

REVISIONS						
REV	DESCRIPTION	DFT	DATE	CHK	DATE	APVD

PAGE	CONTENTS
[1]	COVER PAGE]
[2]	BLOCK DIAGRAM]
[3]	RESET MAP]
[4]	GPIO/IDSEL TABLE]
[5]	PENTIUM III BGA2 PART 1 OF 4]
[6]	PENITUM III BGA2 PART 2 OF 4]
[7]	PENTIUM III BGA2 PART 3 & 4]
[8]	CPU VCORE DECOUPLING]
[9]	CPU VTT DECPUPLING]
[10]	ITP CONNECTOR]
[11]	NV2A (NORTH BRIDGE)]
[12]	NV2A STRAPPING]
[13]	DDR SDRAM (PARTITION A)]
[14]	DDR SDRAM (PARTITION B)]
[15]	DDR SDRAM (PARTITION C)]
[16]	DDR SDRAM (PARTITION D)]
[17]	DDR PARALLEL TERM DATA A/B]
[18]	DDR PARAELLEL TERM DATA C/D]
[19]	DDR SERIES TERM ADDR A/B]
[20]	DDR SERIES TERM ADDR C/D]
[21]	VTERM DECOUPLING]
[22]	NV2A DECOUPLING]
[23]	MCPX 1 OF 2]
[24]	MCPX 2 OF 2]
[25]	CPU VOLTATGE REGULATOR]

PAGE	CONTENTS
[26]	CPU VREG OUTPUT FILTER]
[27]	1.5V SWITCHING REGULATOR]
[28]	CLOCK GENERATOR]
[29]	1.25V SWITCHING REGULATOR]
[30]	LINEAR_REGULATORS_1.5_2.5]
[31]	DVT POWER CONNECTOR]
[32]	BULK DECOUPLING]
[33]	BATTERY]
[34]	LAN LXT972]
[35]	LAN MISC/SMBUS DIAG]
[36]	IDE]
[37]	AUDIO CODEC]
[38]	AUDIO NO POP]
[39]	AUDIO AMPLIFIER]
[40]	AUDIO VREG AND BIAS]
[41]	BLANK PAGE]
[42]	VIDEO DAC AND TV ENCODER]
[43]	AV CONNECTOR]
[44]	LABELS]
[45]	FLASH]
[46]	USG_PWR_SWITCH_FRONT]
[47]	USB_PWR_SWITCH_BACK]
[48]	PIC/FAN/DVD PWR/FRONT PANEL]
[49]	BLANK PAGE]
[50-53]	CREF]

DVTM  
MECHANICAL

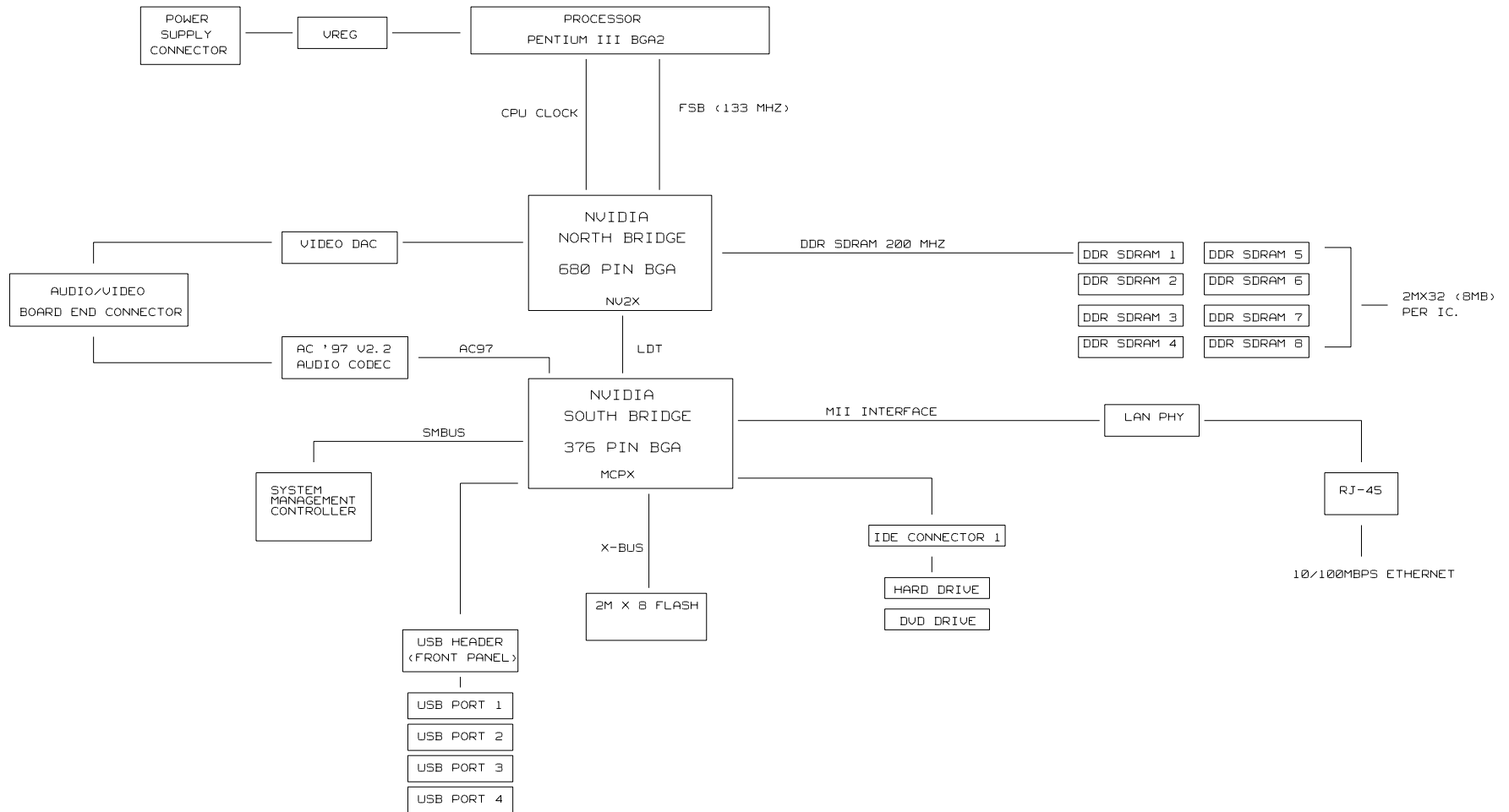
NOTES:

1. THIS SCHEMATIC DOCUMENTS THE GENERIC PRODUCT WITH ALL POSSIBLE CONFIGURATIONS. PLEASE REFER TO SPECIFIC PRODUCT PBA EPLs FOR ITEMS SHOWN AS OPTIONAL IN THE SCHEMATIC.
2. RESISTORS ARE IN OHMS UNLESS OTHERWISE SPECIFIED.
3. UCC = +5V UNLESS OTHERWISE SPECIFIED.
4. \* SUFFIX INDICATES ACTIVE LOW SIGNAL.
5. \I SUFFIX INDICATES SIGNAL EXITS HIERARCHICAL BLOCK.
6. THIS DOCUMENT ALSO EXISTS ON ELECTRONIC MEDIA.

[PAGE\_TITLE=COVER PAGE]

BOM RELEASE DATE	XX/XX/XX	PB NUMBER	XXXXXX-XXX
SIGNATURE	DATE	intel 3065 BOWERS AVE SANTA CLARA, CA 95051	
DRN BY		TITLE	
CHK BY N_SANCHEZ	XX/XX/XX	SCH, PBA, DVT	
ENGR APVD		INTEL	DOCUMENT NUMBER
APVD		CONFIDENTIAL	XXXXXX
APVD		PAGE	REV
		1/53	0.13

DRAWING  
DVT\_SCH\_1.1  
Fri Sep 01 08:42:25 2000

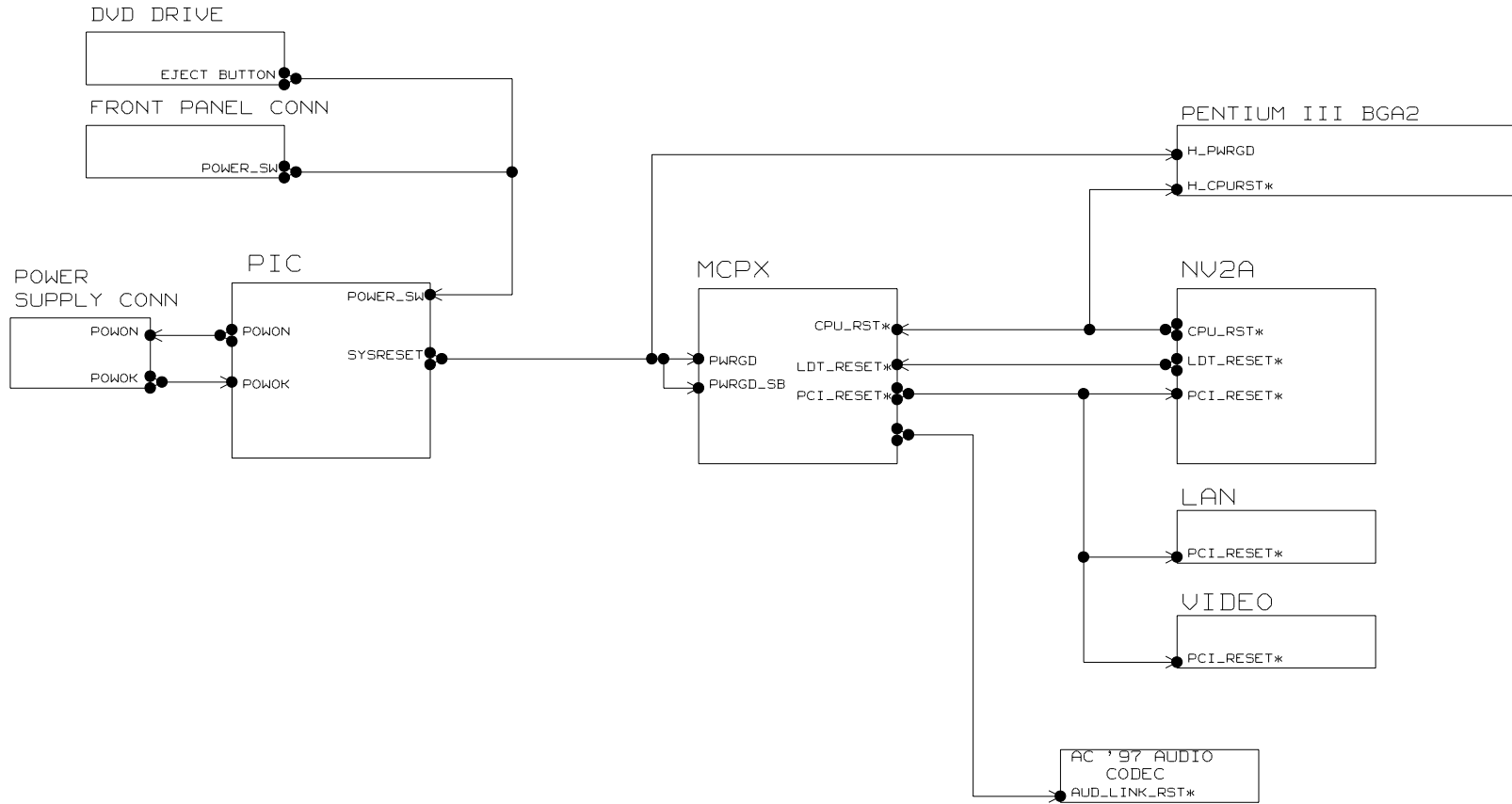


[PAGE\_TITLE=BLOCK DIAGRAM]

DRAWING  
 DWT\_SCH\_1.2  
 Fri Sep 01 07:32:12 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 2	REV 0.13
-----------------------	----------------------------	-----------	-------------

# RESET & POWER-ON MAP

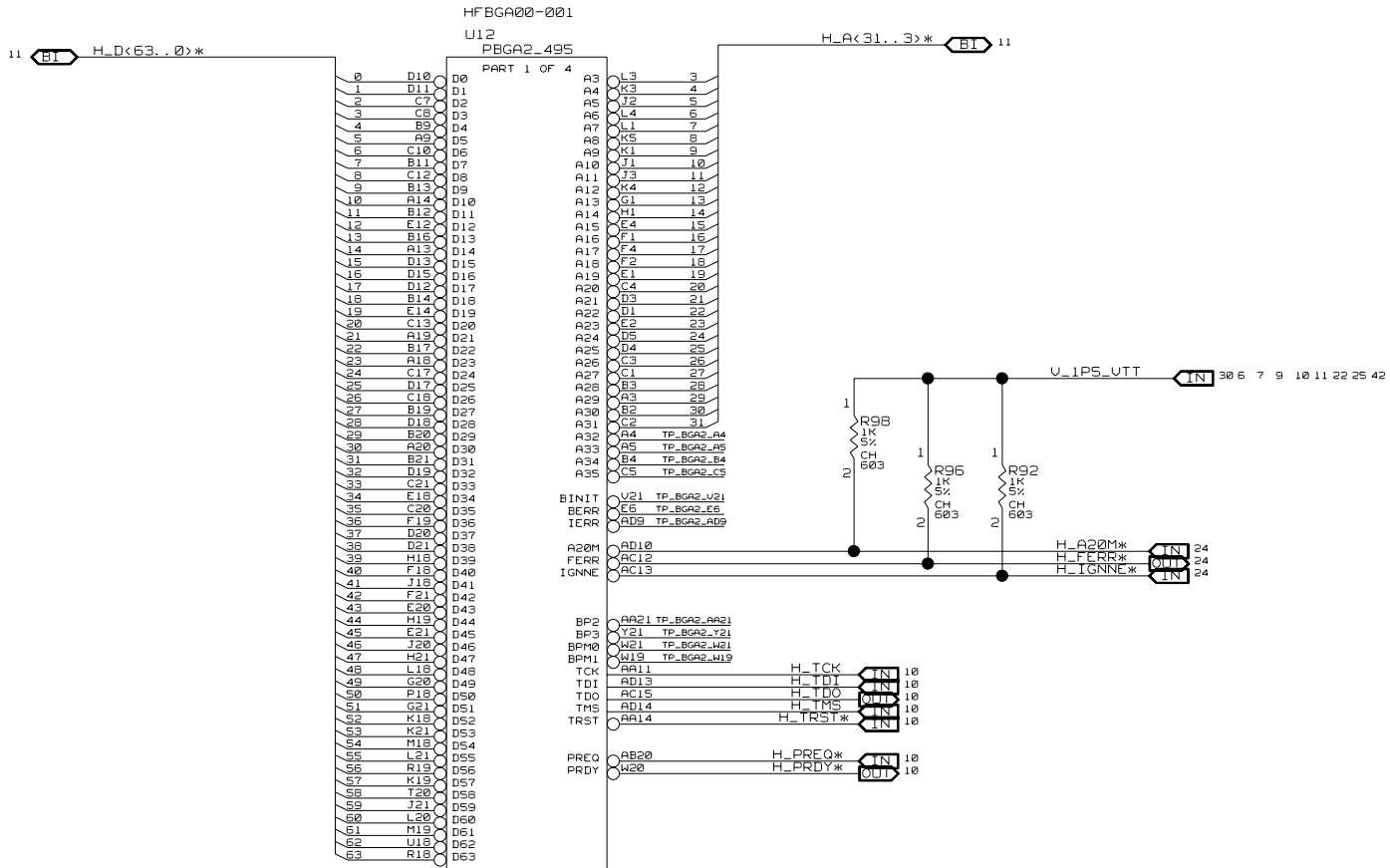


[PAGE\_TITLE=RESET MAP]

DRAWING  
DWT\_SCH\_1.3  
Fri Sep 01 07:32:07 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 3	REV 0.13
-----------------------	----------------------------	-----------	-------------





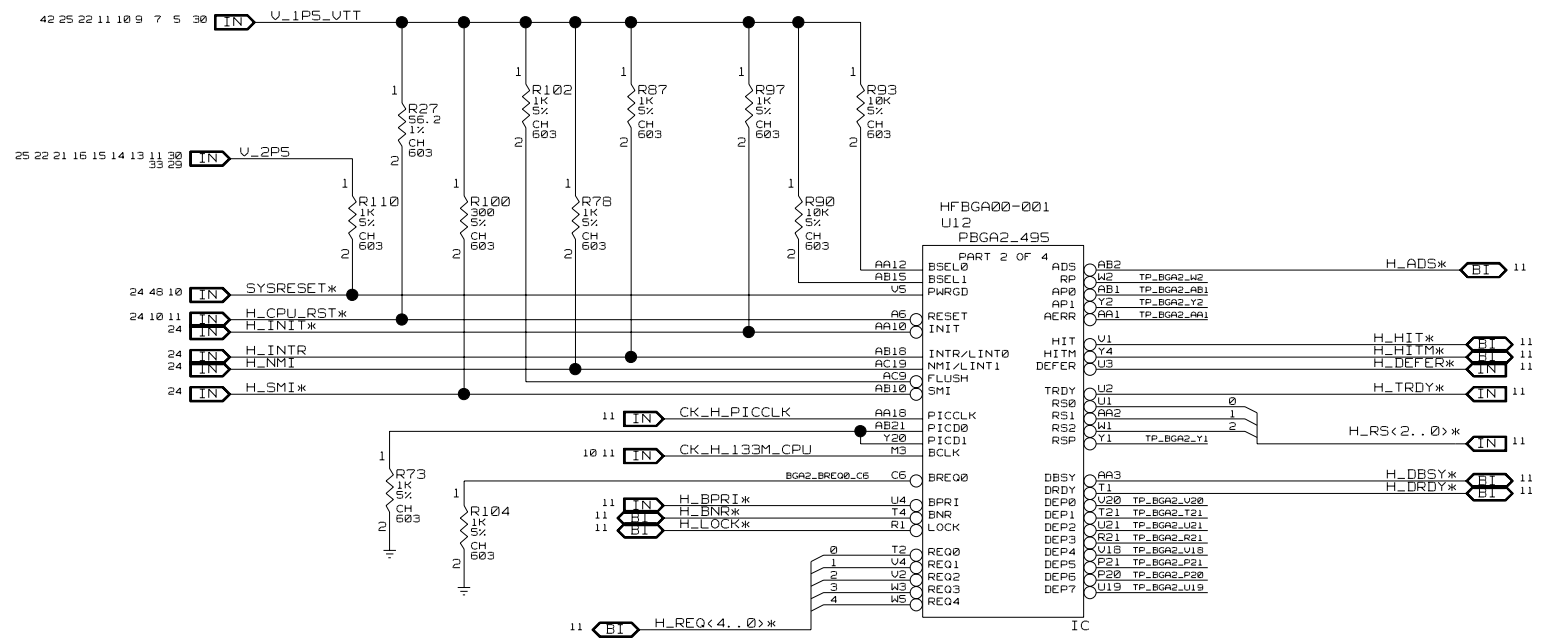
NC: A15, A16, A17, C14, D8, D14, D16, E15, G2, G5, G18, H3, H5, JS, M4, M5, P3, P4, R2, AA5, AA19, AC3, AC11, AC17, AC20, AD15  
 GND: A2, A7, AB, A12, A21, B1, B5, B6, B7, B8, B10, B15, B18, C9, C11, C15, C16, C19, D2, D6, D7, D9, E3, E7, E8, E9  
 GND: E10, E11, E13, E19, F3, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F20, G3, G19, H2, H7, H9, H11, H13, H15  
 GND: H20, J4, J8, J10, J12, J14, J16, J19, K2, K7, K9, K11, K13, K15, K20, L5, L8, L10, L12, L14, L16, L19, M7, M9, M11  
 GND: M13, M15, M20, N2, N3, N4, N6, N10, N11, N14, N16, N18, N19, N20, P5, P7, P9, P11, P13, P15, P19, R3, R4, R5, R10, R12, R14, R16, R20  
 GND: T3, T5, T7, T9, T11, T13, T15, T18, T19, U8, U10, U12, U14, U16, U20, V3, V19, W4, W18, Y3, Y9, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y19  
 GND: AA4, AA13, AA20, AB3, AB5, AB9, AB11, AB13, AB14, AB17, AC1, AC2, AC5, AC10, AC14, AC16, AC21, AD1, AD5, AD16, AD21, AC18

[PAGE\_TITLE=PENTIUM III BGA2 PART 1 OF 4]

DRAWING  
 DUT. SCH.1.5  
 Fri Sep 01 07:31:58 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 5	REV 0.13
-----------------------	----------------------------	-----------	-------------

BSEL1	BSEL0	SYSTEM BUS FREQUENCY
0	0	66 MHZ
0	1	100 MHZ
1	0	RESERVED
1	1	133 MHZ

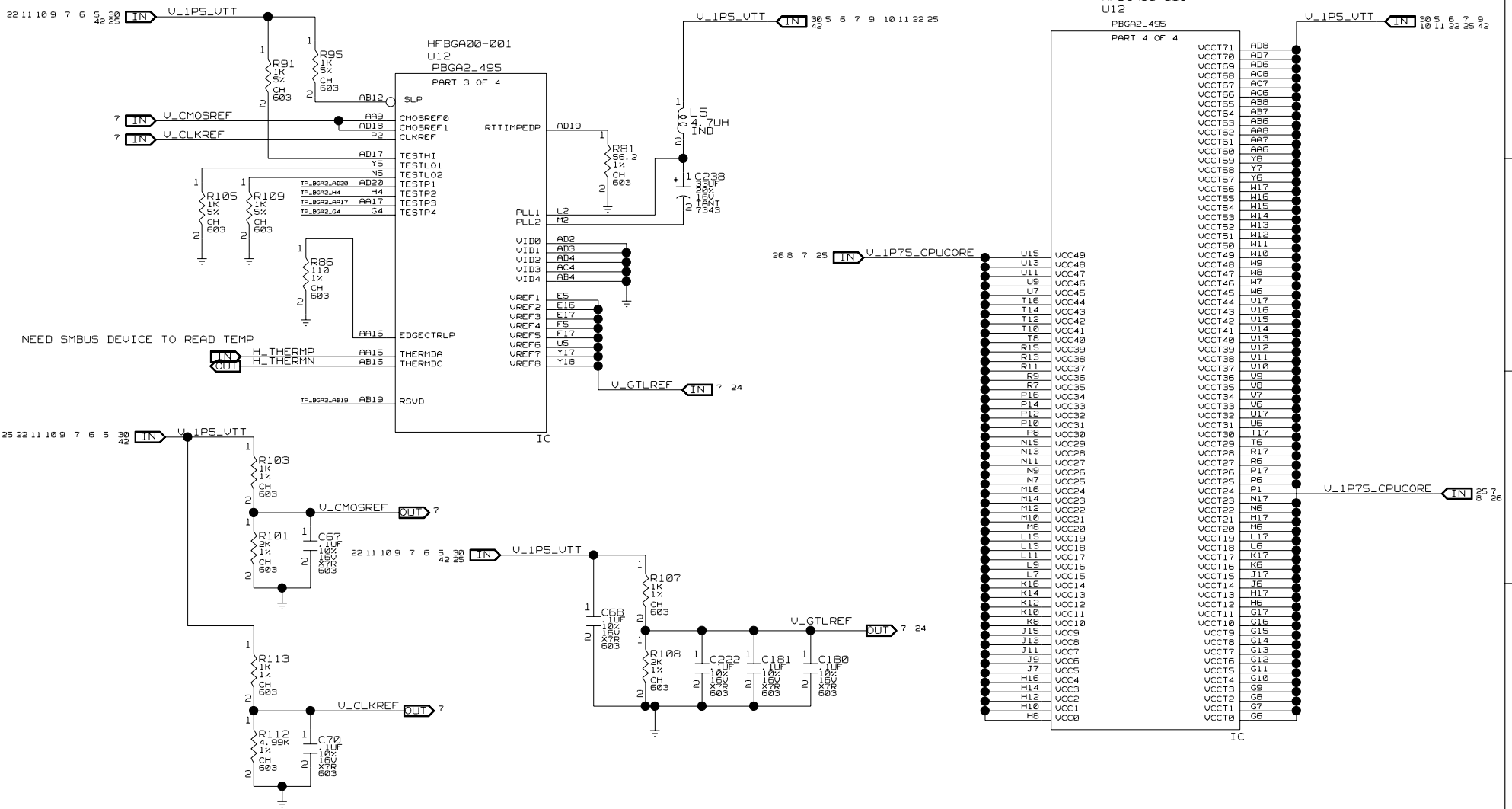


NC: A15, A16, A17, C14, D8, D14, D16, E15, G2, G5, G18, H3, H5, J5, M4, M5, P3, P4, R2, AA5, AA19, AC3, AC11, AC17, AC20, AD15  
 GND: A2, A7, A8, A12, A21, B1, B5, B6, B7, B8, B10, B15, B18, C9, C11, C15, C19, D2, D6, D7, D9, E3, E7, E8, E9  
 GND: E10, E11, E13, E19, F3, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F20, G3, G19, H2, H7, H8, H11, H13, H15  
 GND: H20, J4, J8, J10, J12, J14, J16, J19, K2, K7, K9, K11, K13, K15, K20, L5, L8, L10, L12, L14, L16, L19, M7, M9, M11  
 GND: M13, M15, M20, N2, N3, N4, N8, N10, N12, N14, N16, N18, N19, N20, P5, P7, P9, P11, P13, P15, P19, R3, R4, R5, R8, R10, R12, R14, R16, R20  
 GND: T3, T5, T7, T9, T11, T13, T15, T18, T19, U8, U10, U12, U14, U16, U20, V3, V19, W4, W18, Y3, Y9, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y19  
 GND: AA4, AA13, AA20, AB3, AB5, AB9, AB11, AB13, AB14, AB17, AC1, AC2, AC5, AC10, AC14, AC16, AC21, AD1, AD5, AD16, AD21, AC18

[PAGE\_TITLE=PENITUM III BGA2 PART 2 OF 4]

DRAWING  
 DWT\_SCH\_1.6  
 Fri Sep 01 07:31:54 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 6	REV 0.13
-----------------------	----------------------------	-----------	-------------



[PAGE\_TITLE=PENTIUM III BGA2 PART 3 & 4]

DRAWING  
DWT\_SCH\_1.7  
Fri Sep 01 07:31:49 2000

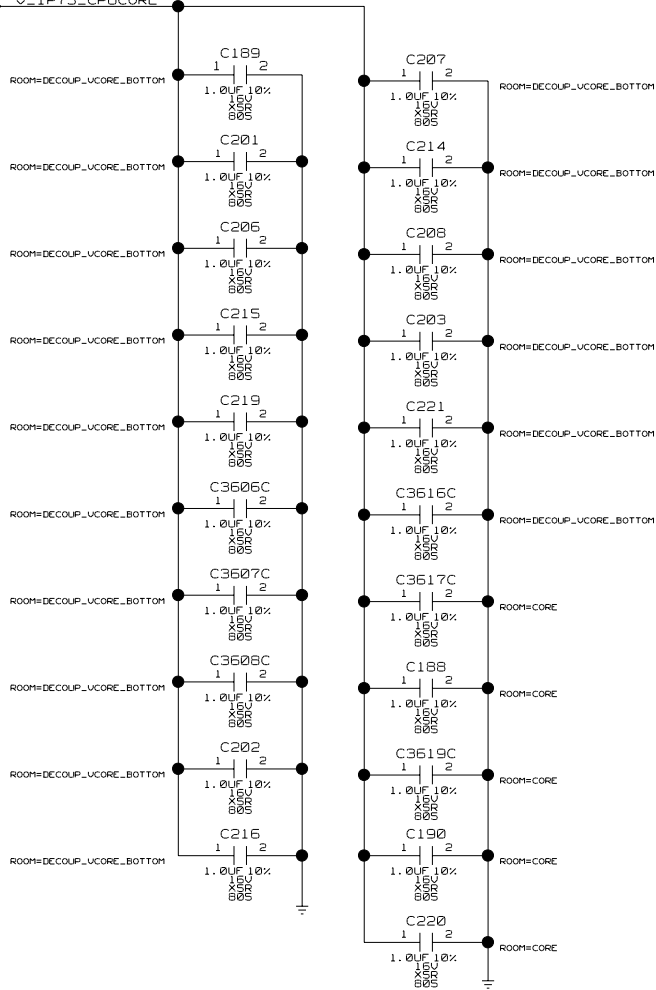
INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 7	REV 0.13
-----------------------	---------------------------	-----------	-------------

# CPU VCORE DECOUPLING

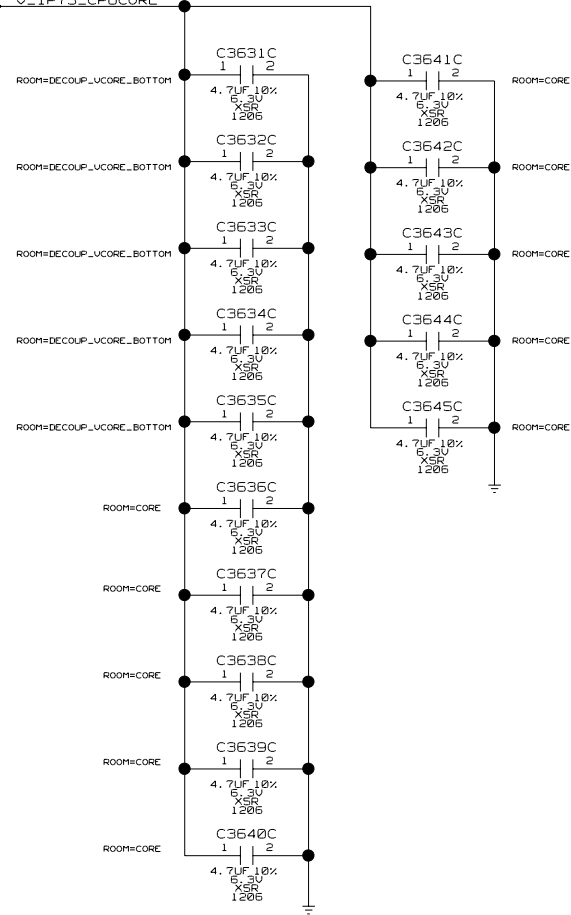
16 1.0UF CAPS PLACED ON BOTTOM.  
5 1.0UF CAPS PLACED ON TOP.

5 4.7UF CAPS PLACED ON BOTTOM.  
10 4.7UF CAPS PLACED ON TOP.

26 8 7 25 U\_1P75\_CPUCORE



26 8 7 25 U\_1P75\_CPUCORE



# CPU VCORE DECOUPLING

[PAGE\_TITLE=CPU VCORE DECOUPLING]

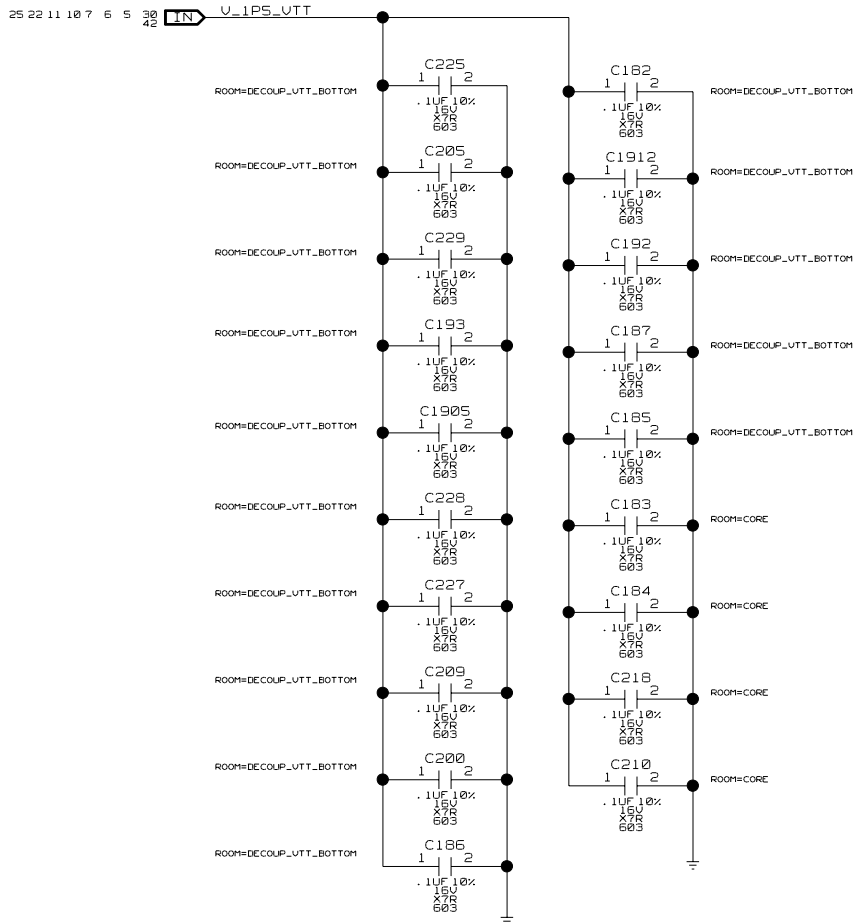
DRAWING  
DWT\_SCH\_1.8  
Fri Sep 01 07:31:45 2000

INTEL	DOCUMENT NUMBER	PAGE	REV
CONFIDENTIAL	XXXXXX	B	0.13



# CPU VTT DECOUPLING CAPS

15 PLACED ON BOTTOM OF CPU.



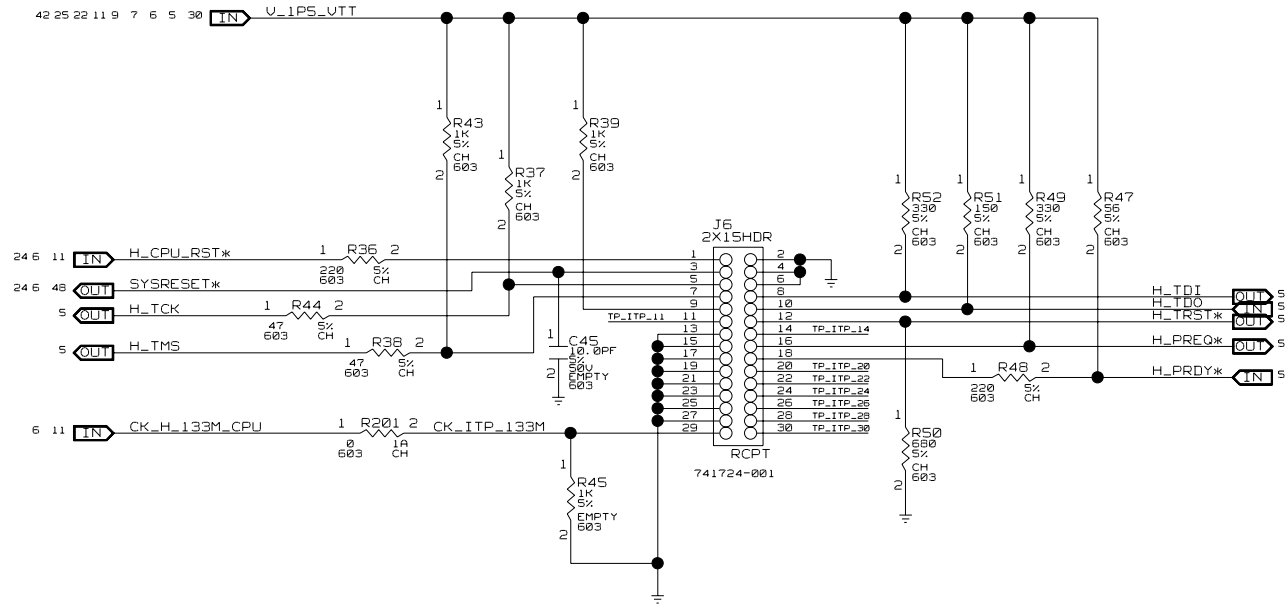
[PAGE\_TITLE=CPU VTT DECOUPLING]

## CPU VTT DECOUPLING

DRAWING  
DVT\_SCH\_1.9  
Fri Sep 01 07:31:40 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 9	REV 0.13
-----------------------	---------------------------	-----------	-------------

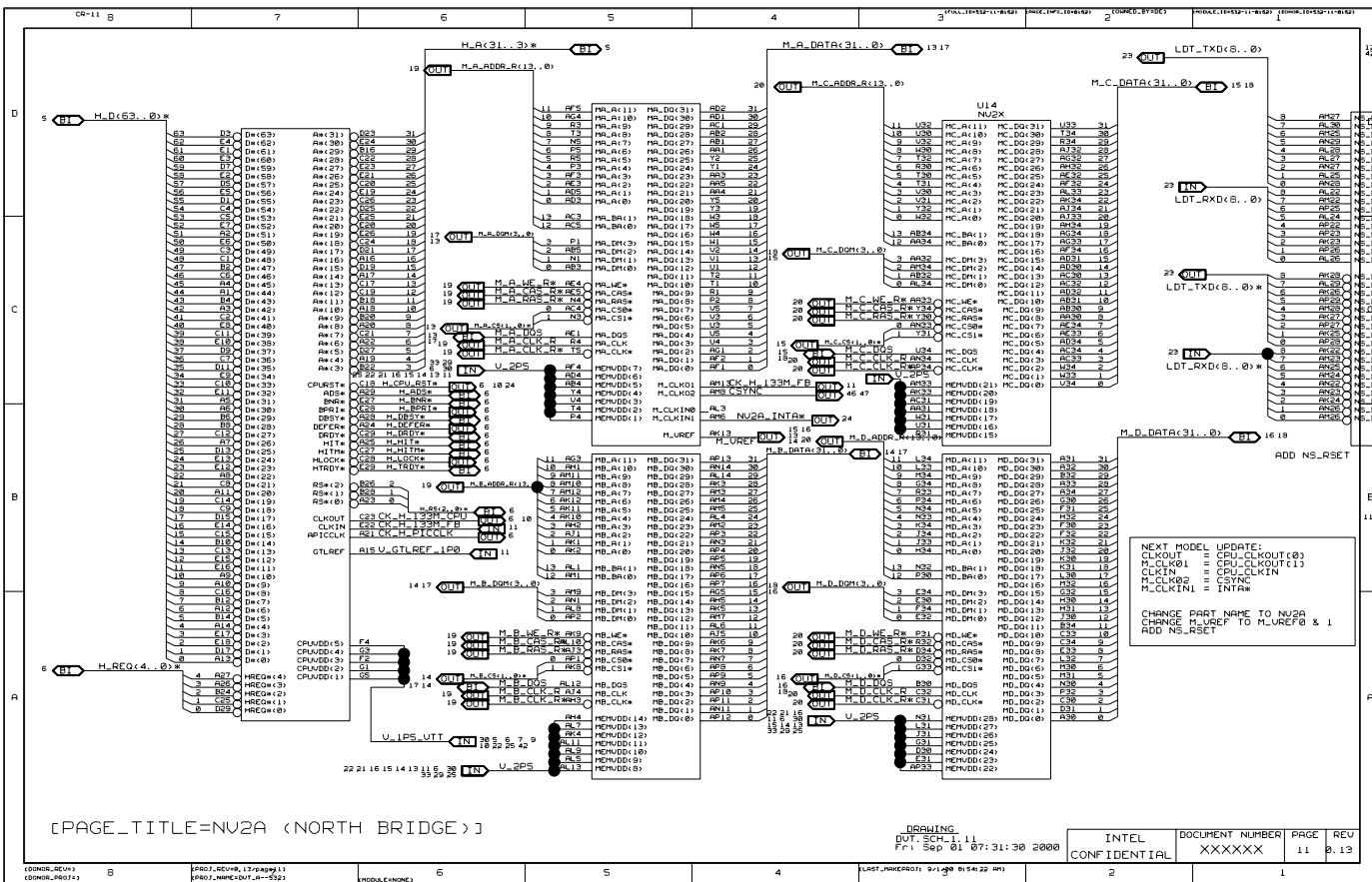
CUMINE ITP VERSION



[PAGE\_TITLE=ITP CONNECTOR]

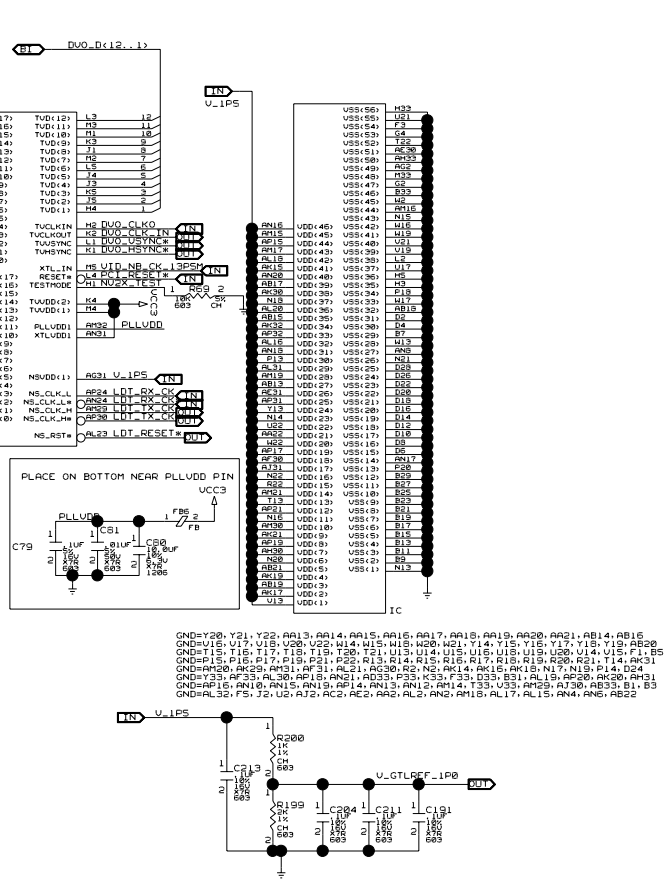
DRAWING  
DUT\_SCH\_1.10  
Fri Sep 01 07:31:35 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 10	REV 0.13
-----------------------	----------------------------	------------	-------------

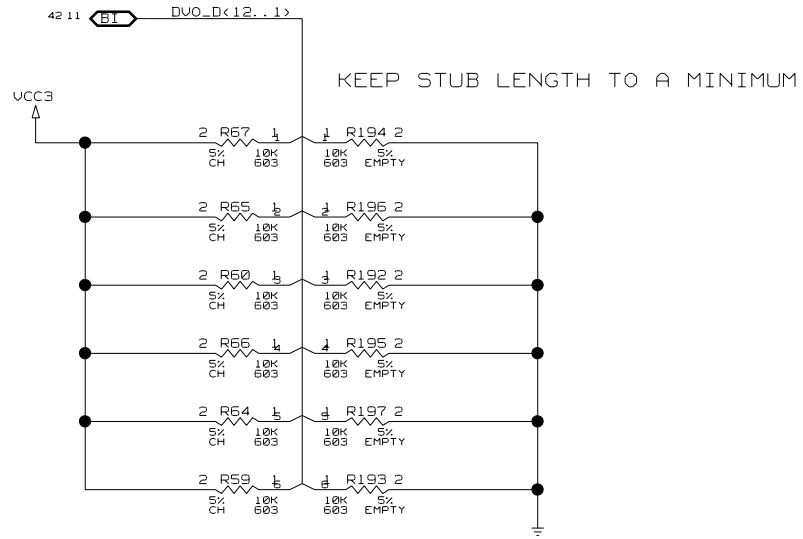


[PAGE\_TITLE=NU2A (NORTH BRIDGE)]

DRAWING: DUT-SCH\_11  
Fr 1 Sep 01 17:31:30 2000



GND=Y20, Y21, Y22, A13, A14, A15, A16, A17, A18, A19, A20, A21, A14, A15  
GND=V17, V18, V20, V23, W14, W15, W16, W20, W21, Y14, Y15, Y16, Y17, Y18, Y19, A20  
GND=T15, T16, T17, T18, T19, T20, T21, U3, U14, U15, U16, U18, U19, U20, U14, U15, F1, B5  
GND=P15, P16, P17, P18, P19, P21, P22, R13, R14, R15, R16, R17, R18, R19, R20, R21, T14, R31  
GND=A16, A18, A19, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A63, A64, A65, A66, A67, A68, A69, A70, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100

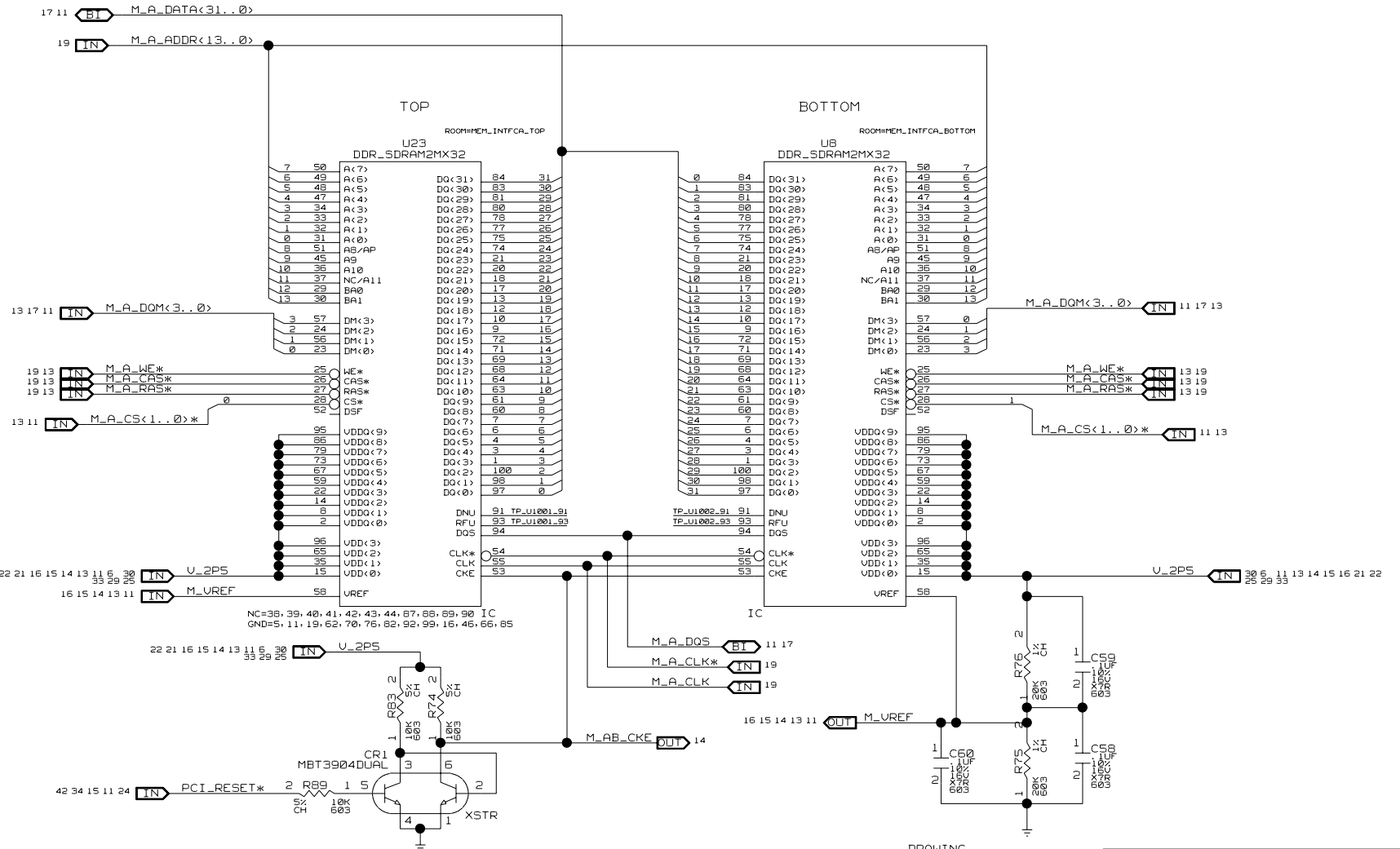


[PAGE\_TITLE=NV2A STRAPPING]

DRAWING  
 DUT\_SCH\_1.12  
 Fri Sep 01 07:31:25 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 12	REV 0.13
-----------------------	----------------------------	------------	-------------

### MEMORY INTERFACE PARTITION A

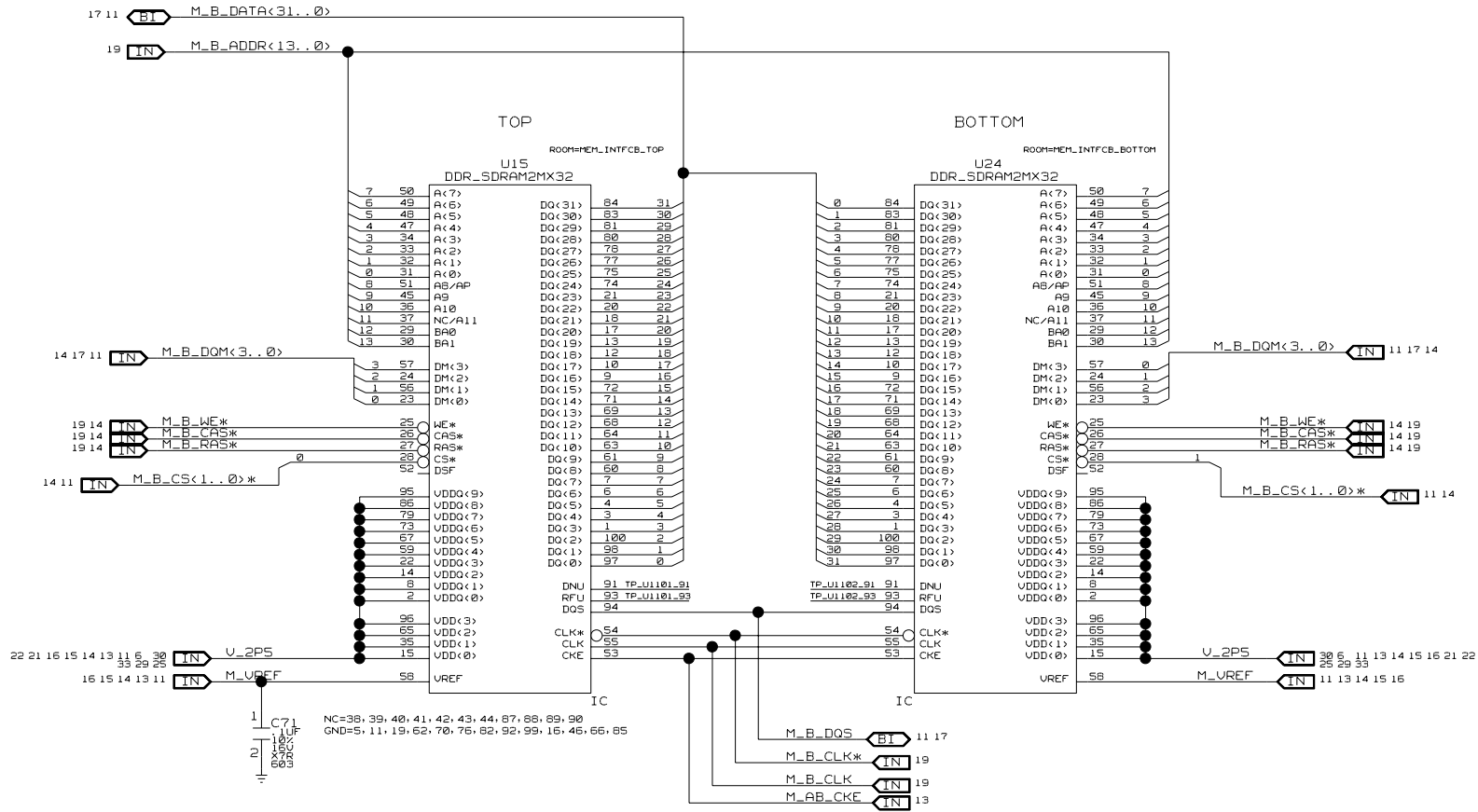


[PAGE\_TITLE=DDR SDRAM (PARTITION A)]

DRAWING  
DUT\_SCH\_1.13  
Fri Sep 01 07:31:20 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 13	REV 0.13
-----------------------	---------------------------	------------	-------------

### MEMORY INTERFACE PARTITION B

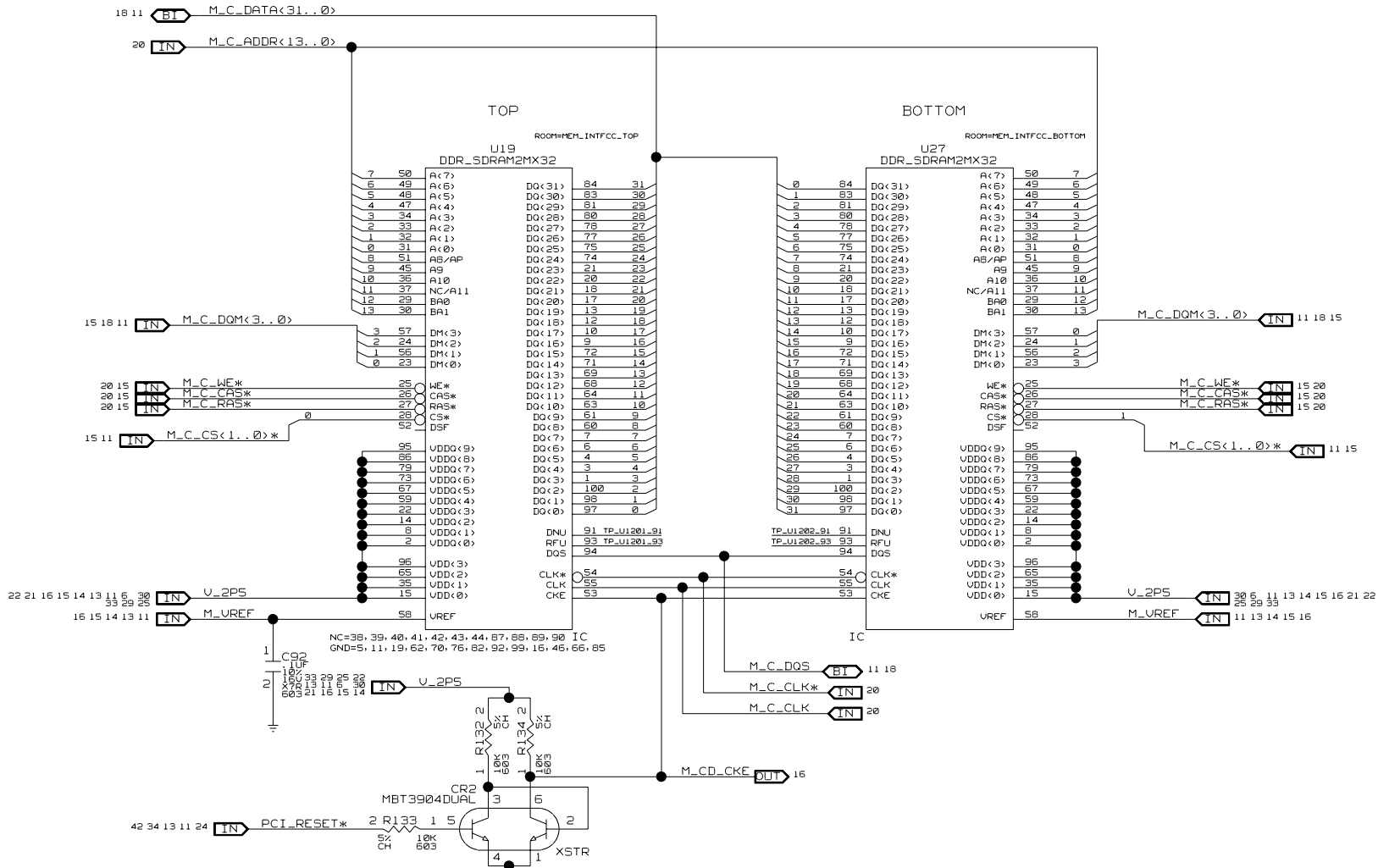


[PAGE\_TITLE=DDR SDRAM (PARTITION B)]

DRAWING  
 DUT\_SCH\_1.14  
 Fri Sep 01 07:31:15 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 14	REV 0.13
-----------------------	----------------------------	------------	-------------

### MEMORY INTERFACE PARTITION C

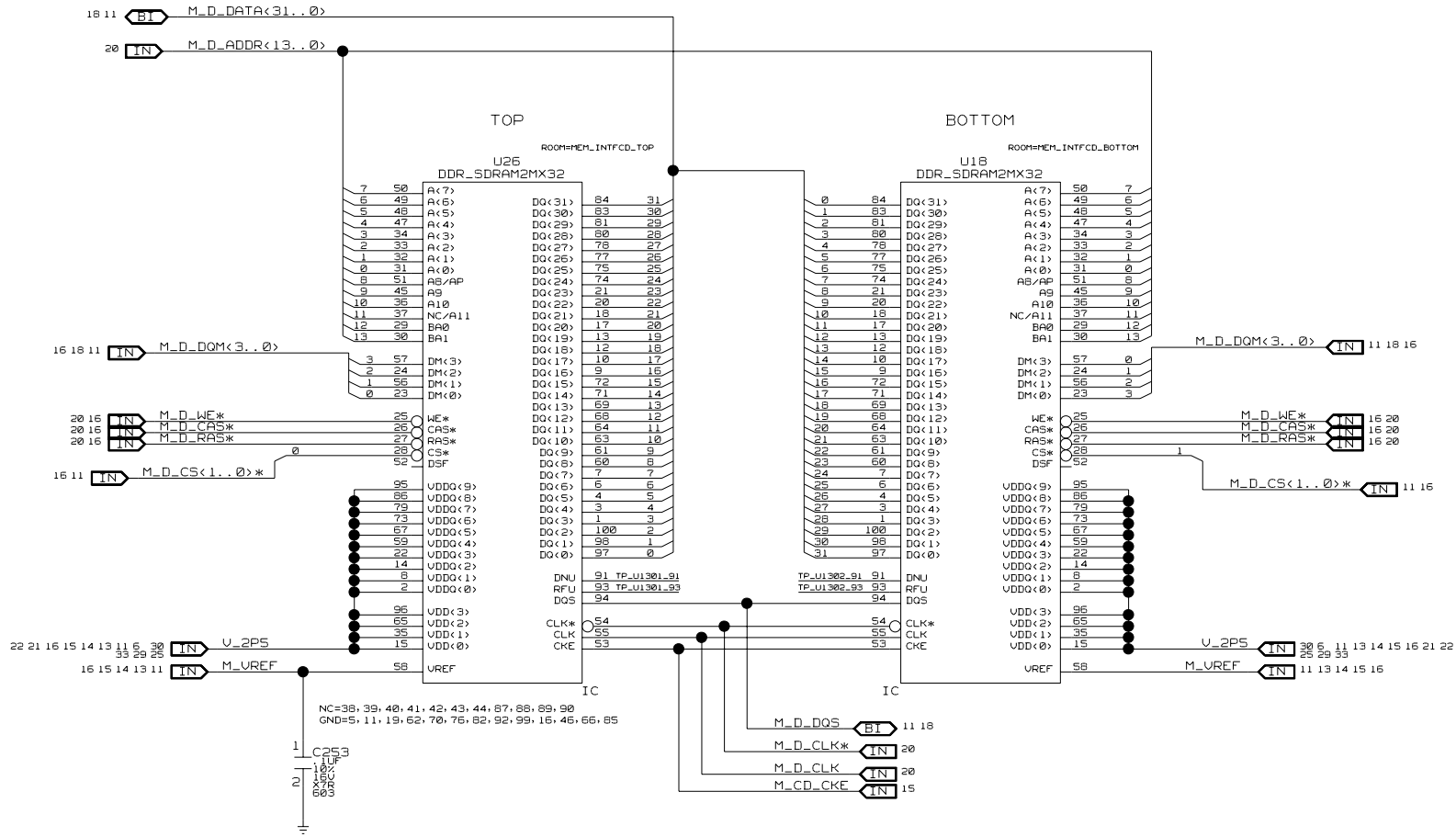


[PAGE\_TITLE=DDR SDRAM (PARTITION C)]

DRAWING  
DUT\_SCH\_1.15  
Fri Sep 01 07:31:11 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 15	REV 0.13
-----------------------	---------------------------	------------	-------------

### MEMORY INTERFACE PARTITION D

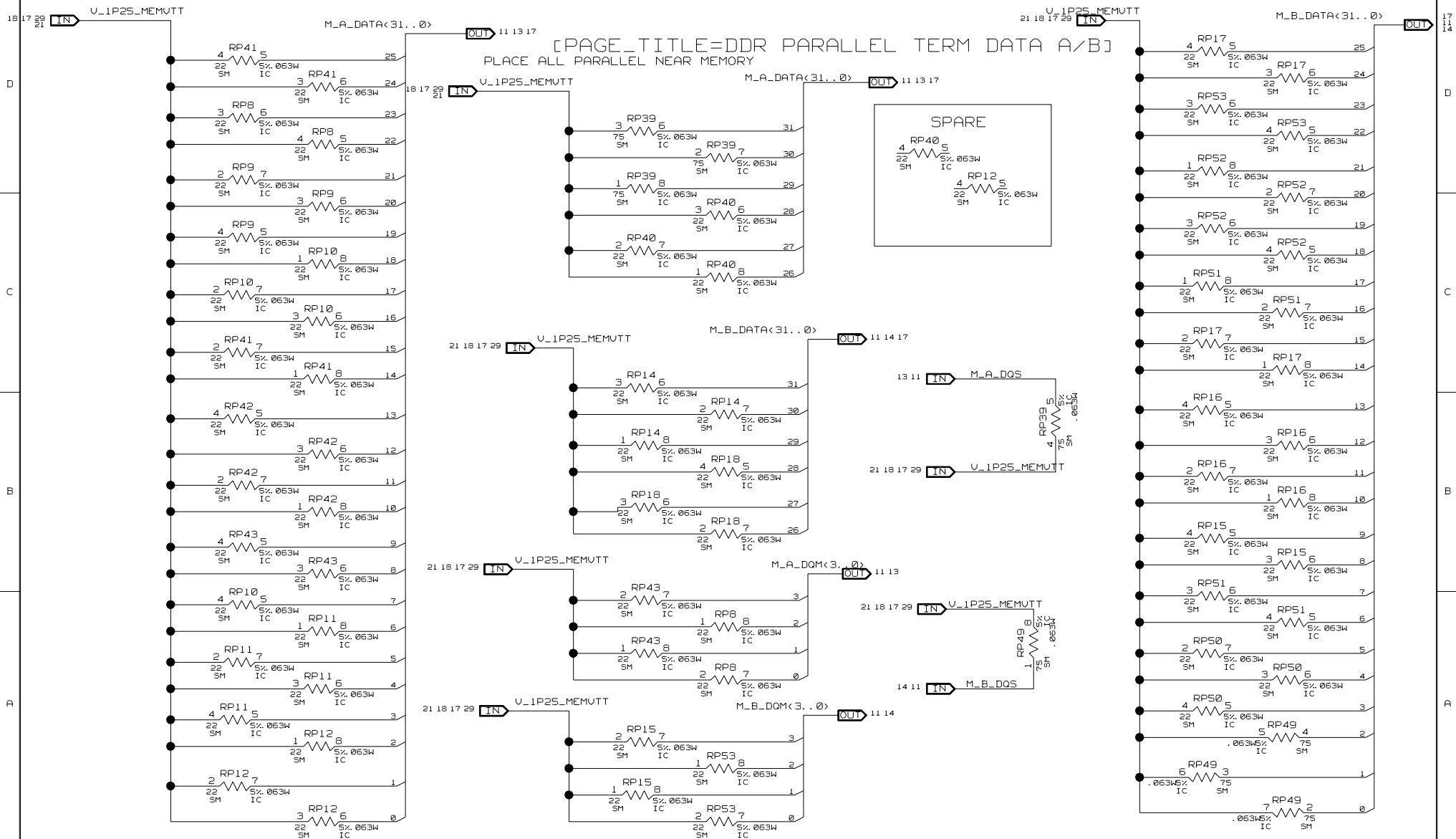


[PAGE\_TITLE=DDR SDRAM (PARTITION D)]

DRAWING  
DWT\_SCH\_1.16  
Fri Sep 01 07:31:06 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 16	REV 0.13
-----------------------	----------------------------	------------	-------------





[PAGE\_TITLE=DDR PARALLEL TERM DATA A/B]  
PLACE ALL PARALLEL NEAR MEMORY

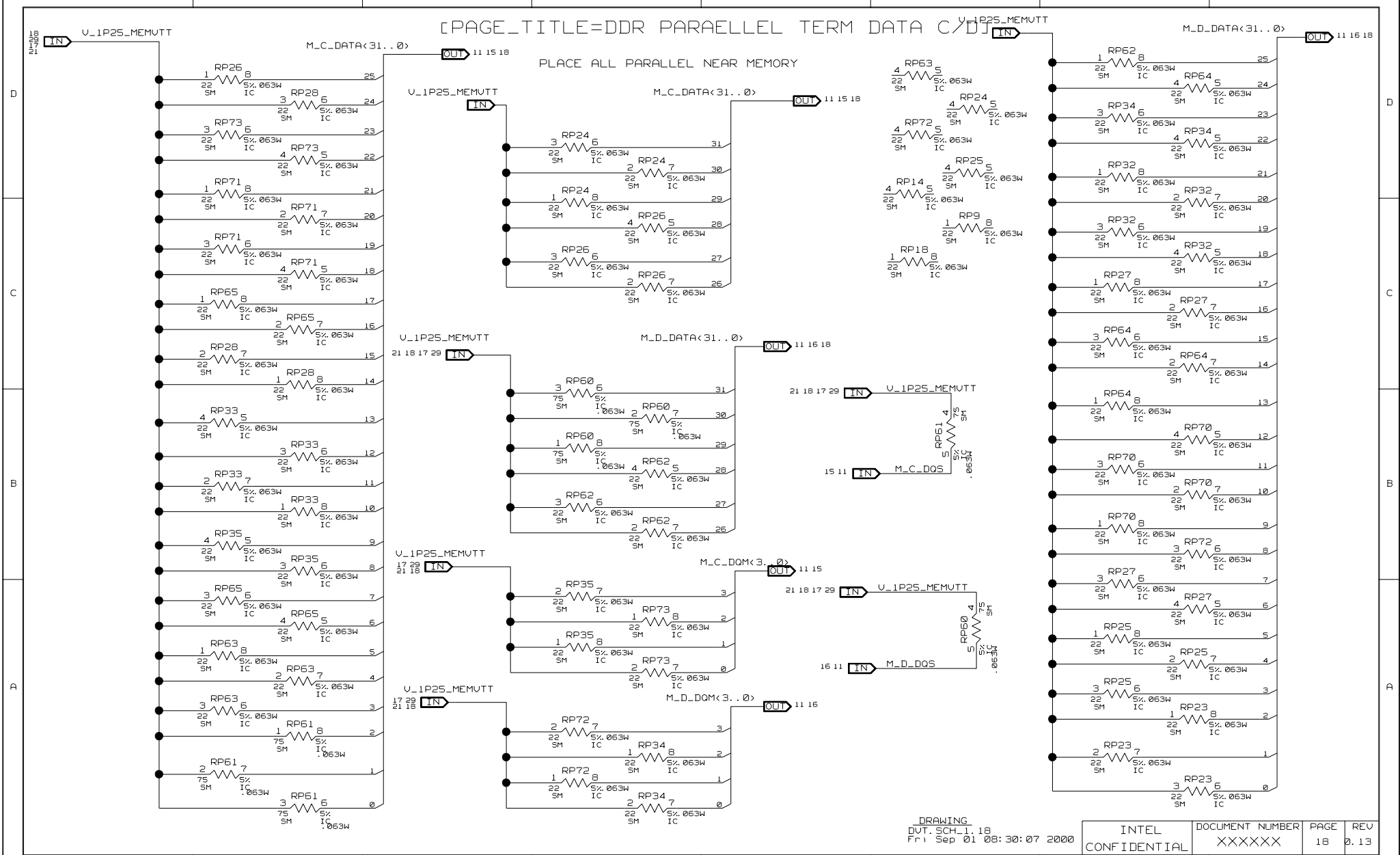
SPARE

DRAWING  
DUT\_SCH\_1.17  
Fri Sep 01 08:29:03 2000

INTEL	DOCUMENT NUMBER	PAGE	REV
CONFIDENTIAL	XXXXXX	17	0.13

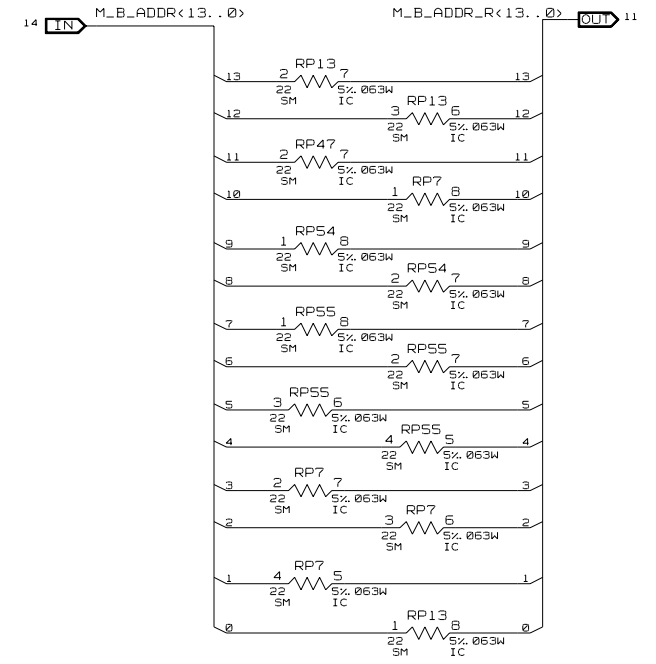
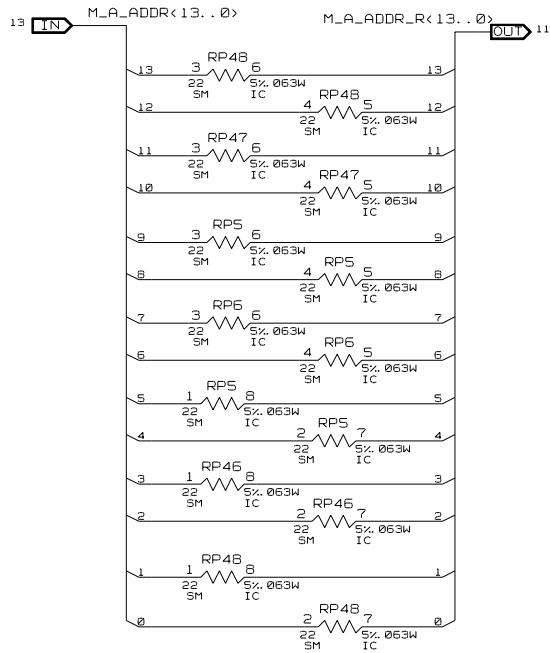
[PAGE\_TITLE=DDR PARALLEL TERM DATA C/D] U\_1P25\_MEMUTT

PLACE ALL PARALLEL NEAR MEMORY

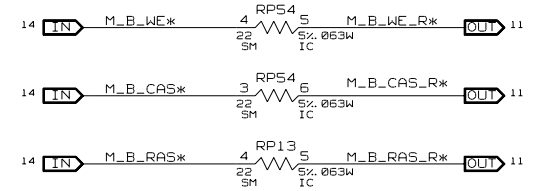
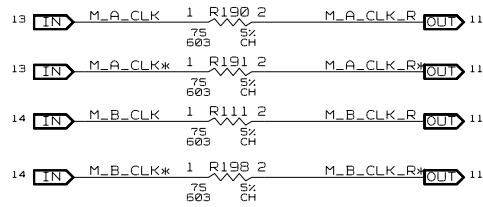
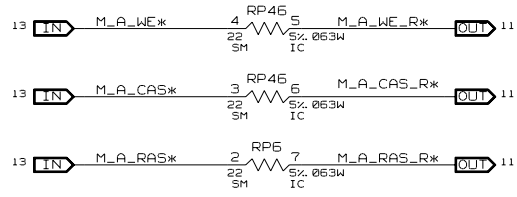


DRAWING  
DWT\_SCH.1.18  
Fri Sep 01 08:30:07 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 18	REV 0.13
-----------------------	---------------------------	------------	-------------



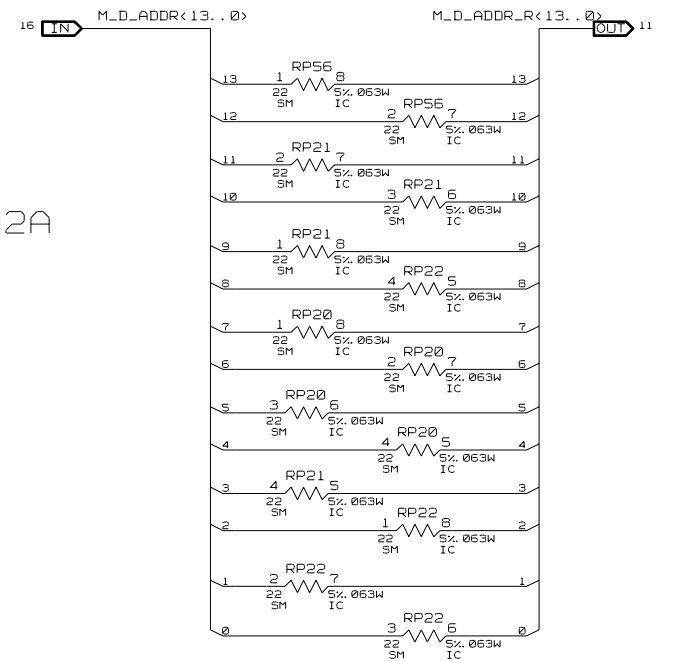
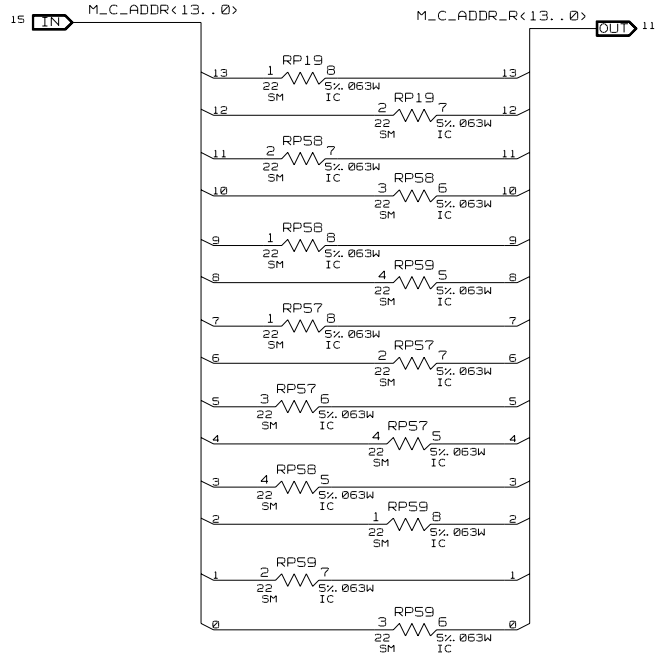
PLACE ALL SERIES NEAR NV2A



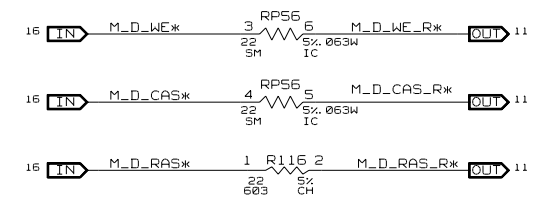
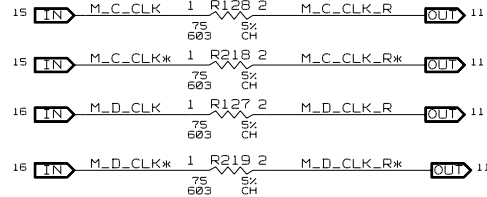
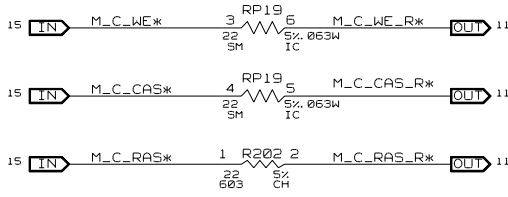
[PAGE\_TITLE=DDR SERIES TERM ADDR A/B]

DRAWING  
DVT\_SCH\_1.19  
Fri Sep 01 07:30:52 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 19	REV 0.13
-----------------------	---------------------------	------------	-------------



PLACE ALL SERIES NEAR NV2A



[PAGE\_TITLE=DDR SERIES TERM ADDR C/D]

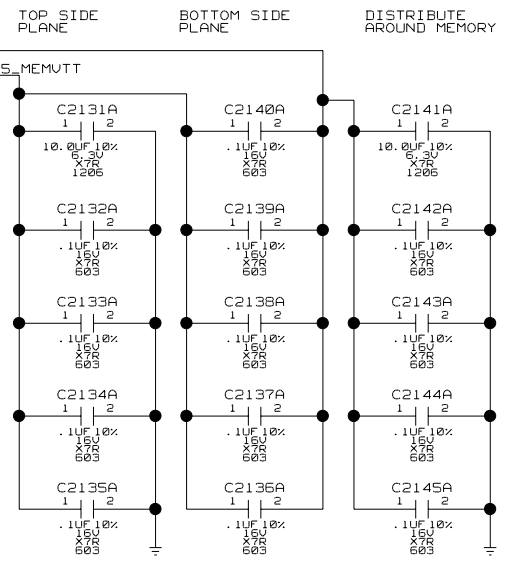
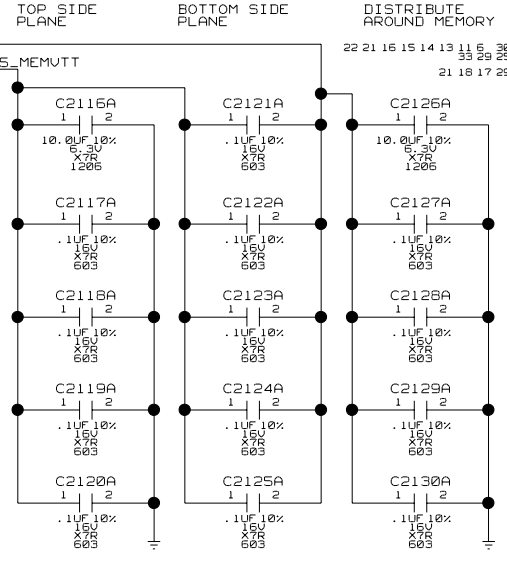
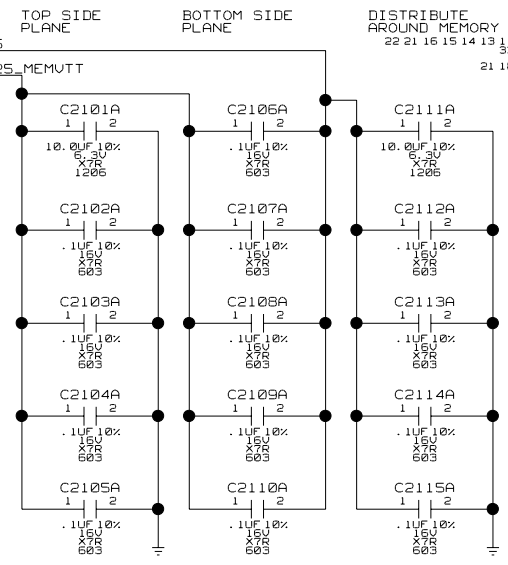
DRAWING  
DVT. SCH.1.20  
Fri Sep 01 07:30:47 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 20	REV 0.13
-----------------------	---------------------------	------------	-------------

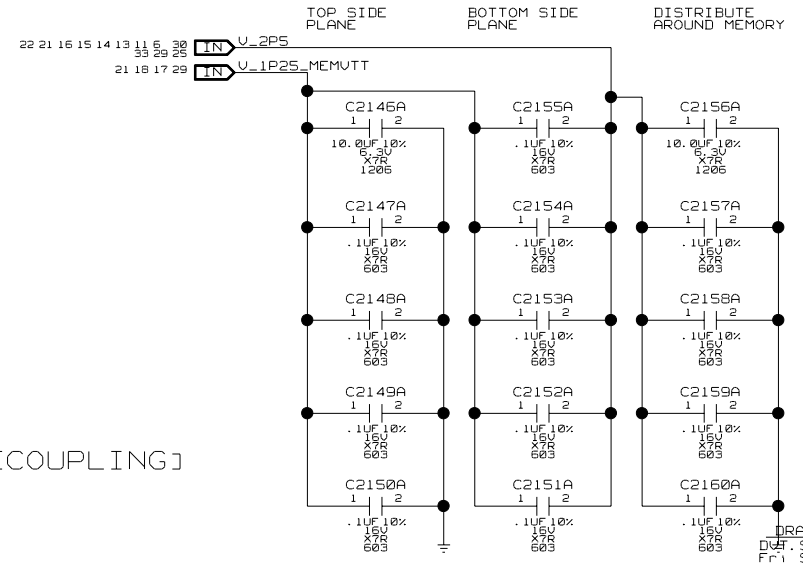
PARTITION A

PARTITION B

PARTITION C



PARTITION D

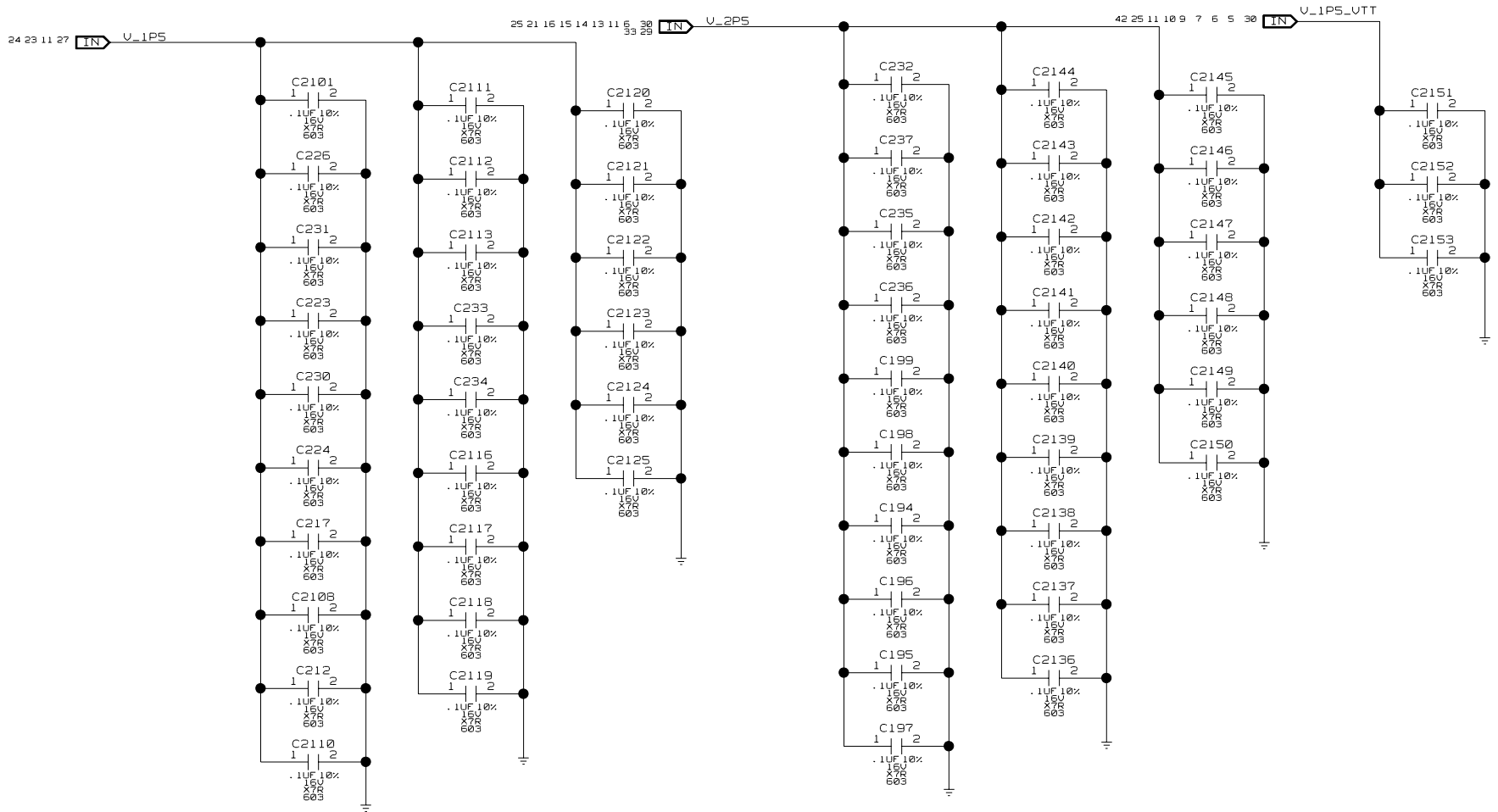


[PAGE\_TITLE=VTERM DECOUPLING]

DRAWING  
DWG. SCH. 1.21  
Fri Sep 1 08:19:02 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 21	REV
-----------------------	---------------------------	------------	-----

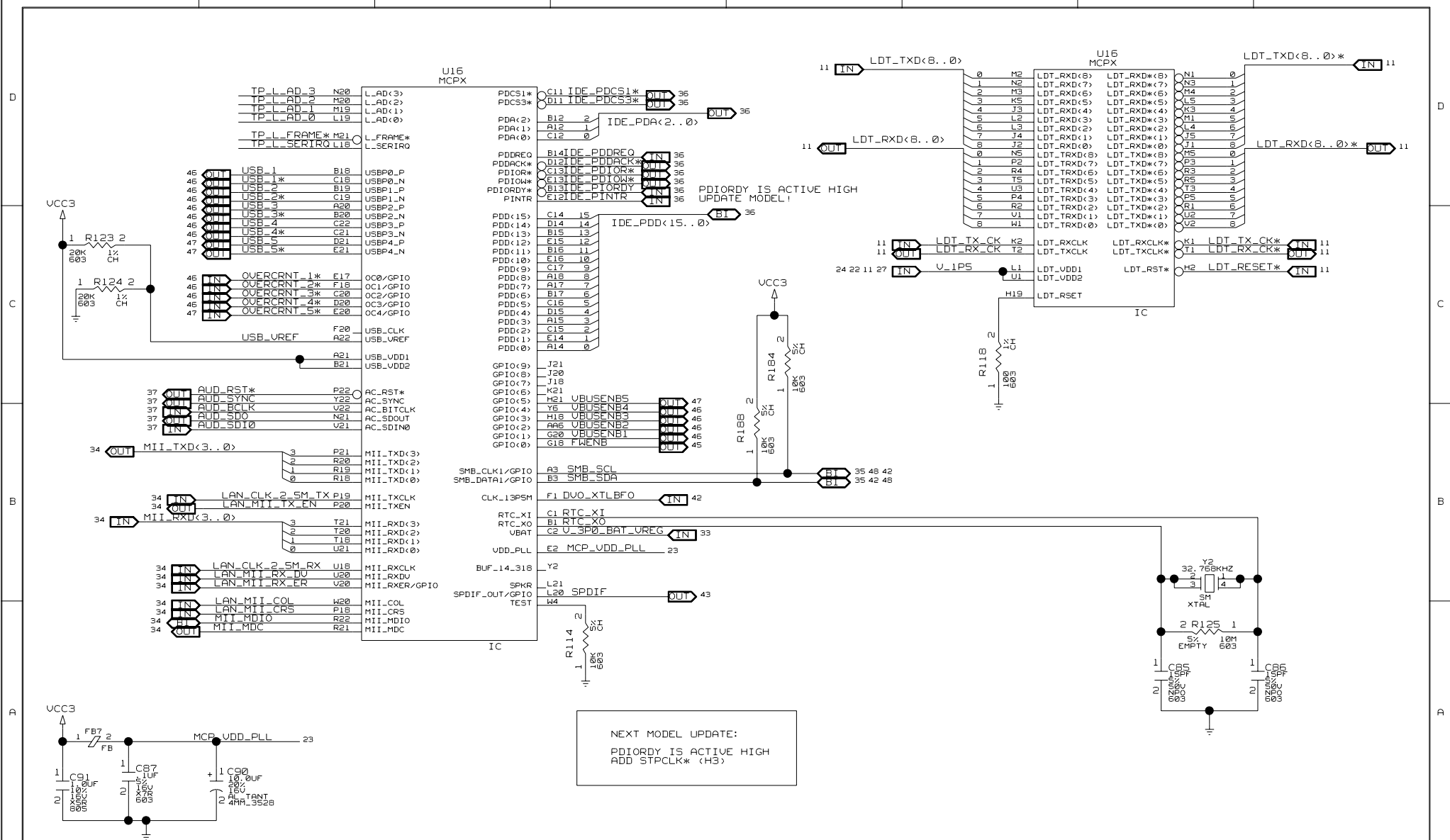
# NV2A DECOUPLING



[PAGE\_TITLE=NV2A DECOUPLING]

DRAWING  
 DWT. SCH.1.22  
 Fri Sep 01 07:30:38 2000

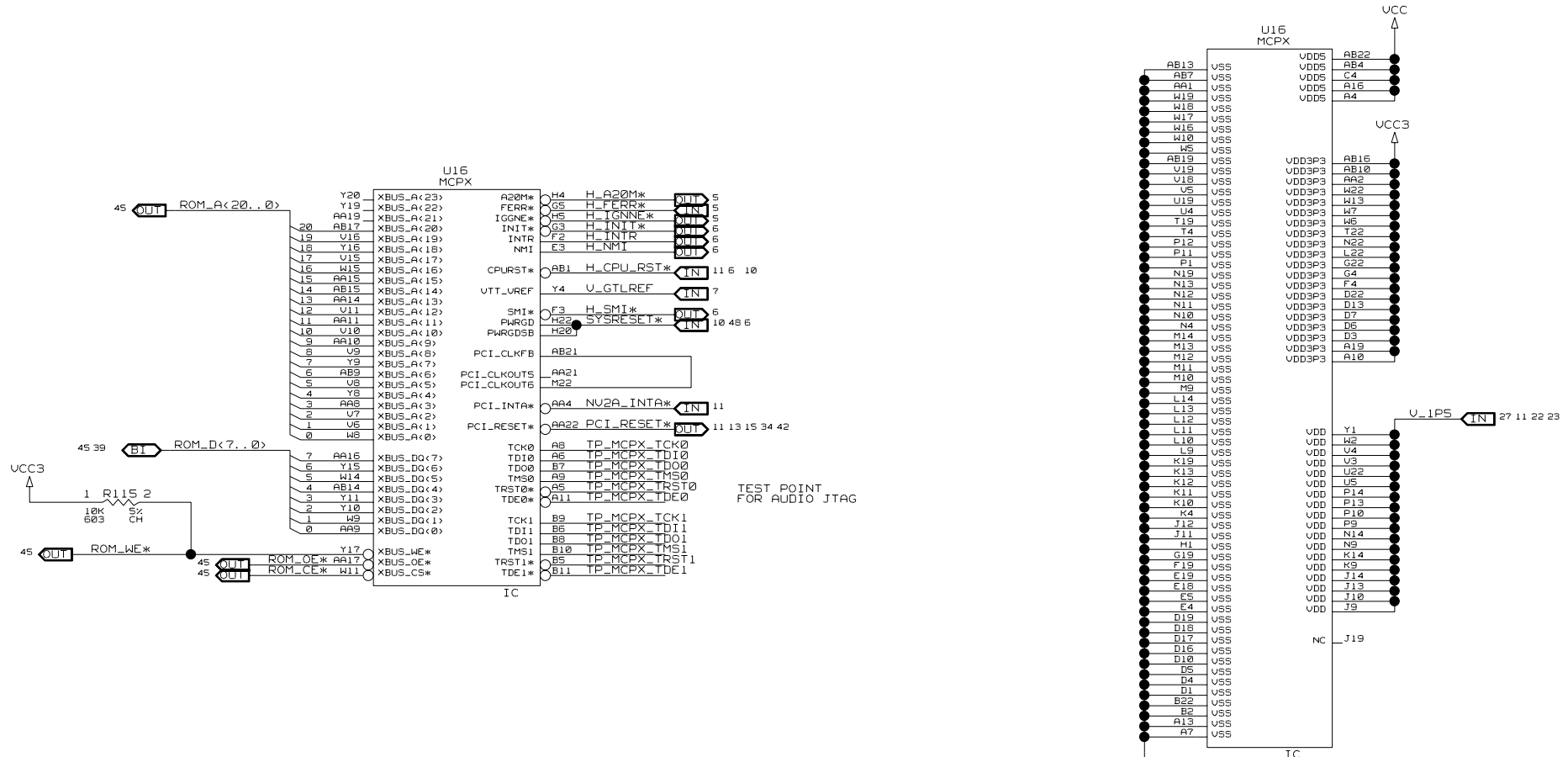
INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 22	REV 0.13
-----------------------	----------------------------	------------	-------------



[PAGE\_TITLE=MCPX 1 OF 2]

DRAWING  
 DUT\_SCH\_1\_23  
 Fri Sep 01 07:30:33 2020

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 23	REV 0.13
--------------------	---------------------------	------------	-------------



[PAGE\_TITLE=MCPX 2 OF 2]

DRAWING  
DWT\_SCH\_1\_24  
Fri Sep 1 08:19:02 2000

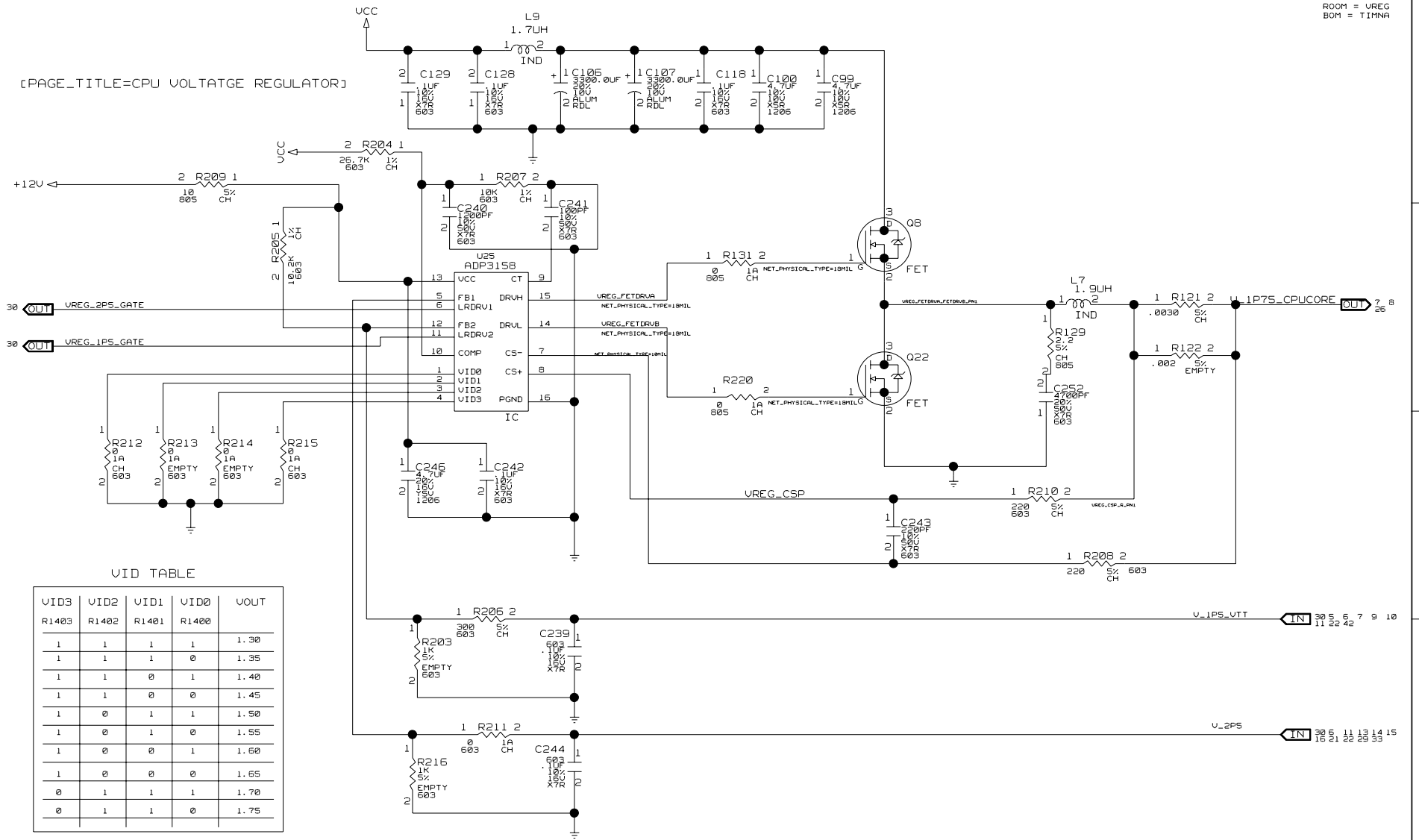
INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 24	REV
-----------------------	---------------------------	------------	-----



LAST USED:  
 R814V  
 L802V  
 C813V  
 U801V  
 CR801V

ROOM = VREG  
 BOM = TIMNA

[PAGE\_TITLE=CPU VOLTATGE REGULATOR]



VID TABLE

VID3	VID2	VID1	VID0	VOUT
R1403	R1402	R1401	R1400	
1	1	1	1	1.30
1	1	1	0	1.35
1	1	0	1	1.40
1	1	0	0	1.45
1	0	1	1	1.50
1	0	1	0	1.55
1	0	0	1	1.60
1	0	0	0	1.65
0	1	1	1	1.70
0	1	1	0	1.75

0= RESISTOR IS STUFFED.  
 1= RESISTOR IS UNSTUFFED.

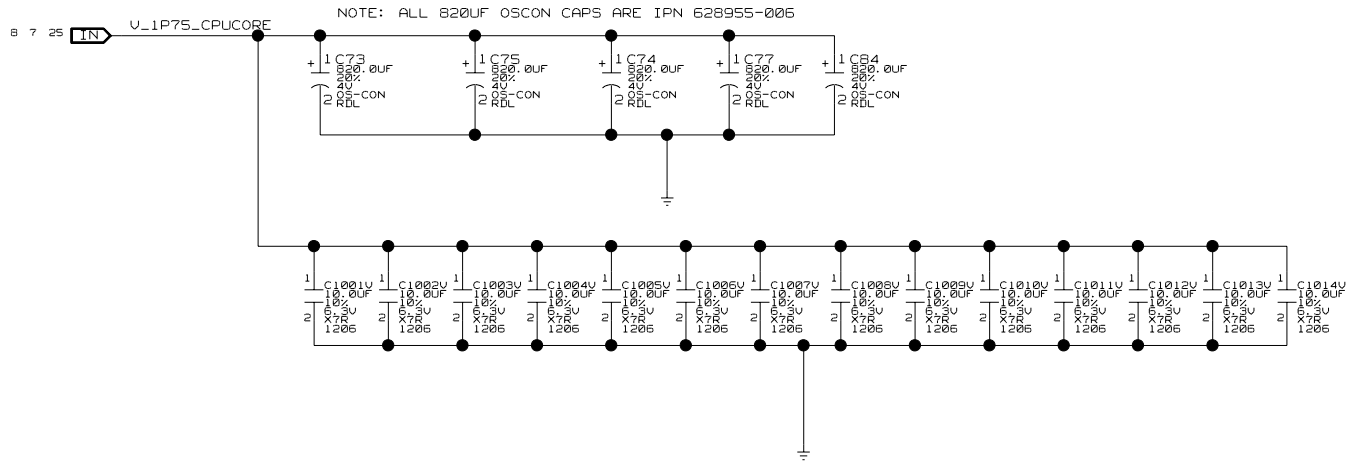
VRM8.4

DRAWING  
 DWT\_SCH\_1.25  
 Fri Sep 01 07:30:24 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 25	REV 0.13
-----------------------	---------------------------	------------	-------------

LAST USED  
C1020V

ROOM = UREG  
BOM = TIMNA



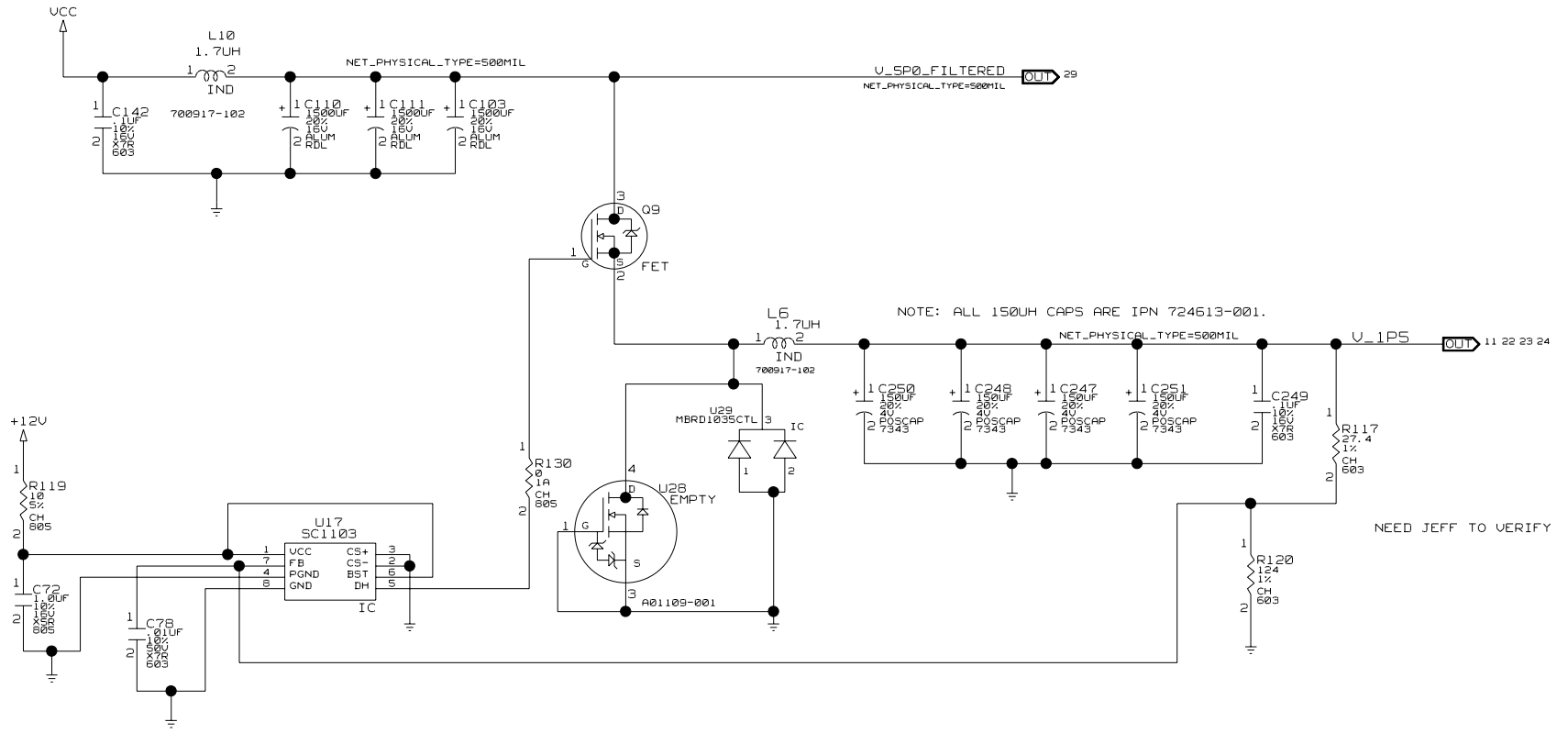
[PAGE\_TITLE=CPU VREG OUTPUT FILTER]

# OUTPUT FILTER

DRAWING  
DVT\_SCH\_1\_25  
Fri Sep 01 07:30:20 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 25	REV 0.13
-----------------------	---------------------------	------------	-------------

(MODULE=VREG) (SOLUTION=REG\_CPU/CORE\_REG) (MOD\_PAGE=page10) (MOD\_REV=0.04C) (PAGE\_TITLE=NO\_TITLE) (LAST\_MAKEGOLD: 3/15/100 S:02:46pm)



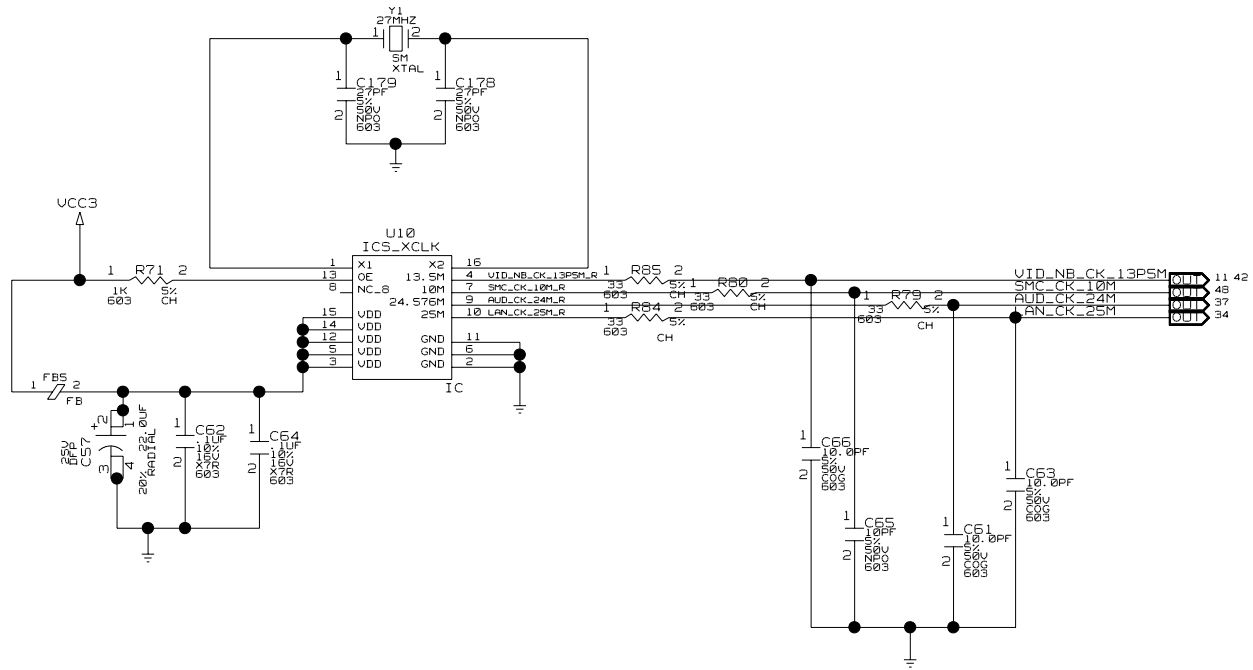
NEED JEFF TO VERIFY

[PAGE\_TITLE=1.5V SWITCHING REGULATOR]

1.5V SWITCHING REGULATOR

DRAWING  
 DWT\_SCH\_1.27  
 Fri Sep 01 07:30:15 2000

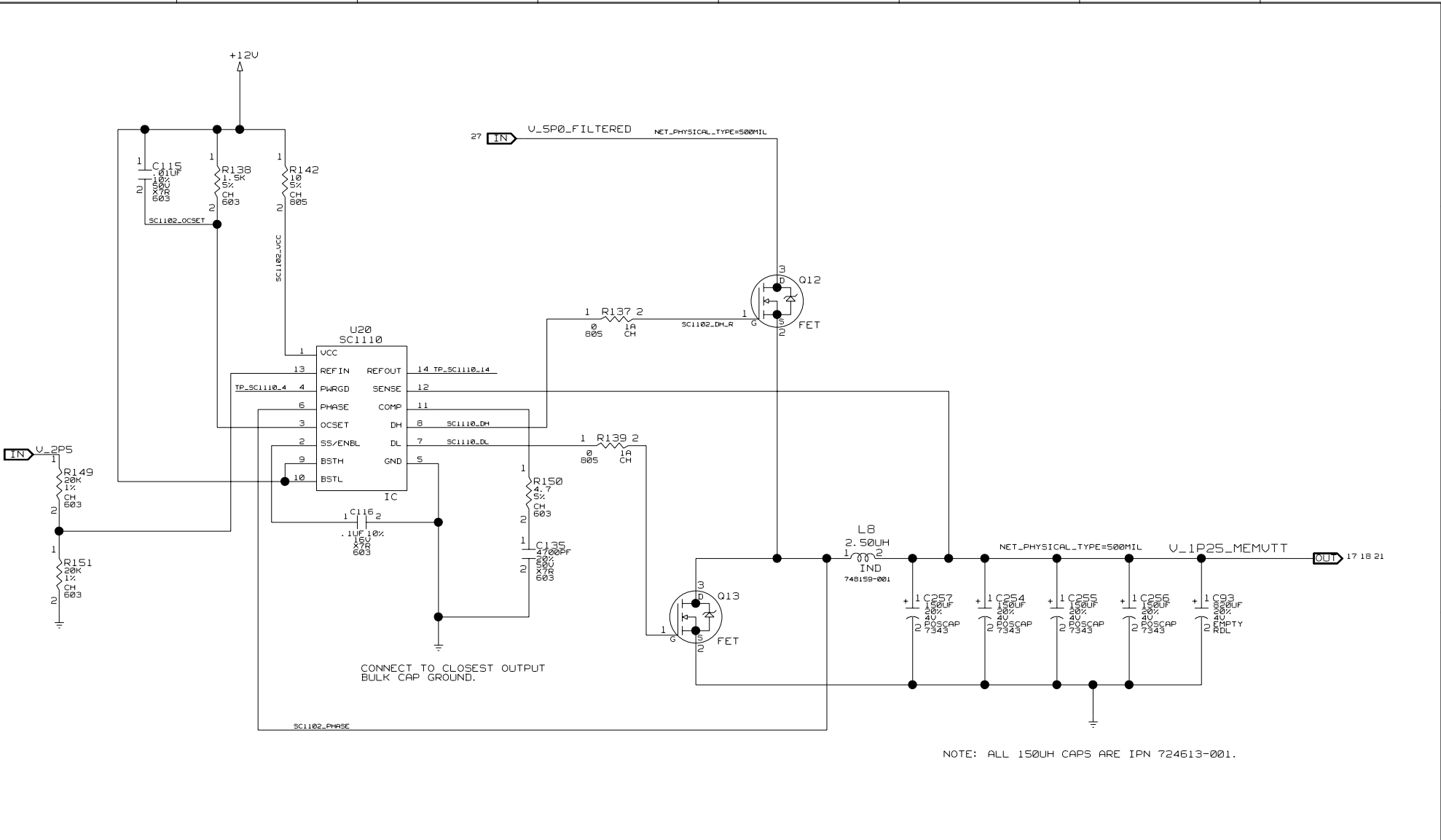
INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 27	REV 0.13
-----------------------	----------------------------	------------	-------------



[PAGE\_TITLE=CLOCK GENERATOR]

DRAWING  
 DUT\_SCH\_1\_28  
 Fri Sep 01 07:30:10 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXXX	PAGE 28	REV 0.13
-----------------------	----------------------------	------------	-------------



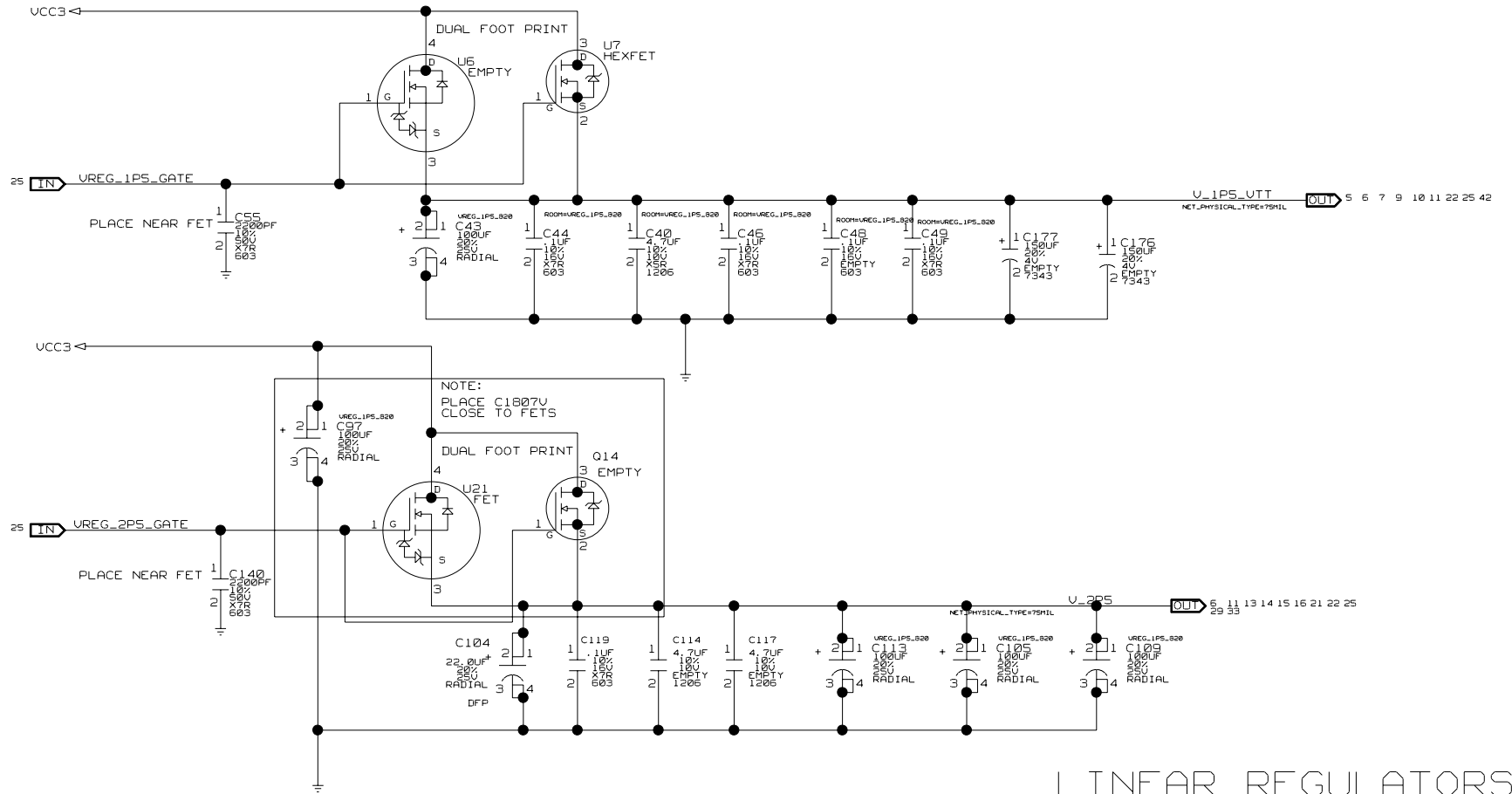
[PAGE\_TITLE=1.25V SWITCHING REGULATOR]

1.25V SWITCHING REGULATOR

DRAWING  
DVT\_SCH\_1\_29  
Fri Sep 01 07:30:06 2000

INTEL	DOCUMENT NUMBER	PAGE	REV
CONFIDENTIAL	XXXXXXX	29	0.13

LAST USED  
Q1804U  
C1810U  
H51810U



# LINEAR REGULATORS (1.5V/2.5V)

[PAGE\_TITLE=LINER\_REGULATORS\_1.5\_2.5]

DRAWING  
DWT\_SCH\_1\_30  
Fri Sep 01 07:30:01 2000

INTEL CONFIDENTIAL	DOCUMENT NUMBER XXXXXX	PAGE 30	REV 0.13
-----------------------	---------------------------	------------	-------------