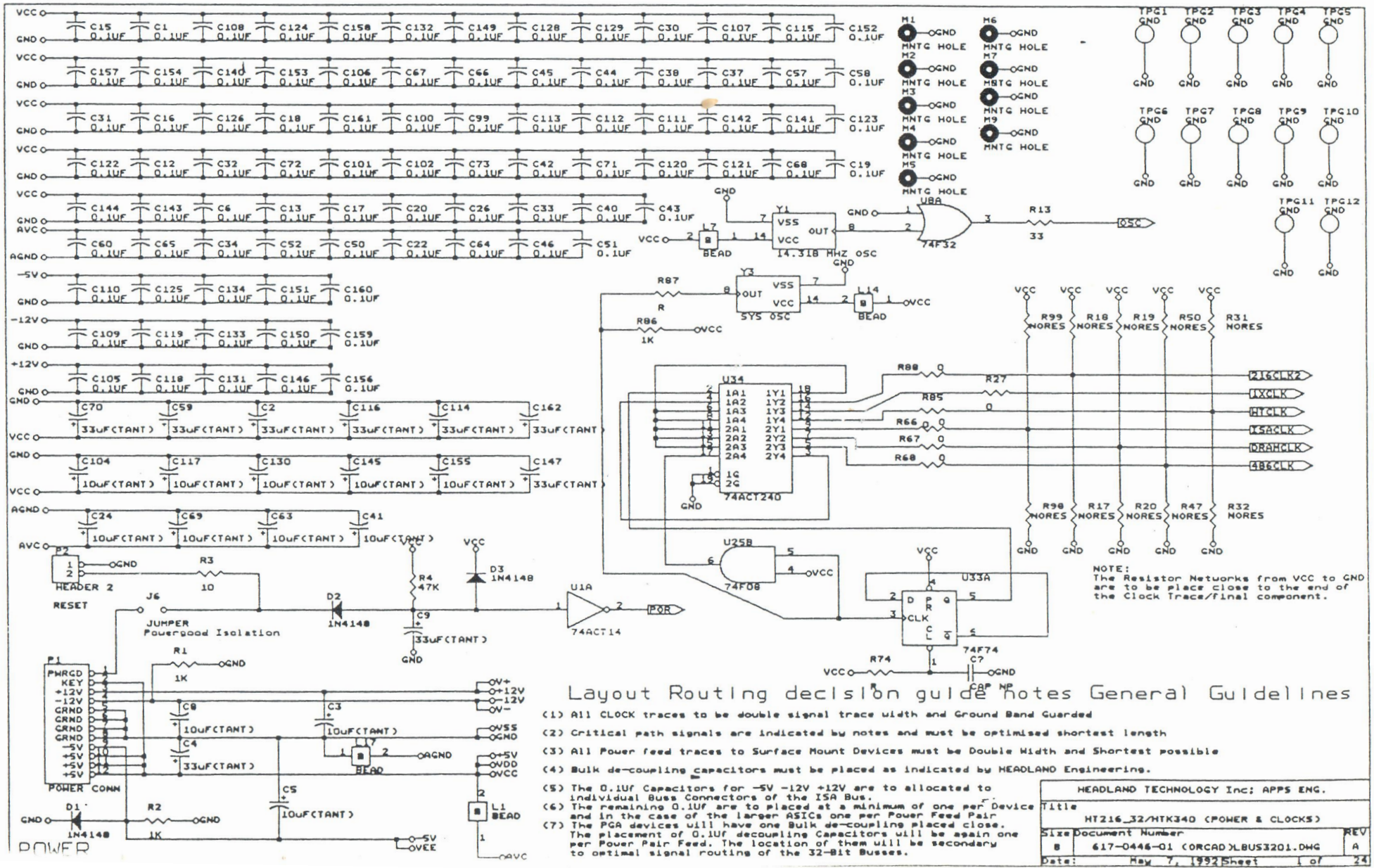
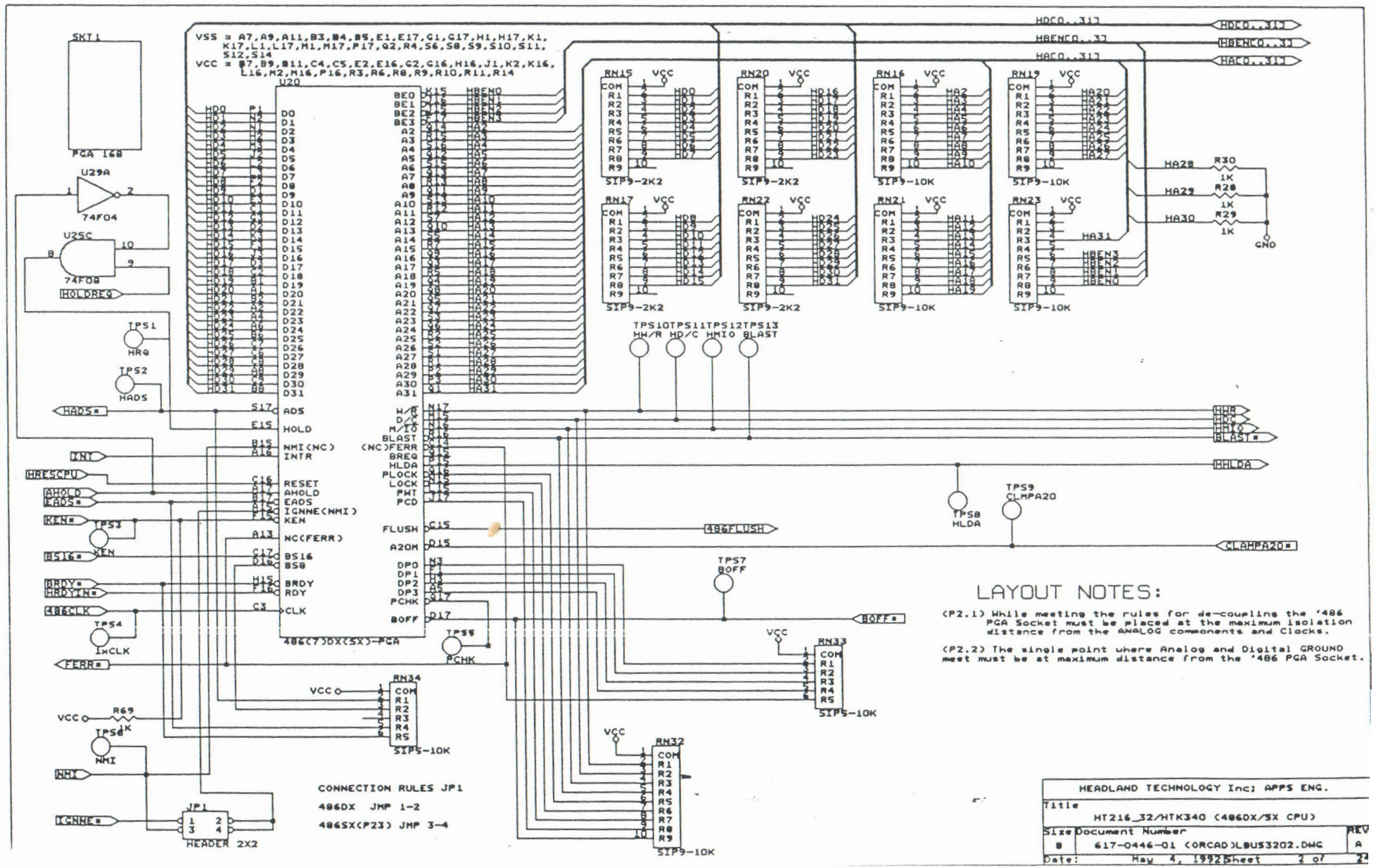
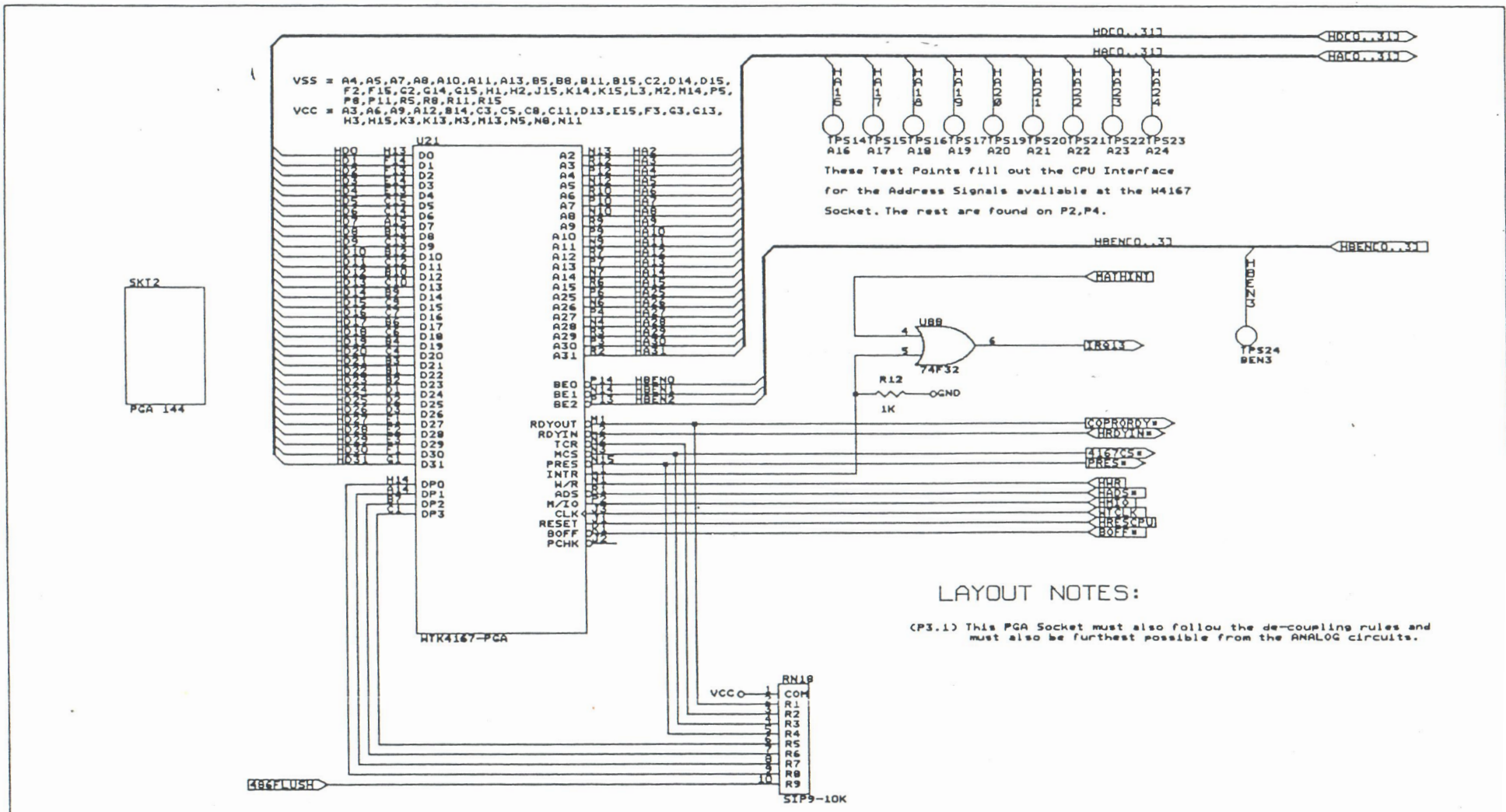
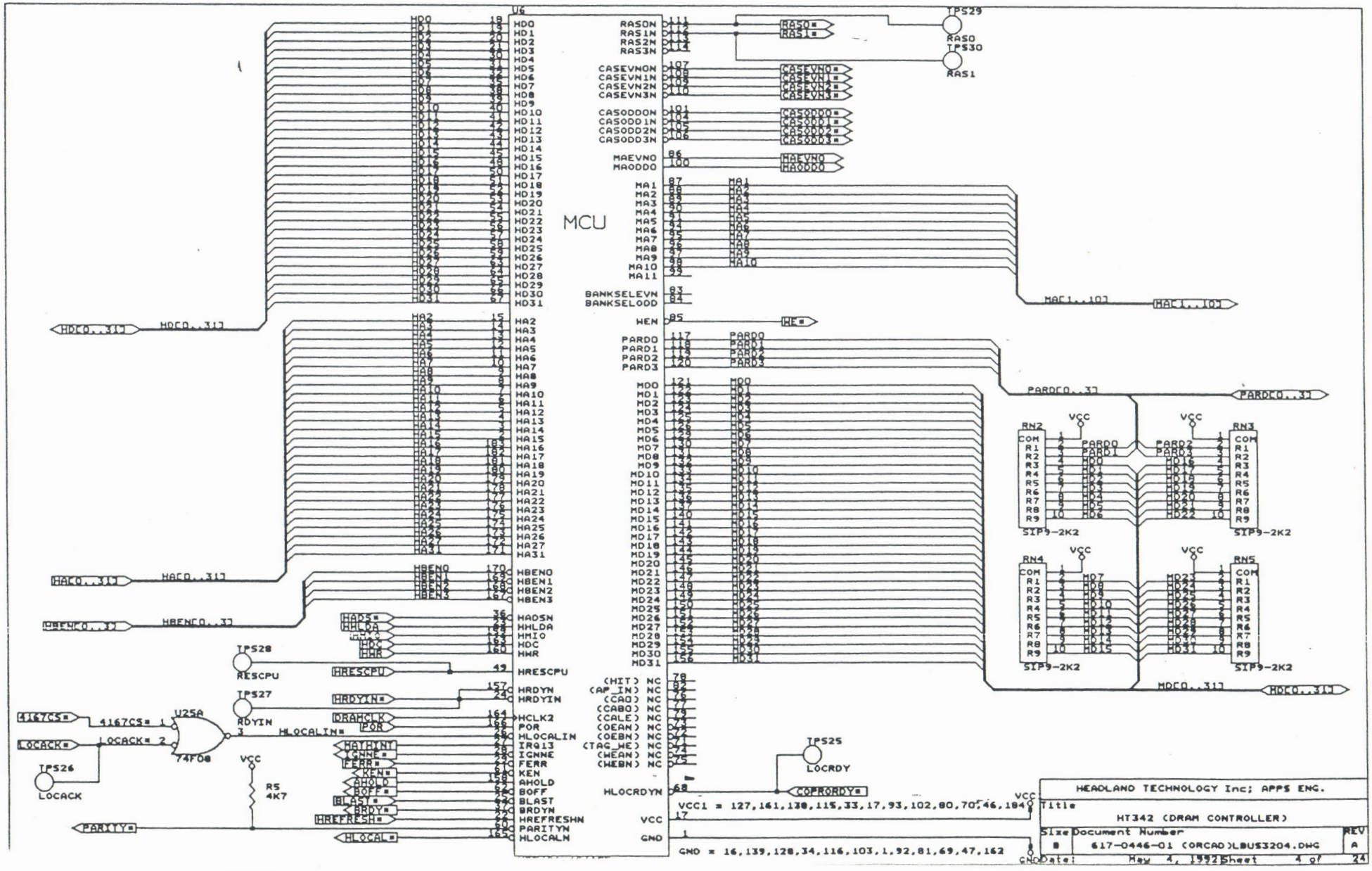
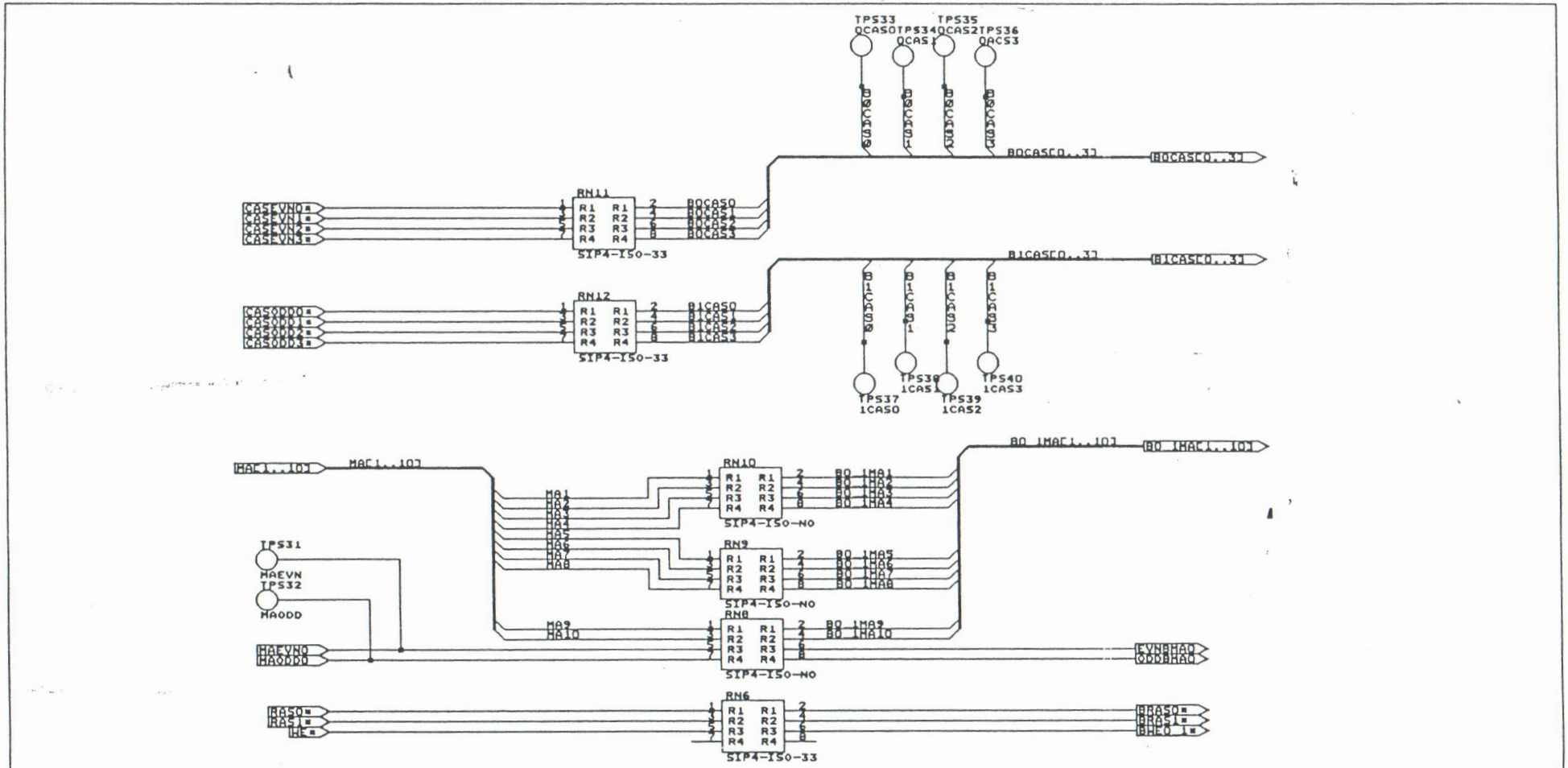
APPLICATION EXAMPLE
THIS DATA MAY NOT
BE ERROR FREE



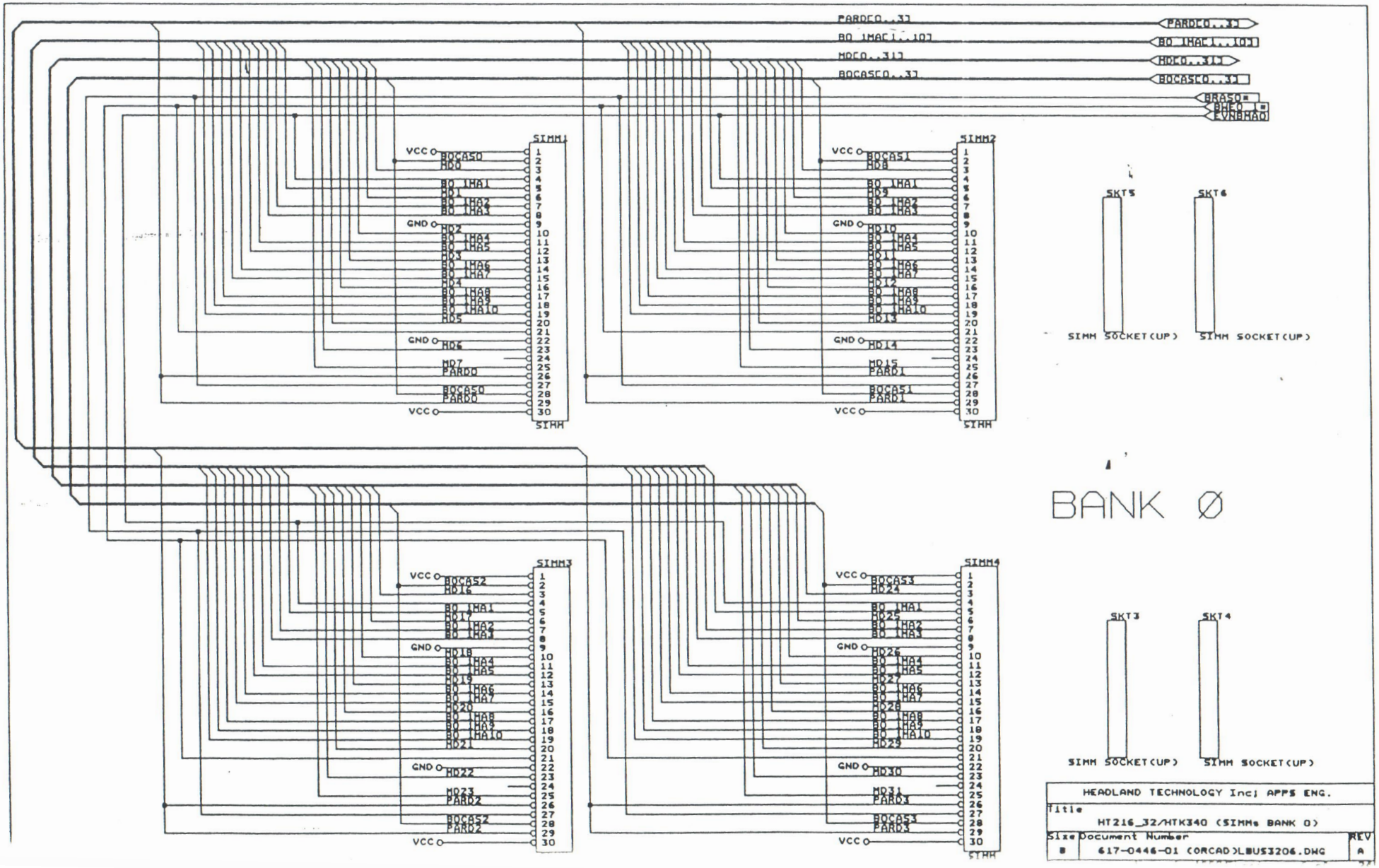

VSS = A7,A9,A11,B3,B4,B5,E1,E17,G1,G17,H1,H17,K1, K17,L1,L17,M1,M17,P17,Q2,R4,S6,S8,S9,S10,S11, S12,S14
VCC = B7,B9,B11,C4,C5,E2,E16,G2,G16,H16,J1,K2,K16, L16,M2,M16,P16,R3,R6,R8,R9,R10,R11,R14
SKT1
PGA 168
U20
486(7)DX(SX)-PGA
U29A
74F04
U25C
74F08
HOLDREQ
TPS1
HRQ
TPS2
HADS
HADS#
HOLD
NMI(NC)
INTR
NMI
HRESCPU
RESET
AHOLD
EADS#
AHOLD
EADS
IGNNE(NMI)
KEN#
TPS3
KEN
KEN
BS16#
BS16
BS8
BRDY#
BRDYIN#
BRDY
RDY
486CLK
CLK
TPS4
1xCLK
FERR#
NC(FERR)
TPS5
PCHK
FLUSH
A20M
PCD
PLOCK
LOCK
PHT
BREQ
HLDA
BOFF
TPS7
BOFF
BOFF#
TPS8
HLDA
TPS9
CLAMPA20
CLAMPA20#
486FLUSH
TPS10
HW/R
TPS11
HD/C
TPS12
HM/IO
TPS13
BLAST
HW/R
HD/C
HM/IO
BLAST#
HHLDA
HBE0
HBE1
HBE2
HBE3
HBENCO..3
HDCO..31
HACO..31
HA2
HA3
HA4
HA5
HA6
HA7
HA8
HA9
HA10
HA11
HA12
HA13
HA14
HA15
HA16
HA17
HA18
HA19
HA20
HA21
HA22
HA23
HA24
HA25
HA26
HA27
HA28
HA29
HA30
HA31
HD0
HD1
HD2
HD3
HD4
HD5
HD6
HD7
HD8
HD9
HD10
HD11
HD12
HD13
HD14
HD15
HD16
HD17
HD18
HD19
HD20
HD21
HD22
HD23
HD24
HD25
HD26
HD27
HD28
HD29
HD30
HD31
RN15
RN16
RN17
RN19
RN20
RN21
RN22
RN23
SIP9-2K2
SIP9-10K
R30
R29
R28
1K
GND
RN32
RN33
RN34
SIP5-10K
R69
1K
NMI
IGNNE#
JP1
HEADER 2X2
CONNECTION RULES JP1
486DX JMP 1-2
486SX(P23) JMP 3-4
LAYOUT NOTES:
(P2.1) While meeting the rules for de-coupling the '486 PGA Socket must be placed at the maximum isolation distance from the ANALOG components and Clocks.
(P2.2) The single point where Analog and Digital GROUND meet must be at maximum distance from the '486 PGA Socket.
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (486DX/SX CPU)
Size B
Document Number 617-0446-01 (ORCAD)LBUS3202.DWG
REV A
Date: May 4, 1992 Sheet 2 of 2

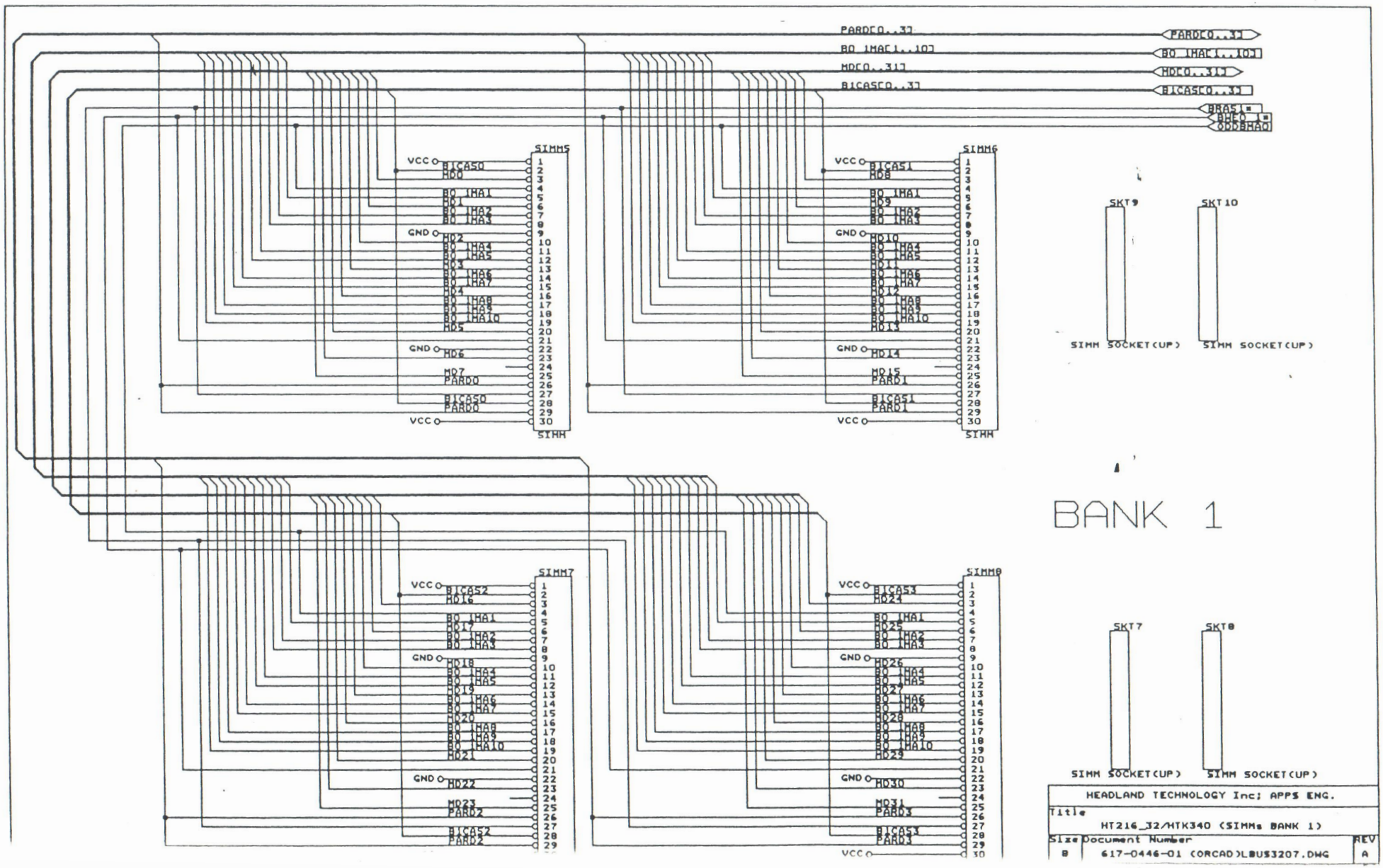

VSS = A4,A5,A7,A8,A10,A11,A13,B5,B8,B11,B15,C2,D14,D15,
F2,F15,G2,G14,G15,H1,H2,J15,K14,K15,L3,M2,M14,P5,
P8,P11,R5,R8,R11,R15
VCC = A3,A6,A9,A12,B14,C3,C5,C8,C11,D13,E15,F3,G3,G13,
H3,H15,K3,K13,M3,M13,N5,N8,N11
HDC0..31
HAC0..31
HA16
HA17
HA18
HA19
HA20
HA21
HA22
HA23
HA24
TPS14 A16
TPS15 A17
TPS16 A18
TPS17 A19
TPS19 A20
TPS20 A21
TPS21 A22
TPS22 A23
TPS23 A24
These Test Points fill out the CPU Interface
for the Address Signals available at the W4167
Socket. The rest are found on P2,P4.
HBENC0..3
HBENC0..3
HAYHINT
U8B
74F32
HRQ13
TPS24
BEN3
R12
1K
GND
SKT2
PGA 144
U21
HTK4167-PGA
COPRORDY
HRDYIN
4167CS
PRES
HWR
HRD
HM/IO
HTCLK
HRESCPU
BOFF
RN18
SIP9-10K
VCC
486FLUSH
LAYOUT NOTES:
(P3.1) This PGA Socket must also follow the de-coupling rules and
must also be furthest possible from the ANALOG circuits.
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (OPTIONAL CO-PROC)
Size
B
Document Number
617-0446-01 (ORCAD)LBUS3203.DWG
Date:
May 4, 1992
Sheet
3 of

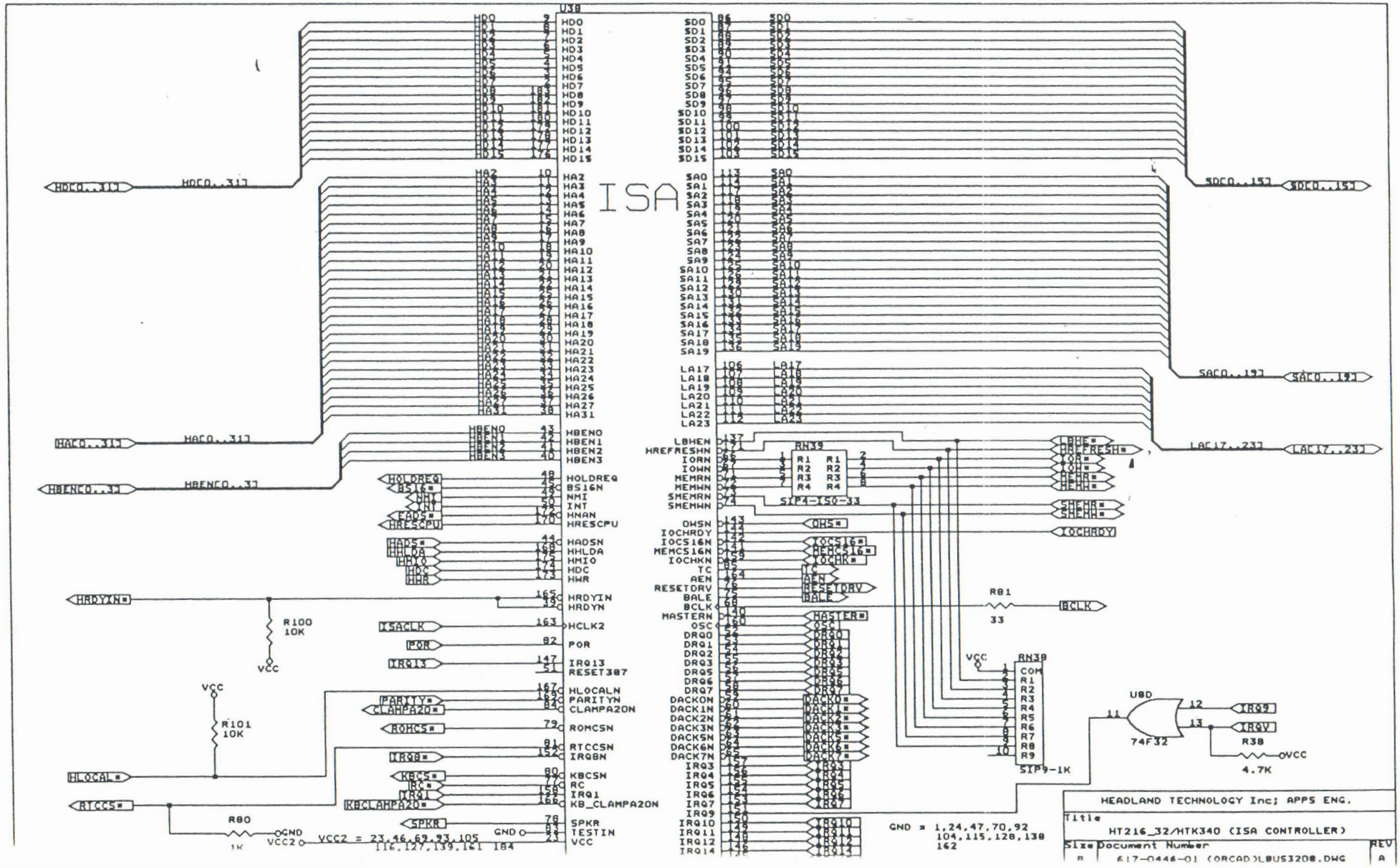

MCU
HEADLAND TECHNOLOGY Inc; APPS ENG.
HT342 (DRAM CONTROLLER)
617-0446-01 (ORCAD)LBUS3204.DWG
Date: May 4, 1992 Sheet 4 of 24
VCC1 = 127,161,138,115,33,17,93,102,80,70,46,184
GND = 16,139,128,34,116,103,1,92,81,69,47,162
SIP9-2K2
74F08
RS 4K7

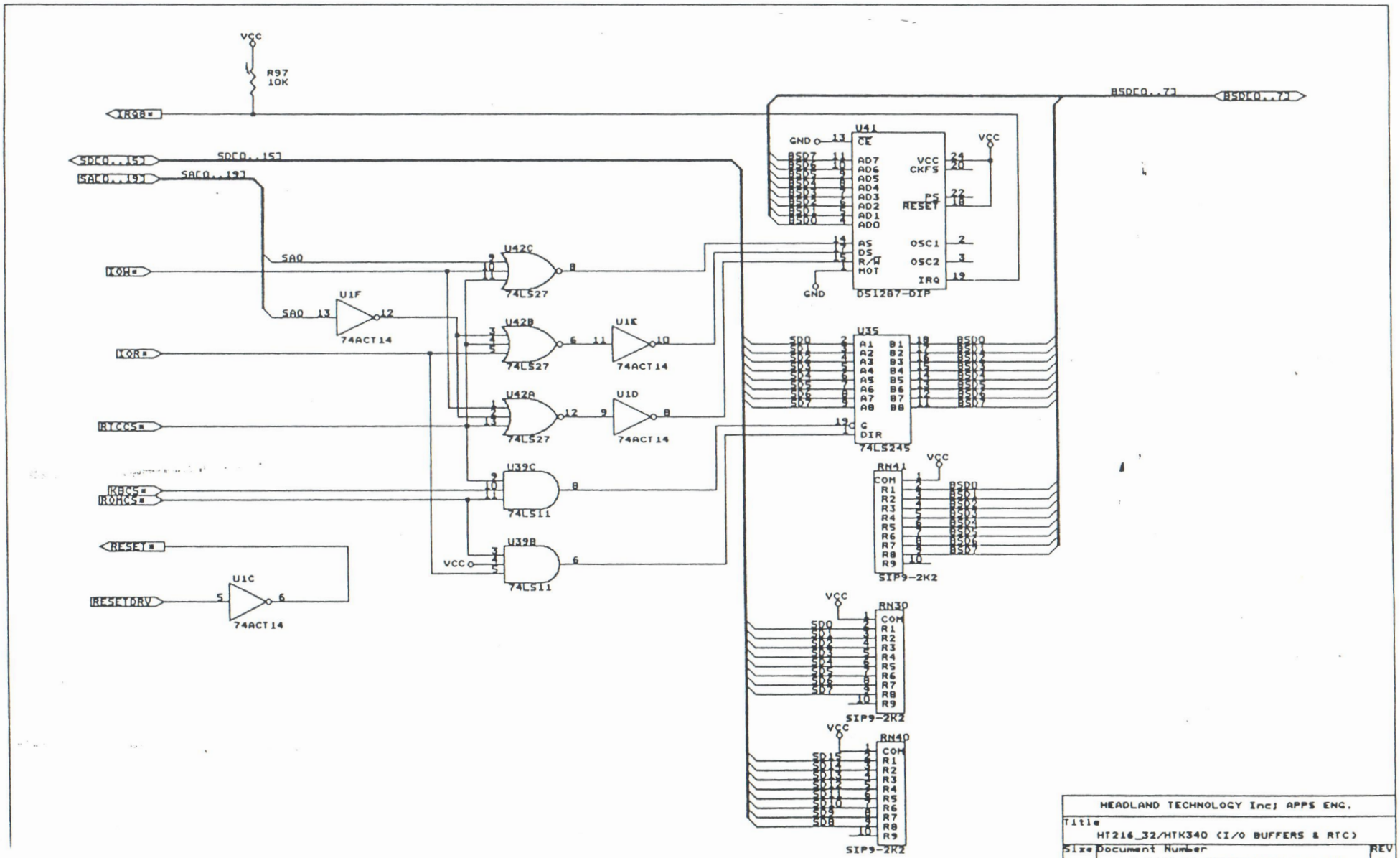


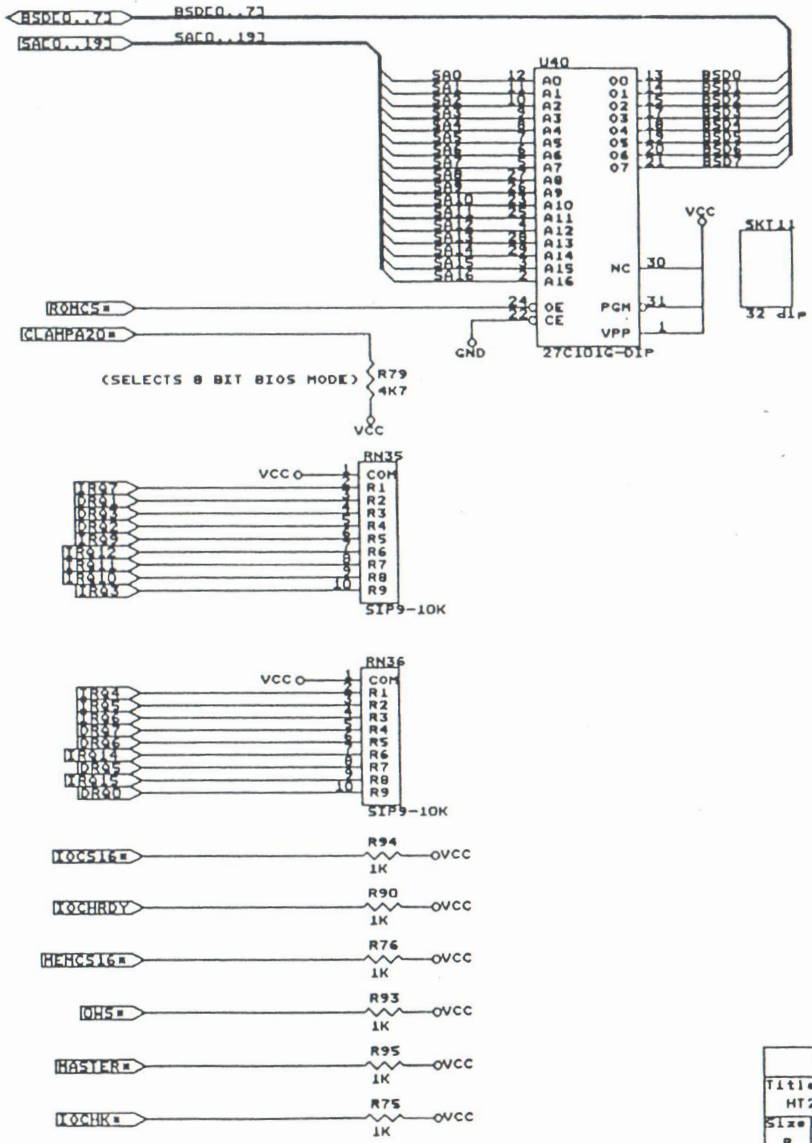
HEADLAND TECHNOLOGY Inc; APPS ENG.	
Title	
HT216_32/HTK340 CDRAM SIGNAL ROUTING/OPTIONS	
Size	Document Number REV


PARDC0..3]
BO_1HAC]..10]
MDC0..31]
BOCASC0..3]
BRASC*
BWEC_L*
EVNBHAC
SIMM1
SIMM2
SIMM3
SIMM4
VCC
GND
BOCAS0
BOCAS1
BOCAS2
BOCAS3
PARD0
PARD1
PARD2
PARD3
SKT5
SKT6
SKT3
SKT4
SIMM SOCKET(UP)
BANK Ø
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (SIMMs BANK 0)
Size
B
Document Number
617-0446-01 (ORCAD)LBUS3206.DWG
REV
A

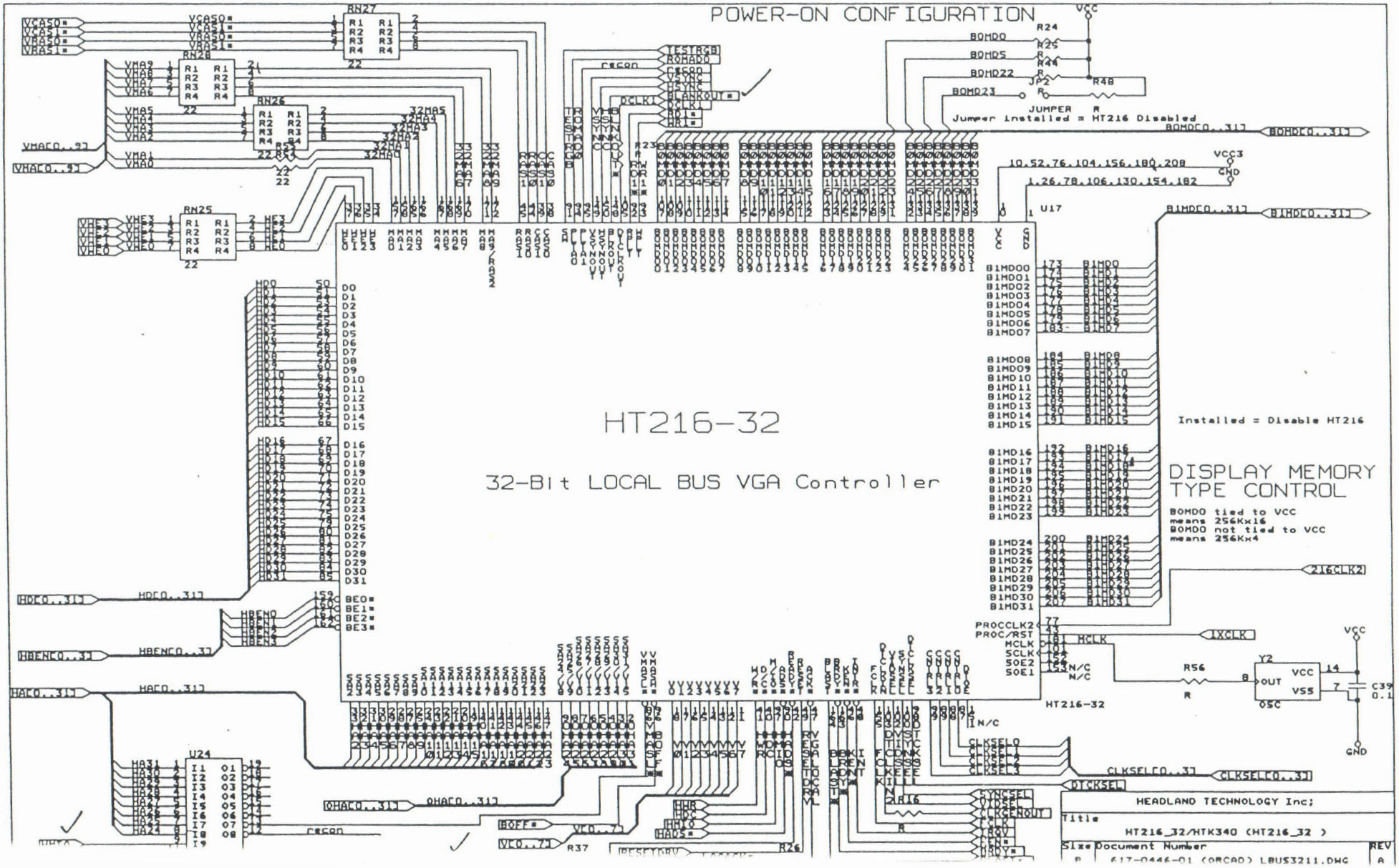

PARDFC0..3J
B0_1MAC1..10J
MDFC0..31J
BICASFC0..3J
BRAS1
BWE0
ODDBHA0
SIMM5
SIMM6
SIMM7
SIMM8
SIMM
VCC
GND
BICAS0
BICAS1
BICAS2
BICAS3
PARD0
PARD1
PARD2
PARD3
SKT9
SKT10
SKT7
SKT8
SIMM SOCKET(UP)
BANK 1
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (SIMMs BANK 1)
Size
B
Document Number
617-0446-01 (ORCAD)LBUS3207.DWG
REV
A

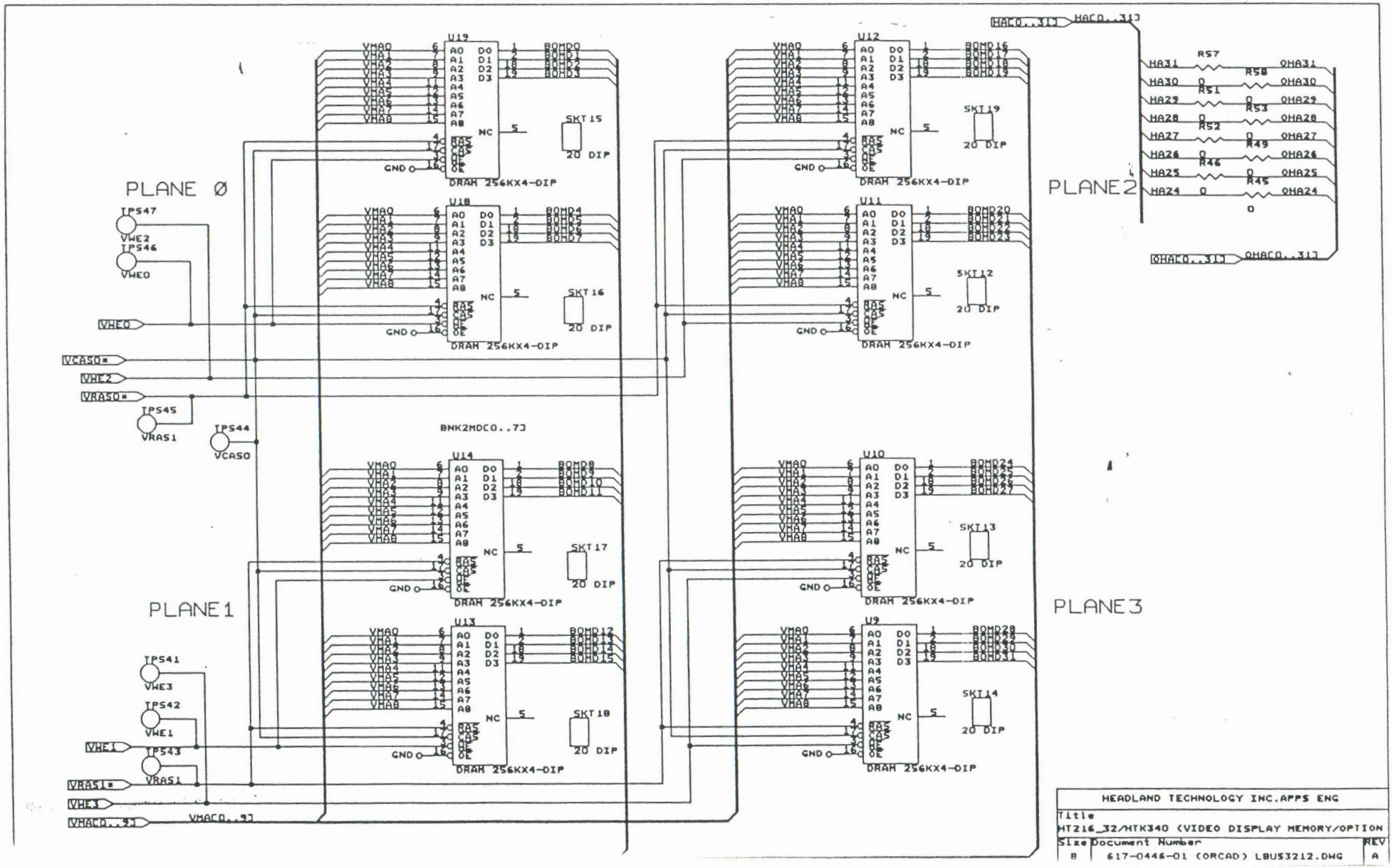

U38
ISA
HD0..31
HA0..31
HBEN0..3
SD0..15
SA0..19
LA17..23
RN39
SIP4-ISO-33
RN38
SIP9-1K
R100
10K
R101
10K
R80
1K
R81
33
R38
4.7K
U8D
74F32
VCC2 = 23,46,69,93,105
116,127,139,161 184
GND = 1,24,47,70,92
104,115,128,138
162
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (ISA CONTROLLER)
Size
Document Number
617-0446-01 (ORCAD)LBUS32D8.DWG
REV
A


VCC
R97
10K
IRQ8*
SDC0..15
SAC0..19
SA0
IOH*
IOR*
RTCCS*
KBCS*
ROMCS*
RESET*
RESETDRV
U42C
74LS27
U42B
74LS27
U42A
74LS27
U39C
74LS11
U39B
74LS11
U1F
74ACT14
U1E
74ACT14
U1D
74ACT14
U1C
74ACT14
BSDC0..7
U41
DS1287-DIP
U35
74LS245
RN41
SIP9-2K2
RN30
SIP9-2K2
RN40
SIP9-2K2
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (I/O BUFFERS & RTC)
Size
Document Number
617-0446-01 (ORCAD)LBUS3209.DWG
REV
A

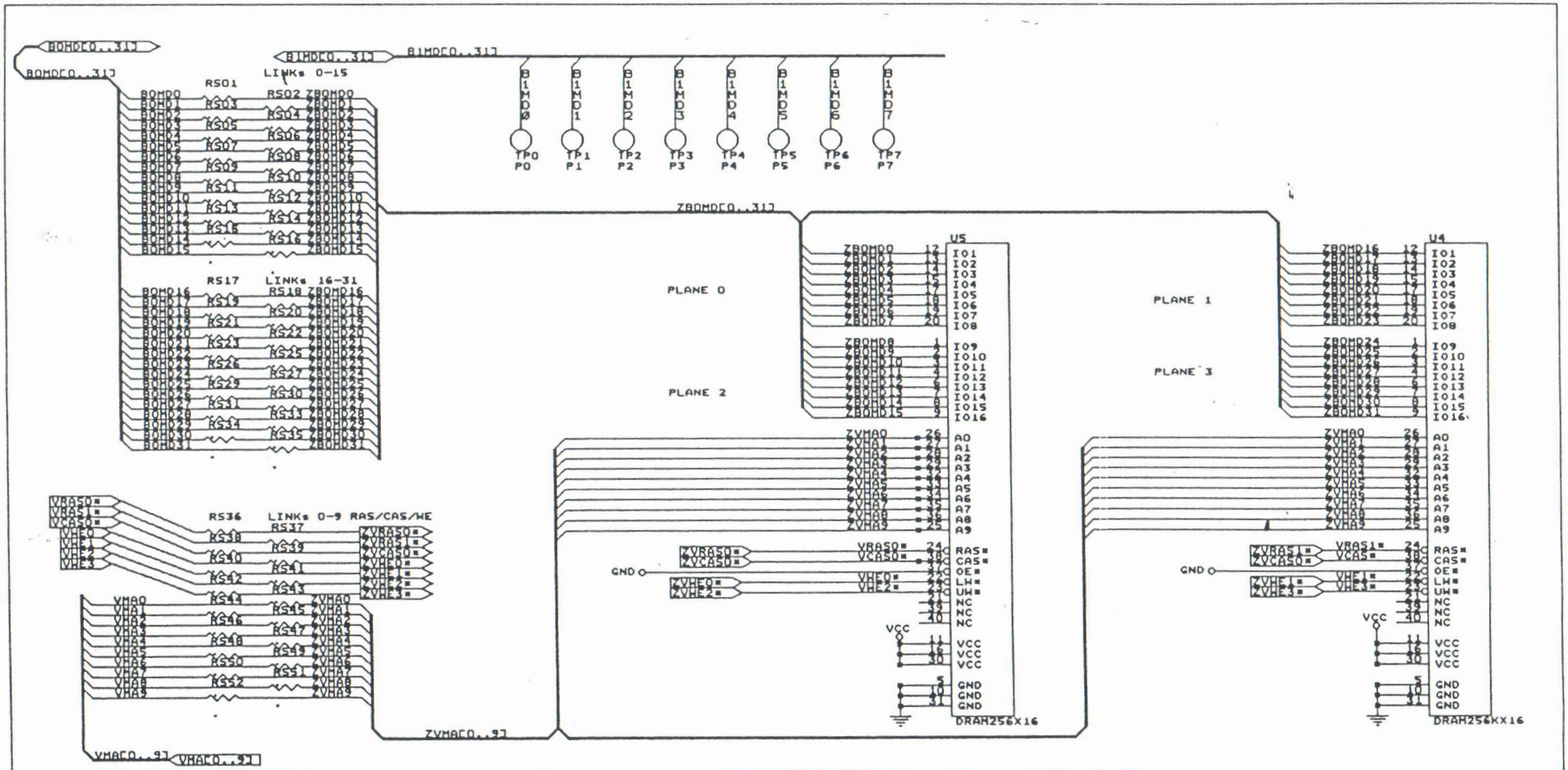


HEADLAND TECHNOLOGY Inc; APPS ENG.		
Title: HT216_32/HTK340 (EPROM & ISA-BUS PULLUPS		
Size: B	Document Number: 617-0446-01 (ORCAD)LBUS3210.DWG	REV: A


POWER-ON CONFIGURATION
HT216-32
32-Bit LOCAL BUS VGA Controller
DISPLAY MEMORY TYPE CONTROL
B0MD0 tied to VCC means 256Kx16
B0MD0 not tied to VCC means 256Kx4
Installed = Disable HT216
JUMPER R
Jumper installed = HT216 Disabled
HEADLAND TECHNOLOGY Inc;
Title
HT216_32/HTK340 (HT216_32)
Size Document Number
617-0446-01 (ORCAD) LBUS3211.DWG
REV A



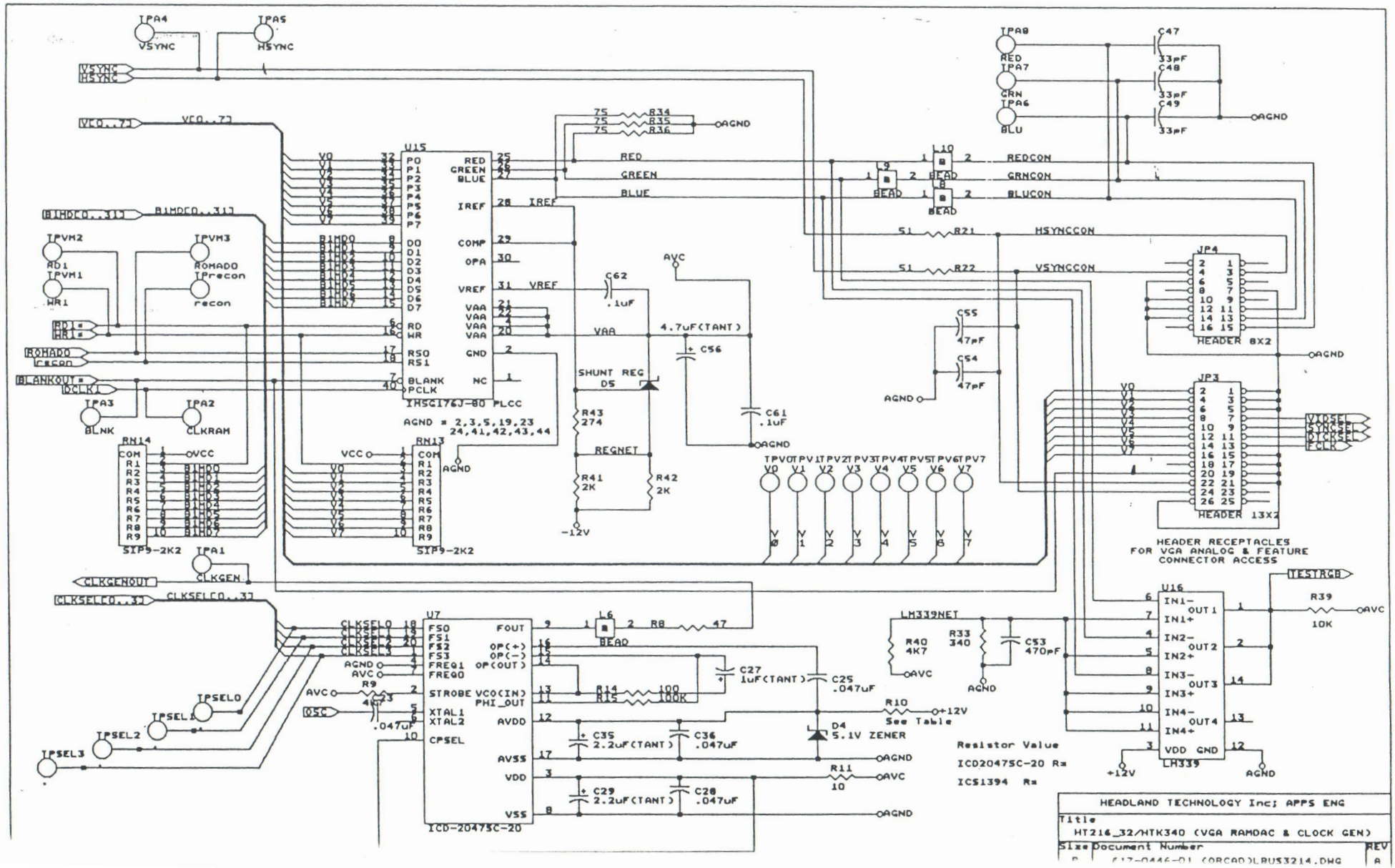
HEADLAND TECHNOLOGY INC.APPS ENG		
Title: HT216_32/HTK340 (VIDEO DISPLAY MEMORY/OPTION		
Size: B	Document Number: 617-0446-01 (ORCAD) LBUS3212.DWG	REV: A

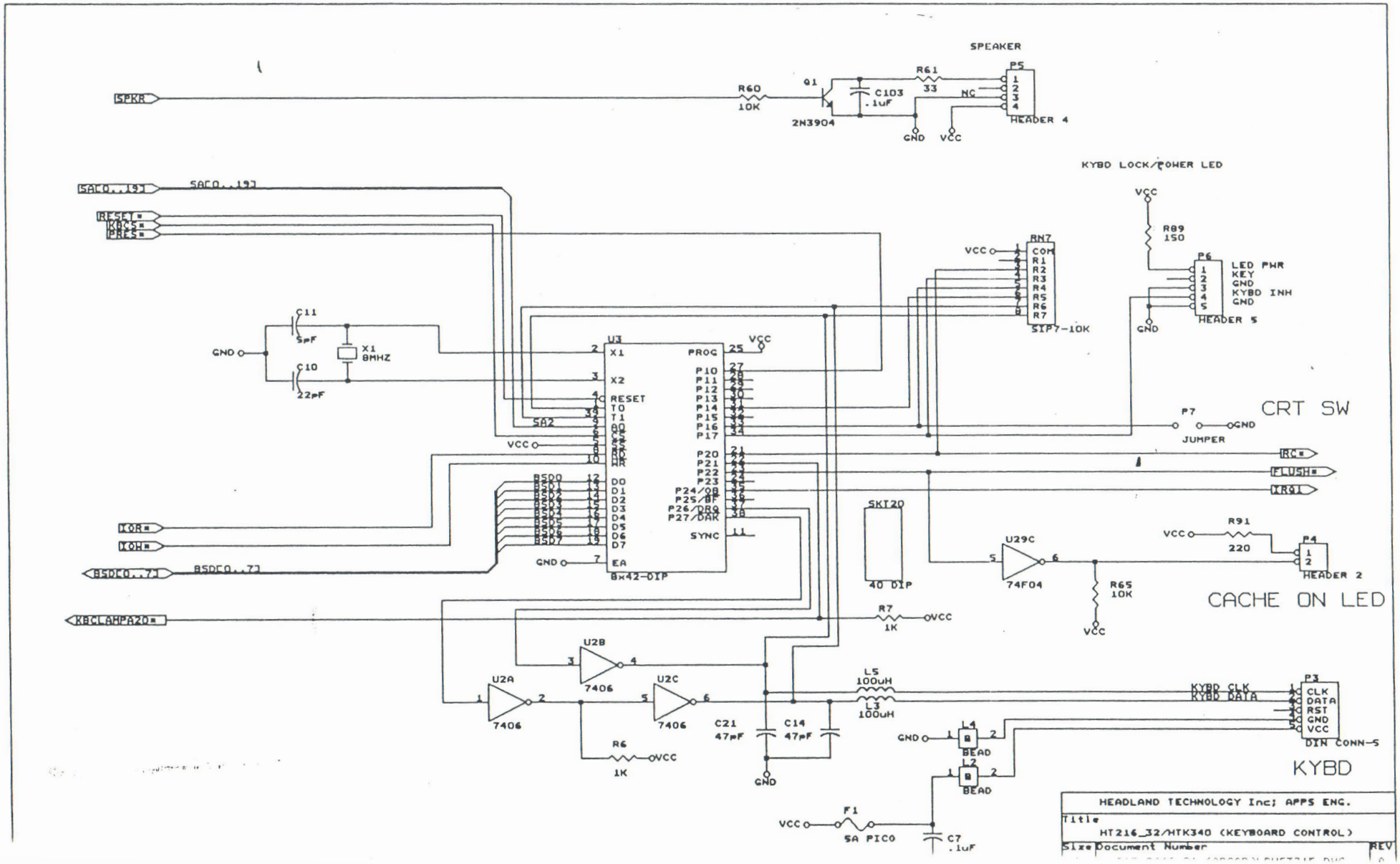


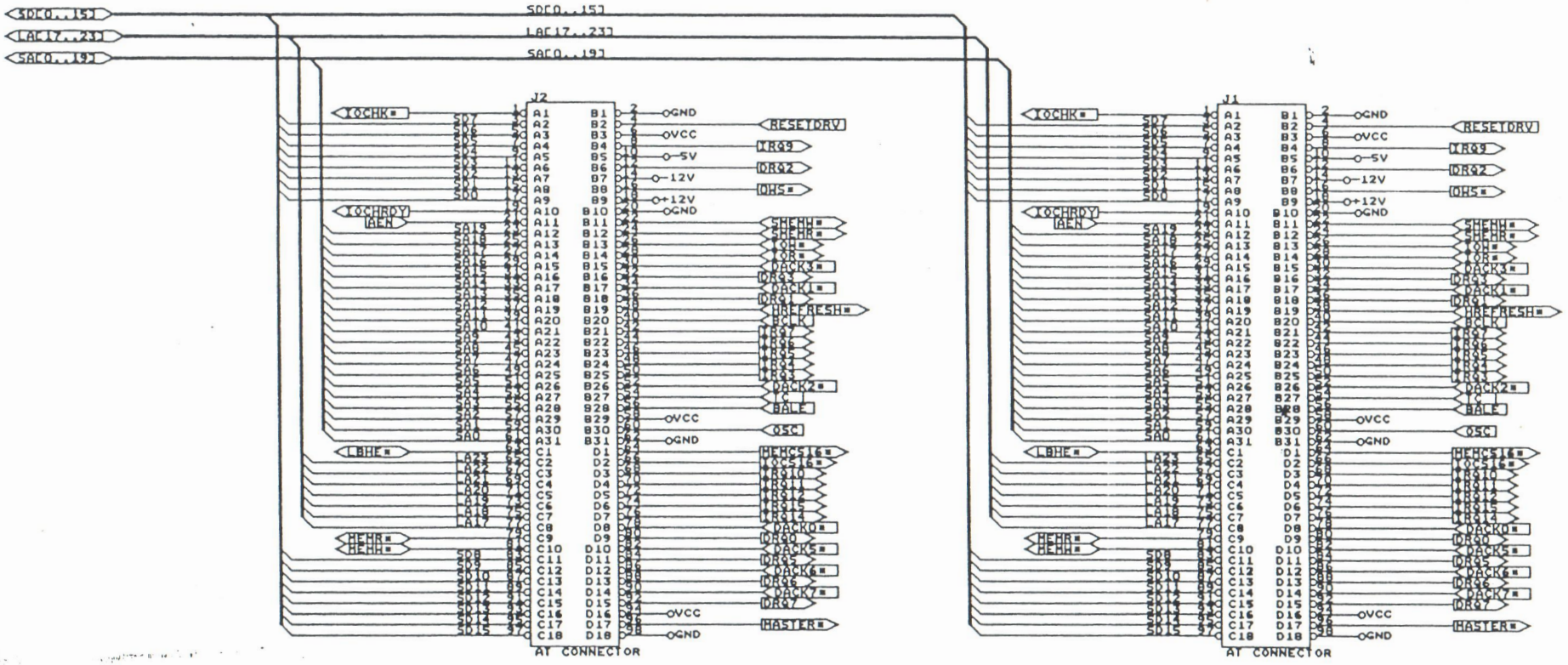
This SCHEMATIC Page is shown as an ALTERNATE to the 256Kx4 Device structure
The Implementation will be of the 256Kx4 devices for the first ARTWORK.

NOTE:
The LINKs exist as Circuit VIA Etches only for
the GENERATION of the ZVxxnnnn BUSSes from Vxxnnn BUSSes

HEADLAND TECHNOLOGY INC. Apps Eng.	
Title	HT216-32/HTK340 DISPLAY MEMORY OPTION
Size B	Document Number 617-0446-01 (ORCAD) LBUS3213.DWG
REV	A


IPA4
VSYNC
IPA5
HSYNC
VSYNC
HSYNC
VC0..7]
VC0..7]
U15
IHSC176J-80 PLCC
AGND = 2,3,5,19,23
24,41,42,43,44
BIHD[0..3]
BIHD[0..3]
IPVM2
RD1
IPVM1
WR1
IPVM3
ROMADO
IPrecon
recon
RD1*
WR1*
ROMADO
recon
BLANKOUT*
DCLK1
IPA3
BLNK
IPA2
CLKRAM
RN14
SIP9-2K2
RN13
SIP9-2K2
IPA1
CLKGEN
CLKGENOUT
CLKSELC0..3]
CLKSELC0..3]
U7
ICD-20475C-20
IPSEL0
IPSEL1
IPSEL2
IPSEL3
AGND
AVC
R9
4K73
.047uF
05C
R34
R35
R36
75
AGND
RED
GREEN
BLUE
IREF
VREF
C62
.1uF
AVC
VAA
4.7uF(TANT)
C56
C61
.1uF
SHUNT REG
D5
REGNET
R43
274
R41
2K
R42
2K
-12V
C27
1uF(TANT)
C25
.047uF
R14
R15
100
100K
C35
2.2uF(TANT)
C36
.047uF
C29
2.2uF(TANT)
C28
.047uF
L6
BEAD
R8
47
R10
See Table
+12V
D4
5.1V ZENER
R11
10
AVC
AGND
IPA8
RED
IPA7
GRN
IPA6
BLU
C47
33pF
C48
33pF
C49
33pF
AGND
L10
BEAD
L9
BEAD
L8
BEAD
REDCON
GRNCON
BLUCON
R21
51
HSYNCCON
R22
51
VSYNCCON
JP4
HEADER 8X2
C55
47pF
C54
47pF
AGND
JP3
HEADER 13X2
VIDSEL
SYNCSEL
DACSEL
PCLK
HEADER RECEPTACLES
FOR VGA ANALOG & FEATURE
CONNECTOR ACCESS
TPV0
TPV1
TPV2
TPV3
TPV4
TPV5
TPV6
TPV7
V0
V1
V2
V3
V4
V5
V6
V7
TESTRGB
U16
LM339
LM339NET
R40
4K7
R33
340
C53
470pF
AVC
AGND
R39
10K
+12V
AGND
Resistor Value
ICD2047SC-20 R=
ICS1394 R=
HEADLAND TECHNOLOGY Inc; APPS ENG
Title
HT216_32/HTK340 (VGA RAMDAC & CLOCK GEN)
Size
Document Number
REV
A

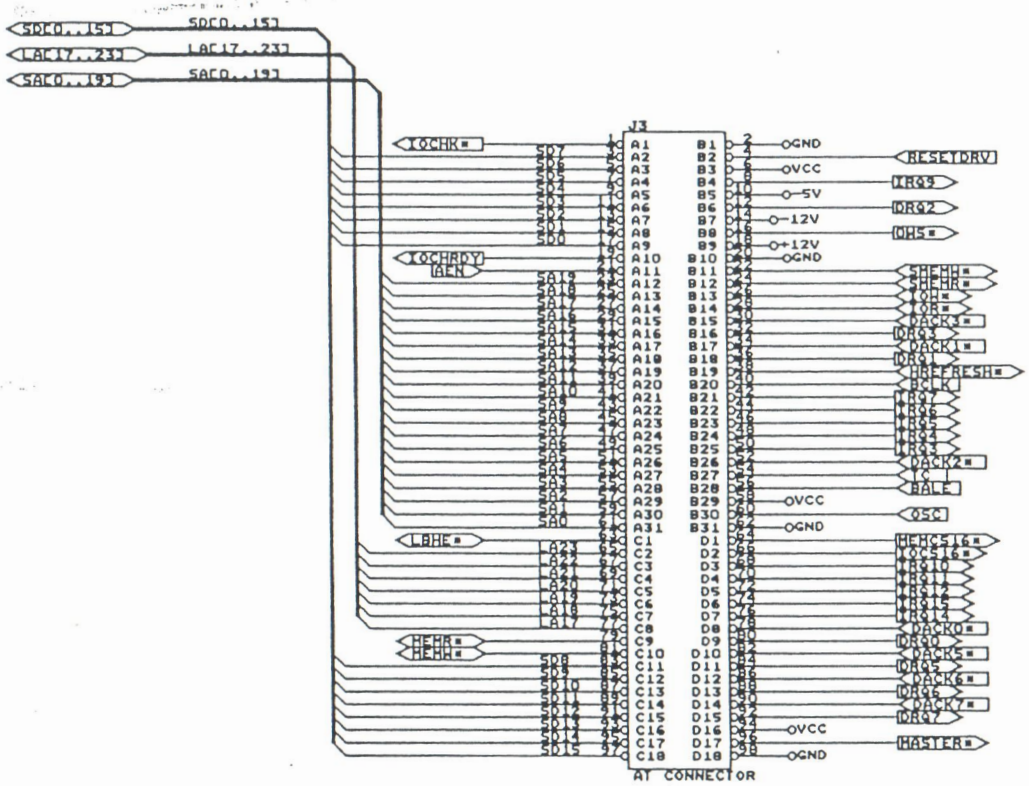

SPEAKER
SPKR
R60
10K
Q1
2N3904
C103
.1uF
R61
33
NC
P5
HEADER 4
GND
VCC
KYBD LOCK/POWER LED
SA[0..19]
RESET
KBCS
PRES
VCC
R89
150
P6
LED PWR
KEY
GND
KYBD INH
GND
HEADER 5
RN7
SIP7-10K
C11
5pF
C10
22pF
X1
8MHZ
U3
8x42-DIP
PROG
SA2
BSD[0..7]
IOR
IOW
P7
JUMPER
CRT SW
IRC
FLUSH
KRQ1
SKT20
40 DIP
U29C
74F04
R91
220
P4
HEADER 2
R65
10K
CACHE ON LED
KBCLAHPA20
R7
1K
U2B
7406
U2A
7406
U2C
7406
L5
100uH
L3
100uH
C21
47pF
C14
47pF
R6
1K
KYBD CLK
KYBD DATA
P3
DIN CONN-5
L4
BEAD
L2
BEAD
KYBD
F1
SA PICO
C7
.1uF
HEADLAND TECHNOLOGY Inc; APPS ENG.
Title
HT216_32/HTK340 (KEYBOARD CONTROL)
Size
Document Number
REV



LAYOUT RULES:

(P15.1) The de-coupling Capacitors for the ISA Bus Connectors are to be placed in line with each connector for +5V,+/-12V & -5V

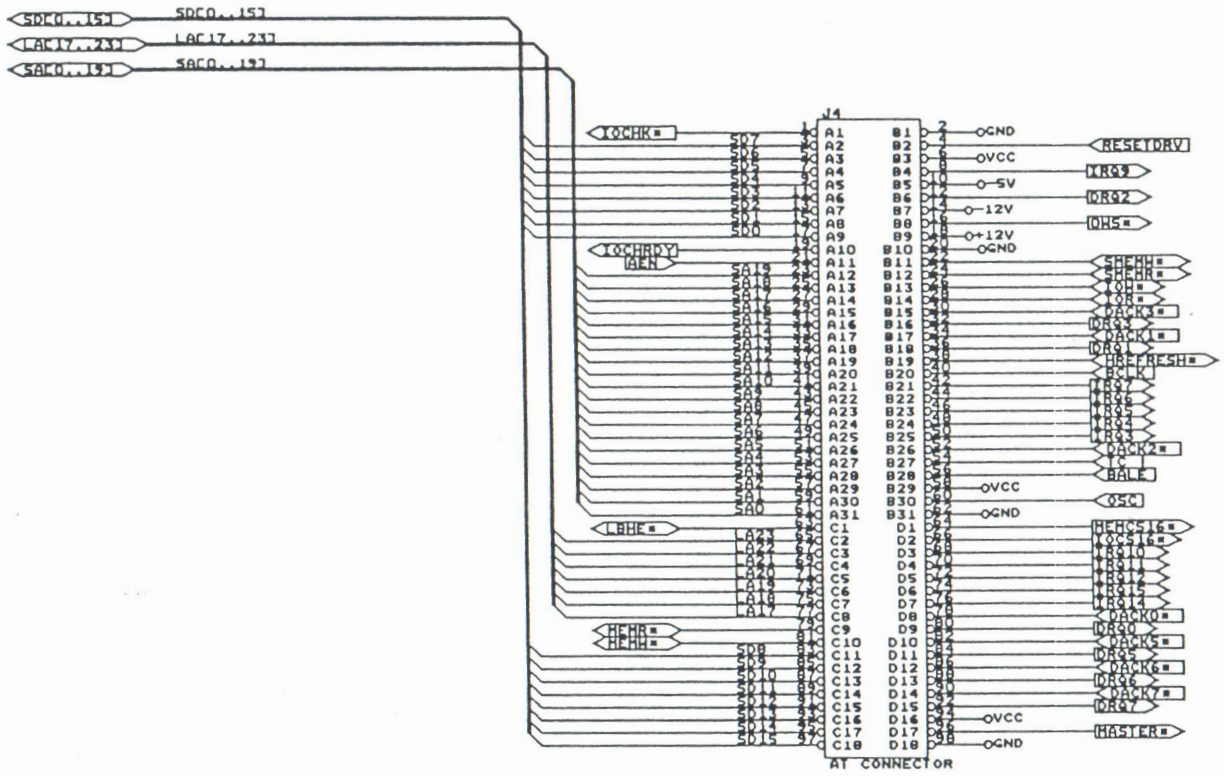
HEADLAND TECHNOLOGY Inc; APPS ENG.		
Title: HT216_32/HTK340 (I/O CONNECTORS 0/1)		
Size: B	Document Number: 617-0446-01 (ORCAD)LBUS3216.DWG	REV: A



LAYOUT RULES:

(P16.1) The de-coupling capacitors for the ISA Bus connectors are to be in line with each connector for +5V +/- 12V & -5V

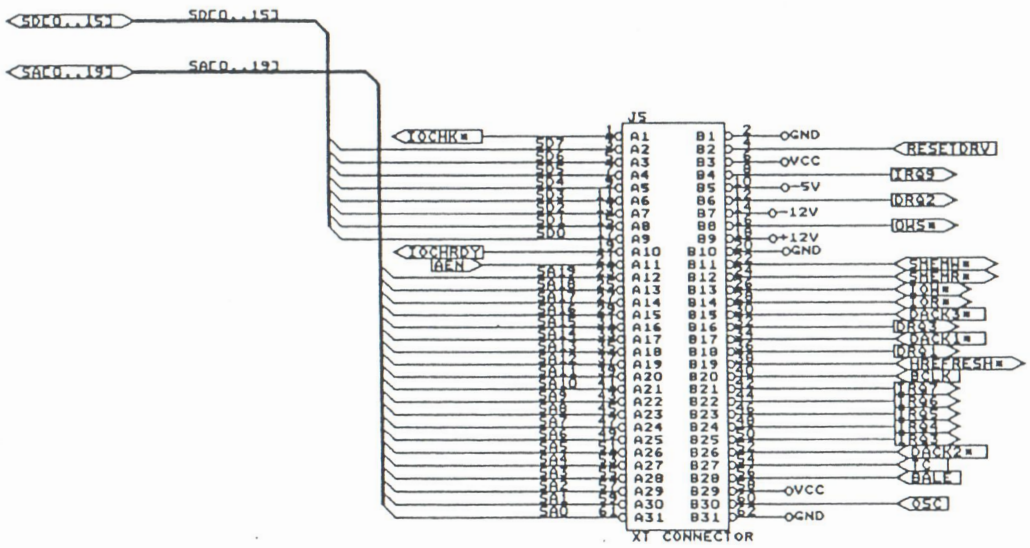
HEADLAND TECHNOLOGY Inc; APPS ENG.	
Title: SHASTA 486 EMBRYO (I/O CONNECTORS 2/3)	
Size	Document Number / REV



LAYOUT RULES:

(P17.1) The de-coupling capacitors for the ISA Bus connectors are to be placed in line with each connector for +5V +/-12V & -5V

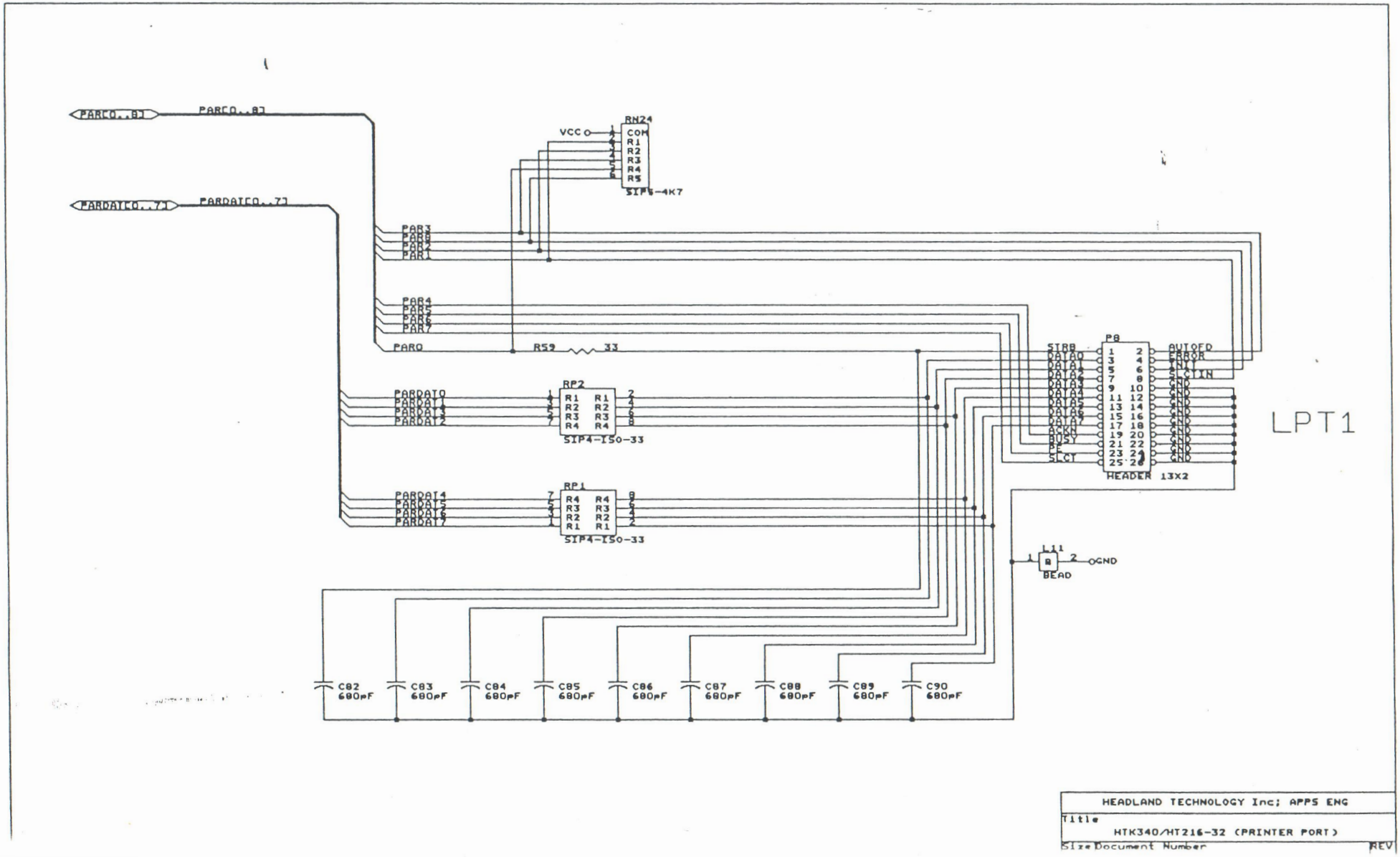
HEADLAND TECHNOLOGY Inc; Apps Eng.	
Title: HT216_32/HTK340 (I/O CONNECTOR 4)	
Size	Document Number / REV
	A



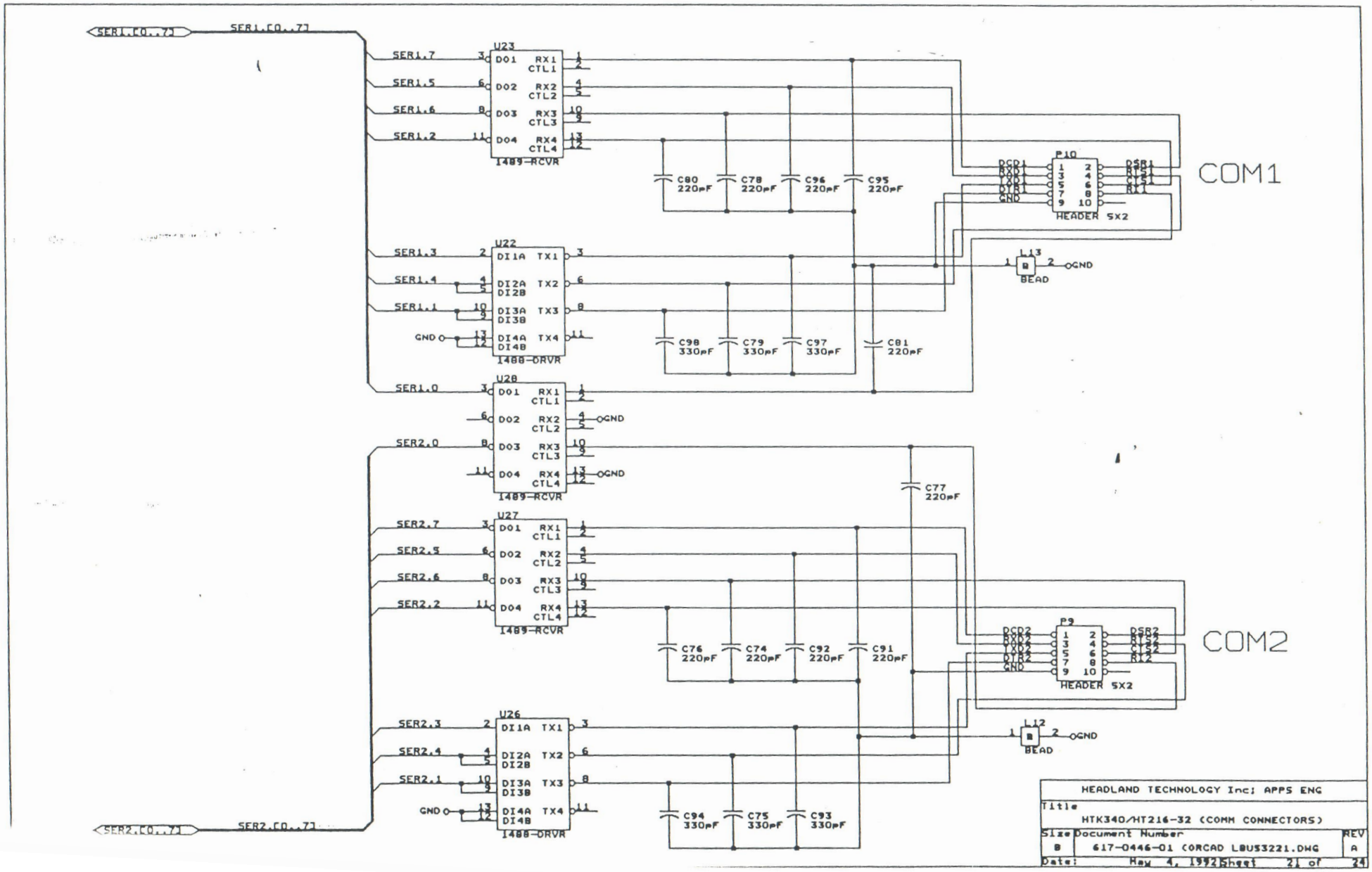
LAYOUT RULES:

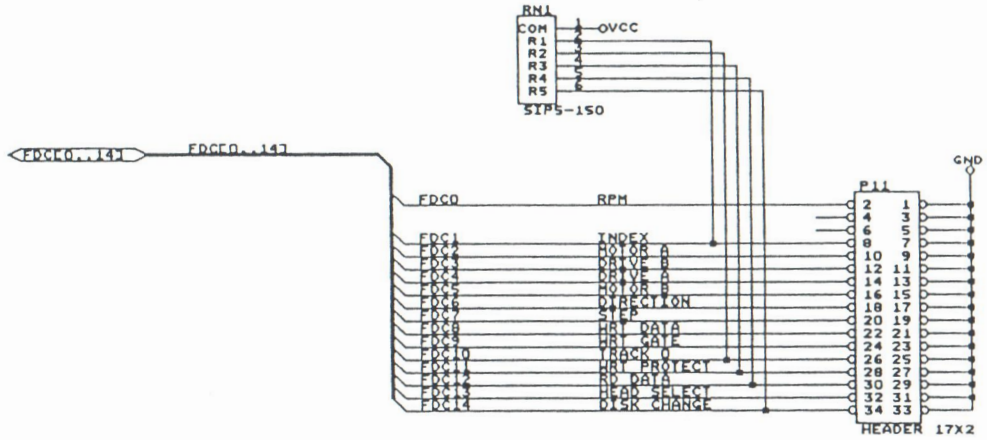
(P18.1) The de-coupling capacitors for the ISA Bus connectors are to be placed in,line with each connector for +5V +/- 12V & -5V

HEADLAND TECHNOLOGY Inc; APPS ENG.		
Title: HT216_32/HTK340 (I/O CONNECTORS 5/6)		
Size: B	Document Number: 617-0446-01 (ORCAD)LBUS3219.DWG	REV: A



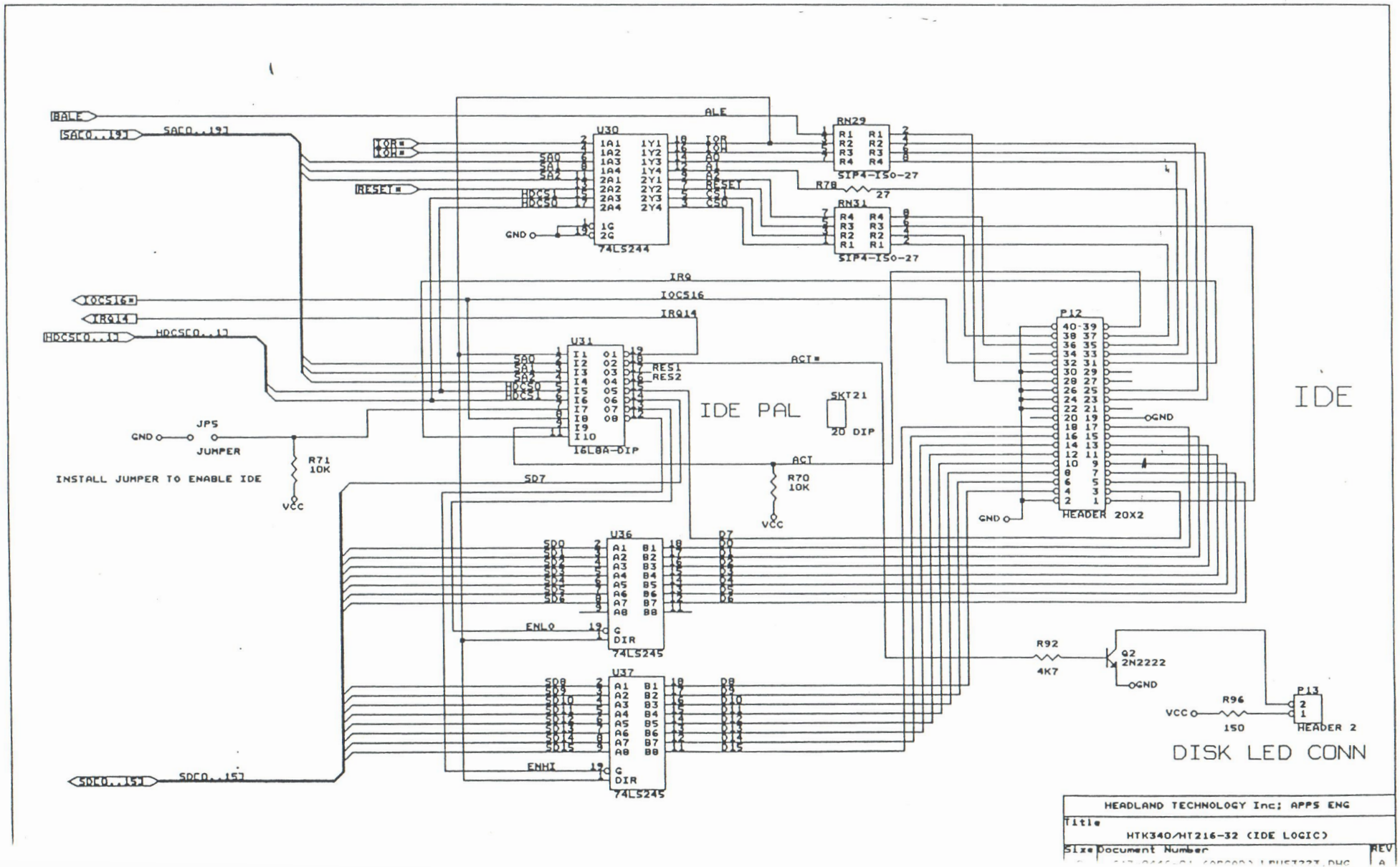
HEADLAND TECHNOLOGY Inc; APPS ENG	
Title	HTK340/HT216-32 (PRINTER PORT)
Size Document Number	REV

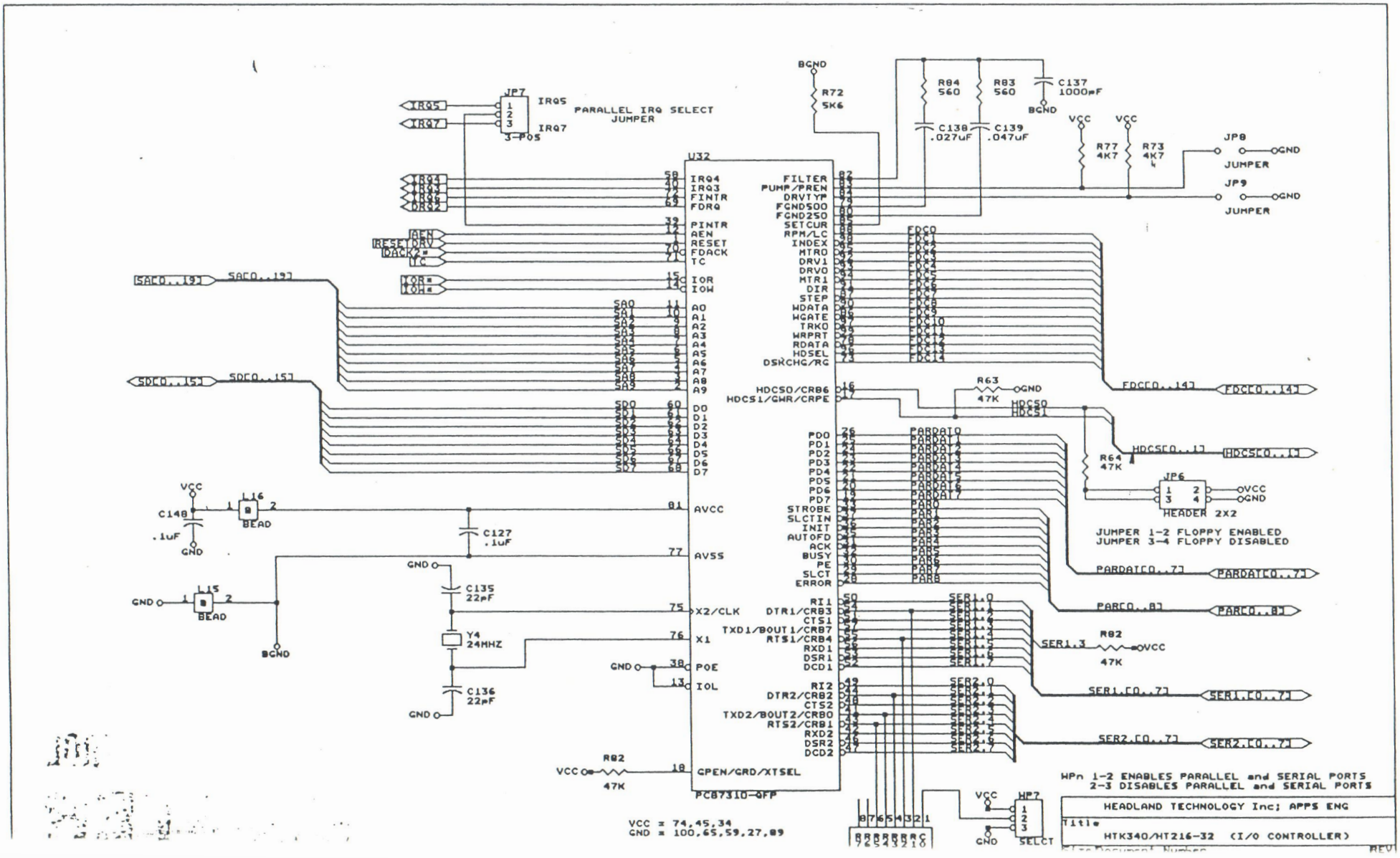

SER1.C0..7]
SER1.C0..7]
U23
SER1.7
SER1.5
SER1.6
SER1.2
DO1 RX1 CTL1
DO2 RX2 CTL2
DO3 RX3 CTL3
DO4 RX4 CTL4
1489-RCVR
C80 220pF
C78 220pF
C96 220pF
C95 220pF
P10
DCD1
RXD1
TXD1
DTR1
GND
DSR1
RTS1
CTS1
RI1
HEADER 5X2
COM1
U22
SER1.3
SER1.4
SER1.1
GND
DI1A TX1
DI2A DI2B TX2
DI3A DI3B TX3
DI4A DI4B TX4
1488-DRVR
C98 330pF
C79 330pF
C97 330pF
C81 220pF
L13
BEAD
GND
U28
SER1.0
DO1 RX1 CTL1
DO2 RX2 CTL2
DO3 RX3 CTL3
DO4 RX4 CTL4
1489-RCVR
GND
SER2.0
C77 220pF
U27
SER2.7
SER2.5
SER2.6
SER2.2
C76 220pF
C74 220pF
C92 220pF
C91 220pF
P9
DCD2
RXD2
TXD2
DTR2
GND
DSR2
RTS2
CTS2
RI2
HEADER 5X2
COM2
U26
SER2.3
SER2.4
SER2.1
GND
C94 330pF
C75 330pF
C93 330pF
L12
BEAD
GND
SER2.C0..7]
SER2.C0..7]
HEADLAND TECHNOLOGY Inc; APPS ENG
Title
HTK340/HT216-32 (COMM CONNECTORS)
Size B
Document Number 617-0446-01 (ORCAD LBUS3221.DWG
REV A
Date: May 4, 1992
Sheet 21 of 24



FDC

HEADLAND TECHNOLOGY Inc; APPS ENG		
Title: HTK340/HT216-32 (FLOPPY DISK CONNECTOR)		
Size: B	Document Number: 617-0446.01 (ORCAD) LBUS3222.DWG	REV: A


BALE
SA[0..19]
SA[0..19]
IOR*
IOW*
RESET*
U30
74LS244
ALE
RN29
SIP4-IS0-27
R78
27
RN31
SIP4-IS0-27
IRQ
IOCS16*
IRQ14
IOCS16
IRQ14
HDCS[0..1]
HDCS[0..1]
U31
I6L8A-DIP
IDE PAL
SKT21
20 DIP
ACT*
ACT
RES1
RES2
JP5
JUMPER
GND
R71
10K
INSTALL JUMPER TO ENABLE IDE
VCC
R70
10K
SD7
P12
HEADER 20X2
IDE
U36
74LS245
U37
74LS245
ENL0
ENHI
SD[0..15]
SD[0..15]
R92
4K7
Q2
2N2222
P13
HEADER 2
R96
150
DISK LED CONN
HEADLAND TECHNOLOGY Inc; APPS ENG
Title
HTK340/HT216-32 (IDE LOGIC)
Size
Document Number
REV
A


JP7
IRQ5
IRQ7
3-POS
PARALLEL IRQ SELECT JUMPER
U32
PC87310-QFP
BGND
R72 5K6
R84 560
R83 560
C137 1000pF
C138 .027uF
C139 .047uF
R77 4K7
R73 4K7
JP8
JUMPER
JP9
JUMPER
R63 47K
HDCS0
HDCS1
R64 47K
JP6
HEADER 2X2
JUMPER 1-2 FLOPPY ENABLED
JUMPER 3-4 FLOPPY DISABLED
R82 47K
SER1.3
C148 .1uF
L16 BEAD
C127 .1uF
L15 BEAD
C135 22pF
C136 22pF
Y4 24MHZ
JP7
SELCT
VCC = 74,45,34
GND = 100,65,59,27,09
WPn 1-2 ENABLES PARALLEL and SERIAL PORTS
2-3 DISABLES PARALLEL and SERIAL PORTS
HEADLAND TECHNOLOGY Inc; APPS ENG
Title
HTK340/HT216-32 (I/O CONTROLLER)

tem	Quantity	Reference	Part
's			
	1	U20	486(7)DX(SX)-PGA
	1	U21	WTK4167-PGA
	1	U6	HT342A-184QFP
	1	U38	HT321B-184QFP
	1	U17	HT216-32
	1	U40	27C101
	1	U3	8x42-DIP
	1	U41	DS1287-DIP
	1	U7	ICD-2047SC-20
	1	U15	IMSG176J-80 PLCC
	1	U32	PC87310-QFP
	1	U24	16L8
	1	U31	16L8A
	1	U29	74F04
	1	U2	7406
	1	U25	74F08
	1	U39	74LS11
	1	U1	74ACT14
	1	U42	74LS27
	1	U8	74F32
	1	U33	74F74
	1	U34	74ACT240
	1	U30	74LS244
	3	U35,U36,U37	74LS245
	1	U16	LM339
	3	U23,U27,U28	1489-RCVR
	2	U22,U26	1488-DRVR
	8	U19,U9,U10,U11,U12,U13, U14,U18	DRAM 256KX4-DIP
	2	U5,U4	DRAM256Kx16
	8	SIMM1,SIMM2,SIMM3,SIMM4, SIMM5,SIMM6,SIMM7,SIMM8	SIMM
esistors			
	24	R68,R17,R18,R19,R20,R27, R31,R32,R45,R46,R47,R49, R50,R51,R52,R53,R57,R58, R66,R67,R85,R88,R98,R99	0
	2	R3,R11	10
	2	R54,R55	22
	1	R78	27
	4	R13,R59,R61,R81	33
	1	R8	47
	2	R21,R22	51
	3	R36,R34,R35	75
	1	R14	100
	2	R89,R96	150
	1	R91	220
	1	R43	274
	1	R33	340

2	R84,R83	560
17	R1,R2,R6,R7,R12,R28,R29, R30,R69,R75,R76,R80, R86,R90,R93,R94,R95	1K
2	R41,R42	2K
8	R5,R9,R38,R40,R73,R77, R79,R92	4.7K
1	R72	5.6K
8	R39,R60,R65,R70,R71,R97, R100,R101	10K
5	R4,R62,R63,R64,R82	47K
1	R15	100K
1	R10	See Table

nets

3	RN8,RN9,RN10	SIP4-ISO-0
4	RN25,RN26,RN27,RN28	SIP4-ISO-22
2	RN31,RN29	SIP4-ISO-27
6	RP1,RP2,RN6,RN11,RN12, RN39	SIP4-ISO-33
1	RN1	SIP5-150
1	RN38	SIP9-1K
13	RN2,RN3,RN4,RN5,RN13, RN14,RN15,RN17,RN20,RN22, RN30,RN40,RN41	SIP9-2.2K
1	RN24	SIP5-4.7K
2	RN33,RN34	SIP5-10K
1	RN7	SIP7-10K
8	RN16,RN18,RN19,RN21,RN23, RN32,RN35,RN36	SIP9-10K
1	RN37	SIP7-47K

apacitors, pF

1	C11	5pF
3	C10,C135,C136	22pF
3	C47,C48,C49	33pF
4	C54,C14,C21,C55	47pF
10	C74,C76,C77,C78,C80,C81, C91,C92,C95,C96	220pF
6	C94,C75,C79,C93,C97,C98	330pF
1	C53	470pF
9	C90,C82,C83,C84,C85,C86, C87,C88,C89	680pF
1	C137	1000pF

apacitors, uF

1	C138	.027uF
5	C25,C23,C28,C36,C139	.047uF
94	C1,C6,C7,C12,C13,C15,C16, C17,C18,C19,C20,C22,C26, C30,C31,C32,C33,C34,C37, C38,C39,C40,C42,C43,C44, C45,C46,C50,C51,C52,C57, C58,C60,C61,C62,C64,C65, C66,C67,C68,C71,C72,C73, C99,C100,C101,C102,C103, C105,C106,C107,C108,C109, C110,C111,C112,C113,C115, C118,C119,C120,C121,C122, C123,C124,C125,C126,C127,	0.1UF

	C128,C129,C131,C132,C133, C134,C140,C141,C142,C143, C144,C146,C148,C149,C150, C151,C152,C153,C154,C156, C157,C158,C159,C160,C161, C163	
1	C27	1uF(TANT)
2	C29,C35	2.2uF(TANT)
1	C56	4.7uF(TANT)
12	C155,C3,C5,C8,C24,C41, C63,C69,C104,C117,C130, C145	10uF(TANT)
9	C162,C2,C4,C9,C59,C70, C114,C116,C147	33uF(TANT)

umpers/headers/connectors

4	J1,J2,J3,J4	AT CONNECTOR
1	J5	XT CONNECTOR
1	P1	POWER CONN
1	P3	DIN CONN-5
6	J6,P7,JP2,JP5,JP8,JP9	JUMPER
3	P2,P4,P13	HEADER 2
2	JP7,WP1	HEADER 3
1	P5	HEADER 4
1	P6	HEADER 5
2	JP1,JP6	HEADER 2X2
2	P9,P10	HEADER 5X2
1	JP4	HEADER 8X2
2	JP3,P8	HEADER 13X2
1	P11	HEADER 17X2
1	P12	HEADER 20X2

isc

1	Y1	14.318 MHZ OSC
1	Y2	OSC
1	Y3	SYS OSC
1	Y4	24MHZ
1	X1	8MHZ
9	M1,M2,M3,M4,M5,M6,M7,M8, M9	MNTG HOLE
15	L1,L2,L4,L6,L7,L8,L9,L10, L11,L12,L13,L14,L15,L16, L17	BEAD
2	L3,L5	100uH
1	Q1	2N3904
1	Q2	2N2222
1	F1	5A PICO
3	D1,D2,D3	1N4148
1	D4	5.1V ZENER
1	D5	SHUNT REG

o be determined

11	R87,R16,R23,R24,R25,R26, R37,R44,R48,R56,R74	R
49	RS01,RS02,RS03,RS04,RS05, RS06,RS07,RS08,RS09,RS10, RS11,RS12,RS13,RS14,RS15, RS16,RS17,RS18,RS19,RS20, RS21,RS22,RS23,RS24,RS25,	TBD

		RS26,RS27,RS28,RS29,RS30, RS31,RS32,RS33,RS34,RS35, RS36,RS37,RS38,RS39,RS40, RS41,RS42,RS43,RS44,RS45, RS46,RS47,RS48,RS49	
ckets			
27	1	SKT1	PGA 168
44	1	SKT2	PGA 144
77	8	SKT3,SKT4,SKT5,SKT6,SKT7, SKT8,SKT9,SKT10	SIMM SOCKET(UP)
86	1	SKT11	32 dip
93	9	SKT12,SKT13,SKT14,SKT15, SKT16,SKT17,SKT18,SKT19, SKT21	20 DIP
156	1	SKT20	40 DIP
st probes			
21	12	TPG1,TPG2,TPG3,TPG4,TPG5, TPG6,TPG7,TPG8,TPG9, TPG10,TPG11,TPG12	GND
104	1	TP0	P0
103	1	TP1	P1
102	1	TP2	P2
101	1	TP3	P3
105	1	TP4	P4
106	1	TP5	P5
107	1	TP6	P6
108	1	TP7	P7
143	1	TPA1	CLKGEN
153	1	TPA2	CLKRAM
152	1	TPA3	BLNK
129	1	TPA4	VSYNC
130	1	TPA5	HSYNC
138	1	TPA6	BLU
137	1	TPA7	GRN
136	1	TPA8	RED
154	1	TPRECON	RECON
31	1	TPS1	HRQ
30	1	TPS2	HADS
32	1	TPS3	KEN
33	1	TPS4	1xCLK
41	1	TPS5	PCHK
34	1	TPS6	NMI
28	1	TPS7	BOFF
39	1	TPS8	HLDA
40	1	TPS9	CLMPA20
35	1	TPS10	HW/R
36	1	TPS11	HD/C
37	1	TPS12	HMIO
38	1	TPS13	BLAST
47	1	TPS14	A16
48	1	TPS15	A17
49	1	TPS16	A18
50	1	TPS17	A19
51	1	TPS19	A20
52	1	TPS20	A21
53	1	TPS21	A22

54	1	TPS22	A23
55	1	TPS23	A24
45	1	TPS24	BEN3
61	1	TPS25	LOCRDY
60	1	TPS26	LOCACK
63	1	TPS27	RDYIN
59	1	TPS28	RESCPU
62	1	TPS29	RAS0
58	1	TPS30	RAS1
74	1	TPS31	MAEVN
73	1	TPS32	MAODD
66	1	TPS33	0CAS0
67	1	TPS34	0CAS1
68	1	TPS35	0CAS2
65	1	TPS36	0ACS3
69	1	TPS37	1CAS0
71	1	TPS38	1CAS1
72	1	TPS39	1CAS2
70	1	TPS40	1CAS3
99	1	TPS41	VWE3
100	1	TPS42	VWE1
98	1	TPS44	VCAS0
97	2	TPS45,TPS43	VRAS1
96	1	TPS46	VWE0
95	1	TPS47	VWE2
139	4	TPSEL0,TPSEL1,TPSEL2, TPSEL3	.
144	1	TPV0	V0
145	1	TPV1	V1
146	1	TPV2	V2
147	1	TPV3	V3
148	1	TPV4	V4
149	1	TPV5	V5
150	1	TPV6	V6
151	1	TPV7	V7
141	1	TPVM1	WR1
140	1	TPVM2	RD1
142	1	TPVM3	ROMAD0