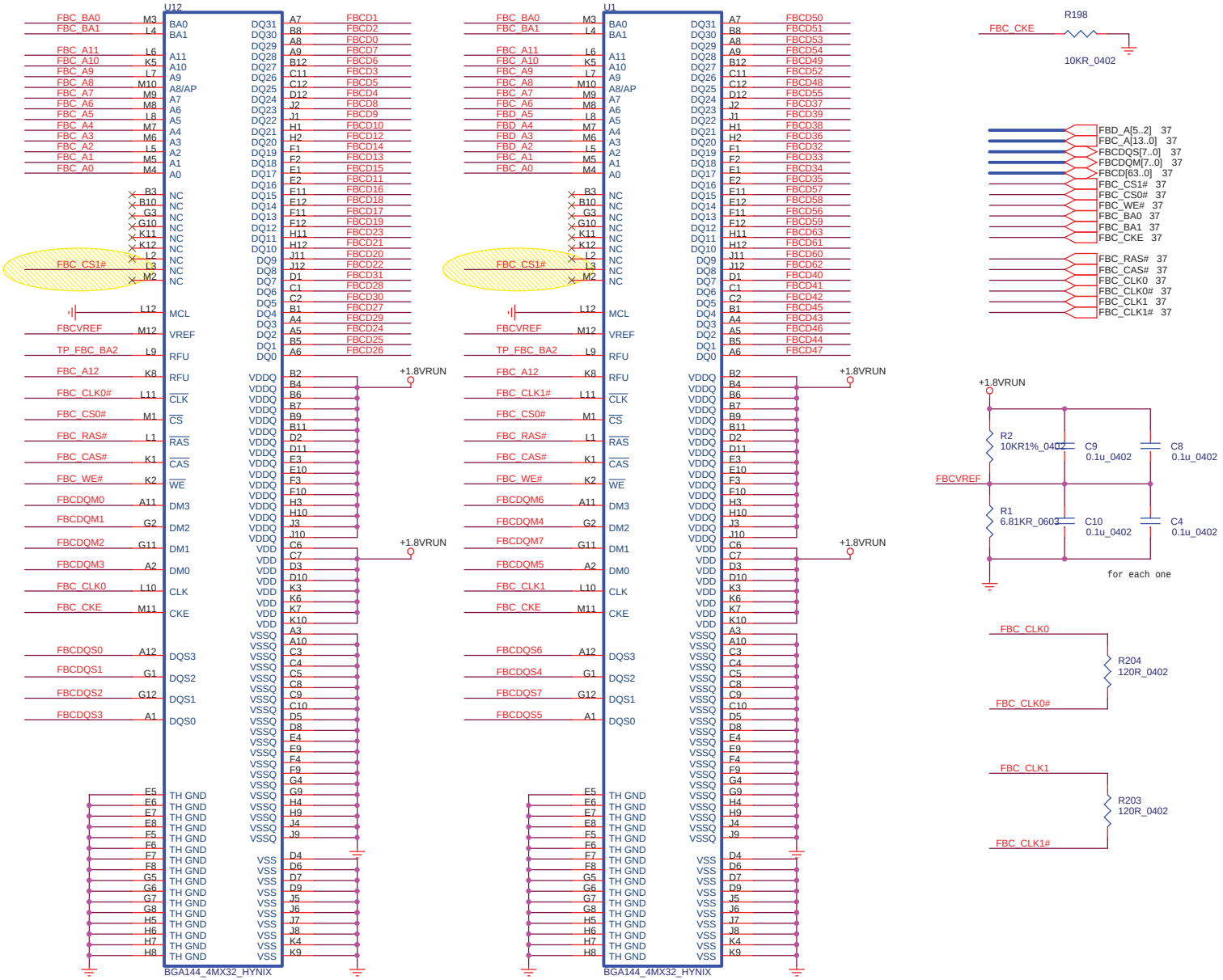
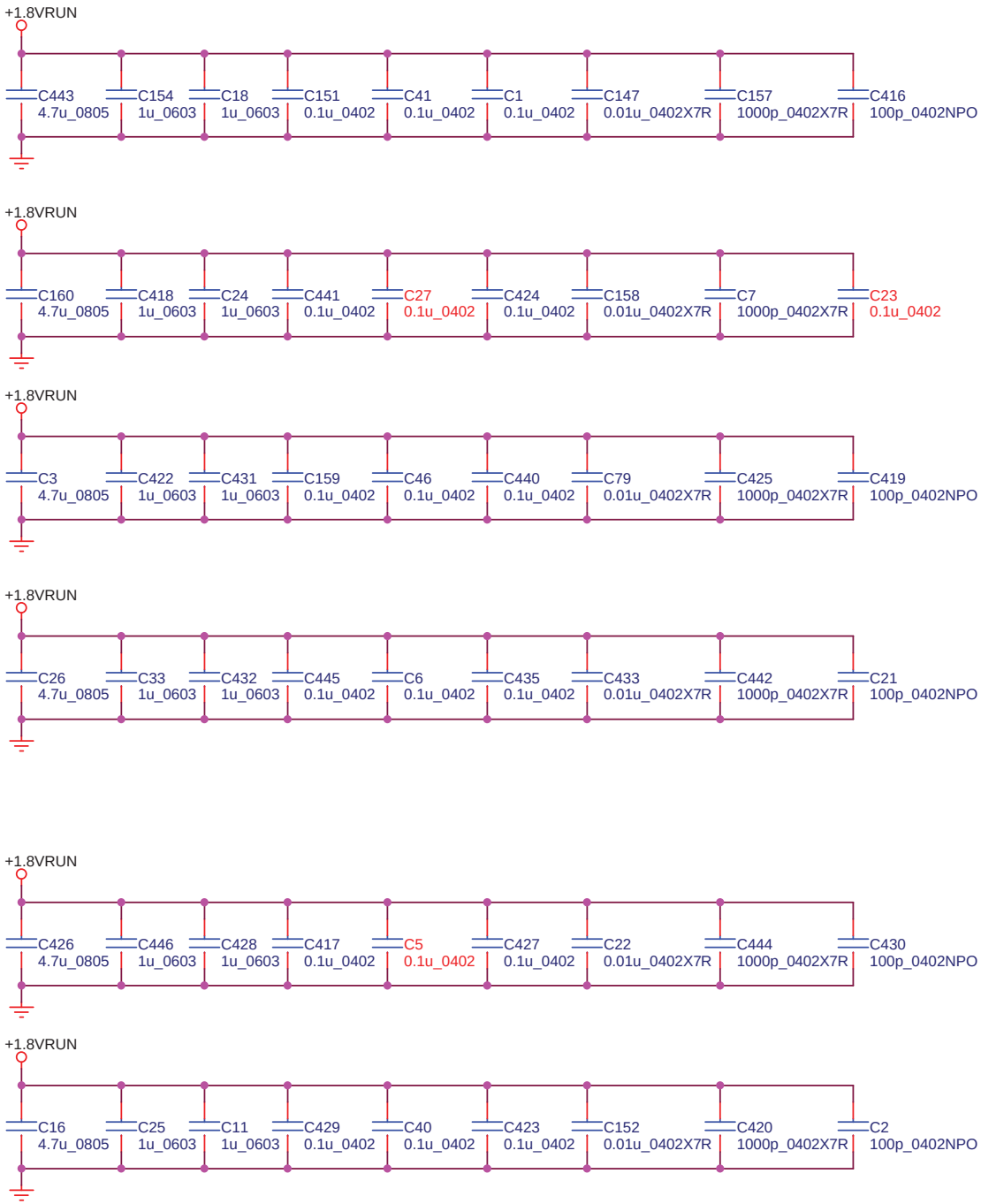


MSI CORPORATION		
Title: ***VGA2***		
Size: A3	Document Number	Rev: 0A
Date: Friday, August 19, 2005	Sheet 41 of 47	



MSI CORPORATION

Title: ***VGA Decoupling***

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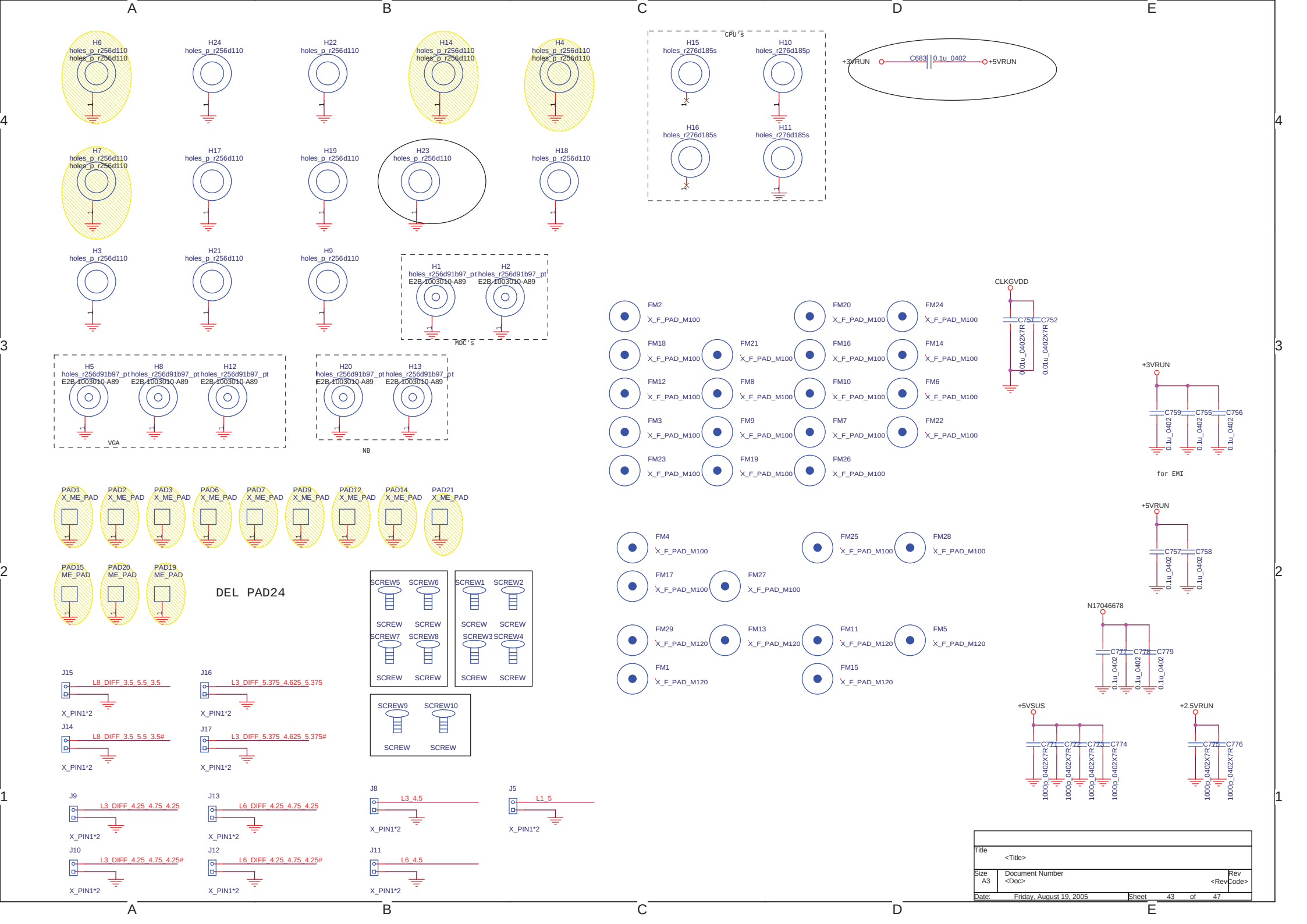
H6
holes_p_r256d110
holes_p_r256d110
H24
holes_p_r256d110
H22
holes_p_r256d110
H14
holes_p_r256d110
holes_p_r256d110
H4
holes_p_r256d110
holes_p_r256d110
H7
holes_p_r256d110
holes_p_r256d110
H17
holes_p_r256d110
H19
holes_p_r256d110
H23
holes_p_r256d110
H18
holes_p_r256d110
H3
holes_p_r256d110
H21
holes_p_r256d110
H9
holes_p_r256d110
H1
holes_r256d91b97_pt
E2B-1003010-A89
H2
holes_r256d91b97_pt
E2B-1003010-A89
MDC's
H5
holes_r256d91b97_pt
E2B-1003010-A89
H8
holes_r256d91b97_pt
E2B-1003010-A89
H12
holes_r256d91b97_pt
E2B-1003010-A89
VGA
H20
holes_r256d91b97_pt
E2B-1003010-A89
H13
holes_r256d91b97_pt
E2B-1003010-A89
NB
CPU's
H15
holes_r276d185s
H10
holes_r276d185p
H16
holes_r276d185s
H11
holes_r276d185s
+3VRUN
C683
0.1u_0402
+5VRUN
FM2
X_F_PAD_M100
FM20
X_F_PAD_M100
FM24
X_F_PAD_M100
FM18
X_F_PAD_M100
FM21
X_F_PAD_M100
FM16
X_F_PAD_M100
FM14
X_F_PAD_M100
FM12
X_F_PAD_M100
FM8
X_F_PAD_M100
FM10
X_F_PAD_M100
FM6
X_F_PAD_M100
FM3
X_F_PAD_M100
FM9
X_F_PAD_M100
FM7
X_F_PAD_M100
FM22
X_F_PAD_M100
FM23
X_F_PAD_M100
FM19
X_F_PAD_M100
FM26
X_F_PAD_M100
CLKGVDD
C751
C752
0.01u_0402X7R
0.01u_0402X7R
+3VRUN
C759
C755
C756
0.1u_0402
0.1u_0402
0.1u_0402
for EMI
PAD1
X_ME_PAD
PAD2
X_ME_PAD
PAD3
X_ME_PAD
PAD6
X_ME_PAD
PAD7
X_ME_PAD
PAD9
X_ME_PAD
PAD12
X_ME_PAD
PAD14
X_ME_PAD
PAD21
X_ME_PAD
PAD15
ME_PAD
PAD20
ME_PAD
PAD19
ME_PAD
DEL PAD24
FM4
X_F_PAD_M100
FM25
X_F_PAD_M100
FM28
X_F_PAD_M100
FM17
X_F_PAD_M100
FM27
X_F_PAD_M100
+5VRUN
C757
C758
0.1u_0402
0.1u_0402
FM29
X_F_PAD_M120
FM13
X_F_PAD_M120
FM11
X_F_PAD_M120
FM5
X_F_PAD_M120
FM1
X_F_PAD_M120
FM15
X_F_PAD_M120
N17046678
C777
C778
C779
0.1u_0402
0.1u_0402
0.1u_0402
SCREW5
SCREW6
SCREW1
SCREW2
SCREW
SCREW
SCREW
SCREW
SCREW7
SCREW8
SCREW3
SCREW4
SCREW
SCREW
SCREW
SCREW
SCREW9
SCREW10
SCREW
SCREW
J15
L8_DIFF_3.5_5.5_3.5
X_PIN1*2
J16
L3_DIFF_5.375_4.625_5.375
X_PIN1*2
J14
L8_DIFF_3.5_5.5_3.5#
X_PIN1*2
J17
L3_DIFF_5.375_4.625_5.375#
X_PIN1*2
+5VSUS
C771
C772
C773
C774
1000p_0402X7R
1000p_0402X7R
1000p_0402X7R
1000p_0402X7R
+2.5VRUN
C775
C776
1000p_0402X7R
1000p_0402X7R
J9
L3_DIFF_4.25_4.75_4.25
X_PIN1*2
J13
L6_DIFF_4.25_4.75_4.25
X_PIN1*2
J8
L3_4.5
X_PIN1*2
J5
L1_5
X_PIN1*2
J10
L3_DIFF_4.25_4.75_4.25#
X_PIN1*2
J12
L6_DIFF_4.25_4.75_4.25#
X_PIN1*2
J11
L6_4.5
X_PIN1*2
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Size
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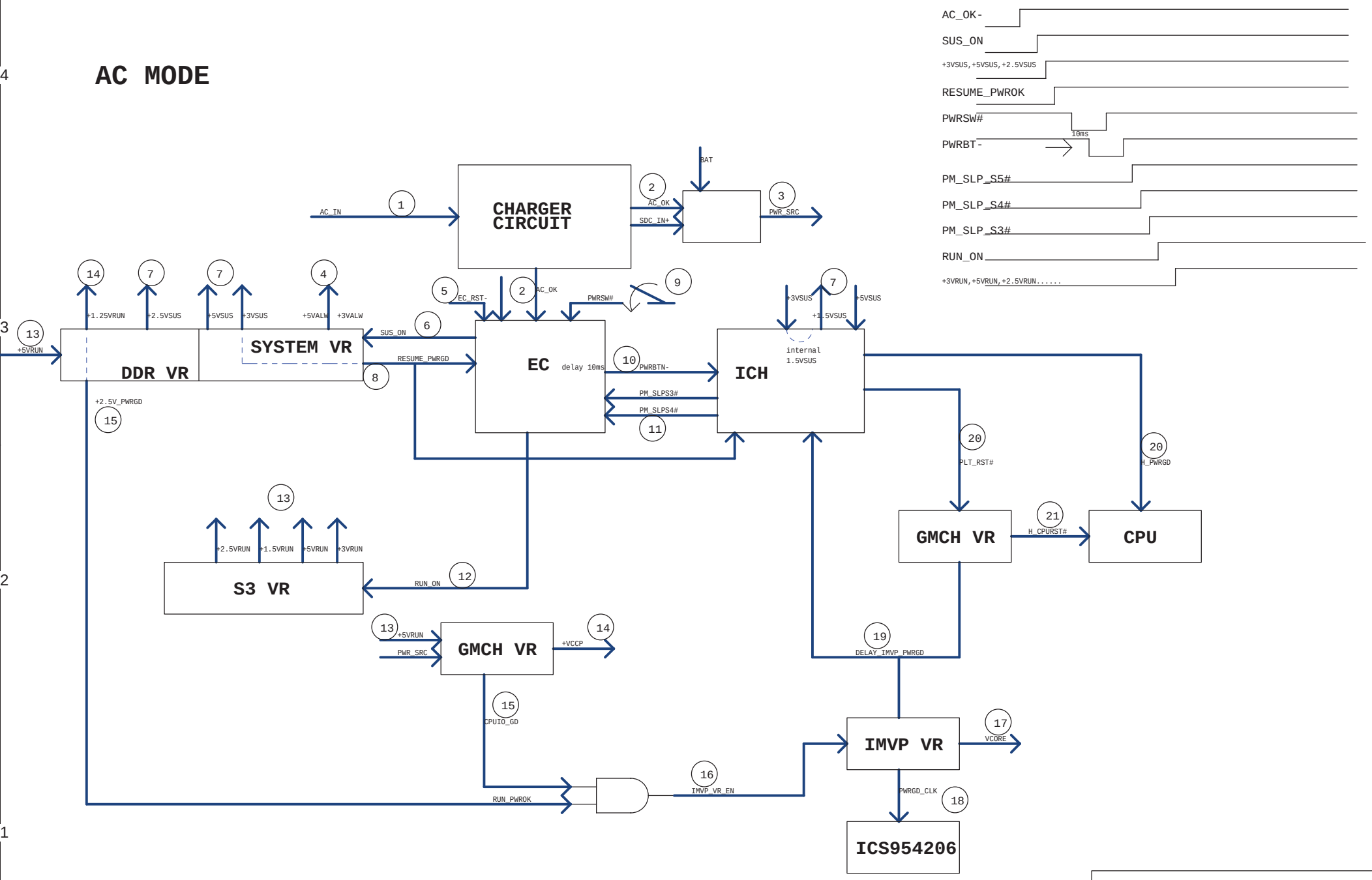
AC MODE



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Size A3	Document Number <Doc>		Rev <RevCode>
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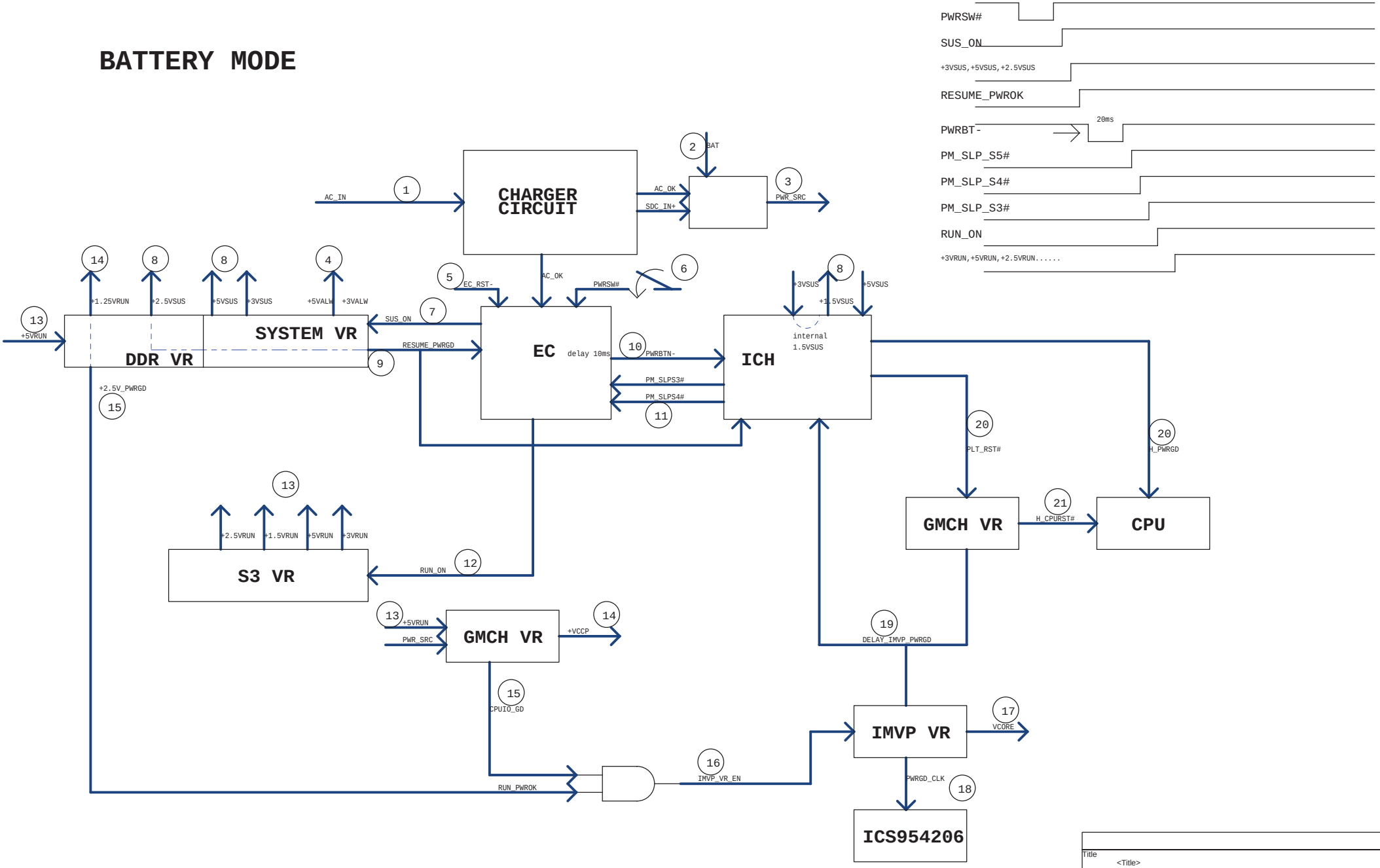
BATTERY MODE



Title	<Title>		
Size A3	Document Number <Doc>		Rev <RevCode>
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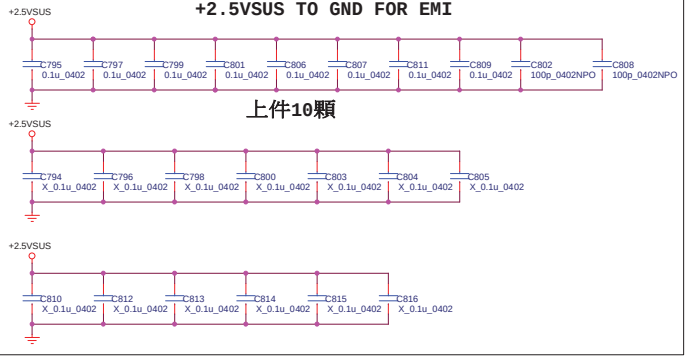
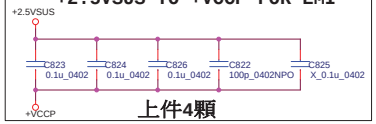
+2.5VSUS TO GND FOR EMI



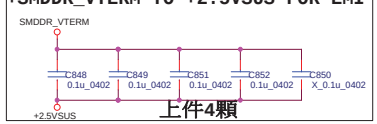
上件10顆

+2.5VSUS TO +VCCP FOR EMI



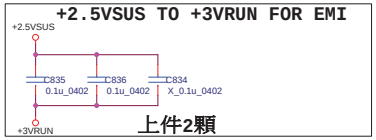
上件4顆

+SMDDR_VTERM TO +2.5VSUS FOR EMI



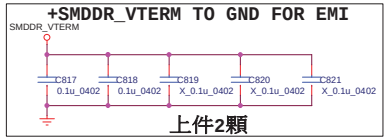
上件4顆

+2.5VSUS TO +3VRUN FOR EMI



上件2顆

+SMDDR_VTERM TO GND FOR EMI



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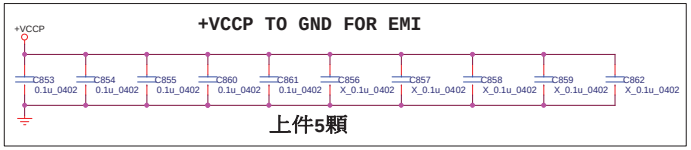
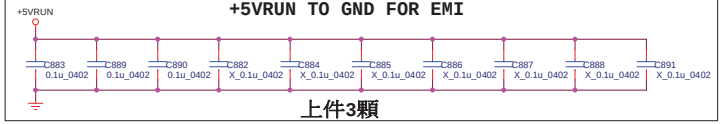
+VCCP TO GND FOR EMI



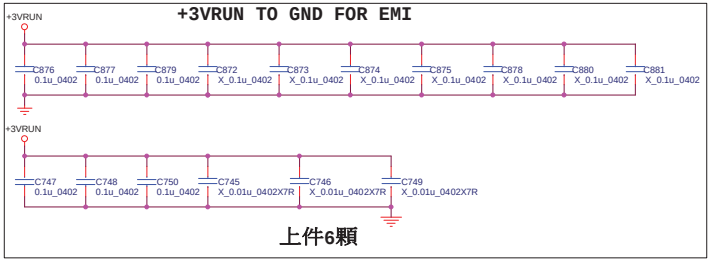
上件5顆

+5VRUN TO GND FOR EMI



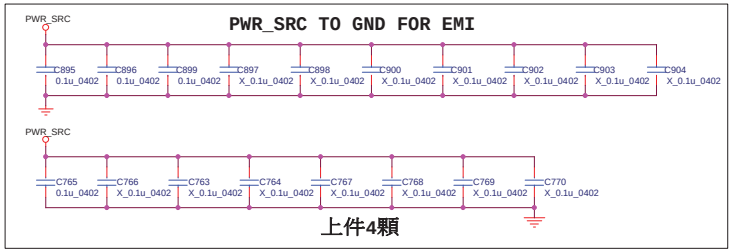
上件3顆

+3VRUN TO GND FOR EMI



上件6顆

PWR_SRC TO GND FOR EMI



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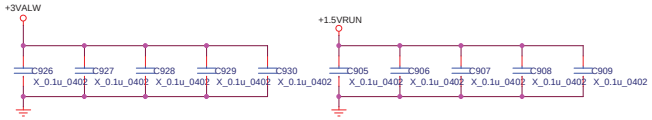

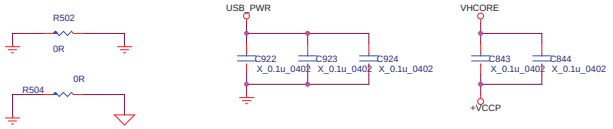

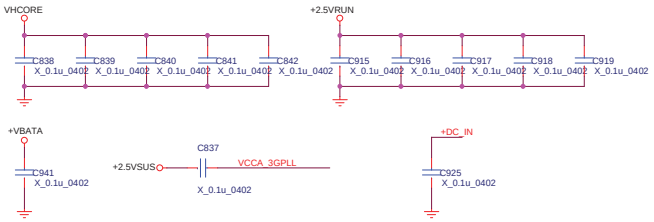

MSI CORPORATION

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1. PAGE2 REMOVE IDSEL PIN, USE SWITH CONTROL

2. PAGE6 MODIFY TV OUT CIRCUIT/ ADD 1.5K PULL-LOW IN PIN LIBG

3. PAGE11 MODIFY DIMM AD SETTING

4. PAGE13 MODIFY DMI POWER/ CHANGE PCI PULL UP RESISTOR

5. PAGE14 MODIFY BT GPIO PIN TO EC/ ADD TEST PAD FOR USB SIGNALS/ REMOVE MB ID SETTING RESISTOR

6. PAGE15 MODIFY LAN POWER PIN TO CAPACITOR/ MODIFY +5VSUS POWER RESISTOR

7. PAGE16 MODIFY CPU IDSEL CIRCUIT/ REMOVE PULL UP RESISTOR FOR CLOCK GEN. SETTING

8. PAGE18 MODIFY USB POWER RESISTOR FOR LEAKAGE

9. PAGE19/PAGE20/PAGE21 MODIFY RICHON IC POWER FROM SUS TO RUN FOR S3 POWER CONSUMPTION

10. PAGE22 MODIFY INT MIC OP AMP CIRCUIT/ REMOVE PULL LOW RESISTOR FOR EXTERNAL CLOCK SETTING

11. PAGE25 MODIFY LAN TRANSFORM POWER TO +2.5VSUS FOR LEAKAGE/ ADD TWO RESISTOR FOR 10/100 POWER CHANGE

12. PAGE26 MODIFY INVERTER POWER TO +19V/ MODIFY EDID RESISTOR

13. PAGE27 ADD DIODE TO KBRST AND GAT20 CIRCUIT FOR LEAKAGE

14. PAGE29 MODIFY BATTERY PIN DEFINE FOR VENDOR SUGGESTION

15. PAGE30 MODIFY POWERGOOD CIRCUIT

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