MICROPROCESSOR COMPONENTS LIBRARY

Packaged Parts

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CONTENTS

How To Use This Library..... 2

General Information..... 4

Component List By Sequence..... 9

Component List by Function..... 14

File List By Component Function..... 23

Component Plots..... 37

MICROPROCESSOR COMPONENTS LIBRARY

SCHEMATIC SYMBOLS

This manual and the Microprocessor Library Parts Diskettes comprise the P-CAD Microprocessor Part Library.

This manual includes information on how to use the library; general information about the library; component lists by sequence, function, and file; and component plots.

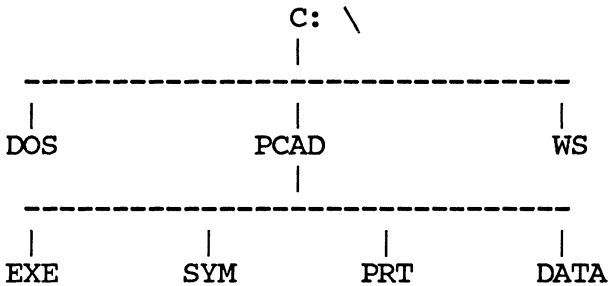
The library diskettes contain the component files, a layer structure file, standard size sheet files, PC-PACK cross reference files, a special symbol file, and padstack files.

HOW TO USE THIS LIBRARY

This section describes a recommended directory structure and steps in creating a design.

DIRECTORY STRUCTURE

In order to conserve space on your hard disk, and increase performance, it is recommended that you store library components within a directory structure. This structure should be tailored to your particular applications and design methodologies. The following example illustrates how this is done.



In this case symbols are stored in the SYM directory. Parts are stored in the PRT directory.

CREATING A DESIGN

To use the library in a design, start PC-CAPS or PC-CARDS. After the menu is displayed, load the correct layer structure. You can load the layer structure supplied with the library, or you can load one of the drawing sheets on the diskettes (A, B, C, D, or E size).

Then you can create the design by entering components, wires, text, instance, and net names.

For each PC-CAPS Symbol, there is a corresponding PC-CARDS Part. These are supplied on separate libraries. Both Symbols and Parts contain the electrical "intelligence" required for creating schematics, extracting data, and laying-out printed circuit boards.

Although P-CAD has gone to great effort to carefully verify the integrity of this information, P-CAD is not responsible for the usage of this library, or damages resulting from any technical inaccuracies. P-CAD may make improvements and/or changes in this product at any time and without prior notice.

This library has been developed at the request of our users, and we welcome any suggestions regarding improvements, or other libraries that are desired.

GENERAL INFORMATION

This section provides general information about various aspects of the P-CAD Microprocessor Library, including the layer structures, assignment of symbol attributes, and signal naming conventions.

SCHEMATIC LAYER STRUCTURE

The following layer structure, LAYS.SCH, is included on the Microprocessor Symbol Library diskettes. This LAYS.SCH is a version of the standard P-CAD layer structure that has been edited and used in creating the Microprocessor Library Symbols.

LAYER	NAME	PEN #	STATUS	USE
1	WIRES	1	OFF	Interconnecting wires
2	BUS	1	OFF	Interconnecting busses/wires
3	GATE	2	ON	Gate geometry/symbol
4	IEEE	2	OFF	Not used
5	PINFUN	3	OFF	Not used
6	PINNUM	1	ABL	Pin Numbers
7	PINNAM	6	ABL	Pin names
8	PINCON	1	ABL	Pin connections (dot)

LAYER	NAME	PEN #	STATUS	USE
9	REFDES	2	ABL	Reference Designator
10	ATTR	6	OFF	Not Used
11	SDOT	1	OFF	Not used
12	DEVICE	5	OFF	Device Name

PRINTED CIRCUIT BOARD LAYER STRUCTURE

The following layer structure, MULTI.PCB, is included on the Microprocessor Part Library diskettes. MULTI.PCB is a version of the standard P-CAD layer structure (LAYS.PCB) that has been edited and used in creating the Microprocessor Library Parts.

LAYER	NAME	PEN #	STATUS	USE
1	PADCOM	7	ON	Graphic Component Pads
2	FLCOMP	7	OFF	Flash Component Pads
3	PADSLD	8	OFF	Graphic Solder Pads
4	FLSOLD	8	OFF	Flash Solder Pads
5	PADINT	9	OFF	Graphic Internal Pads

LAYER	NAME	PEN #	STATUS	USE
6	FLINT	9	OFF	Flash Internal Pads
7	GNDCON	10	OFF	Graphic Internal Ground Connection
8	FLGCON	10	OFF	Flash Internal Ground Connection
9	CLEAR	12	OFF	Graphic Universal Clearance
10	FLCLER	12	OFF	Flash Universal Clearance
11	PWRCON	13	OFF	Graphic Internal Power Connections
12	FLPCON	13	OFF	Flash Internal Power connections
13	SLDMSK	14	OFF	Graphic Solder Mask Relief
14	FLSMSK	14	OFF	Flash Solder Mask
15	DRILL	15	OFF	Graphic Drill Template
16	FLDRLL	15	OFF	Flash Drill Template

LAYER	NAME	PEN #	STATUS	USE
17	PIN	4	ON	Pin Color
18	BRDOUT	4	ON	Board Outline
19	FLTARG	4	OFF	Flash Alignment Targets
20	SLKSCR	6	ON	Silkscreen Paint
21	DEVICE	5	ON	Device Names
22	ATTR	6	OFF	Attributes
23	REFDES	6	OFF	Reference Designators
24	COMP	1	ABL A	Component Traces
25	SOLDER	2	ABL	Solder Side Traces
26	INT1	3	OFF	Internal Traces

SIGNAL NAMING CONVENTIONS

The following signal naming conventions are used in the components library.

Signal	Convention
READY	RDY
CLOCK	CLK
RESET	RST and RES

INFORMATION ON COMPONENT PARTS

Library Component Parts are created with the pin types shown below. Special types 5 or 6 are used when pin 1 is used as power or ground. These numbers are shown for each part in the component plots section.

TYPE	FUNCTION	SHAPE
1	PIN 1 I.D.	SQUARE
2	STD PIN I.D.	ROUND
3	STD. GROUND	ROUND
4	STD. POWER	ROUND
5	PIN 1 POWER	SQUARE
6	PIN 1 GROUND	SQUARE

INFORMATION ON SPECIAL PACKAGES

Special Quad packaged microprocessors i.e., 80186, 80188 and 80286 follow these conventions:

1. The symbols are shown in dip form.

2. The parts are shown as four sided.

3. The standard symbols and parts reflect the 68 Lead Ceramic Pin Grid Array Package Type CG.

4. The alternate symbols and parts "T" reflect the Textool 68 Lead Chip Carrier Socket.

COMPONENT LIST BY SEQUENCE

NUMBER	PART PAGE#	PART DISK#
2004	37	1
2114A	37	1
2115A	37	1
2115H	37	1
2125A	37	1
2125H	37	1
2148H	37	1
2149H	37	1
2164A	37	1
2186	37	1
2186A	37	1
2187A	37	1
27128	37	1
27128A	37	1
27256	37	1
2732A	37	1
2764	37	1
2764A	37	1
2816A	37	1
2817A	37	1
51C64	37	1
51C65	37	1
7220	37	1
7220-1	37	1
7220-4	37	1
7220-5	37	1
7224	37	1
80130	37	1
80130-2	37	1
80150	37	1
80150-2	37	1
80186	58	3

NUMBER	PART PAGE#	PART DISK#
80188	45	3
80286	45	3
80287	37	1
80287-3	38	1
8031AH	38	1
8032AH	38	1
8035AHL	39	1
8039AHL	39	1
8040AHL	39	1
8041A	38	1
8042	38	1
8044AH	38	1
8048AH	38	1
8049AH	39	1
8050AH	39	1
8051AH	38	1
8052AH	38	1
8080A	39	1
8080A-1	39	1
8080A-2	39	1
8085A	39	1
8085A-2	40	1
8085AH	39	1
8085AH-1	39	1
8085AH-2	39	1
8086	40	2
8086-1	40	2
8086-2	40	2
8087	40	2
8088	40	2
8088-2	40	2
8089	40	2
80C39-7	39	1
80C49-7	39	1
8155	40	2

NUMBER	PART PAGE#	PART DISK#
8155-2	40	2
8155H	40	2
8155H-2	40	2
8156	40	2
8156-2	40	2
8156H	40	2
8156H-2	40	2
8185	41	2
8185-2	41	2
8202A	41	2
8203	41	2
82C03	41	2
8205	41	2
82062	41	2
8208	41	2
8212	41	2
8216	41	2
8218	41	2
8219	41	2
8224	41	2
8226	41	2
8228	41	2
82284	41	2
82284-6	41	2
82285	41	2
82288	41	2
82288-6	41	2
8231A	41	2
8237A	42	2
8237A-4	42	2
8237A-5	42	2
8238	41	2
8243	42	2
82501	42	2
8251A	42	2
8253	42	2

Component List by Sequence

NUMBER	PART PAGE#	PART DISK#
82530	42	2
82530-6	43	2
8253-5	42	2
8254	42	2
8255A	42	2
8255A-5	42	2
8256AH	42	2
8257	42	2
8257-5	43	2
82586	42	2
8259A	42	2
8259A-2	42	2
8259A-8	42	2
8271	43	2
8271-6	43	2
82720	43	2
8272A	43	2
8273	43	2
8273-4	43	2
82731	43	2
8274	43	3
8275	43	3
8276	43	3
8279	43	3
8279-5	43	3
8282	43	3
8283	43	3
8284A	43	3
8284A-1	43	3
8286	43	3
8287	43	3
8288	44	3
8289	44	3
8289-1	44	3
8291A	44	3
8292	44	3

Component List by Sequence

NUMBER	PART PAGE#	PART DISK#
8293	44	3
8294A	44	3
8295	44	3
8344AH	38	1
8355	44	3
8355-2	44	3
8641A	38	1
8741A	38	1
8742	38	1
8744H	38	1
8748H	39	1
8749H	39	1
8751H	38	1
8751H-8	38	1
8751H-10	38	1
8751H-11	38	1
8755A	44	3
8755A-2	44	3

COMPONENT LIST BY FUNCTION

Component	Description
MCS-80/85 MICROPROCESSORS	
8080A	8-Bit N-channel Microprocessor
8080A-1	8-Bit N-channel Microprocessor
8080A-2	8-Bit N-channel Microprocessor
8085AH	8-Bit HMOS Microprocessor
8085AH-2	8-Bit HMOS Microprocessor
8085AH-1	8-Bit HMOS Microprocessor
8085A	Single Chip 8-Bit N-Channel Microprocessor
8085A-2	Single Chip 8-Bit N-Channel Microprocessor
8155H	2048-Bit Static HMOS RAM with I/O Ports and timer
8156H	2048-Bit Static HMOS RAM with I/O Ports and timer
8155H-2	2048-Bit Static HMOS RAM with I/O Ports and timer
8156H-2	2048-Bit Static HMOS RAM with I/O Ports and timer
8155	2048-Bit Static MOS RAM with I/O Ports and Timer
8156	2048-Bit Static MOS RAM with I/O Ports and Timer
8155-2	2048-Bit Static MOS RAM with I/O Ports and Timer
8156-2	2048-Bit Static MOS RAM with I/O Ports and Timer
8185	1024 X 8-Bit Static RAM for MCS-85
8185-2	1024 X 8-Bit Static RAM for MCS-85
8205	High Speed 1 Out of 8 Binary Decoder
8212	8-Bit Input/Output Port

Component	Description
8216	4-Bit Parallel Bidirectional Bus Driver
8226	4-Bit Parallel Bidirectional Bus Driver
8218	Bipolar Microcomputer Bus Controller for MCS-80 & MCS-85 Family
8219	Bipolar Microcomputer Bus Controller for MCS-80 & MCS-85 Family
8224	Clock Generator and Driver for 8080A CPU
8228	System Controller and Bus Driver for 8080A CPU
8238	System Controller and Bus Driver for 8080A CPU
8237A	High Performance Programmable Interrupt Controller
8237A-4	High Performance Programmable Interrupt Controller
8237A-5	High Performance Programmable Interrupt Controller
8257	Programmable DMA Controller
8257-5	Programmable DMA Controller
8259A	Programmable Interrupt Controller
8259A-2	Programmable Interrupt Controller
8259A-8	Programmable Interrupt Controller
8355	16,384-Bit ROM with I/O
8355-2	16,384-Bit ROM with I/O
8755A	16,384-Bit EPROM with I/O
8755A-2	16,384-Bit EPROM with I/O

Component	Description
iAPX 86, 88, 186, 188 MICROPROCESSORS	
8086	16-Bit HMOS Microprocessor
8086-1	16-Bit HMOS Microprocessor
8086-2	16-Bit HMOS Microprocessor
80186	High Integration 16-Bit Microprocessor
8088	8-Bit HMOS Microprocessor
8088-2	8-Bit HMOS Microprocessor
80188	High Integration 8-Bit Microprocessor
8089	8 & 16-Bit HMOS I/O Processor
8087	Numeric Data Coprocessor
80130	iRMX 86 Operating System Processor
80130-2	iRMX 86 Operating System Processor
80150	CP/M-86 Operating System Processors
80150-2	CP/M-86 Operating System Processors
8282	Octal Latch
8283	Octal Latch
8284A	Clock Generator and Driver for iAPX 86, 88 Processors
8284A-1	Clock Generator and Driver for iAPX 86, 88 Processors
8286	Octal Bus Transceiver
8287	Octal Bus Transceiver
8288	Bus Controller for iAPX 86, 88 Processors
8289	Bus Arbiter
8289-1	Bus Arbiter

Component	Description
iAPX 286 MICROPROCESSORS	
80286	High Performance Microprocessor with Memory Management and Protection
80287	80-Bit HMOS Numeric Processor Extension
80287-3	80-Bit HMOS Numeric Processor Extension
82284	Clock Generator and Ready Interface for iAPX 286 Processor
82284-6	Clock Generator and Ready Interface for iAPX 286 Processor
82288	Bus Controller for iAPX 286 Processors
82288-6	Bus Controller for iAPX 286 Processors
MEMORY CONTROLLERS	
8202A	Dynamic RAM Controller
8203	64K Dynamic Ram Controller
82C03	CMOS 64K Dynamic Ram Controller
8208	Dynamic RAM Controller
SUPPORT PERIPHERALS	
8231A	Arithmetic Processing Unit
8253	Programmable Interval Timer
8253-5	Programmable Interval Timer
8254	Programmable Interval Timer
8255A	Programmable Peripheral Interface
8255A-5	Programmable Peripheral Interface

Component List by Function

Component	Description
8256AH	Multifunctional Universal Asynchronous Receiver Transmitter (MUART)
8279	Programmable Keyboard/Display Interface
8279-5	Programmable Keyboard/Display Interface
82285	Clock Generator and Ready Interface for I/O Coprocessors

FLOPPY DISK CONTROLLERS

8271	Programmable Floppy Disk Controller
8271-6	Programmable Floppy Disk Controller
8272A	Single/Double Density Floppy Disk Controller

HARD DISK CONTROLLERS

82062	Winchester Disk Controller
8041A	Universal Peripheral Interface 8-Bit Microcomputer
8641A	Universal Peripheral Interface 8-Bit Microcomputer
8741A	Universal Peripheral Interface 8-Bit Microcomputer
8042	Universal Peripheral Interface 8-Bit Microcomputer
8742	Universal Peripheral Interface 8-Bit Microcomputer
8243	MCS-48 Input/Output Expander
8295	Dot Matrix Print Controller

Component	Description
GLOBAL COMMUNICATIONS	
8251A	Programmable Communication Interface
8273	Programmable HDLC/SDLC Protocol Controller
8273-4	Programmable HDLC/SDLC Protocol Controller
8274	Multi-Protocol Serial Controller (MPSC)
82530	Serial Communications Controller (SCC)
82530-6	Serial Communications Controller (SCC)
LOCAL AREA NETWORKS	
82501	Ethernet Serial Interface
82586	Local Area Network Coprocessor
OTHER DATA COMMUNICATIONS	
8291A	GPIB Talker/Listener
8292	GPIB Controller
8293	GPIB Transceiver
8294A	Data Incription Unit
ALPHANUMERIC TERMINAL CONTROLLERS	
8275	Programmable CRT Controller
8276	Small System CRT Controller
GRAPHIC DISPLAY PRODUCTS	
82720	Graphic Display Controller

Component	Description
TEXT PROCESSING PRODUCTS	
82731	Video Interface Controller
RAMs (Random Access Memories)	
2114A	1024 x 4-Bit Static Ram
2115A	High Speed 1K x 1-Bit Static RAM
2125A	High Speed 1K x 1-Bit Static RAM
2115H	High Speed 1K x 1-Bit Static RAM
2125A	High Speed 1K x 1-Bit Static RAM
2148H	1024 x 4-Bit Static RAM
2149H	1024 x 4-Bit Static RAM
2164A	65,536 x 1-Bit Dynamic RAM
2186A	8192 x 8 Bit Integrated RAM
2186	8192 x 8 Bit Integrated RAM
2187A	8192 x 8 Bit Integrated RAM
51C64	65,536 x 1-Bit CHMOS Dynamic RAM
51C65	Static Column CHMOS Dynamic RAM
EPROMS (Erasable Programmable Read Only Memories)	
2732A	32K (4K x 8 VU Erasable PROM)
2764	64K (8K x 8 VU Erasable PROM)
2764A	Advanced 64K (8K x 8 VU Erasable PROM)
27128	128K (16K x 8 VU Erasable PROM)
27128A	Advanced 128K (16K x 8 VU Erasable PROM)
27256	256K (32K x 8 VU Erasable PROM)

Component	Description
E2PROMS & NVRAMS (Incircuit Programmable Writable Memories)	
2004	4K (512 x 8) Non-volatile Random Access Memory
2816A	16K (2K x 8) Electrically Erasable EPROM
2817A	16K (2K x 8) Electrically Erasable EPROM
BUBBLE MEMORY	
7220	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-1	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-4	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7220-5	Controller for 1MBit BPK 70A Bubble Memory Subsystem
7224	Controller for 4MBit
MCS-51	
8031AH	Single-Component 8-Bit Microcomputer
8051AH	Single-Component 8-Bit Microcomputer
8032AH	Single-Component 8-Bit Microcomputer
8052AH	Single-Component 8-Bit Microcomputer
8751H	Single-Component 8-Bit Microcomputer
8751H-11	Single-Component 8-Bit Microcomputer
8751H-10	Single-Component 8-Bit Microcomputer

Component List by Function

Component	Description
8751H-8	Single-Component 8-Bit Micro
MCS-48	
8048AH	HMOS Single-Component 8-Bit Microcomputer
8748H	HMOS Single-Component 8-Bit Microcomputer
8035AHL	HMOS Single-Component 8-Bit Microcomputer
8049AH	HMOS Single-Component 8-Bit Microcomputer
8749H	HMOS Single-Component 8-Bit Microcomputer
8039AHL	HMOS Single-Component 8-Bit Microcomputer
8050AH	HMOS Single-Component 8-Bit Microcomputer
8040AHL	HMOS Single-Component 8-Bit Microcomputer
MC3-48 Express	
80C49-7	CHMOS Single-Component 8-Bit Microcomputer
80C39-7	CHMOS Single-Component 8-Bit Microcomputer
RUPI	
8044AH	High Performance 8-Bit Microcontroller with On-Chip Serial Communication Center
8344AH	High Performance 8-Bit Microcontroller with On-Chip Serial Communication Center
8744H	High Perf 8-Bit Microcontroller with On-Chip Serial Comm Center

FILE LIST BY COMPONENT FUNCTION

8-BIT N-CHANNEL MICROPROCESSOR
PC-CAPS SYMBOL: 8080A.SYM, 8080A-1.SYM, 8080A-2.SYM
PC-CARDS PART : 8080A.PRT, 8080A-1.PRT, 8080A-2.PRT
PIN CONFIGURATION: DIP40

8-BIT HMOS MICROPROCESSORS
PC-CAPS SYMBOL: 8085AH.SYM, 8085AH-1.SYM, 8085AH-2.SYM
PC-CARDS PART : 8085AH.PRT, 8085AH-1.PRT, 8085AH-2.PRT
PIN CONFIGURATION: DIP40

SINGLE CHIP 8-BIT N-CHANNEL MICROPROCESSORS
PC-CAPS SYMBOL: 8085A.SYM, 8085A-2.SYM
PC-CARDS PART : 8085A.PRT, 8085A-2.PRT
PIN CONFIGURATION: DIP40

2048-BIT STATIC HMOS RAM WITH I/O PORTS AND TIMER
PC-CAPS SYMBOL: 8155H.SYM, 8155H-2.SYM, 8156H.SYM, 8156H-2.SYM
PC-CARDS PART : 8155H.PRT, 8155H-2.PRT, 8156H.PRT, 8156H-2.PRT
PIN CONFIGURATION: DIP40

2048-BIT STATIC MOS RAM WITH I/O PORTS AND TIMER
PC-CAPS SYMBOL: 8155.SYM, 8155-2.SYM, 8156.SYM, 8156-2.SYM
PC-CARDS PART : 8155.PRT, 8155-2.PRT, 8156.PRT, 8156-2.PRT
PIN CONFIGURATION: DIP40

1024 X 8-BIT STATIC RAM
PC-CAPS SYMBOL: 8185.SYM, 8185-2.SYM
PC-CARDS PART : 8185.PRT, 8185-2.PRT
PIN CONFIGURATION: DIP18

HIGH SPEED 1 OUT OF 8 BINARY DECODER
PC-CAPS SYMBOL: 8205.SYM
PC-CARDS PART : 8205.PRT
PIN CONFIGURATION: DIP16

8-BIT INPUT/OUTPUT PORT
PC-CAPS SYMBOL: 8212.SYM
PC-CARDS PART : 8212.PRT
PIN CONFIGURATION: DIP24

4-BIT PARALLEL BIDIRECTIONAL BUS DRIVER
PC-CAPS SYMBOL: 8226.SYM
PC-CARDS PART : 8226.PRT
PIN CONFIGURATION: DIP16

4-BIT PARALLEL BIDIRECTIONAL BUS DRIVER
PC-CAPS SYMBOL: 8216.SYM
PC-CARDS PART : 8216.PRT
PIN CONFIGURATION: DIP16

BIPOLAR MICROCOMPUTER BUS CONTROLLER
PC-CAPS SYMBOL: 8218.SYM
PC-CARDS PART : 8218.PRT
PIN CONFIGURATION: DIP28

BIPOLAR MICROCOMPUTER BUS CONTROLLER
PC-CAPS SYMBOL: 8219.SYM
PC-CARDS PART : 8219.PRT
PIN CONFIGURATION: DIP28

CLOCK GENERATOR AND DRIVER
PC-CAPS SYMBOL: 8224.SYM
PC-CARDS PART : 8224.PRT
PIN CONFIGURATION: DIP16

SYSTEM CONTROLLER AND BUS DRIVER
PC-CAPS SYMBOL: 8228.SYM, 8238.SYM
PC-CARDS PART : 8228.PRT, 8238.PRT
PIN CONFIGURATION: DIP28

HIGH PERFORMANCE PROGRAMMABLE DMA CONTROLLER
PC-CAPS SYMBOL: 8237A.SYM, 8237A-4.SYM,
8237A-5.SYM
PC-CARDS PART : 8237A.PRT, 8237A-4.PRT,
8237A-5.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE DMA CONTROLLER
PC-CAPS SYMBOL: 8257.SYM, 8257-5.SYM
PC-CARDS PART : 8257.PRT, 8257-5.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE INTERRUPT CONTROLLER
PC-CAPS SYMBOL: 8259A.SYM, 8259A-2.SYM,
8259A-8.SYM
PC-CARDS PART : 8259A.PRT, 8259A-2.PRT,
8259A-8.PRT
PIN CONFIGURATION: DIP28

16,384-BIT ROM WITH I/O
PC-CAPS SYMBOL: 8355.SYM, 8355-2.SYM
PC-CARDS PART : 8355.PRT, 8355-2.PRT
PIN CONFIGURATION: DIP40

16,384-BIT EPROM WITH I/O
PC-CAPS SYMBOL: 8755A.SYM, 8755A-2.SYM
PC-CARDS PART : 8755A.PRT, 8755A-2.PRT
PIN CONFIGURATION: DIP40

16-BIT HMOS MICROPROCESSOR
PC-CAPS SYMBOL: 8086.SYM, 8086-1.SYM,
8086-2.SYM
PC-CARDS PART : 8086.PRT, 8086-1.PRT,
8086-2.PRT
PIN CONFIGURATION: DIP40

8 & 16-BIT HMOS I/O PROCESSOR
PC-CAPS SYMBOL: 8089.SYM
PC-CARDS PART : 8089.PRT
PIN CONFIGURATION: DIP40

8-BIT HMOS MICROPROCESSOR
PC-CAPS SYMBOL: 8088.SYM, 8088-2.SYM
PC-CARDS PART : 8088.PRT, 8088-2.PRT
PIN CONFIGURATION: DIP40

NUMERIC DATA COPROCESSOR
PC-CAPS SYMBOL: 8087.SYM
PC-CARDS PART : 8087.PRT
PIN CONFIGURATION: DIP40

iRMX 86 OPERATING SYSTEM PROCESSORS
PC-CAPS SYMBOL: 80130.SYM, 80130-2.SYM
PC-CARDS PART : 80130.PRT, 80130-2.PRT
PIN CONFIGURATION: DIP40

CP/M-86 OPERATING SYSTEM PROCESSORS
PC-CAPS SYMBOL: 80150.SYM, 80150-2.SYM
PC-CARDS PART : 80150.PRT, 80150-2.PRT
PIN CONFIGURATION: DIP40

OCTAL LATCH
PC-CAPS SYMBOL: 8282.SYM
PC-CARDS PART : 8282.PRT
PIN CONFIGURATION: DIP20

OCTAL LATCH
PC-CAPS SYMBOL: 8283.SYM
PC-CARDS PART : 8283.PRT
PIN CONFIGURATION: DIP20

CLOCK GENERATOR AND DRIVER
PC-CAPS SYMBOL: 8284A.SYM, 8284A-1.SYM
PC-CARDS PART : 8284A.PRT, 8284A-1.PRT
PIN CONFIGURATION: DIP18

OCTAL BUS TRANSCEIVER
PC-CAPS SYMBOL: 8286.SYM
PC-CARDS PART : 8286.PRT
PIN CONFIGURATION: DIP20

OCTAL BUS TRANSCEIVER
PC-CAPS SYMBOL: 8287.SYM
PC-CARDS PART : 8287.PRT
PIN CONFIGURATION: DIP20

BUS CONTROLLER
PC-CAPS SYMBOL: 8288.SYM
PC-CARDS PART : 8288.PRT
PIN CONFIGURATION: DIP20

BUS ARBITER
PC-CAPS SYMBOL: 8289.SYM, 8289-1.SYM
PC-CARDS PART : 8289.PRT, 8289-1.PRT
PIN CONFIGURATION: DIP20

80-BIT HMOS NUMERIC PROCESSOR EXTENSION
PC-CAPS SYMBOL: 80287.SYM, 80287-3.SYM
PC-CARDS PART : 80287.PRT, 80287-3.PRT
PIN CONFIGURATION: DIP40

CLOCK GENERATOR AND READY INTERFACE
PC-CAPS SYMBOL: 82284.SYM, 82284-6.SYM
PC-CARDS PART : 82284.PRT, 82284-6.PRT
PIN CONFIGURATION: DIP18

BUS CONTROLLER
PC-CAPS SYMBOL: 82288.SYM, 82288-6.SYM
PC-CARDS PART : 82288.PRT, 82288-6.PRT
PIN CONFIGURATION: DIP20

DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8202A.SYM
PC-CARDS PART : 8202A.PRT
PIN CONFIGURATION: DIP40

64K DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8203.SYM
PC-CARDS PART : 8203.PRT
PIN CONFIGURATION: DIP40

CMOS 64K DYNAMIC RAM CONTOLLER
PC-CAPS SYMBOL: 82C03.SYM
PC-CARDS PART : 82C03.PRT
PIN CONFIGURATION: DIP40

DYNAMIC RAM CONTROLLER
PC-CAPS SYMBOL: 8208.SYM
PC-CARDS PART : 8208.PRT
PIN CONFIGURATION: DIP48

ARITHMETIC PROCESSING UNIT
PC-CAPS SYMBOL: 8231A.SYM
PC-CARDS PART : 8231A.PRT
PIN CONFIGURATION: DIP24

PROGRAMMABLE INTERVAL TIMER
PC-CAPS SYMBOL: 8253.SYM, 8253-5.SYM,
8254.SYM
PC-CARDS PART : 8253.PRT, 8253-5.PRT,
8254.PRT
PIN CONFIGURATION: DIP24

PROGRAMMABLE PERIPHERAL INTERFACE
PC-CAPS SYMBOL: 8255A.SYM, 8255A-5.SYM
PC-CARDS PART : 8255A.PRT, 8255A-5.PRT
PIN CONFIGURATION: DIP40

MULTIFUNCTION UNIVERSAL ASYNCHRONOUS
RECEIVER-TRANSMITTER (MUART)
PC-CAPS SYMBOL: 8256AH.SYM
PC-CARDS PART : 8256AH.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE KEYBOARD/DISPLAY INTERFACE
PC-CAPS SYMBOL: 8279.SYM, 8279-5.SYM
PC-CARDS PART : 8279.PRT, 8279-5.PRT
PIN CONFIGURATION: DIP40

CLOCK GENERATOR AND READY INTERFACE FOR I/O COPROCESSORS
PC-CAPS SYMBOL: 82285.SYM
PC-CARDS PART : 82285.PRT
PIN CONFIGURATION: DIP18

PROGRAMMABLE FLOPPY DISK CONTROLLER
PC-CAPS SYMBOL: 8271.SYM, 8271-6.SYM
PC-CARDS PART : 8271.PRT, 8271-6.PRT
PIN CONFIGURATION: DIP40

SINGLE/DOUBLE DENSITY FLOPPY DISK CONTROLLER
PC-CAPS SYMBOL: 8272A.SYM
PC-CARDS PART : 8272A.PRT
PIN CONFIGURATION: DIP40

WINCHESTER DISK CONTROLLER
PC-CAPS SYMBOL: 82062.SYM
PC-CARDS PART : 82062.PRT
PIN CONFIGURATION: DIP40

UNIVERSAL PERIPHERAL INTERFACE 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8041A.SYM, 8641A.SYM, 8741A.SYM, 8042.SYM, 8742.SYM
PC-CARDS PART : 8041A.PRT, 8641A.PRT, 8741A.PRT, 8042.PRT, 8742.PRT
PIN CONFIGURATION: DIP40

INPUT/OUTPUT EXPANDER
PC-CAPS SYMBOL: 8243.SYM
PC-CARDS PART : 8243.PRT
PIN CONFIGURATION: DIP24

DOT MATRIX PRINTER CONTROLLER
PC-CAPS SYMBOL: 8295.SYM
PC-CARDS PART : 8295.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE COMMUNICATION INTERFACE
PC-CAPS SYMBOL: 8251A.SYM
PC-CARDS PART : 8251A.PRT
PIN CONFIGURATION: DIP28

PROGRAMMABLE HDLC/SDLC PROTOCOL CONTROLLER
PC-CAPS SYMBOL: 8273.SYM, 8273-4.SYM
PC-CARDS PART : 8273.PRT, 8273-4.PRT
PIN CONFIGURATION: DIP40

MULTI-PROTOCOL SERIAL CONTROLLER (MPSC)
PC-CAPS SYMBOL: 8274.SYM
PC-CARDS PART : 8274.PRT
PIN CONFIGURATION: DIP40

SERIAL COMMUNICATIONS CONTOLLER (SCC)
PC-CAPS SYMBOL: 82530.SYM, 82530-6.SYM
PC-CARDS PART : 82530.PRT, 82530-6.PRT
PIN CONFIGURATION: DIP40

ETHERNET SERIAL INTERFACE
PC-CAPS SYMBOL: 82501.SYM
PC-CARDS PART : 82501.PRT
PIN CONFIGURATION: DIP20

LOCAL AREA NETWORK COPROCESSOR
PC-CAPS SYMBOL: 82586.SYM
PC-CARDS PART : 82586.PRT
PIN CONFIGURATION: DIP48

GPIB TALKER/LISTENER
PC-CAPS SYMBOL: 8291A.SYM
PC-CARDS PART : 8291A.PRT
PIN CONFIGURATION: DIP40

GPIB CONTROLLER
PC-CAPS SYMBOL: 8292.SYM
PC-CARDS PART : 8292.PRT
PIN CONFIGURATION: DIP40

GPIB TRANSCEIVER
PC-CAPS SYMBOL: 8293.SYM
PC-CARDS PART : 8293.PRT
PIN CONFIGURATION: DIP28

DATA ENCRYPTION UNIT
PC-CAPS SYMBOL: 8294A.SYM
PC-CARDS PART : 8294A.PRT
PIN CONFIGURATION: DIP40

PROGRAMMABLE CRT CONTROLLER
PC-CAPS SYMBOL: 8275.SYM
PC-CARDS PART : 8275.PRT
PIN CONFIGURATION: DIP40

SMALL SYSTEM CRT CONTROLLER
PC-CAPS SYMBOL: 8276.SYM
PC-CARDS PART : 8276.PRT
PIN CONFIGURATION: DIP40

GRAPHICS DISPLAY CONTROLLER
PC-CAPS SYMBOL: 82720.SYM
PC-CARDS PART : 82720.PRT
PIN CONFIGURATION: DIP40

VIDEO INTERFACE CONTROLLER
PC-CAPS SYMBOL: 82731.SYM
PC-CARDS PART : 82731.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8031AH.SYM, 8051AH.SYM
PC-CARDS PART : 8031AH.PRT, 8051AH.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8032AH.SYM, 8052AH.SYM
PC-CARDS PART : 8032AH.PRT, 8052AH.PRT
PIN CONFIGURATION: DIP40

SINGLE-COMPONENT 8-BIT MICROCOMPUTERS
PC-CAPS SYMBOL: 8751H.SYM, 8751H-11.SYM,
8751H-10.SYM, 8751H-8.SYM
PC-CARDS PART : 8751H.PRT, 8751H-11.PRT,
8751H-10.PRT, 8751H-8.PRT
PIN CONFIGURATION: DIP40

HIGH PERFORMANCE 8-BIT MICROCONTROLLER WITH
ON-CHIP SERIAL COMMUNICATION CENTER
PC-CAPS SYMBOL: 8044AH.SYM, 8344AH.SYM,
8744H.SYM
PC-CARDS PART : 8044AH.SYM, 8344AH.SYM,
8744H.SYM
PIN CONFIGURATION: DIP40

HMOS SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 8048AH.SYM, 8748H.SYM,
8035AHL.SYM, 8049AH.SYM
8749H.SYM, 8039AHL.SYM,
8050AH.SYM, 8040AHL.SYM
PC-CARDS PART : 8048AH.PRT, 8748H.PRT,
8035AHL,PRT, 8049AH.PRT
8749H.PRT, 8039AHL.PRT,
8050AH.PRT, 8040AHL.PRT
PIN CONFIGURATION: DIP40

CHMOS SINGLE-COMPONENT 8-BIT MICROCOMPUTER
PC-CAPS SYMBOL: 80C49-7.SYM, 80C39-7.SYM
PC-CARDS PART : 80C49-7.PRT, 80C39-7.PRT
PIN CONFIGURATION: DIP40

16K (2K X 8) ELECTRICALLY ERASABLE PROM
PC-CAPS SYMBOL: 2816A.SYM
PC-CARDS PART : 2816A.PRT
PIN CONFIGURATION: DIP24

16K (2K X 8) ELECTRICALLY ERASABLE PROM
PC-CAPS SYMBOL: 2817A.SYM
PC-CARDS PART : 2817A.PRT
PIN CONFIGURATION: DIP28

CONTROLLER FOR 1MBIT BPK 70A BUBBLE MEMORY SUBSYSTEM
PC-CAPS SYMBOL: 7220.SYM, 7220-1.SYM, 7220-4.SYM, 7220-5.SYM
PC-CARDS PART : 7220.PRT, 7220-1.PRT, 7220-4.PRT, 7220-5.PRT
PIN CONFIGURATION: DIP40

CONTROLLER FOR 4MBIT BPK 5V74 BUBBLE MEMORY SUBSYSTEM
PC-CAPS SYMBOL: 7224.SYM
PC-CARDS PART : 7224.PRT
PIN CONFIGURATION: DIP40

32K (4K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2732A.SYM
PC-CARDS PART : 2732A.PRT
PIN CONFIGURATION: DIP24

1024 X 4 BIT STATIC RAM
PC-CAPS SYMBOL: 2114A.SYM, 2148H.SYM, 2149H.SYM
PC-CARDS PART : 2114A.PRT, 2148H.PRT, 2149H.PRT
PIN CONFIGURATION: DIP18

HIGH SPEED 1K X 1 BIT STATIC RAM
PC-CAPS SYMBOL: 2115A.SYM, 2125A.SYM
PC-CARDS PART : 2115A.PRT, 2125A.PRT
PIN CONFIGURATION: DIP16

HMOS HIGH SPEED 1K X 1 BIT STATIC RAM
PC-CAPS SYMBOL: 2115H.SYM, 2125H.SYM
PC-CARDS PART : 2115H.PRT, 2125H.PRT
PIN CONFIGURATION: DIP16

4K (512 X 8) NON-VOLATILE RANDOM ACCESS MEMORY
PC-CAPS SYMBOL: 2004.SYM
PC-CARDS PART : 2004.PRT
PIN CONFIGURATION: DIP28

64K (8K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2764.SYM
PC-CARDS PART : 2764.PRT
PIN CONFIGURATION: DIP28

ADVANCED 64K (8K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 2764A.SYM
PC-CARDS PART : 2764A.PRT
PIN CONFIGURATION: DIP28

128K (16K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27128.SYM
PC-CARDS PART : 27128.PRT
PIN CONFIGURATION: DIP28

ADVANCED 128K (16K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27128A.SYM
PC-CARDS PART : 27128A.PRT
PIN CONFIGURATION: DIP28

65,536 X 1 BIT DYNAMIC RAM
PC-CAPS SYMBOL: 2164A.SYM
PC-CARDS PART : 2164A.PRT
PIN CONFIGURATION: DIP16

65,536 X 1 BIT CHMOS DYNAMIC RAM
PC-CAPS SYMBOL: 51C64.SYM
PC-CARDS PART : 51C64.PRT
PIN CONFIGURATION: DIP16

STATIC COLUMN CHMOS DYNAMIC RAM
PC-CAPS SYMBOL: 51C65.SYM
PC-CARDS PART : 51C65.PRT
PIN CONFIGURATION: DIP16

256K (32K X 8) UV ERASABLE PROM
PC-CAPS SYMBOL: 27256.SYM
PC-CARDS PART : 27256.PRT
PIN CONFIGURATION: DIP28

8192 X 8 BIT INTEGRATED RAM
PC-CAPS SYMBOL: 2186A.SYM, 2186.SYM
PC-CARDS PART : 2186A.PRT, 2186.PRT
PIN CONFIGURATION: DIP28

8192 X 8 BIT INTEGRATED RAM
PC-CAPS SYMBOL: 2187A.SYM
PC-CARDS PART : 2187A.PRT
PIN CONFIGURATION: DIP28

iAPX 186 HIGH INTEGRATED 16-BIT
MICROPROCESSOR
PC-CAPS SYMBOL: 80186.SYM
PC-CARDS PART : 80186.PRT
PIN CONFIGURATION: QUAD68

iAPX 188 HIGH INTEGRATED 8-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80188.SYM
PC-CARDS PART : 80188.PRT
PIN CONFIGURATION: QUAD68

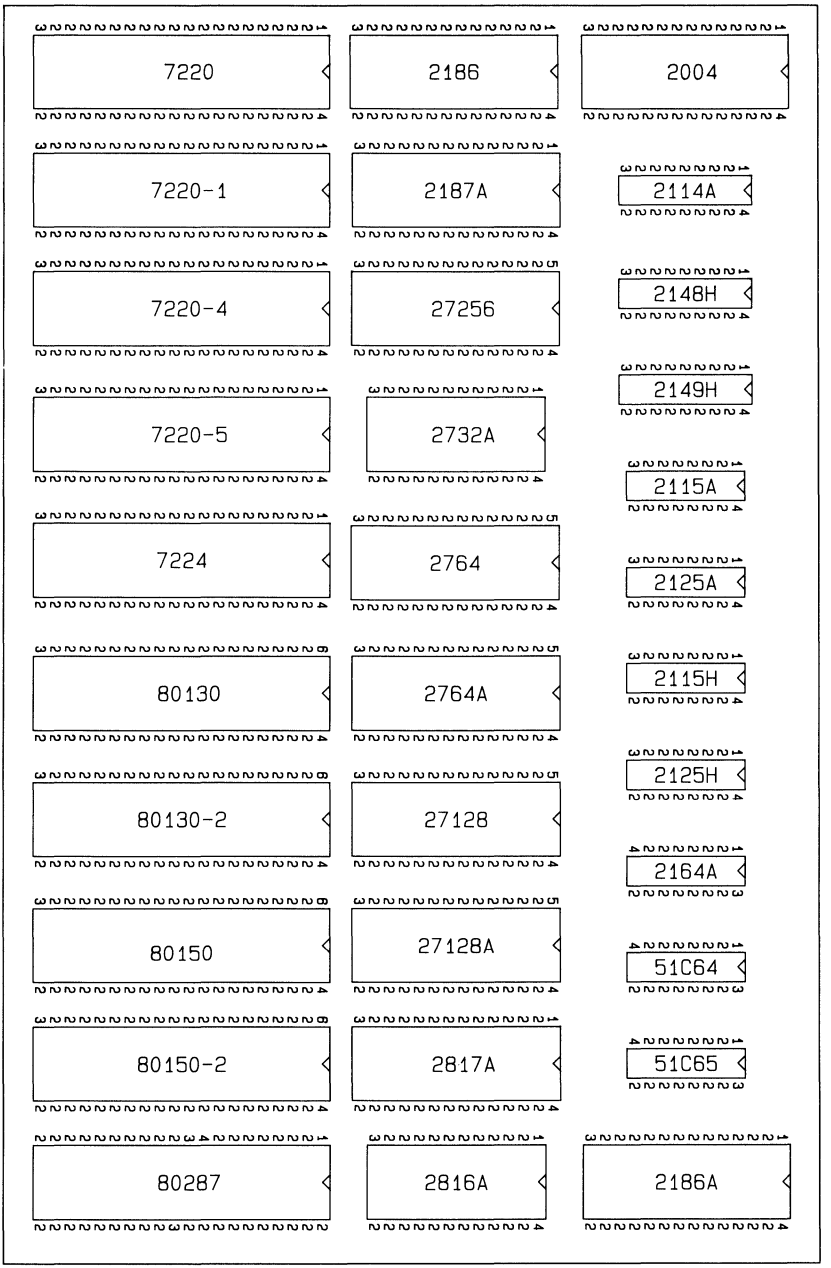
iAPX 286/10 HIGH PERFORMANCE MICROPROCESSOR
WITH MEMORY MANAGEMENT AND PROTECTION
PC-CAPS SYMBOL: 80286.SYM
PC-CARDS PART : 80286.PRT
PIN CONFIGURATION: QUAD68

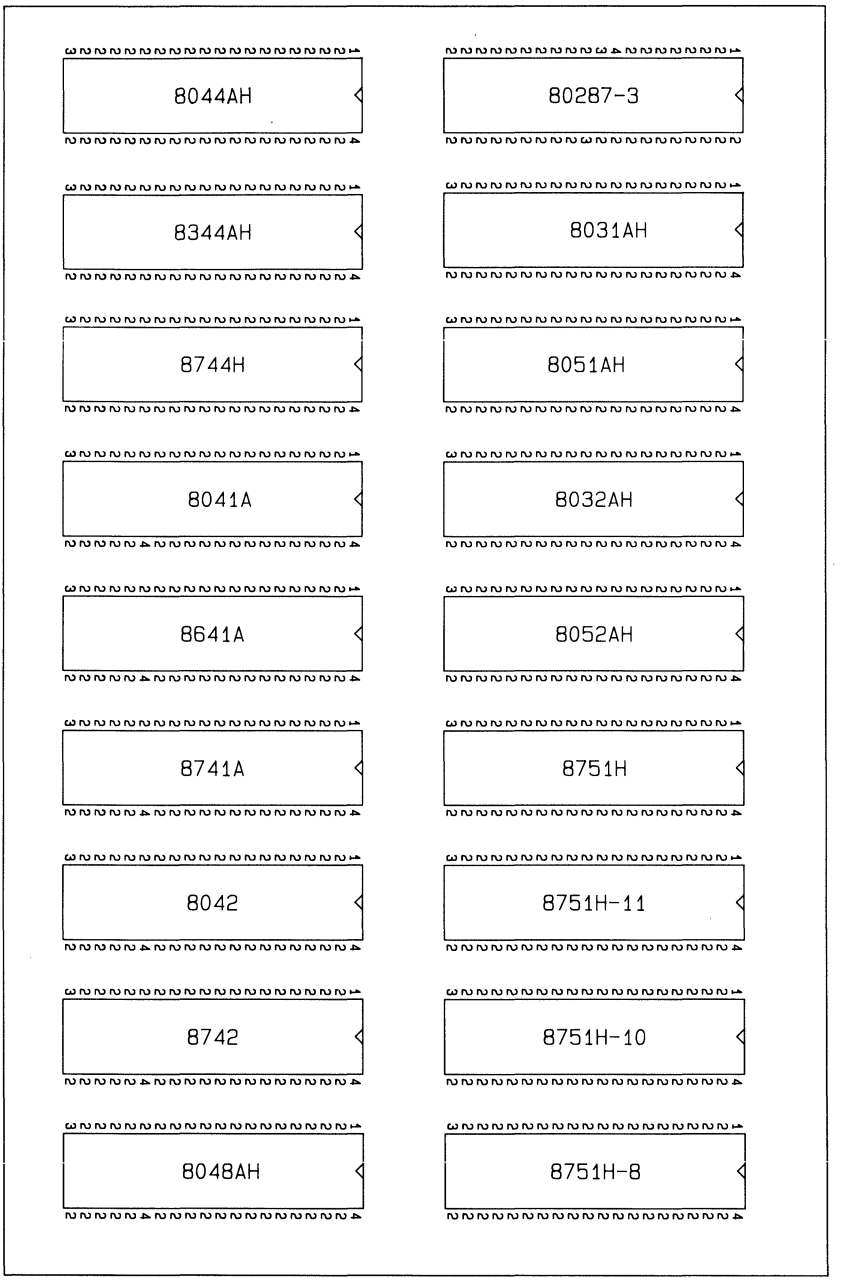
iAPX 186 HIGH INTEGRATED 16-BIT
MICROPROCESSOR
PC-CAPS SYMBOL: 80186T.SYM
PC-CARDS PART : 80186T.PRT
PIN CONFIGURATION: QUAD68

iAPX 188 HIGH INTEGRATED 8-BIT MICROPROCESSOR
PC-CAPS SYMBOL: 80188T.SYM
PC-CARDS PART : 80188T.PRT
PIN CONFIGURATION: QUAD68

iAPX 286/10 HIGH PERFORMANCE MICROPROCESSOR
WITH MEMORY MANAGEMENT AND PROTECTION
PC-CAPS SYMBOL: 80286T.SYM
PC-CARDS PART : 80286T.PRT
PIN CONFIGURATION: QUAD68

COMPONENT PLOTS

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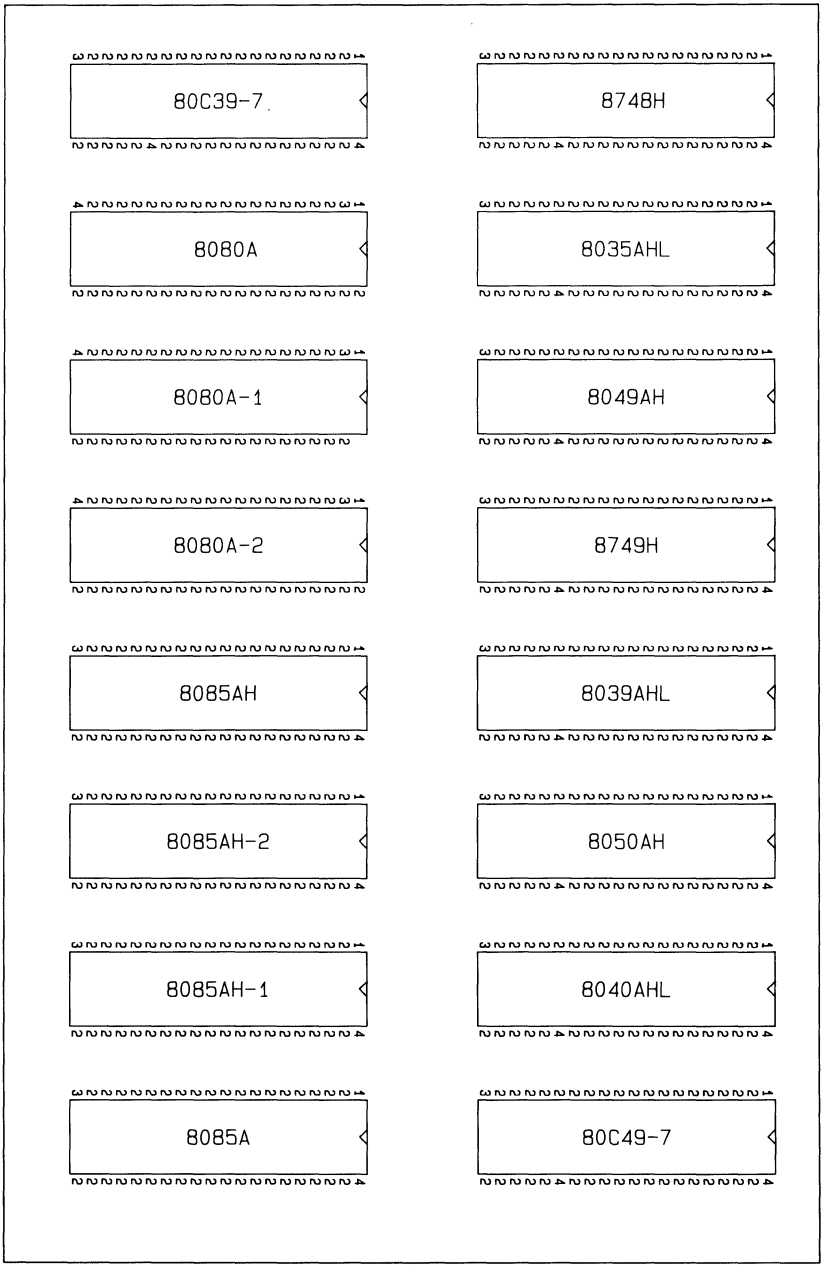
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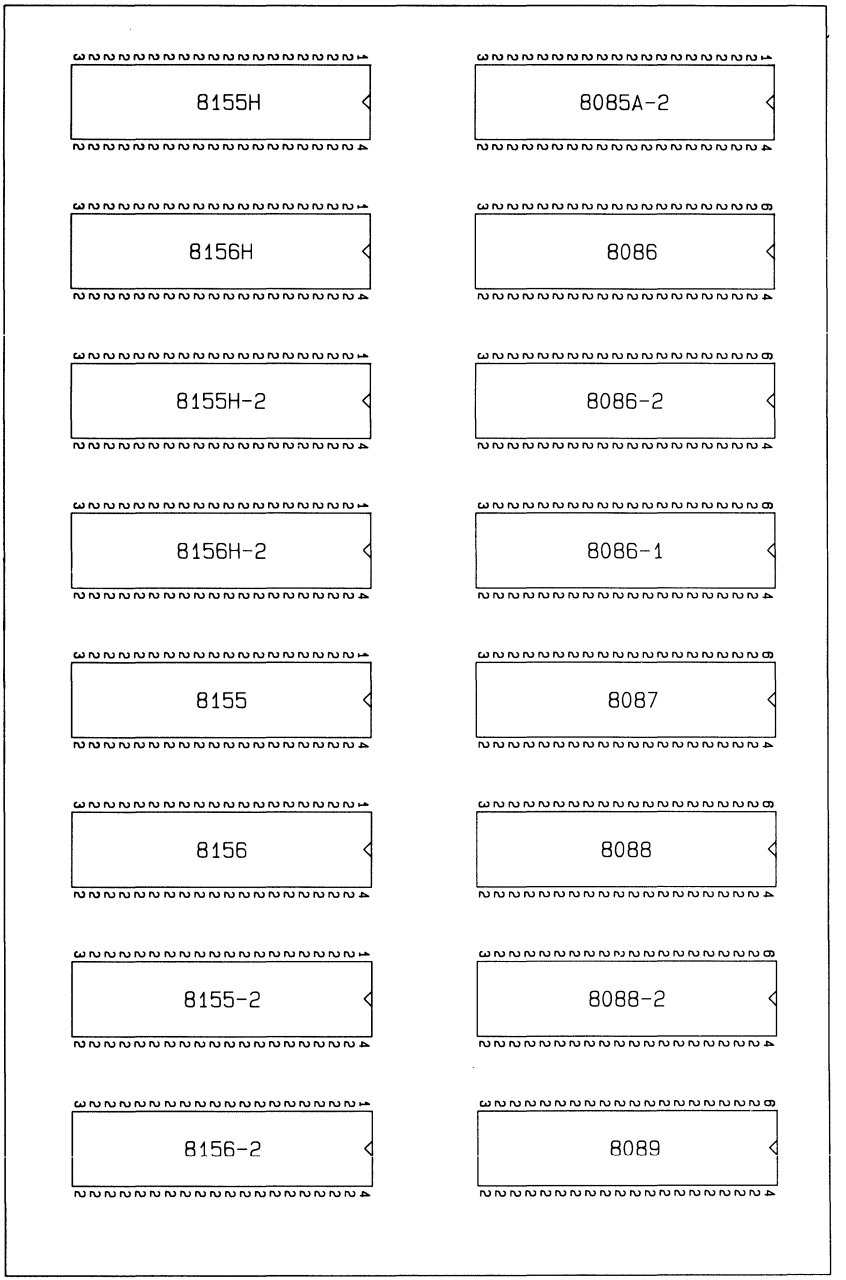
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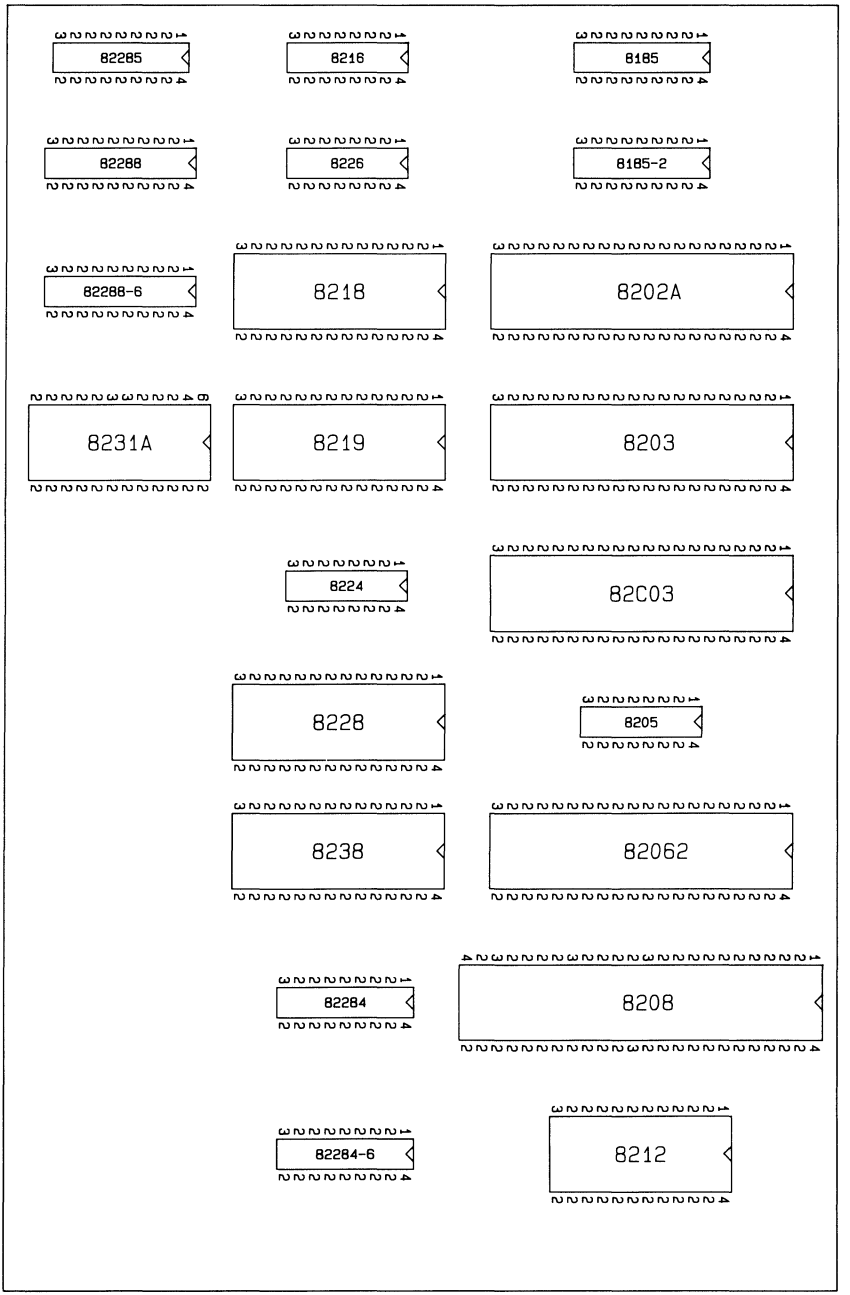
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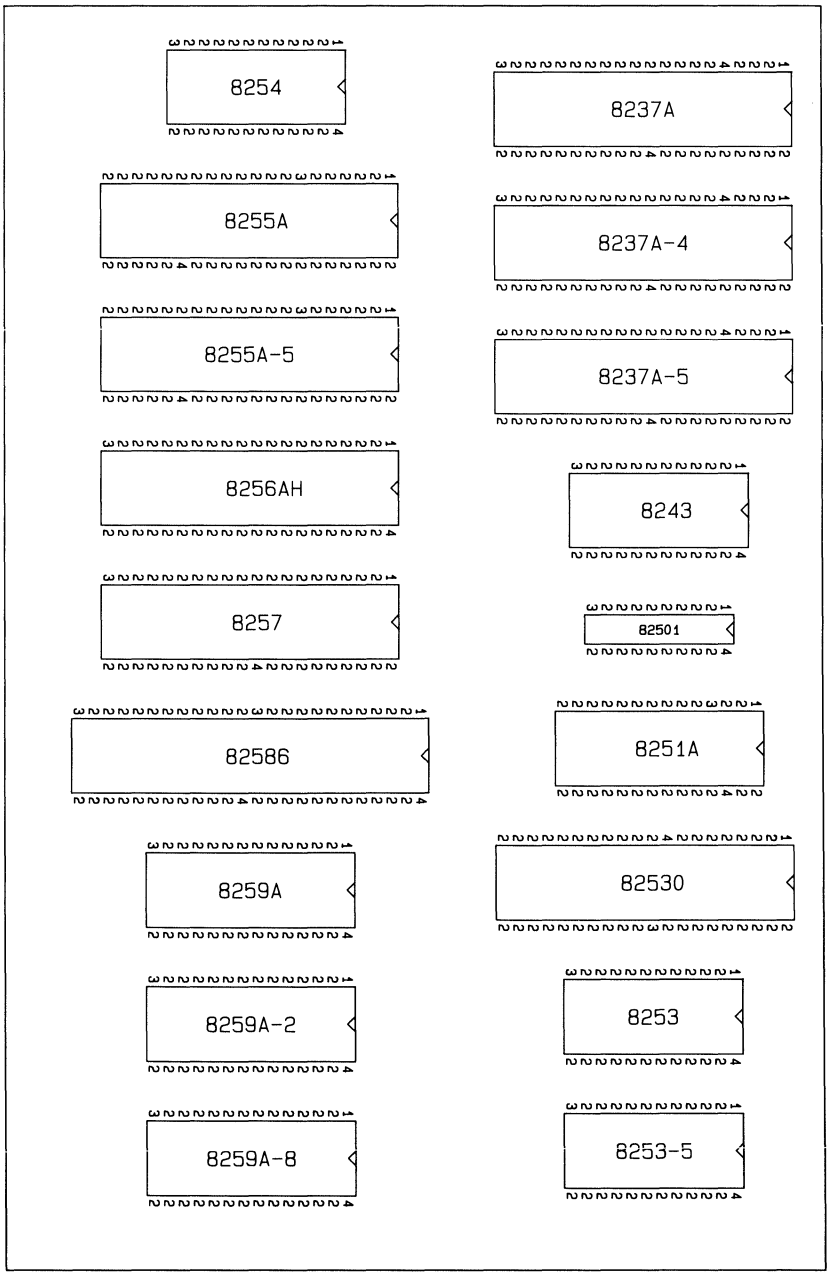
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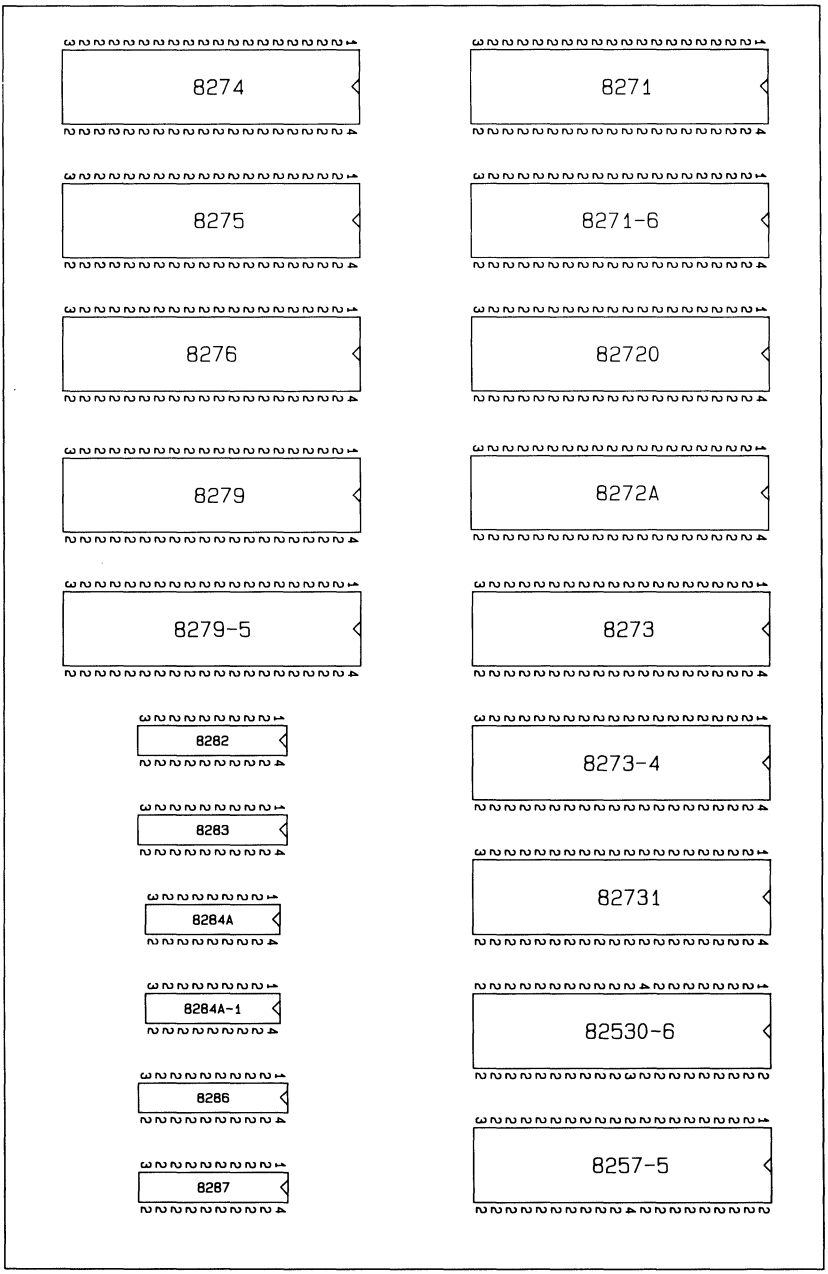
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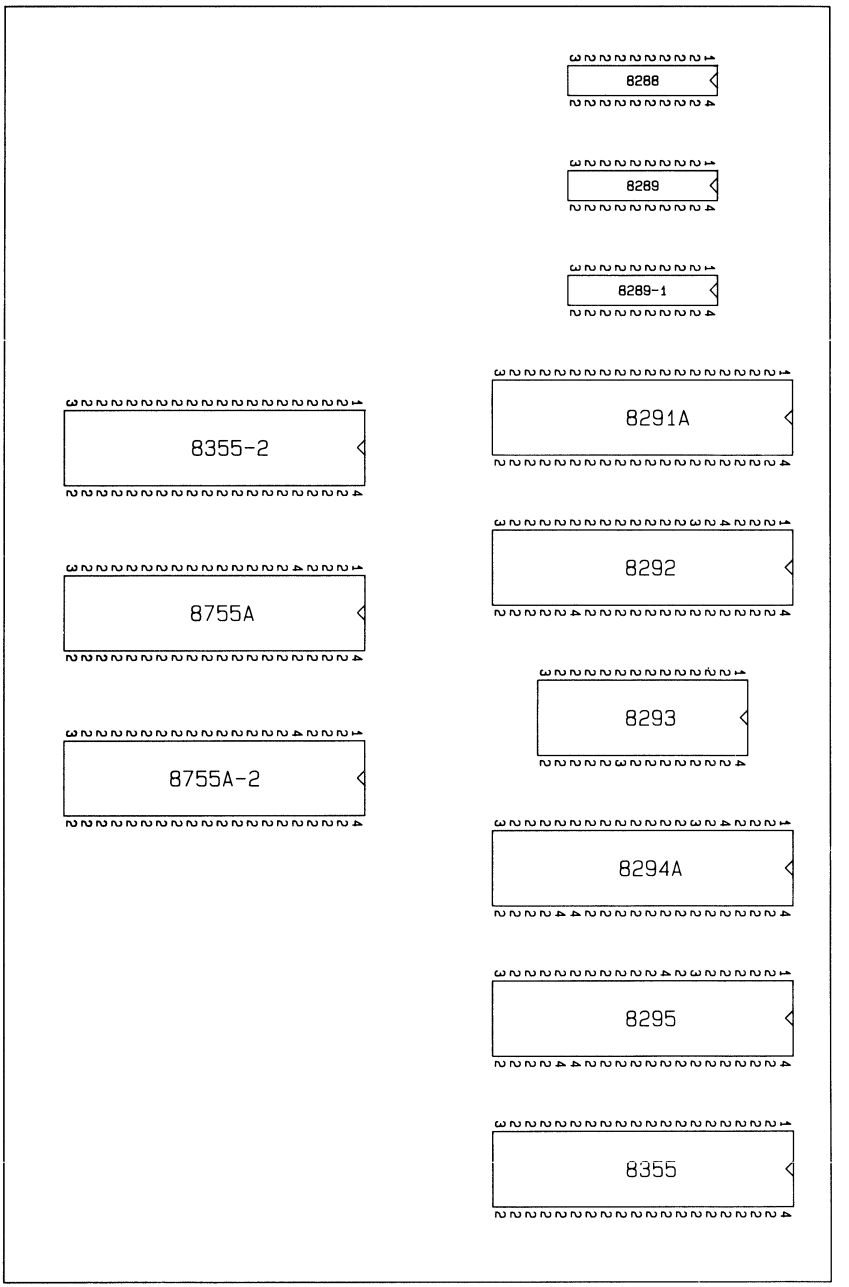
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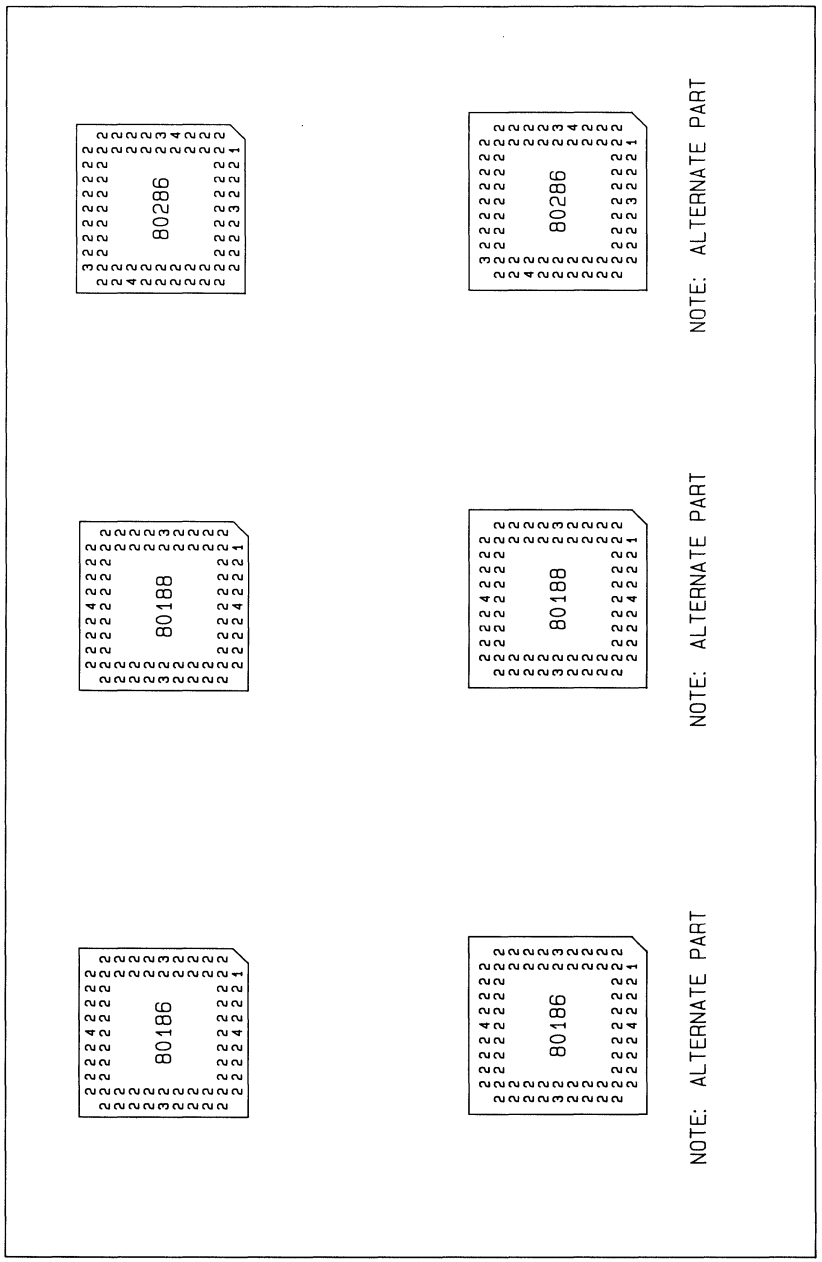
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