MOTOROLA® MICROPROCESSOR COMPONENTS LIBRARY

Schematic Symbols

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TRADEMARK

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OVERVIEW

This manual and the five Motorola Microprocessor Schematic Symbol Diskettes comprise the P-CAD Motorola Microprocessor Schematic Symbols Library. The library has been developed at the request of our users, and we welcome any suggestions for improvements or additions.

The library diskettes contain the following files for use with the PC-CAPS schematic capture program:

- Component files
- Layer structure files, LAYS.SYM and LAYS.SCH
- Standard-size drawing sheet files, ASIZE.SCH through ESIZE.SCH
- MOTOROLA.FIL and MOTOROLA.LIB files

  MOTOROLA.FIL is a sample text file used as input into PREPACK to create the binary file MOTOROLA.LIB that contains packaging information for PC-PACK. Both MOTOROLA.FIL and MOTOROLA.LIB contain all the components in the Motorola Microprocessor Library. Normal usage is to extract only those components used in a design and put them in a new .FIL file for input to PREPACK.

Storage of these files in a practical and efficient directory structure is discussed in the next section of this manual. The following section, "Creating a Design", tells you how to use the files with PC-CAPS.

The remainder of the manual is devoted to lists of components by sequence and function, component pin sequences, and component plots.

FILE MANAGEMENT

The complete Motorola Microprocessor Symbols Library includes more than 1.4 MB of files. If you are loading the library on the hard disk of your stand-alone computer, you should omit any of the components that you will not need in order to conserve disk space. This is especially important if you are using a 10 MB hard disk.

If your hard disk space is very limited, you may remove individual unneeded components from the library. Each component is contained in a separate DOS file, and individual components may be erased using the DOS erase command. Refer to your IBM DOS Manual or the "DOS Reference" chapter included with your PC-CAPS or PC-CARDS User's Manuals for instructions on listing and erasing files.

P-CAD recommends a specific directory structure for efficient system operation. Your library symbols are normally placed in a specific subdirectory to make it easy to manage these files. The directory structure is described in your P-CAD Installation Guide.

CREATING A DESIGN

To use the library in a design, run PC-CAPS. Instructions are given in the "Using PC-CAPS" chapter of your PC-CAPS User's Manual. When the menu is displayed, select FILE/LOAD and load the layer structure. You can load LAYS.SCH or one of the standard-size drawing sheet files, ASIZE.SCH through ESIZE.SCH.

Layer Structure

Two layer structure files are included with this library, LAYS.SYM and LAYS.SCH. There is no difference between LAYS.SYM and LAYS.SCH other than the active state of the layers.

The following layer structure, LAYS.SYM, is a standard P-CAD layer structure and is recommended when creating library components.

Table 1. LAYS.SYM Layer Structure

Layer	Name	Pen	Status	Use
1	WIRES	1	OFF	Interconnecting wires
2	BUS	1	OFF	Interconnecting busses/wires

Table 1 Continued

Layer	Name	Pen	Status	Use
3	GATE	2	ABL (A)	Symbol graphics (ANSII)
4	IEEE	2	OFF	Symbol graphics (IEEE)
5	PINFUN	3	OFF	Pin functions (IEEE)
6	PINNUM	1	ABL	Pin numbers
7	PINNAM	6	ABL	Pin names
8	PINCON	4	ABL	Pin connections
9	REFDES	2	ABL	Reference designators
10	ATTR	6	OFF	Visible attributes
11	SDOT	1	OFF	Solder dots (not used)
12	DEVICE	5	ABL	Device name
13	OUTLIN	5	OFF	Component outline
14	ATTR2	6	OFF	Invisible attributes
15	NOTES	6	OFF	Notes/text/ documentation
16	NETNAM	4	OFF	Net/signal names (schematic)
17	CMPNAM	5	OFF	Component instance names
18	BORDER	5	OFF	Drawing/schematic border

The following layer structure, LAYS.SCH, is another standard P-CAD layer structure and is recommended when creating schematics.

Table 2. LAYS.SCH Layer Structure

Layer	Name	Pen	Status	Use
1	WIRES	1	ABL (A)	Interconnecting wires
2	BUS	1	ABL	Interconnecting busses/wires
3	GATE	2	ON	Symbol graphics (ANSII)
4	IEEE	2	OFF	Symbol graphics (IEEE)
5	PINFUN	3	OFF	Pin functions (IEEE)
6	PINNUM	1	ON	Pin numbers
7	PINNAM	6	ON	Pin names
8	PINCON	4	ON	Pin connections
9	REFDES	2	ON	Reference designators
10	ATTR	6	OFF	Visible attributes
11	SDOT	1	ON	Solder dots (not used)
12	DEVICE	5	ON	Device name
13	OUTLIN	5	OFF	Component outline
14	ATTR2	6	OFF	Invisible attributes
15	NOTES	6	OFF	Notes/text/ documentation

Table 2 Continued

Layer	Name	Pen	Status	Use
16	NETNAM	4	ABL	Net/signal names (schematic)
17	CMPNAM	5	OFF	Component instance names
18	BORDER	5	OFF	Drawing/schematic border

Drawing Sheets

The standard-size drawing sheet files, ASIZE.SCH through ESIZE.SCH, were created using the LAYS.SCH layer structure. When loaded, they provide the correct layer structure for the library plus a standard-size drawing sheet border.

Components

When you have loaded your layer structure or drawing sheet file, you can enter the symbols, wires, text, instances, and net names. Complete instructions are given in the "Using PC-CAPS" chapter of your PC-CAPS User's Manual. Each PC-CAPS component contains the electrical "intelligence" required to create schematics and extract data.

GENERAL INFORMATION

This library was created using Motorola's Single-Chip Microcomputer Data Book, Motorola's 8-Bit Microprocessor and Peripheral Data Book and individual data sheets for specific parts. Additional references include Hitachi's Microcomputer Data Book, Intel's Memory Components Handbook, Rockwell's 1984 Data Book, Signetics' MOS Microprocessor Data Manual, and Fairchild's MicroProcessor Products Data Book.

IEEE representations of all the devices are included. All complex devices are treated as gray boxes; limited information concerning the function of the devices is provided. All simple devices have normal IEEE representations.

Due to system limitations regarding filename length, two filenames are truncated versions of the component names; 1468705F2 and 1468705G2 were shortened to 1468705F and 1468705G, respectively.

Some components come in more than one package. To distinguish components that come in more than one package, we have used the following filenaming conventions:

68-pin LCC - The filename ends in L; for example, 68000L.SYM.

PGA - The filename ends in P; for example, 68000P.SYM.

24-pin skinny-dip - The filename ends in SK; for example, 3447SK.SYM.

If a device comes only in a PGA package, then the filename always ends in P.

NAMING CONVENTIONS

In this library, all the signal names are drawn exactly as shown in the Motorola data sheets except where the abbreviation of the signal name is required due to the length of the name. For example, VCC STANDBY may be shortened to VCCSTBY. In addition, some names in the data sheets may contain an illegal character such as a slash (/). In cases such as these, the charcters are either omitted or replaced with a dash (-). The actual signal names for the symbols are given in the pinlists in this manual.

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

Table 3. Signal Naming Conventions

Signal Name	Convention
CLOCK	CLK
R/W'	R-W
VCC STANDBY	VCCSTBY

PIN NUMBERS

The numbering scheme used by Motorola for the pin grid arrays (PGA) packages is incompatible with PCAD software, so it was necessary to adopt the numbering scheme used by Hitachi.

Table 4. 68-pin Pin Grid Array Cross Reference

P-CAD Pin Number	Motorola Pin Number	P-CAD Pin Number	Motorola Pin Number
1	A1	35	A3
2	B1	36	A2
3	C1	37	B2
4	D1	38	C2
5	E1	39	D2
6	F1	40	E2
7	G1	41	F2
8	H1	42	G2
9	J1	43	H2
10	K1	44	J2
11	K2	45	J3
12	K3	46	J4
13	K4	47	J5
14	K5	48	J6
15	K6	49	J7
16	K7	50	J8
17	K8	51	J9
18	K9	52	H9
19	K10	53	G9
20	J10	54	F9
21	H10	55	E9
22	G10	56	D9
23	F10	57	C9
24	E10	58	B9
25	D10	59	B8
26	C10	60	B7
27	B10	61	B6
28	A10	62	B5
29	A9	63	B4
30	A8	64	B3
31	A7	65	C3
32	A6	66	H3
33	A5	67	H8
34	A4	68	C8

Table 5. 84-pin Pin Grid Array Cross Reference

P-CAD Pin Number	Motorola Pin Number	P-CAD Pin Number	Motorola Pin Number
1	A1	43	H2
2	B1	44	J2
3	C1	45	J3
4	D1	46	J4
5	E1	47	J5
6	F1	48	J6
7	G1	49	J7
8	H1	50	J8
9	J1	51	J9
10	K1	52	H9
11	K2	53	G9
12	K3	54	F9
13	K4	55	E9
14	K5	56	D9
15	K6	57	C9
16	K7	58	B9
17	K8	59	B8
18	K9	60	B7
19	K10	61	B6
20	J10	62	B5
21	H10	63	B4
22	G10	64	B3
23	F10	65	C3
24	E10	66	D3
25	D10	67	E3
26	C10	68	F3
27	B10	69	G3
28	A10	70	H3
29	A9	71	H4
30	A8	72	H5
31	A7	73	H6
32	A6	74	H7
33	A5	75	H8
34	A4	76	G8
35	A3	77	F8
36	A2	78	E8
37	B2	79	D8
38	C2	80	C8
39	D2	81	C7
40	E2	82	C6
41	F2	83	C5
42	G2	84	C4

Table 6. 114-pin Pin Grid Array Cross Reference

P-CAD Pin Number	Motorola Pin Number	P-CAD Pin Number	Motorola Pin Number
1	A1	43	A7
2	B1	44	A6
3	C1	45	A5
4	D1	46	A4
5	E1	47	A3
6	F1	48	A2
7	G1	49	B2
8	H1	50	C2
9	J1	51	D2
10	K1	52	E2
11	L1	53	F2
12	M1	54	G2
13	N1	55	H2
14	N2	56	J2
15	N3	57	K2
16	N4	58	L2
17	N5	59	M2
18	N6	60	M3
19	N7	61	M4
20	N8	62	M5
21	N9	63	M6
22	N10	64	M7
23	N11	65	M8
24	N12	66	M9
25	N13	67	M10
26	M13	68	M11
27	L13	69	M12
28	K13	70	L12
29	J13	71	K12
30	H13	72	J12
31	G13	73	H12
32	F13	74	G12
33	E13	75	F12
34	D13	76	E12
35	C13	77	D12
36	B13	78	C12
37	A13	79	B12
38	A12	80	B11
39	A11	81	B10
40	A10	82	B9
41	A9	83	B8
42	A8	84	B7

Table 6 Continued

P-CAD Pin Number	Motorola Pin Number	P-CAD Pin Number	Motorola Pin Number
85	B6	100	L6
86	B5	101	L7
87	B4	102	L8
88	B3	103	L9
89	C3	104	L10
90	D3	105	L11
91	E3	106	G11
92	F3	107	C11
93	G3	108	C10
94	H3	109	C9
95	J3	110	C8
96	K3	111	C7
97	L3	112	C6
98	L4	113	C5
99	L5	114	C4

COMPONENT LIST BY SEQUENCE

The component filename is the component number plus the extension .SYM; for example, 6800.SYM. "Plot Number" refers to the plots in the last section of this manual.

SYMBOL	DISK NUMBER	PLOT NUMBER (ANSI/IEEE)
2670	1	1/1A
2671	1	1/1A
2672	1	1/1A
2673A	1	1/1A
2673B	1	1/1A
2674	1	1/1A
2675	1	2/2A
2716	1	2/2A
2732	1	2/2A
2764	1	2/2A
3440	1	2/2A
3441	1	2/2A
3443	1	2/2A
3446	1	2/2A
3447	1	2/2A
3447SK	1	2/2A
3448	1	3/3A
3870	1	3/3A
6172	1	3/3A
6173	1	3/3A
6800	1	3/3A
6801	1	3/3A
6801U4	1	3/3A
6802	1	3/3A
6802NS	1	3/3A
6803	1	4/4A
6803E	1	4/4A
6803U4	1	4/4A
66804J2	1	4/4A
6804P2	1	4/4A
68HC04P2	1	4/4A
68HC04P3	1	4/4A
6805K2	1	4/4A
6805K3	1	4/4A
6805P2	1	5/5A
6805P4	1	5/5A
6805P6	1	5/5A
6805R2	1	5/5A

SYMBOL	DISK NUMBER	PLOT NUMBER (ANSI/IEEE)
6805R3	2	5/5A
6805S2	2	5/5A
6805T2	2	5/5A
6805U2	2	5/5A
6805U3	2	6/6A
68HC05C4	2	6/6A
6808	2	6/6A
6809	2	6/6A
6809E	2	6/6A
68HC09E	2	6/6A
6810	2	6/6A
6821	2	6/6A
6822	2	6/6A
6829	2	7/7A
68HC34	2	7/7A
6835	2	7/7A
6836E16	2	7/7A
6836R16	2	7/7A
6839	2	7/7A
6840	2	7/7A
6843	2	7/7A
6844	2	7/7A
6845	2	7/7A
6846	2	8/8A
6847	2	8/8A
6847Y	2	8/8A
6850	2	8/8A
68HC51	2	8/8A
6852	2	8/8A
68HC53	2	8/8A
6854	2	8/8A
6859	2	8/8A
6860	2	8/8A
6875	2	9/9A
6875A	2	9/9A
6880	2	9/9A
6882A	2	9/9A
6882B	2	9/9A
6883	2	9/9A
6885	3	9/9A
6886	3	9/9A
6887	3	9/9A
6888	3	9/9A
6889	3	9/9A
6890	3	9/9A

SYMBOL	DISK NUMBER	PLOT NUMBER (ANSI/IEEE)
27128	3	9/9A
27256	3	10/10A
68000	3	10/10A
68000L	3	10/10A
68000P	3	10/10A
68008	3	10/10A
68010	3	11/11A
68010P	3	11/11A
68012P	3	11/11A
68020P	3	11/11A
68120	3	11/11A
68121	3	12/12A
68153	3	12/12A
68230	3	12/12A
68430	3	12/12A
68440	3	12/12A
68440P	3	13/13A
68450	3	13/13A
68450P	3	13/13A
68451	3	13/13A
68451L	3	13/13A
68451P	4	14/14A
68452	4	14/14A
68465	4	14/14A
68486	4	14/14A
68487	4	14/14A
68488	4	15/15A
68561	4	15/15A
68564	4	15/15A
68652	4	15/15A
68653	4	15/15A
68661	4	16/16A
68681	4	16/16A
68701	4	16/16A
68701U4	4	16/16A
68705P3	4	16/16A
68705P5	4	16/16A
68705R3	4	16/16A
68705R5	4	17/17A
68705U3	4	17/17A
68705U5	4	17/17A
68802	4	17/17A
68881P	4	17/17A
68901	4	18/18A
146805E2	4	18/18A

SYMBOL	DISK NUMBER	PLOT NUMBER (ANSI/IEEE)
146805E3	4	18/18A
146805F2	4	18/18A
146805G2	4	18/18A
146805H2	4	19/19A
146818	4	19/19A
146818A	4	19/19A
146823	4	19/19A
1468705F2	5	19/19A
1468705G2	5	19/19A

COMPONENT LIST BY FUNCTION

The component filename is the component number plus the extension .SYM; for example, 6800.SYM.

A/D CONVERTERS

6890	8-Bit MPU D/A converter

ADDRESS MULTIPLEXERS

6883	Synchronous address multiplexer

BUFFERS

6882A	Octal buffer/latch with inverted outputs
6882B	Octal buffer/latch with non-inverted outputs
6885	Hex address buffer
6886	Hex address buffer
6887	Hex address buffer
6888	Hex address buffer

BUS CONTROL MODULES

68153	Bus interrupter module
68452	Bus arbitration module

BUS TRANSCEIVERS

3440	Quad interface bus transceiver
3441	Quad interface bus transceiver
3443	Quad interface bus transceiver
3446	Quad bidirectional bus transceiver
3447	Octal GPIB transceiver
3447SK	Octal GPIB transceiver in a 24-pin skinny dip
3448	Quad GPIB transceiver
6880	Quad bus transceiver
6889	Quad bus transceiver

CLOCK GENERATORS

6875	Two-phase clock generator
6875A	Two-phase clock generator

COMMUNICATION CIRCUITS

6172	Digital modulator
6173	Digital demodulator
6854	Advanced data-link controller
6860	Digital modem
68561	Multi-protocol communications controller
68564	Serial input/output
68652	Multi-protocol communications controller
68681	Dual asynchronous receiver and transmitter
68802	Local network controller

COPROCESSORS

68881P	HCMOS floating point coprocessor in a 68-pin PGA package

DIRECT MEMORY ACCESS CONTROLLERS

6844	Direct memory access controller
68440	Dual-channel direct memory access controller
68440P	Dual-channel direct memory access controller in a 68-pin PGA package
68450	Direct memory access controller
68450P	Direct memory access controller in a 68-pin PGA package

DISK CONTROLLERS

6843	Floppy disk controller
68465	Double-density floppy disk controller

INTERFACE/ADAPTERS

6821	Peripheral interface adapter
6822	Industrial interface adapter
6850	Asynchronous communications interface adapter
68HC51	Asynchronous communications interface adapter
6852	Synchronous serial data adapter
68HC53	Asynchronous communications interface adapter
68120	Intelligent peripheral interface
68121	Intelligent peripheral interface
68230	Parallel interface/timer
68430	Direct memory access interface
68488	General purpose interface bus adapter

INTERFACE/ADAPTERS (Continued)

68661	Enhanced programmable communications interface
146823	CMOS parallel interface

KEYBOARD CONTROLLERS

2671	Programmable keyboard and communications controller

MEMORY MANAGEMENT UNITS

6829	Memory management unit
68HC34	Dual-port memory unit
68451	Memory management unit
68451L	Memory management unit in a 68-pin LCC package
68451P	Memory management unit in a 68-pin PGA package

MICROCOMPUTERS

6801	8-Bit microcomputer
6801U4	8-Bit microcomputer
6804J2	8-Bit microcomputer
6804P2	8-Bit microcomputer
68HC04P2	8-Bit HCMOS microcomputer
68HC04P3	8-Bit HCMOS microcomputer
6805K2	8-Bit microcomputer with serial peripheral interface and two timers
6805K3	8-Bit microcomputer with A/D converter, serial peripheral interface, and two timers
6805P2	8-Bit HMOS 1K microcomputer
6805P4	8-Bit HMOS 2K microcomputer
6805P6	8-Bit microcomputer
6805R2	8-Bit microcomputer
6805R3	8-Bit microcomputer
6805S2	8-Bit microcomputer with A/D converter, serial peripheral interface, and three timers
6805T2	8-Bit HMOS 2K microcomputer with PLL
6805U2	8-Bit microcomputer
6805U3	8-Bit microcomputer
68HC05C4	8-Bit HCMOS microcomputer
68701	8-Bit microcomputer with EPROM
68701U4	8-Bit microcomputer with EPROM

MICROCOMPUTERS (Continued)

68705P3	8-Bit microcomputer with EPROM
68705P5	8-Bit microcomputer with EPROM
68705R3	8-Bit microcomputer with EPROM
68705R5	8-Bit microcomputer with EPROM
68705U3	8-Bit microcomputer with EPROM
68705U5	8-Bit microcomputer with EPROM
146805F2	8-Bit CMOS microcomputer
146805G2	8-Bit CMOS microcomputer
146805H2	8-Bit CMOS microcomputer
1468705F	8-Bit microcomputer with EPROM (1468705F2)
1468705G	8-Bit microcomputer with EPROM (1468705G2)

MICROCONTROLLERS

3870	8-Bit single-chip microcontroller

MICROPROCESSORS

6800	8-Bit Microprocessor unit
6802	8-Bit microprocessor with clock and optional RAM
6802NS	8-Bit microprocessor with clock and optional RAM
6803	8-Bit microprocessor unit
6803E	8-Bit microprocessor unit
6803U4	8-Bit microprocessor unit
6808	8-Bit microprocessor with clock
6809	8-Bit microprocessor unit
6809E	8-bit microprocessor unit
68HC09E	8-Bit HCMOS microprocessor unit
68000	16/32-Bit microprocessor unit
68000L	16/32-Bit microprocessor unit in a 68-pin LCC package
68000P	16/32-Bit microprocessor unit in a 68-pin PGA package
68008	8/32-Bit microprocessor unit with an 8-bit data bus
68010	16/32-Bit virtual memory microprocessor
68010P	16/32-Bit virtual memory microprocessor in a 68-pin PGA package
68012P	16/32-Bit virtual memory microprocessor in an 84-pin PGA package

MICROPROCESSORS (Continued)

68020P	32-Bit microprocessor in a 114-pin PGA package
146805E2	8-Bit CMOS microprocessor unit
146805E3	8-Bit CMOS microprocessor unit

PERIPHERALS

68901	Multi-function peripheral

POLYNOMIAL GENERATOR CHECKER

68653	Polynomial generator checker and character comparator

RAM

6810	128x8 Bit Static RAM

ROM/EPROM

2716	2Kx8 EPROM
2732A	4Kx8 EPROM
2764	8Kx8 EPROM
27128	16Kx8 EPROM
27256	32Kx8 EPROM
6836E16	128K combination ROM/EPROM memory
6836R16	128K combination ROM/EPROM memory
6839	Floating-point ROM
6846	ROM-I/O-timer

SECURITY DEVICES

6859	Data security device

TIMERS/CLOCKS

6840	Programmable timer
146818	Real-time clock with RAM
146818A	Real-time clock with RAM

VIDEO DISPLAY GENERATORS/CONTROLLERS

2670	Display character and graphics generator
2672	Programmable video timing controller
2673A	Video attributes controller with light pen strike-through
2673B	Video attributes controller with graphics control
2674	Advanced video display controller
2675	Color/monochrome attributes controller
6835	Mask programmed CRT controller
6845	CRT controller
6847	Video diplay controller
6847Y	Video display controller with interlace
68486	Raster memory interface
68487	Raster memory controller

COMPONENT PIN SEQUENCES

The component filename is the component number plus the extension .SYM; for example, 6800.SYM.

DEVICE	PINS		
2670:	CA0	CA1	CA2
	CA3	CA4	CA5
	CA6	CA7	LA0
	LA1	LA2	LA3
	SCD	GM	CSTROBE
	LSTROBE	D0	D1
	D2	D3	D4
	D5	D6	D7
	D8	D9	
2671:	D0	D1	D2
	D3	D4	D5
	D6	D7	RXC
	TXC	XINTR'	INTA'
	INTR'	A0	A1
	A2	CE'	R'
	W'	RXD	TXD
	KC0	KC1	KC2
	KC3	KR0	KR1
	KR2	KCLK	KDRES
	HYS'	TONE	REPEAT'
	KRET	SHIFT'	CONTROL'
	XTL1	XTL2-BRC	
2672:	D0	D1	D2
	D3	D4	D5
	D6	D7	A0
	A1	A2	INTR'
	CE'	R	'W'
	CCLK'	DADD0	DADD1
	DADD2	DADD3	DADD4
	DADD5	DADD6	DADD7
	DADD8	DADD9	DADD10
	DADD11	DADD12	DADD13
	CURSOR	LPS	CTRL1
	CTRL2	CTRL3	HSYNC
	V-CSYNC	BLANK	
2673A:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	CC0	CC1

	CC2	DCLK	CBLANK
	BKGND	HDOT	CURSOR
	ARVID	ABLANK	ABLINK
	AHILT	AUL	ALTPEN
	AFLG	AMODE	ACD
	BLINK	UL	LL
	LPL	BLANK	RESET
	CCLK'	TTLVID1	TTLVID2
	VIDEO	VSS	
2673B:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	CC0	CC1
	CC2	DCLK	CBLANK
	BKGND	HDOT	CURSOR
	ARVID	ABLANK	ABLINK
	AHILT	AUL	AGM
	AFLG	AMODE	ACD
	BLINK	UL	LL
	GMD	BLANK	RESET
	CCLK'	TTLVID1	TTLVID2
	VIDEO	VSS	
2674:	D0	D1	D2
	D3	D4	D5
	D6	D7	A0
	A1	A2	INTR'
	CE'	R'	W'
	CCLK'	DADD0	DADD1
	DADD2	DADD3	DADD4
	DADD5	DADD6	DADD7
	DADD8	DADD9	DADD10
	DADD11	DADD12	DADD13
	CURSOR	CTRL1	CTRL2
	CTRL3	ACLL	HSYNC
	V-CSYNC	BLANK	
2675:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	ADOUBLE	DOTM	DOTS
	ADOTM	C0	C1
	DCLK	RBLANK	UL
	BLINK	CURSOR	CMODE
	ABLINK	AUL	M-C
	ABL-ABLA	AGR-BKGN	ARE-AHIL

	ABL-AGP2	AGR-ARVI	ARE-AGP1
	BLANK	RESET	RE-TTLV1
	BL-TTLV2	GR-GP1	LUM-GP2
	CCLK'	VBB	
2716:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	CE'
	OE'	O0	O1
	O2	O3	O4
	O5	O6	O7
2732:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	CE'	OE'	O0
	O1	O2	O3
	O4	O5	O6
	O7		
2764:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	PGM'	CE'
	OE'	O0	O1
	O2	O3	O4
	O5	O6	O7
3440:	E	DA	RA
	DB	RB	DD
	RD	DC	RC
	BA	BB	BD
	BC		
3441:	E	DA	RA
	DB	RB	DC
	RC	DD	RD
	BA	BB	BC
	BD		
3443:	E	DA	RA
	DB	RB	DC
	RC	DD	RD
	BA	BB	BC
	BD		

3446:	ENABC	END	DA
	RA	DB	RB
	DC	RC	DD
	RD	BA	BB
	BC	BD	
3447:	SR0	SR1-4	SR5
	SR6	SR7	D0
	D1	D2	D3
	D4	D5	D6
	D7	B0B1	
	B2	B3	B4
	B5	B6	B7
3447SK:	SR0	SR1-4	SR5
	SR6	SR7	D0
	D1	D2	D3
	D4	D5	D6
	D7	B0	B1
	B2	B3	B4
	B5	B6	B7
3448:	PULLUPEN	S-RA	S-RB
	DA	DB	BA
	BB		
3870:	P0-0'	P0-1'	P0-2'
	P0-3'	P0-4'	P0-5'
	P0-6'	P0-7'	P1-0'
	P1-1'	P1-2'	P1-3'
	P1-4'	P1-5'	P1-6'
	P1-7'	EXTINT	TEST
	RESET'	XTL1	XTL2
	P4-0'	P4-1'	P4-2'
	P4-3'	P4-4'	P4-5'
	P4-6'	P4-7'	P5-0'
	P5-1'	P5-2'	P5-3'
	P5-4'	P5-5'	P5-6'
	P5-7'	STROBE'	
6172:	CTS1	CTS2	RTS'
	CTS'	TPE'	TXDATA
	DRS	PSS	ANBK'
	TXMK'	EXCLK	CLK
	B0	B1	B2
	B3	B4	B5
	DRTS'	TXCLK	DBC
	TST		

6173:	RXDATA	RXCLK	OCAR
	OEYE	90EYE	DCD'
	TPE'	DRS	DBC
	TCLK	CLK	CCOR
	ENV'	PSS	RDI
	CARS'	NSYNC'	FCAR'
	TEN'	TSTR'	ADC
	ADS		
6800:	D0	D1	D2
	D3	D4	D5
	D6	D7	NMI'
	IRQ'	DBE	TSC
	CLK1	CLK2	HALT'
	RESET'	A0	A1
	A2	A3	A4
	A5	A6	A7
	A8	A9	A10
	A11	A12	A13
	A14	A15	R-W
	BA	VMA	
6801:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31P32	P33	P34
	P34P35	P36	P37
	P37P40	P41	P42
	P43	P44	P45
	P46	P47	SC2
	E		
6801U4:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	SC2	E	

6802:	D0	D1	D2
	D3	D4	D5
	D6	D7	MR
	NMI'	IRQ'	RE
	VCCSTBY	HALT'	RESET'
	XTAL	EXTAL	A0
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	E	R-W	BA
	VMA		
6802NS:	D0	D1	D2
	D3	D4	D5
	D6	D7	MR
	NMI'	IRQ'	RE
	VCCSTBY	HALT'	RESET'
	XTAL	EXTAL	A0
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	E	R-W	BA
	VMA		
6803:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	SC2	E	
6803E:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	VCCSTBY	AS	E
	HALT'	RESET'	P30

	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	R-W	BA	
6803U4:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	SC2	E	
6804J2:	PA4	PA5	PA6
	PA7	IRQ'	MDS
	TIMER	RESET'	EXTAL
	XTAL	PB0	PB1
	PB2	PB3	PB4
	PB5	PB6	PB7
6804P2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	IRQ'
	MDS	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	
68HC04P2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	IRQ'
	MDS	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	

68HC04P3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	IRQ'
	MDS	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	
6805K2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-SPIS
	PD1-SPIC	PD2-SPID	PD3-SPID
	PD4-TCN2	PD5-TIMB	PD6-TCN1
	PD7-TIMA	INT1'	RESET'
	EXTAL	XTAL	VSTBY
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
6805K3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-SPIS
	PD1-SPIC	PD2-SPID	PD3-SPID
	PD4-TCN2	PD5-TIMB	PD6-TCN1
	PD7-TIMA	INT1'	RESET'
	EXTAL	XTAL	VSTBY
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
6805P2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	NUM	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	

6805P4:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	VSB	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	
6805P6:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	NUM	TIMER	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	
6805R2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-AN0
	PD1-AN1	PD2-AN2	PD3-AN3
	PD4-VRL	PD5-VRH	PD6-INT2
	PD7	INT'	NUM
	TIMER	RESET'	EXTAL
	XTAL	PB0	PB1
	PB2	PB3	PB4
	PB5	PB6	PB7
	PC0	PC1	PC2
	PC3	PC4	PC5
	PC6	PC7	
6805R3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-AN0
	PD1-AN1	PD2-AN2	PD3-AN3
	PD4-VRL	PD5-VRH	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		

6805S2:	PD0-AN0	PD1-AN1	PD2-AN2
	PD3-AN3	PD4-VRL	PD5-VRH
	PD6-AN4	INT1'	NUM
	RESET'	EXTAL	XTAL
	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PB0
	PB1	PB2	PB3
	PC0	PC1	
6805T2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	NUM	FIN	RESET'
	EXTAL	XTAL	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0-TIME	PC1
	PC2	PHCOMP	
6805U2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6-INT2
	PD7	INT'	NUM
	TIMER	RESET'	EXTAL
	XTAL	PB0	PB1
	PB2	PB3	PB4
	PB5	PB6	PB7
	PC0	PC1	PC2
	PC3	PC4	PC5
	PC6	PC7	
6805U3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		

68HC05C4:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-RDI
	PD1-TDO	PD2-MISO	PD3-MOSI
	PD4-SCK	PD5-SS	PD7
	IRQ'	TCAP	RESET'
	OSC1	OSC2	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PC0	PC1
	PC2	PC3	PC4
	PC5	PC6	PC7
	TCMP		
6808:	D0	D1	D2
	D3	D4	D5
	D6	D7	MR
	NMI'	IRQ'	RE
	HALT'	RESET'	XTAL
	EXTAL	A0	A1
	A2	A3	A4
	A5	A6	A7
	A8	A9	A10
	A11	A12	A13
	A14	A15	E
	R-W	BA	VMA
6809:	D0	D1	D2
	D3	D4	D5
	D6	D7	NMI'
	FIRQ'	IRQ'	DMA-BRQ'
	MRDY	HALT'	RESET'
	EXTAL	XTAL	A0
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	R-W	BA	BS
	E	Q	
6809E:	D0	D1	D2
	D3	D4	D5
	D6	D7	NMI'
	FIRQ'	IRQ'	TSC
	E	Q	HALT'
	RESET'	A0	A1
	A2	A3	A4
	A5	A6	A7

	A8	A9	A10
	A11	A12	A13
	A14	A15	LIC
	AVMA	R-W	BA
	BS	BUSY	
68HC09E:	D0	D1	D2
	D3	D4	D5
	D6	D7	NMI'
	FIRQ'	IRQ'	TSC
	E	Q	HALT'
	RESET'	A0	A1
	A2	A3	A4
	A5	A6	A7
	A8	A9	A10
	A11	A12	A13
	A14	A15	LIC
	AVMA	R-W	BA
	BS	BUSY	
6810:	A0	A1	A2
	A3	A4	A5
	A6	R-W	CS0
	CS1'	CS2'	CS3
	CS4'	CS5'	D0
	D1	D2	D3
	D4	D5	D6
	D7		
6821:	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQA'
	IRQB'	RS0	RS1
	CS0	CS1	CS2'
	E	R-W	RESET'
	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	CA1
	CA2	CB1	CB2
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	
6822:	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQA'
	IRQB'	RS0	RS1
	CS0	CS1	CS2'
	E	R-W	RESET'

	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	CA1
	CA2	CB1	CB2
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	
6829:	A11	A12	A13
	A14	A15	RS0
	RS1	RS2	RS3
	RS4	RS5	RS6
	KVA'	RA'	BA
	BS	R-W	E
	Q	RESET'	D0
	D1	D2	D3
	D4	D5	D6
	D7	PA11	PA12
	PA13	PA14	PA15
	PA16	PA17	PA18
	PA19	PA20	
68HC34:	A0	A1	A2
	A3	A4	A5
	A6	A7	EA
	R-WA	RSA	ASA
	CS1A'	EB	R-WB
	RSB	ASB	CS1B'
	MODE	RESET'	D0
	D1	D2	D3
	D4	D5	D6
	D7	AD0	AD1
	AD2	AD3	AD4
	AD5	AD6	AD7
	IRQA'	IRQB'	
6835:	D0	D1	D2
	D3	D4	D5
	D6	D7	PROG
	RS	CS'	E
	W'	CLK	RESET'
	MA0	MA1	MA2
	MA3	MA4	MA5
	MA6	MA7	MA8
	MA9	MA10	MA11
	MA12	MA13	RA0
	RA1	RA2	RA3
	RA4	DE	HS
	VS	CURSOR	

6836E16:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	W'
	G'	E'	DQ0
	DQ1	DQ2	DQ3
	DQ4	DQ5	DQ6
	DQ7		
6836R16:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	W'
	G'	E'	DQ0
	DQ1	DQ2	DQ3
	DQ4	DQ5	DQ6
	DQ7		
6839:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	E	D0
	D1	D2	D3
	D4	D5	D6
	D7		
6840:	C1'	G1'	C2'
	G2'	C3'	G3'
	RS0	RS1	RS2
	CS0'	CS1	E
	R-W	RESET'	D0
	D1	D2	D3
	D4	D5	D6
	D7	O1	O2
	O3	IRQ'	
6843:	D0	D1	D2
	D3	D4	D5
	D6	D7	TXAK
	TXRQ	IRQ'	RS0
	RS1	RS2	CS'
	E	BD	R-W
	CLK	RESET'	FIR
	HDR	HLD	WGT
	FI	IDX	TRZ

	WPT	RDY	STP
	LCT	VFOC	WDT
	DCK	RDT	
6844:	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQ-DE'
	DRQ1'	DRQ2'	DGRNT
	E	R-W	RESET'
	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	A14
	A15	TXRQ0	TXRQ1
	TXRQ2	TXRQ3	TXAKA
	CS-TXAKB	TXSTB'	
6845:	D0	D1	D2
	D3	D4	D5
	D6	D7	LPSTB
	RS	CS'	E
	R-W	CLK	RESET'
	MA0	MA1	MA2
	MA3	MA4	MA5
	MA6	MA7	MA8
	MA9	MA10	MA11
	MA12	MA13	RA0
	RA1	RA2	RA3
	RA4	DE	HS
	VS	CURSOR	
6846:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	CTC'
	CTG'	CP1	CS0
	CS1	E	R-W
	RESET'	D0	D1
	D2	D3	D4
	D5	D6	D7
	P0	P1	P2
	P3	P4	P5
	P6	P7	CP2
	CTO	IRQ'	
6847:	DD0	DD1	DD2
	DD3	DD4	DD5
	DD6	DD7	GM0
	GM1	GM2	A-G

	A-S	INT-EXT	INV
	CSS	MS'	RP'
	FS'	HS'	CLK
	DA0	DA1	DA2
	DA3	DA4	DA5
	DA6	DA7	DA8
	DA9	DA10	DA11
	DA12	PHA	PHB
	CHB	Y	
6847Y:	DD0	DD1	DD2
	DD3	DD4	DD5
	DD6	DD7	GM0
	GM1	GM2	A-G
	A-S	INT-EXT	INV
	CSS	MS'	RP'
	FS'	HS'	CLK
	DA0	DA1	DA2
	DA3	DA4	DA5
	DA6	DA7	DA8
	DA9	DA10	DA11
	DA12	PHA	PHB
	CHB	Y	
6850:	D0	D1	D2
	D3	D4	D5
	D6	D7	RXCLK
	TXCLK	IRQ'	RS
	CS0	CS1	CS2'
	E	R-W	RXDATA
	TXDATA	RTS'	CTS'
	DCD'		
68HC51:	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQ'
	RS0	RS1	CS0
	CS1'	R-W	CLK
	RESET'	TXD	RXD
	RXC	DSR'	DTR'
	RTS'	CTS'	DCD'
	XTL1		
6852:	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQ'
	RS	CS'	E
	R-W	RESET'	TXD

	TXC	RXD	RXC
	TUF	SM-DTR	CTS'
	DCD'		
68HC53:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	IRQ'
	CS0	CS1'	CS2
	R-W	AS	DS
	RESET'	TXD	RXD
	RXC	DSR'	DTR'
	RTS'	CTS'	DCD'
	XTL0	XTL1	
6854:	D0	D1	D2
	D3	D4	D5
	D6	D7	RXC
	TXC	RDSR	TDSR
	IRQ'	RS0	RS1
	CS'	R-W	E
	RESET'	RXD	TXD
	RTS'	CTS'	DCD'
	LOC-DTR'	FLAGDET'	
6859:	A0	A1	A2
	CS0	CS1'	CS2'
	CS3	CS4	E
	2XE	R-W	RESET'
	D0	D1	D2
	D3	D4	D5
	D6	D7	IRQR'
	IRQPE'		
6860:	RXDATA	TXDATA	DTR'
	CTS'	BRKR'	RXBRK
	TXBRK'	ST'	TST
	ESD'	ESS'	ELS'
	XTAL	FO	TXCAR
	RXCAR	RXRATE	TD'
	MODE	SH'	RI'
	ANPH		
6875:	EXTIN	MEMRDY	DMA-REF'
	PWRRES'	X1	X2
	MPU1	MPU2	BUS2
	MEMCLK	2XFO	4XFO
	DMA-REFG	RESO'	

6875A:	EXTIN	MEMRDY	DMA-REF'
	PWRRES'	X1	X2
	MPU1	MPU2	BUS2
	MEMCLK	2XFO	4XFO
	DMA-REFG	RESO'	
6880:	DE	RE'	D1
	R1	D2	R2
	D3	R3	D4
	R4	B1	B2
	B3	B4	
6882A:	OE'	L'	I1
	I2	I3	I4
	I5	I6	I7
	I8	O1	O2
	O3	O4	O5
	O6	O7	O8
6882B:	OE'	L'	I1
	I2	I3	I4
	I5	I6	I7
	I8	O1	O2
	O3	O4	O5
	O6	O7	O8
6883:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	A14
	A15	R-W	E
	Q	OSCI	OSCO
	Z0	Z1	Z2
	Z3	Z4	Z5
	Z6	Z7	CAS'
	RAS0'	WE'	VCLK
	HS'	DA0	S0
	S1	S2	
6885:	E1'	E2'	AI
	BI	CI	DI
	EI	FI	AO
	BO	CO	DO
	EO	FO	

6886:	E1'	E2'	AI
	BI	CI	DI
	EI	FI	AO
	BO	CO	DO
	EO	FO	
6887:	E4'	E2'	AI
	BI	CI	DI
	EI	FI	AO
	BO	CO	DO
	EO	FO	
6888:	E4'	E2'	AI
	BI	CI	DI
	EI	FI	AO
	BO	CO	DO
	EO	FO	
6889:	DE	RE'	D1
	R1	D2	R2
	D3	R3	D4
	R4	B1	B2
	B3	B4	
6890:	D0	D1	D2
	D3	D4	D5
	D6	D7	EN'
	RESET'	VEE	AGND
	REFOUT	REFIN	20VSPAN
	10VSPAN	IOUT	BIPOFF
27128:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	PGM'
	CE'	OE'	O0
	O1	O2	O3
	O4	O5	O6
	O7		
27256:	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	A14
	CE'	OE'	O0
	O1	O2	O3
	O4	O5	O6
	O7		

68000:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'
	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	BG'
	R-W	AS'	UDS'
	LDS'	E	VMA'
	FC0	FC1	FC2
68000L:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'
	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	BG'
	R-W	AS'	UDS'
	LDS'	E	VMA'
	FC0	FC1	FC2
68000P:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'

	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	BG'
	R-W	AS'	UDS'
	LDS'	E	VMA'
	FC0	FC1	FC2
68008:	D0	D1	D2
	D3	D4	D5
	D6	D7	IPL0-2'
	IPL1'	BR'	DTACK'
	VPA'	CLK	BERR'
	HALT'	RESET'	A0
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	BG'	R-W
	AS'	DS'	E
	FC0	FC1	FC2
68010:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'
	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	BG'
	R-W	AS'	UDS'
	LDS'	E	VMA'
	FC0	FC1	FC2

68010P:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'
	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	BG'
	R-W	AS'	UDS'
	LDS'	E	VMA'
	FC0	FC1	FC2
68012P:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	IPL0'	IPL1'
	IPL2'	BR'	BGACK'
	DTACK'	VPA'	CLK
	BERR'	HALT'	RESET'
	A1	A2	A3
	A4	A5	A6
	A7	A8	A9
	A10	A11	A12
	A13	A14	A15
	A16	A17	A18
	A19	A20	A21
	A22	A23	A24
	A25	A26	A27
	A28	A29	A31
	BG'	RMC'	R-W
	AS'	UDS'	LDS'
	E	VMA'	FC0
	FC1	FC2	
68020P:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14

	D15	D16	D17
	D18	D19	D20
	D21	D22	D23
	D24	D25	D26
	D27	D28	D29
	D30	D31	BR'
	BGACK'	CDIS'	DSACK0'
	DSACK1'	IPL0'	IPL1'
	IPL2'	AVEC'	CLK
	BERR'	HALT'	RESET'
	A0	A1	A2
	A3	A4	A5
	A6	A7	A8
	A9	A10	A11
	A12	A13	A14
	A15	A16	A17
	A18	A19	A20
	A21	A22	A23
	A24	A25	A26
	A27	A28	A29
	A30	A31	BG'
	ECS'	OCS'	RMC'
	R-W	AS'	DS'
	DBEN'	IPEND'	SIZ0
	SIZ1	FC0	FC1
	FC2		
68120:	SD0	SD1	SD2
	SD3	SD4	SD5
	SD6	SD7	SA0
	SA1	SA2	SA3
	SA4	SA5	SA6
	SA7	DTACK'	CS'
	SR-W	H-B-NMI'	IRQ1'
	E	RESET'	P30
	P31	P32	P33
	P34	P35	P36
	P37	SC1	SC2
	P40	P41	P42
	P43	P44	P45
	P46	P47	P20
	P21	P22	P23
	P24		
68121:	SD0	SD1	SD2
	SD3	SD4	SD5
	SD6	SD7	SA0
	SA1	SA2	SA3
	SA4	SA5	SA6
	SA7	DTACK'	CS'

	SR-W	H-B-NMI'	IRQ1'
	E	RESET'	P30
	P31	P32	P33
	P34	P35	P36
	P37	SC1	SC2
	P40	P41	P42
	P43	P44	P45
	P46	P47	P20
	P21	P22	P23
	P24		
68153:	D0	D1	D2
	D3	D4	D5
	D6	D7	A1
	A2	A3	INT0'
	INT1'	INT2'	INT3'
	CS'	IACK'	IACKIN'
	R-W	CLK	IRQ1'
	IRQ2'	IRQ3'	IRQ4'
	IRQ5'	IRQ6'	IRQ7'
	INTAL0	INTAL1	DTACK'
	INTAE'	IACKOUT'	
68230:	D0	D1	D2
	D3	D4	D5
	D6	D7	RS1
	RS2	RS3	RS4
	RS5	CS'	DTACK'
	R-W	CLK	RESET'
	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	H1	H2
	H3	H4	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
68430:	A1	A2	A3
	A4	A5	A6
	A7	A8-D0	A9-D1
	A10-D2	A11-D3	A12-D4
	A13-D5	A14-D6	A15-D7
	A16-D8	A17-D9	A18-D10
	A19-D11	A20-D12	A21-D13
	A22-D14	A23-D15	OWN'
	DBEN'	BG'	BGOUT'

	BR'	BGACK'	IACK'
	IRQ'	CS'	DTACK'
	R-W	AS'	UDS'
	LDS'	CLK	RESET'
	REQ'	ACK'	RDY'
	DTC'	DONE'	RERUN'
	VBB		

68440:

A1	A2	A3
A4	A5	A6
A7	A8-D0	A9-D1
A10-D2	A11-D3	A12-D4
A13-D5	A14-D6	A15-D7
A16-D8	A17-D9	A18-D10
A19-D11	A20-D12	A21-D13
A22-D14	A23-D15	OWN'
UAS'	HIBYTE'	DBEN'
DDIR'	BR'	BG'
BGACK'	IACK'	IRQ'
CS'	DTACK'	R-W
AS'	UDS'	LDS'
CLK	REQ0'	ACK0'
PCL0	REQ1'	ACK1'
PCL1	DONE'	DTC'
FC0	FC1	FC2
BEC0'	BEC1'	BEC2'

68440P:

A1	A2	A3
A4	A5	A6
A7	A8-D0	A9-D1
A10-D2	A11-D3	A12-D4
A13-D5	A14-D6	A15-D7
A16-D8	A17-D9	A18-D10
A19-D11	A20-D12	A21-D13
A22-D14	A23-D15	OWN'
HIBYTE'	DBEN'	DDIR'
BR'	BG'	BGACK'
IACK'	IRQ'	CS'
DTACK'	R-W	AS'
UDS'	LDS'	CLK
REQ0'	ACK0'	PCL0
REQ1'	ACK1'	PCL1
DONE'	DTC'	FC0
FC1	FC2	BEC0'
BEC1'	BEC2'	

68450:	A1	A2	A3
	A4	A5	A6
	A7	A8-D0	A9-D1
	A10-D2	A11-D3	A12-D4
	A13-D5	A14-D6	A15-D7
	A16-D8	A17-D9	A18-D10
	A19-D11	A20-D12	A21-D13
	A22-D14	A23-D15	OWN'
	UAS'	HIBYTE'	DBEN'
	DDIR'	BR'	BG'
	BGACK'	IACK'	IRQ'
	CS'	DTACK'	R-W
	AS'	UDS'	LDS'
	CLK	REQ0'	ACK0'
	PCL0	REQ1'	ACK1'
	PCL1	REQ2'	ACK2'
	PCL2	REQ3'	ACK3'
	PCL3	DONE'	DTC'
	FC0	FC1	FC2
	BEC0'	BEC1'	BEC2'
68450P:	A1	A2	A3
	A4	A5	A6
	A7	A8-D0	A9-D1
	A10-D2	A11-D3	A12-D4
	A13-D5	A14-D6	A15-D7
	A16-D8	A17-D9	A18-D10
	A19-D11	A20-D12	A21-D13
	A22-D14	A23-D15	OWN'
	UAS'	HIBYTE'	DBEN'
	DDIR'	BR'	BG'
	BGACK'	IACK'	IRQ'
	CS'	DTACK'	R-W
	AS'	UDS'	LDS'
	CLK	REQ0'	ACK0'
	PCL0	REQ1'	ACK1'
	PCL1	REQ2'	ACK2'
	PCL2	REQ3'	ACK3'
	PCL3	DONE'	DTC'
	FC0	FC1	FC2
	BEC0'	BEC1'	BEC2'
68451:	A8	A9	A10
	A11	A12	A13
	A14	A15	A16
	A17	A18	A19
	A20	A21	A22
	A23	RS1	RS2
	RS3	RS4	RS5

	FC0	FC1	FC2
	FC3	IACK'	IRQ'
	FAULT'	MODE	CS'
	DTACK'	R-W	AS'
	UDS'	LDS'	CLK
	RESET'	PAD0	PAD1
	PAD2	PAD3	PAD4
	PAD5	PAD6	PAD7
	PAD8	PAD9	PAD10
	PAD11	PAD12	PAD13
	PAD14	PAD15	GO'
	ANY'	ALL	MAS'
	WIN'	ED'	HAD'
68451L:	A8	A9	A10
	A11	A12	A13
	A14	A15	A16
	A17	A18	A19
	A20	A21	A22
	A23	RS1	RS2
	RS3	RS4	RS5
	FC0	FC1	FC2
	FC3	IACK'	IRQ'
	FAULT'	MODE	CS'
	DTACK'	R-W	AS'
	UDS'	LDS'	CLK
	RESET'	PAD0	PAD1
	PAD2	PAD3	PAD4
	PAD5	PAD6	PAD7
	PAD8	PAD9	PAD10
	PAD11	PAD12	PAD13
	PAD14	PAD15	GO'
	ANY'	ALL	MAS'
	WIN'	ED'	HAD'
68451P:	A8	A9	A10
	A11	A12	A13
	A14	A15	A16
	A17	A18	A19
	A20	A21	A22
	A23	RS1	RS2
	RS3	RS4	RS5
	FC0	FC1	FC2
	FC3	IACK'	IRQ'
	FAULT'	MODE	CS'
	DTACK'	R-W	AS'
	UDS'	LDS'	CLK
	RESET'	PAD0	PAD1
	PAD2	PAD3	PAD4

	PAD5	PAD6	PAD7
	PAD8	PAD9	PAD10
	PAD11	PAD12	PAD13
	PAD14	PAD15	GO'
	ANY'	ALL	MAS'
	WIN'	ED'	HAD'
68452:	DBR0'	DBR1'	DBR2'
	DBR3'	DBR4'	DBR5'
	DBR6'	DBR7'	BG'
	BGACK'	LEI'	DBG0'
	DBG1'	DBG2'	DBG3'
	DBG4'	DBG5'	DBG6'
	DBG7'	BR'	BCLR'
68465:	D0	D1	D2
	D3	D4	D5
	D6	D7	DACK'
	DONE'	REQ'	IRQ'
	RS	CS'	DTACK'
	R-W	CLK	RESET'
	WCK	WDA	WE
	PS0	PS1	RDW
	RDD	VCO	LCT-DIR
	FR-STP	RW-SEEK	HDL
	HDSEL	MFM	US0
	US1	RDY	IDX
	FLT-TRK0	WP-TS	
68486:	X0	X1	X2
	X3	X4	X5
	X6	X7	X8
	X9	ADEN'	ADSEL'
	S0	S1	S2
	DTACK'	CS'	R-W
	AS'	UDS'	LDS'
	CLK	OSCI	OSCO
	Z0	Z1	Z2
	Z3	Z4	Z5
	Z6	Z7	Z8
	WE'	RAS'	CAS0'
	CAS1'	CAS2'	CAS3'
	CASTB'	DBEN	CSC
	VTCLK	MTCLK	PCLK
	HSYNC'		

68487:	X0	X1	X2
	X3	X4	X5
	X6	X7	X8
	X9	CASTB'	R-W
	ADSEL'	DBEN	VTCLK
	MTCLK	PCLK	HSYNC'
	INT'	REN	T1
	T2	A0	A1
	A2	A3	A4
	A5	A6	A7
	B0	B1	B2
	B3	B4	B5
	B6	B7	VIDEN'
	SYNC'	R	G
	B	RTI	
68488:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	RS0
	RS1	RS2	CS'
	DMAREQ	ASE'	TRIG'
	DMAGRANT	IRQ'	E
	R-W	RESET'	IB0
	IB1	IB2	IB3
	IB4	IB5	IB6
	IB7	T-R1	T-R2
	DAC	RFD	DAV'
	ATN'	IFC'	SRQ'
	REN'	EOI'	
68561:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	A1	A2
	A3	A4	IRQ'
	IACK'	TDSR'	RDSR'
	DACK'	DONE'	DTC'
	CS'	DTACK'	R-W
	UDS'	LDS'	RESET'
	RXD	RXC	TXD
	TXC	RTS'	CTS'
	DTR'	DSR'	DCD'
	BCLK	EXTAL	XTAL

68564:	D0	D1	D2
	D3	D4	D5
	D6	D7	A1
	A2	A3	A4
	A5	RXCA'	TXCA'
	RXCB'	TXCB'	INTR'
	IACK'	IEI'	CS'
	DTACK'	R-W	CLK
	RESET'	RXDA	TXDA
	RXRDYA'	TXRDYA'	SYNCA'
	RTSA'	CTSA'	DTRA'
	DCDA'	RXDB	TXDB
	RXRDYB'	TXRDYB'	SYNCB'
	RTSB'	CTSB'	DTRB'
	DCDB'	IEO'	XTAL1
	XTAL2		
68652:	DB0	DB1	DB2
	DB3	DB4	DB5
	DB6	DB7	DB8
	DB9	DB10	DB11
	DB12	DB13	DB14
	DB15	A0	A1
	A2	DBEN	BYTE
	CE	R-W	RESET
	RXSI	RXC	RXDA
	RXSA	RXA	RXE
	S-F	TXSO	TXC
	TXU	TXBE	TXA
	TXE	MM	
68653:	A0	A1	CE0'
	CE1'	R-W	D0
	D1	D2	D3
	D4	D5	D6
	D7	INT'	
68661:	D0	D1	D2
	D3	D4	D5
	D6	D7	A0
	A1	CE'	R-W
	RESET	BRCLK	TXD
	TXRDY'	TXC-SYNC	RXD
	RXRDY'	RXC-BKDE	TXE-DSC'
	DTR'	DSR'	RTS'
	CTS'	DCD'	

68681:	D0	D1	D2
	D3	D4	D5
	D6	D7	A1
	A2	A3	A4
	IACK'	INTR'	CS'
	DTACK'	R-W	RESET'
	X1-CLK	X2	IP0
	IP1	IP2	IP3
	IP4	IP5	OP0
	OP1	OP2	OP3
	OP4	OP5	OP6
	OP7	RXDA	TXDA
	RXDB	TXDB	
68701:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	SC2	E	
68701U4:	P10	P11	P12
	P13	P14	P15
	P16	P17	P20
	P21	P22	P23
	P24	NMI'	IRQ1'
	SC1	VCCSTBY	RESET'
	XTAL1	EXTAL2	P30
	P31	P32	P33
	P34	P35	P36
	P37	P40	P41
	P42	P43	P44
	P45	P46	P47
	SC2	E	
68705P3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	TIMER	RESET'	EXTAL
	XTAL	PB0	PB1

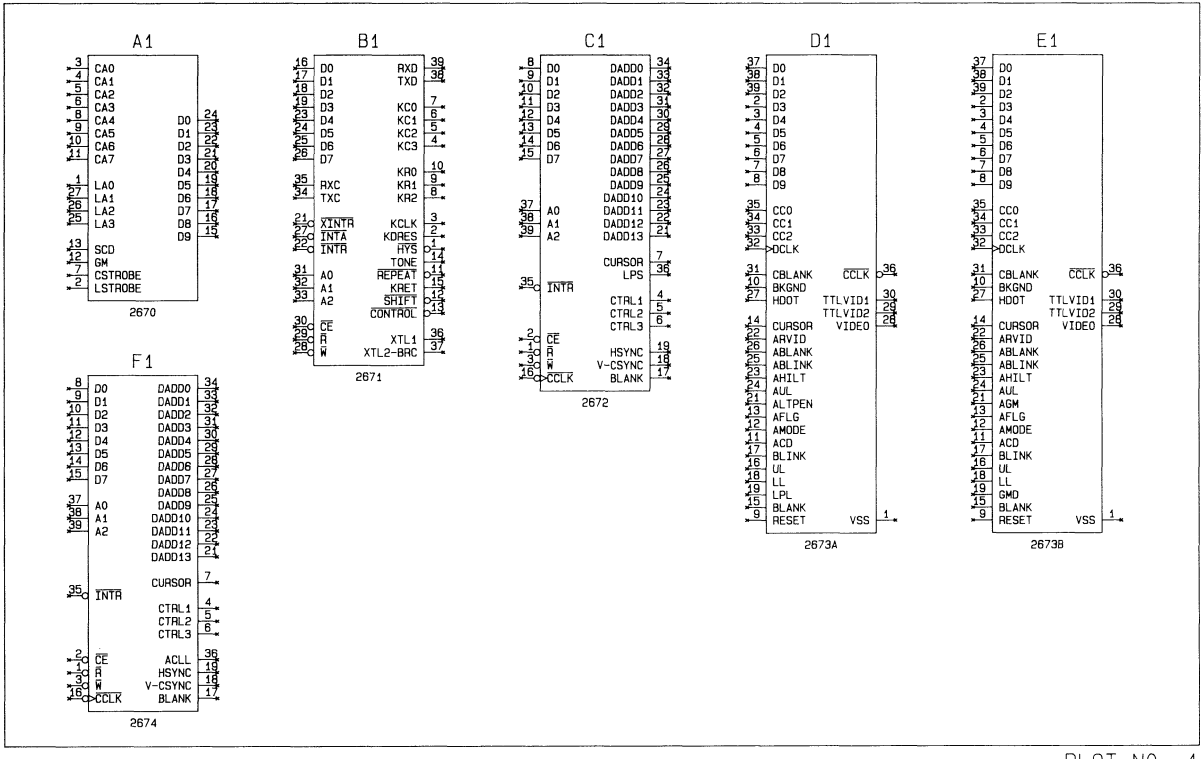
	PB2	PB3	PB4
	PB5	PB6	PB7
	PC0	PC1	PC2
	PC3		
68705P5:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	INT'
	TIMER	ERESET'	XTAL
	XTAL	PB0	PB1
	PB2	PB3	PB4
	PB5	PB6	PB7
	PC0	PC1	PC2
	PC3		
68705R3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-AN0
	PD1-AN1	PD2-AN2	PD3-AN3
	PD4-VRL	PD5-VRH	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
68705R5:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0-AN0
	PD1-AN1	PD2-AN2	PD3-AN3
	PD4-VRL	PD5-VRH	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
68705U3:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL

	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
68705U5:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6-INT2
	PD7	INT'	TIMER
	RESET'	EXTAL	XTAL
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		
68802:	D0	D1	D2
	D3	D4	D5
	D6	D7	D8
	D9	D10	D11
	D12	D13	D14
	D15	TXREQ'	RXREQ'
	DONE'	DACK'	IACK'
	IRQ'	DTACK'	CS'
	R-W	DS'	RESET'
	RXDATA	RXCLK	TXDATA
	TXCLK	TXEN	SIGQUAL
	SENSE	MAUREQ'	MILOOP'
	ISOLATE'	MAUAV'	
68881P:	A0	A1	A2
	A3	A4	SENSE'
	SIZE'	CS'	R-W
	AS'	DS'	CLK
	RESET'	D0	D1
	D2	D3	D4
	D5	D6	D7
	D8	D9	D10
	D11	D12	D13
	D14	D15	D16
	D17	D18	D19
	D20	D21	D22
	D23	D24	D25

	D26	D27	D28
	D29	D30	D31
	DSACK0'	DSACK1'	
68901:	D0	D1	D2
	D3	D4	D5
	D6	D7	RS1
	RS2	RS3	RS4
	RS5	IACK'	IRQ'
	IEI'	IEO'	CS'
	DTACK'	R-W	DS'
	CLK	RESET'	I0
	I1	I2	I3
	I4	I5	I6
	I7	SI	SO
	RC	RR'	TC
	TR'	TAI	TAO
	TBI	TBO	TCO
	TDO	XTAL1	XTAL2
146805E2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	IRQ'	TIMER
	RESET'	OSC1	OSC2
	B0	B1	B2
	B3	B4	B5
	B6	B7	A8
	A9	A10	A11
	A12	R-W	AS
	DS	LI	
146805E3:	PA0	PA1	PA2
	PA3	PA4	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	IRQ'	TIMER
	RESET'	OSC1	OSC2
	B0B1	B2	
	B3	B4	B5
	B6	B7	A8
	A9	A10	A11
	A12	A13	A14
	A15	R-W	AS
	DS	LI	

146805F2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PC0
	PC1	PC2	PC3
	IRQ'	NUM	TIMER
	RESET'	OSC1	OSC2
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	
146805G2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6
	PD7	IRQ'	NUM
	TIMER	RESET'	OSC1
	OSC2	PB0	PB1
	PB2	PB3	PB4
	PB5	PB6	PB7
	PC0	PC1	PC2
	PC3	PC4	PC5
	PC6	PC7	
146805H2:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PC4
	PC5	PC6	PC7
	IRQ'	NUM	TIMER
	RESET'	OSC1	OSC2
	XFC	SYNVSS	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7	PD0	PD1
	PD2	PD3	PD4
	PD5	PD6	PD7
	ALRT	CO	
146818:	CKFS	CS'	R-W
	AS	DS	VDD
	PS	RESET'	OSC1
	OSC2	AD0	AD1
	AD2	AD3	AD4
	AD5	AD6	AD7
	CKOUT	SQW	IRQ'
146818A:	CKFS	STBY'	MOT
	CS'	R-W	AS
	DS	VDD	PS
	RESET'	OSC1	OSC2

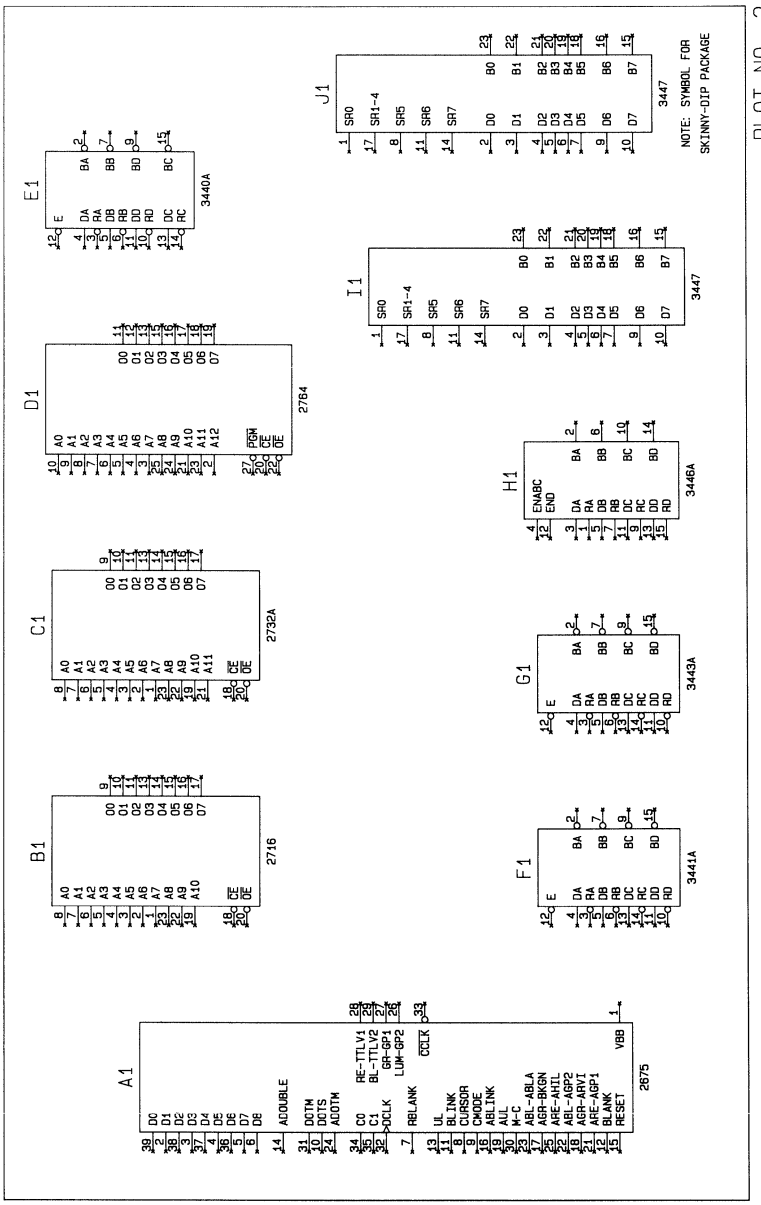
	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	CKOUT
	SQW	IRQ'	
146823:	AD0	AD1	AD2
	AD3	AD4	AD5
	AD6	AD7	IRQ'
	CE'	R-W	AS
	DS	RESET'	PA0
	PA1	PA2	PA3
	PA4	PA5	PA6
	PA7	PC0	PC1
	PC2	PC3	PC4-CA1
	PC5-CA2	PC6-CB1	PC7-CB2
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	
1468705F:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PC0
	PC1	PC2	PC3
	IRQ'	TIMER	RESET'
	OSC1	OSC2	PB0
	PB1	PB2	PB3
	PB4	PB5	PB6
	PB7		
1468705G:	PA0	PA1	PA2
	PA3	PA4	PA5
	PA6	PA7	PD0
	PD1	PD2	PD3
	PD4	PD5	PD6
	PD7	IRQ'	TIMER
	RESET'	OSC1	OSC2
	PB0	PB1	PB2
	PB3	PB4	PB5
	PB6	PB7	PC0
	PC1	PC2	PC3
	PC4	PC5	PC6
	PC7		


A1
CA0
CA1
CA2
CA3
CA4
CA5
CA6
CA7
LA0
LA1
LA2
LA3
SCD
GW
CSTROBE
LSTROBE
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
2670
B1
D0
D1
D2
D3
D4
D5
D6
D7
RXC
TXC
XINTR
INTA
INTR
A0
A1
A2
CE
R
W
RXD
TXD
KC0
KC1
KC2
KC3
KR0
KR1
KR2
KCLK
KDRES
RVS
TONE
REPEAT
KRET
SHIFT
CONTROL
XTL1
XTL2-BRG
2671
C1
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
A2
INTR
CE
R
W
CCLK
DADD0
DADD1
DADD2
DADD3
DADD4
DADD5
DADD6
DADD7
DADD8
DADD9
DADD10
DADD11
DADD12
DADD13
CURSOR
LPS
CTRL1
CTRL2
CTRL3
HSYNC
V-CSYNC
BLANK
2672
D1
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
CC0
CC1
CC2
DCLK
CBLANK
BKGND
HDOT
CURSOR
ARVID
ABLANK
ABLINK
AHILT
AUL
ALTPEN
AFLG
AMODE
ACD
BLINK
UL
LL
LPL
BLANK
RESET
CCLK
TTLVID1
TTLVID2
VIDEO
VSS
2673A
E1
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
CC0
CC1
CC2
DCLK
CBLANK
BKGND
HDOT
CURSOR
ARVID
ABLANK
ABLINK
AHILT
AUL
AGM
AFLG
AMODE
ACD
BLINK
UL
LL
GMD
BLANK
RESET
CCLK
TTLVID1
TTLVID2
VIDEO
VSS
2673B
F1
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
A2
INTR
CE
R
W
CCLK
DADD0
DADD1
DADD2
DADD3
DADD4
DADD5
DADD6
DADD7
DADD8
DADD9
DADD10
DADD11
DADD12
DADD13
CURSOR
CTRL1
CTRL2
CTRL3
ACLL
HSYNC
V-CSYNC
BLANK
2674

PLOT NO. 1

COMPONENT PLOTS

Plot 2



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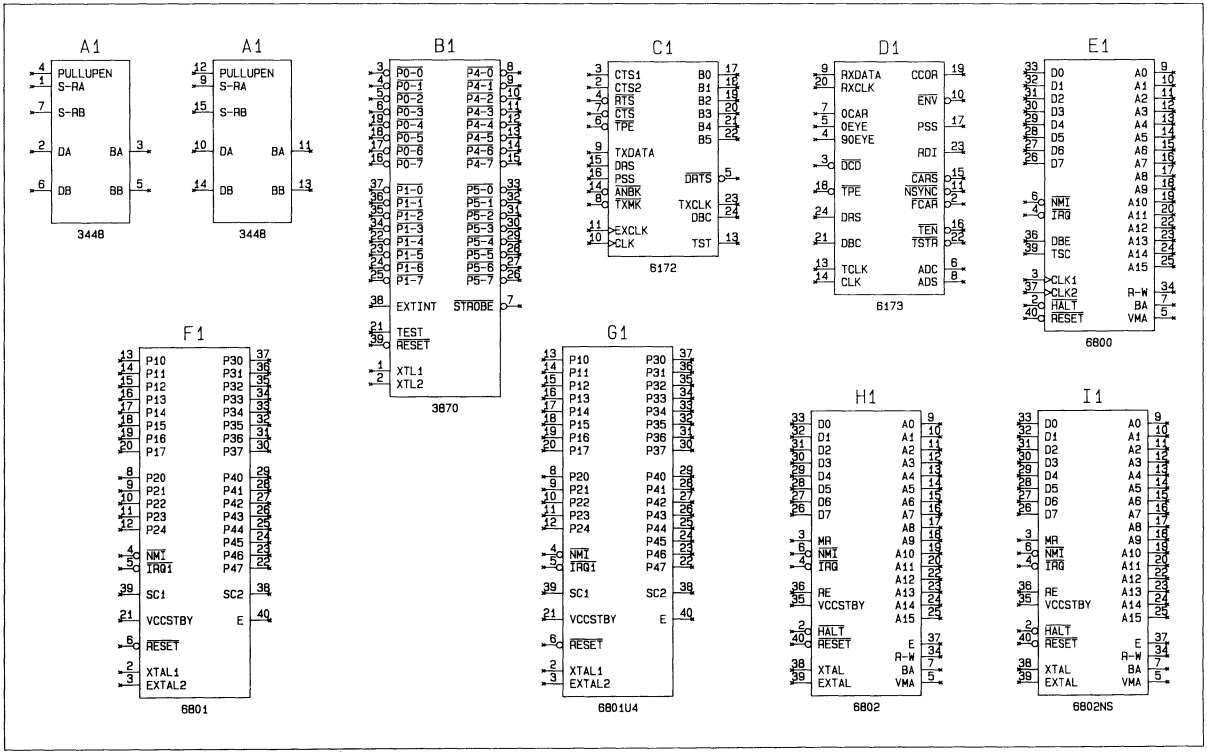
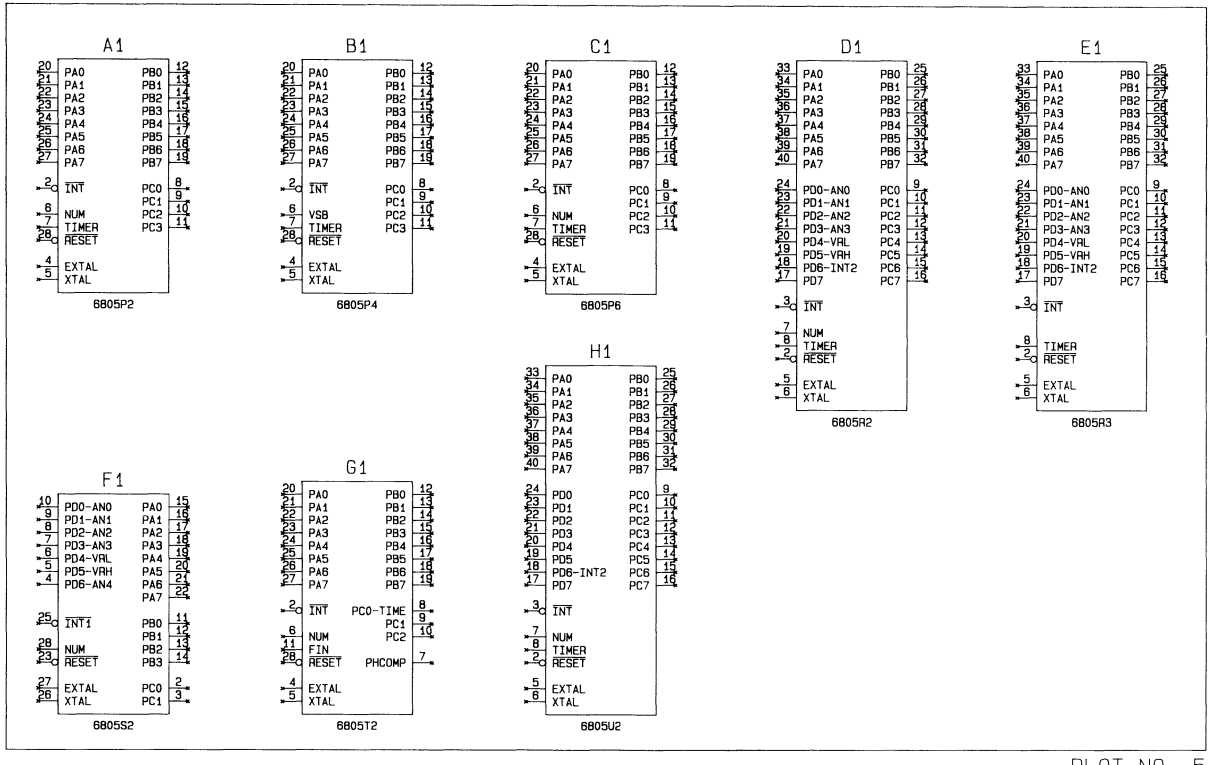

A1
PULLUPEN
S-RA
S-RB
DA
BA
DB
BB
3448
A1
PULLUPEN
S-RA
S-RB
DA
BA
DB
BB
3448
B1
P0-0
P0-1
P0-2
P0-3
P0-4
P0-5
P0-6
P0-7
P1-0
P1-1
P1-2
P1-3
P1-4
P1-5
P1-6
P1-7
P4-0
P4-1
P4-2
P4-3
P4-4
P4-5
P4-6
P4-7
P5-0
P5-1
P5-2
P5-3
P5-4
P5-5
P5-6
P5-7
EXTINT
STROBE
TEST
RESET
XTL1
XTL2
3870
C1
CTS1
CTS2
RTS
CTS
TPE
TXDATA
DRS
PSS
ANBK
TXMK
EXCLK
CLK
B0
B1
B2
B3
B4
B5
DRTS
TXCLK
DBC
TST
6172
D1
RXDATA
RXCLK
OCAR
OEYE
90EYE
DCD
TPE
DRS
DBC
TCLK
CLK
CCOR
ENV
PSS
RDI
CARS
NSYNC
FCAR
TEN
TSTR
ADC
ADS
6173
E1
D0
D1
D2
D3
D4
D5
D6
D7
NMI
IRQ
DBE
TSC
CLK1
CLK2
HALT
RESET
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
R-W
BA
VMA
6800
F1
P10
P11
P12
P13
P14
P15
P16
P17
P20
P21
P22
P23
P24
NMI
IRQ1
SC1
VCCSTBY
RESET
XTAL1
EXTAL2
P30
P31
P32
P33
P34
P35
P36
P37
P40
P41
P42
P43
P44
P45
P46
P47
SC2
E
6801
G1
6801U4
H1
MR
NMI
IRQ
RE
VCCSTBY
HALT
RESET
XTAL
EXTAL
6802
I1
6802NS

PLOT NO. 3

A1
P10 P30 37
P11 P31 36
P12 P32 35
P13 P33 34
P14 P34 33
P15 P35 32
P16 P36 31
P17 P37 30
P20 P40 29
P21 P41 28
P22 P42 27
P23 P43 26
P24 P44 25
P45 24
NMI P46 23
IRQ1 P47 22
SC1 SC2 38
VCCSTBY E 40
RESET
XTAL1
EXTAL2
6803
B1
P10 P30 37
P11 P31 36
P12 P32 35
P13 P33 34
P14 P34 33
P15 P35 32
P16 P36 31
P17 P37 30
P20 P40 29
P21 P41 28
P22 P42 27
P23 P43 26
P24 P44 25
P45 24
NMI P46 23
IRQ1 P47 22
R-W 38
VCCSTBY BA 3
AS
E
HALT
RESET
6803E
C1
P10 P30 37
P11 P31 36
P12 P32 35
P13 P33 34
P14 P34 33
P15 P35 32
P16 P36 31
P17 P37 30
P20 P40 29
P21 P41 28
P22 P42 27
P23 P43 26
P24 P44 25
P45 24
NMI P46 23
IRQ1 P47 22
SC1 SC2 38
VCCSTBY E 40
RESET
XTAL1
EXTAL2
6803U4
D1
PB0 8
PB1 9
PB2 10
PB3 11
PA4 PB4 12
PA5 PB5 13
PA6 PB6 14
PA7 PB7 15
IRQ
MDS
TIMER
RESET
EXTAL
XTAL
6804J2
E1
PA0 PB0 12
PA1 PB1 13
PA2 PB2 14
PA3 PB3 15
PA4 PB4 16
PA5 PB5 17
PA6 PB6 18
PA7 PB7 19
IRQ PC0 8
PC1 9
MDS PC2 10
TIMER PC3 11
RESET
EXTAL
XTAL
6804P2
F1
PA0 PB0 12
PA1 PB1 13
PA2 PB2 14
PA3 PB3 15
PA4 PB4 16
PA5 PB5 17
PA6 PB6 18
PA7 PB7 19
IRQ PC0 8
PC1 9
MDS PC2 10
TIMER PC3 11
RESET
EXTAL
XTAL
68HC04P2
G1
PA0 PB0 12
PA1 PB1 13
PA2 PB2 14
PA3 PB3 15
PA4 PB4 16
PA5 PB5 17
PA6 PB6 18
PA7 PB7 19
IRQ PC0 8
PC1 9
MDS PC2 10
TIMER PC3 11
RESET
EXTAL
XTAL
68HC04P3
H1
PA0 PB0 25
PA1 PB1 26
PA2 PB2 27
PA3 PB3 28
PA4 PB4 29
PA5 PB5 30
PA6 PB6 31
PA7 PB7 32
PD0-SPIS PC0 9
PD1-SPIC PC1 10
PD2-SPID PC2 11
PD3-SPID PC3 12
PD4-TCN2 PC4 13
PD5-TIMB PC5 14
PD6-TCN1 PC6 15
PD7-TIMA PC7 16
INT1
RESET
EXTAL
XTAL
VSTBY
6805K2
I1
PA0 PB0 25
PA1 PB1 26
PA2 PB2 27
PA3 PB3 28
PA4 PB4 29
PA5 PB5 30
PA6 PB6 31
PA7 PB7 32
PD0-SPIS PC0 9
PD1-SPIC PC1 10
PD2-SPID PC2 11
PD3-SPID PC3 12
PD4-TCN2 PC4 13
PD5-TIMB PC5 14
PD6-TCN1 PC6 15
PD7-TIMA PC7 16
INT1
RESET
EXTAL
XTAL
VSTBY
6805K3

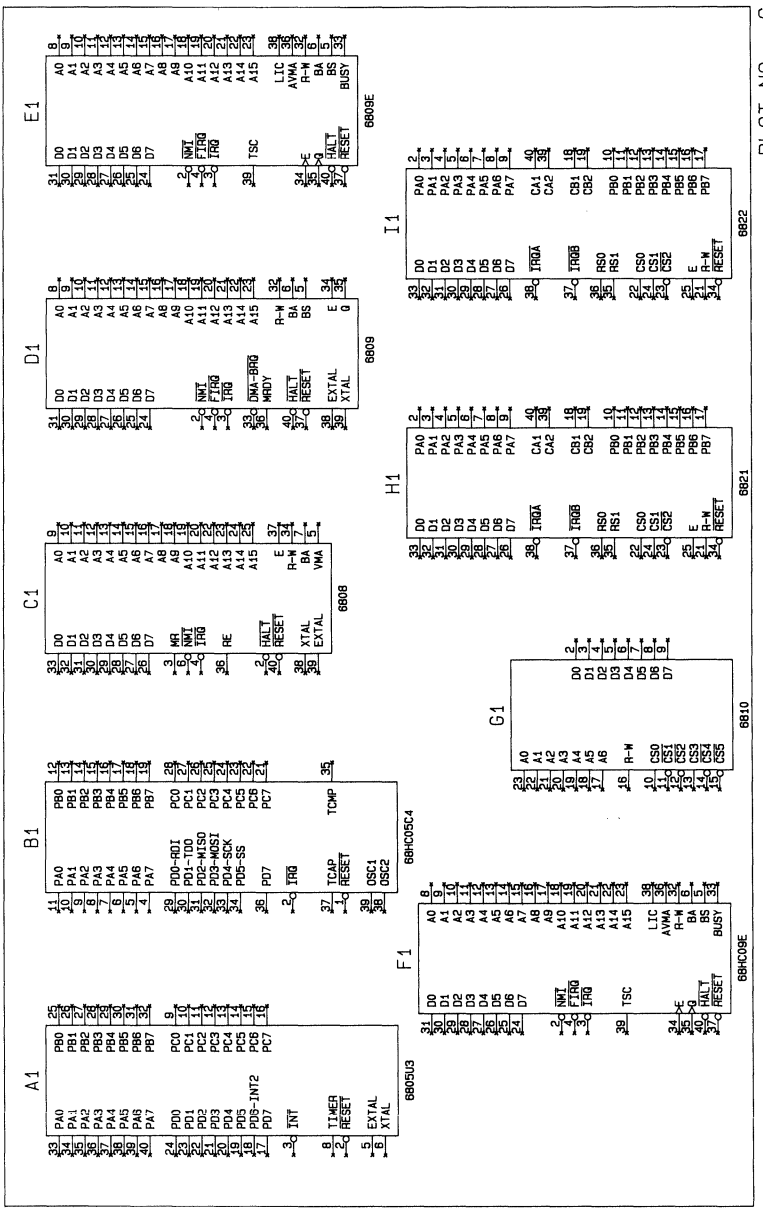
PLOT NO. 4


A1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
INT
NUM
TIMER
RESET
EXTAL
XTAL
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
6805P2
B1
VSB
6805P4
C1
6805P6
D1
PD0-AN0
PD1-AN1
PD2-AN2
PD3-AN3
PD4-VRL
PD5-VRH
PD6-INT2
PD7
6805R2
E1
6805R3
F1
PA4
PA5
PA6
PA7
INT1
6805S2
G1
PC0-TIME
FIN
PHCOMP
6805T2
H1
6805U2

PLOT NO. 5

COMPONENT PLOTS

Plot 6



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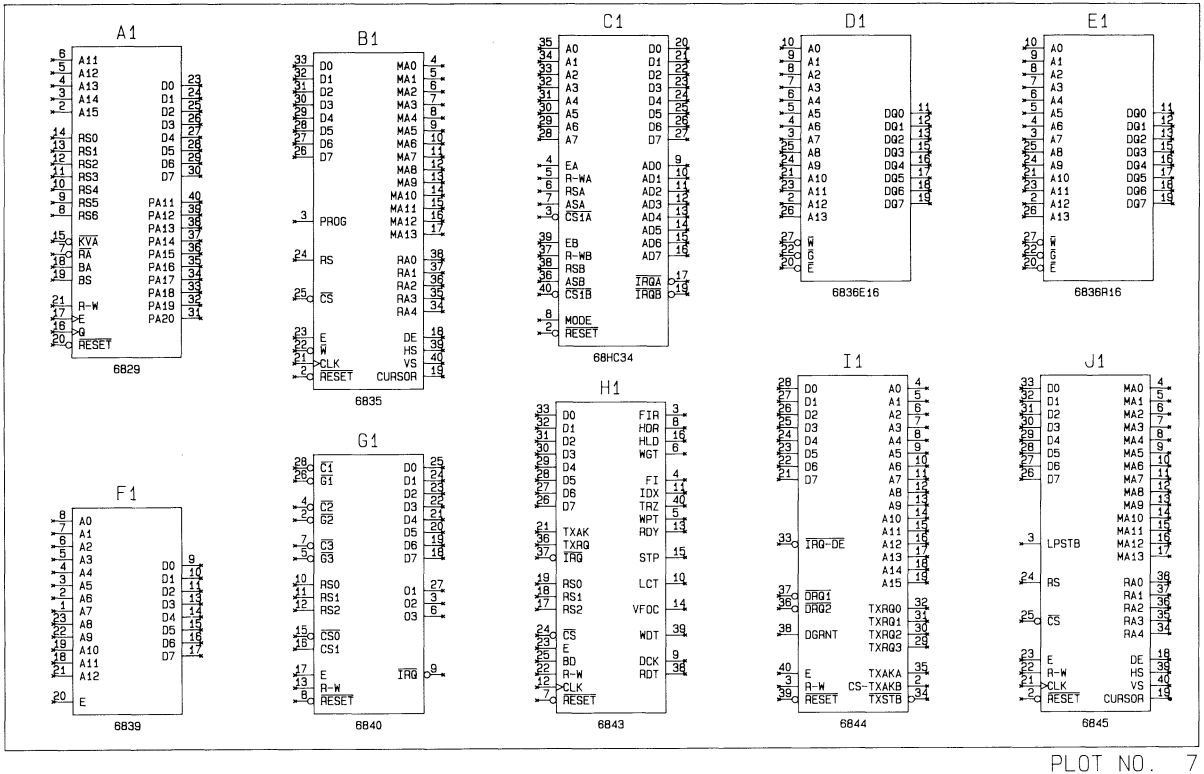
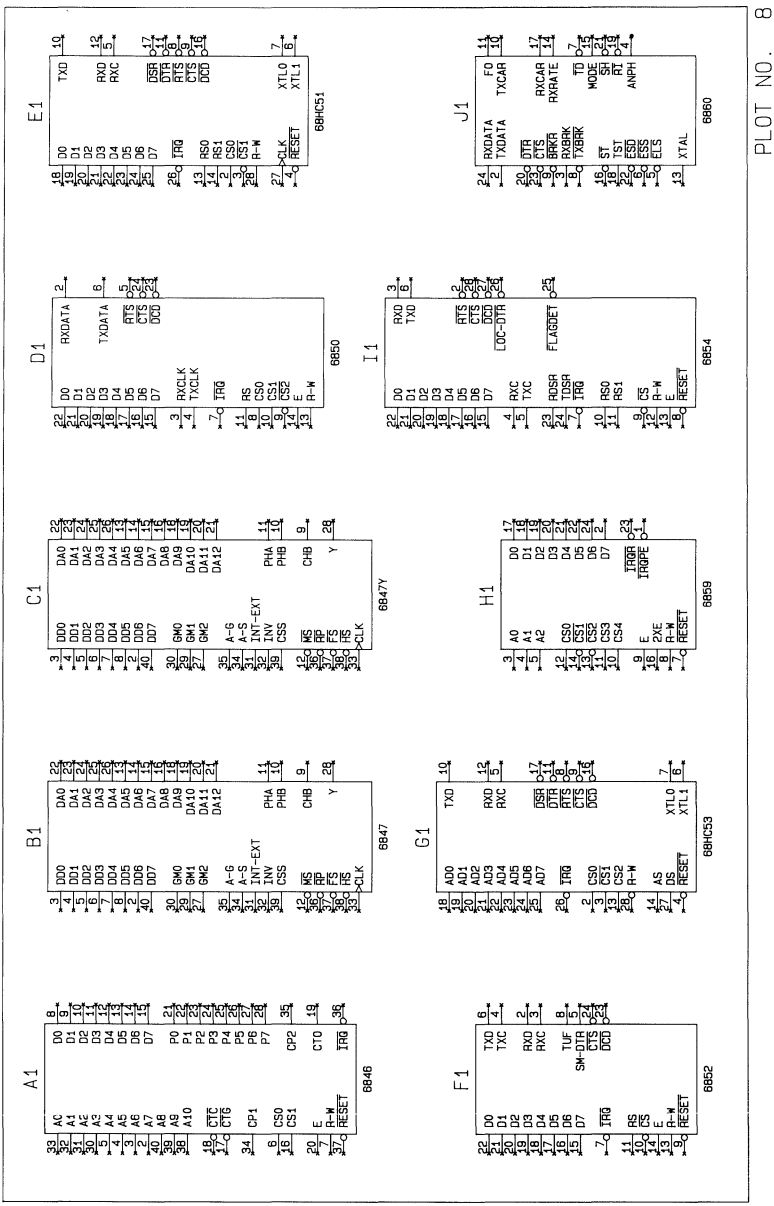

A1
A11
A12
A13
A14
A15
RS0
RS1
RS2
RS3
RS4
RS5
RS6
KVA
RA
BA
BS
R-W
E
G
RESET
D0
D1
D2
D3
D4
D5
D6
D7
PA11
PA12
PA13
PA14
PA15
PA16
PA17
PA18
PA19
PA20
6829
B1
PROG
RS
CS
E
W
CLK
RESET
MA0
MA1
MA2
MA3
MA4
MA5
MA6
MA7
MA8
MA9
MA10
MA11
MA12
MA13
RA0
RA1
RA2
RA3
RA4
DE
HS
VS
CURSOR
6835
C1
EA
R-WA
RSA
ASA
CS1A
EB
R-WB
RSB
ASB
CS1B
MODE
RESET
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
IRQA
IRQB
68HC34
D1
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
6836E16
E1
6836R16
F1
6839
G1
C1
G1
C2
G2
C3
G3
RS0
RS1
RS2
CS0
CS1
O1
O2
O3
6840
H1
FIR
HDR
HLD
WGT
FI
IDX
TRZ
WPT
RDY
STP
LCT
VFOC
WDT
DCK
RDT
TXAK
TXRQ
IRQ
6843
I1
IRQ-DE
DRQ1
DRQ2
DGRANT
TXRQ0
TXRQ1
TXRQ2
TXRQ3
TXAKA
CS-TXAKB
TXSTB
6844
J1
LPSTB
6845

PLOT NO. 7

COMPONENT PLOTS

Plot 8



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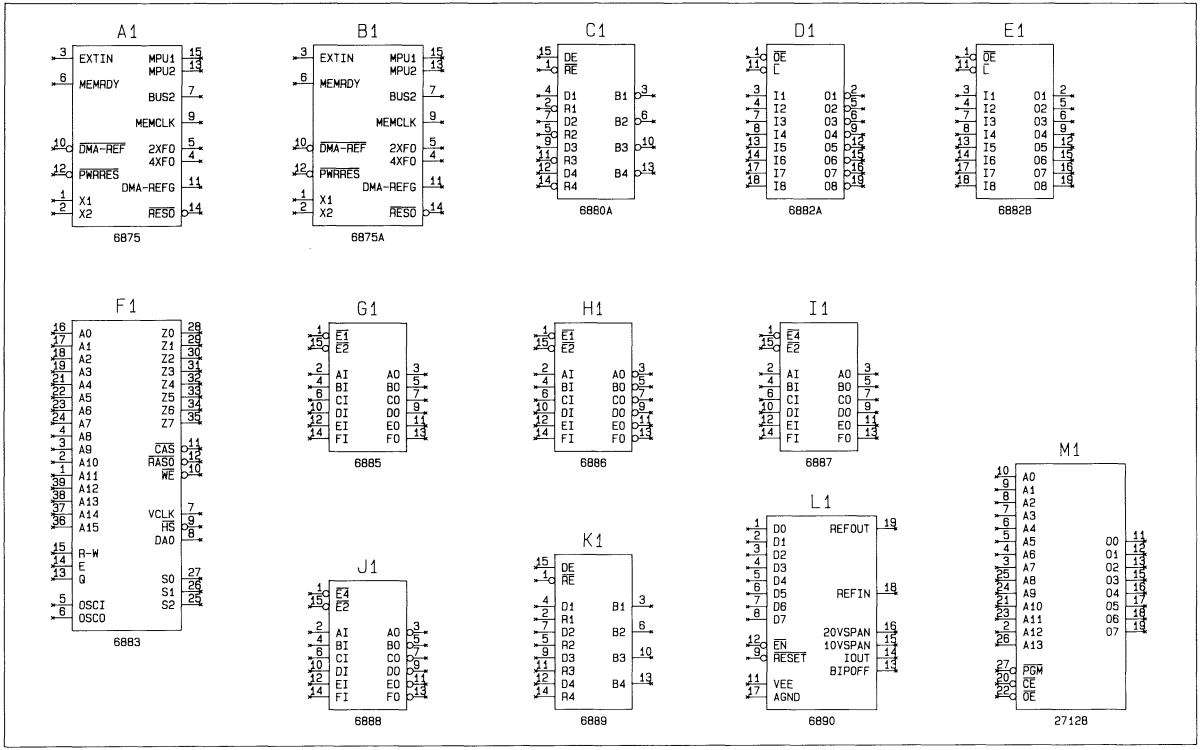
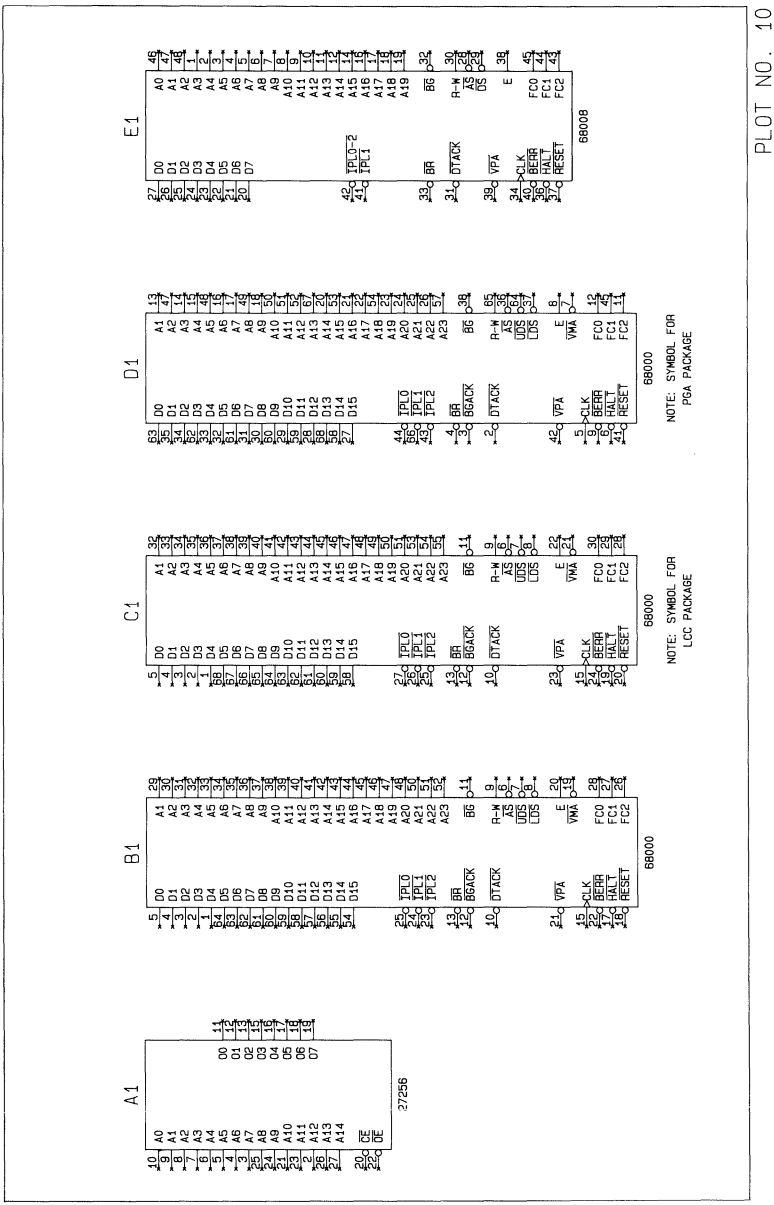

A1
EXTIN
MEMRDY
DMA-REF
PWRRES
X1
X2
MPU1
MPU2
BUS2
MEMCLK
2XFO
4XFO
DMA-REFG
RESO
6875
B1
6875A
C1
DE
RE
D1
R1
D2
R2
D3
R3
D4
R4
B1
B2
B3
B4
6880A
D1
OE
C
I1
I2
I3
I4
I5
I6
I7
I8
O1
O2
O3
O4
O5
O6
O7
O8
6882A
E1
6882B
F1
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
R-W
E
Q
OSCI
OSCO
Z0
Z1
Z2
Z3
Z4
Z5
Z6
Z7
CAS
RASO
WE
VCLK
HS
DA0
S0
S1
S2
6883
G1
E1
E2
AI
BI
CI
DI
EI
FI
AO
BO
CO
DO
EO
FO
6885
H1
6886
I1
E4
6887
J1
6888
K1
6889
L1
D0
D1
D2
D3
D4
D5
D6
D7
EN
RESET
VEE
AGND
REFOUT
REFIN
20VSPAN
10VSPAN
IOUT
BIPOFF
6890
M1
27128

PLOT NO. 9

COMPONENT PLOTS **Plot 10**



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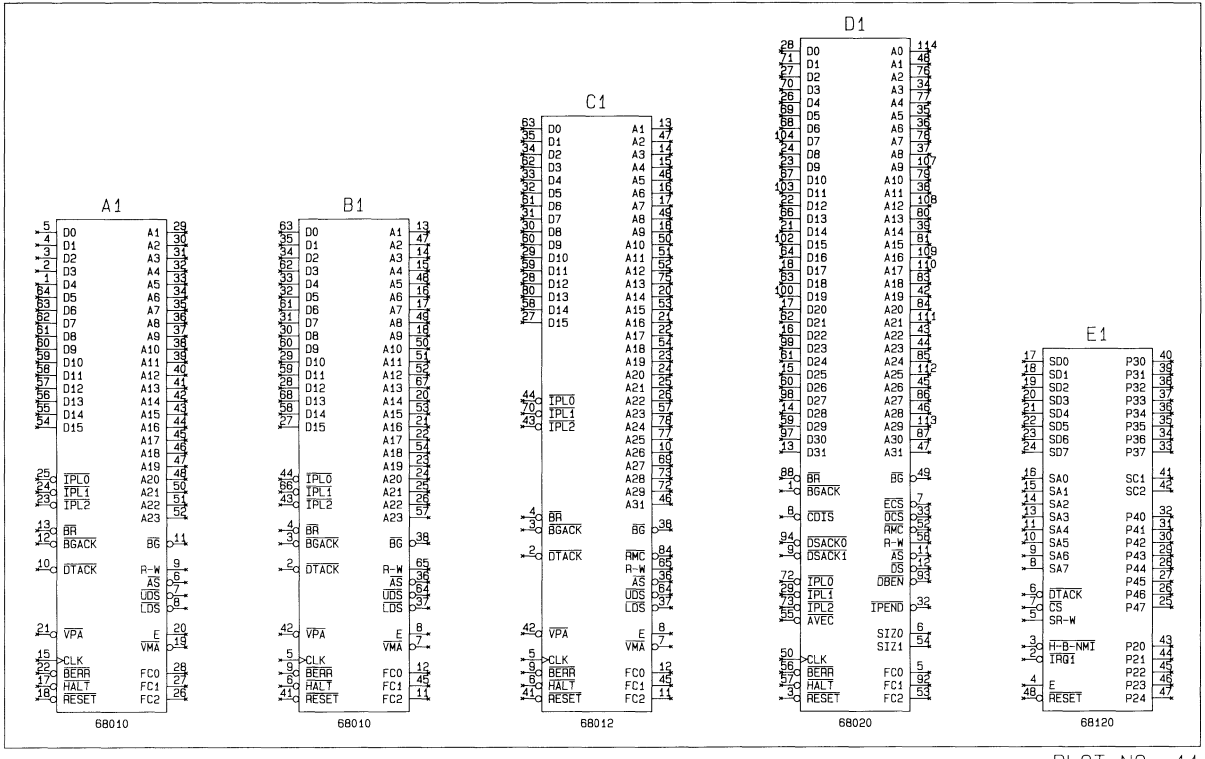
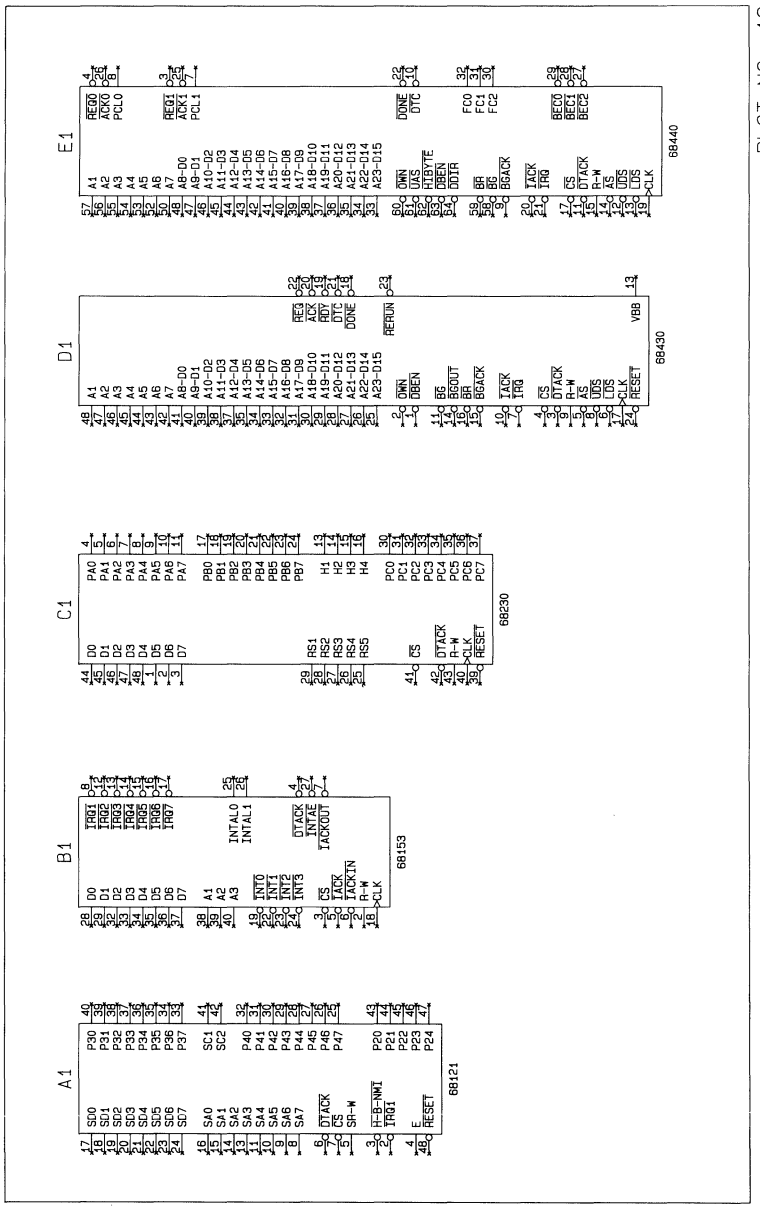


PLOT NO. 11

COMPONENT PLOTS

Plot 12



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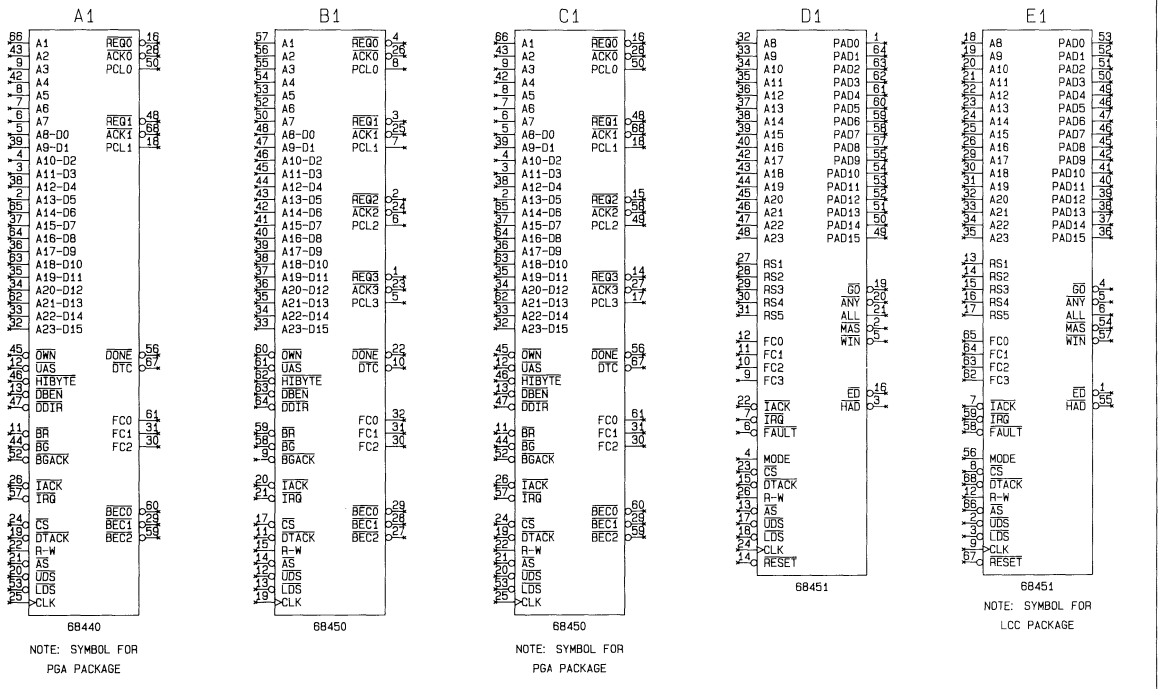
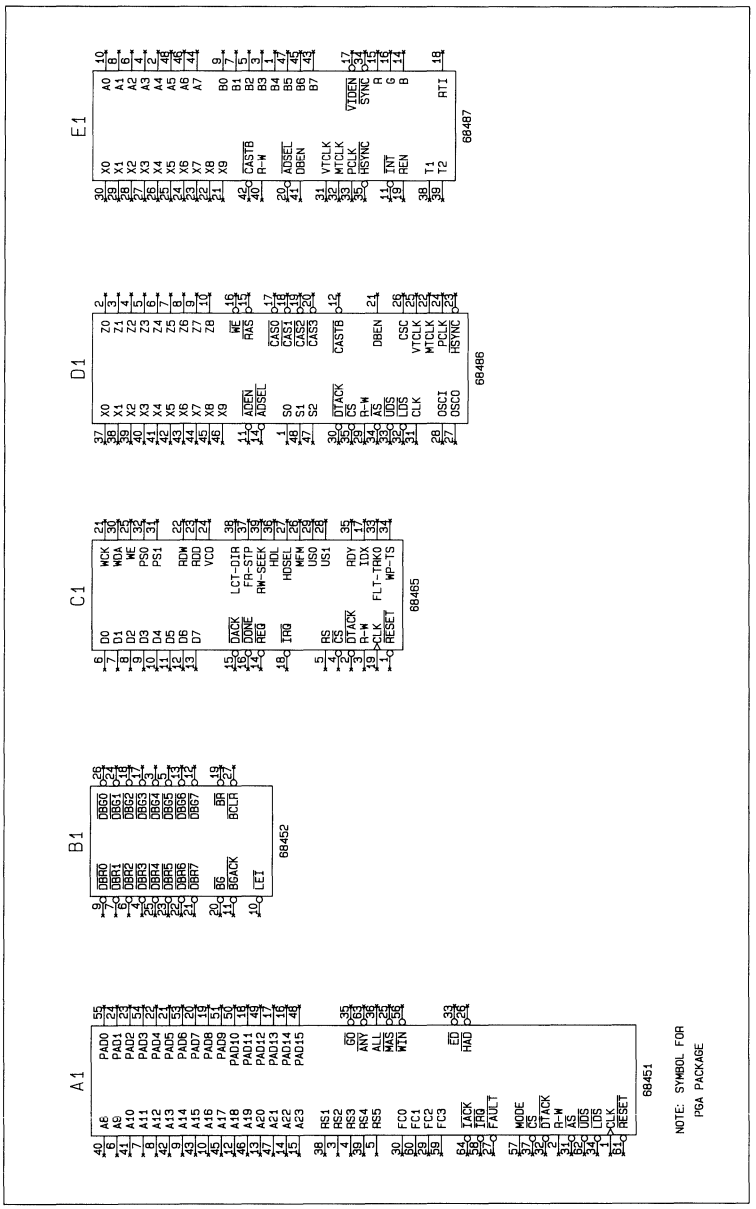

A1
B1
C1
D1
E1
68440
68450
68450
68451
68451
NOTE: SYMBOL FOR PGA PACKAGE
NOTE: SYMBOL FOR PGA PACKAGE
NOTE: SYMBOL FOR LCC PACKAGE

PLOT NO. 13

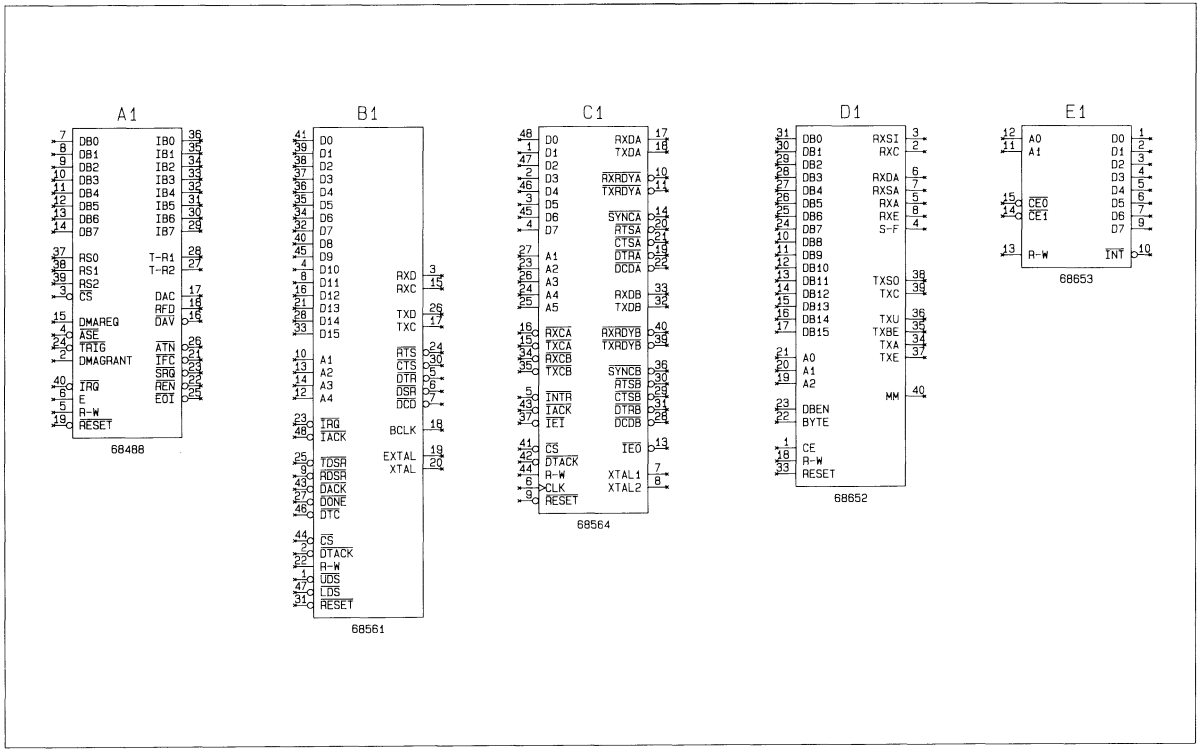
COMPONENT PLOTS

Plot 14



PLOT NO. 14

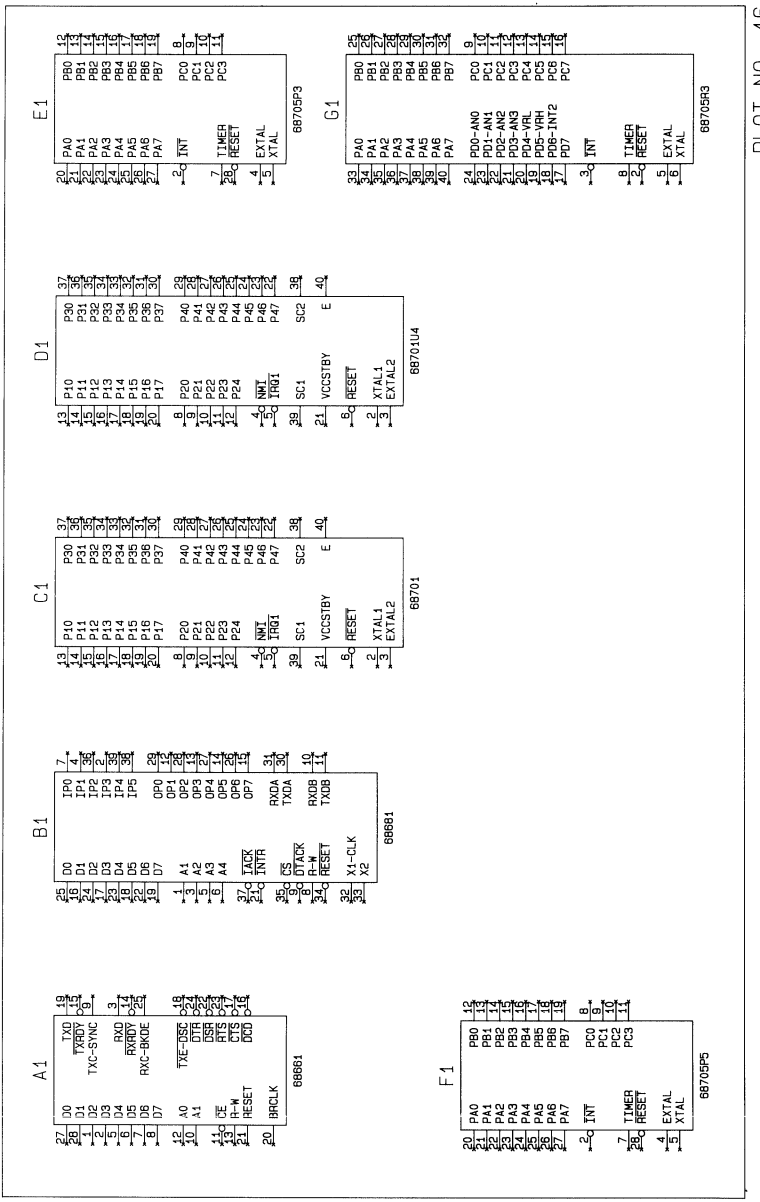
000-0128-00


A1
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
RS0
RS1
RS2
CS
DMAREQ
ASE
TRIG
DMAGRANT
IRQ
E
R-W
RESET
IB0
IB1
IB2
IB3
IB4
IB5
IB6
IB7
T-R1
T-R2
DAC
RFD
DAV
ATN
IFC
SRQ
REN
EOI
68488
B1
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
A1
A2
A3
A4
IRQ
IACK
TOSA
ADSA
DACK
DONE
DTC
CS
DTACK
R-W
UDS
LDS
RESET
RXD
RXC
TXD
TXC
RTS
CTS
DTR
DSR
DCD
BCLK
EXTAL
XTAL
68561
C1
D0
D1
D2
D3
D4
D5
D6
D7
A1
A2
A3
A4
A5
RXCA
TXCA
RXCB
TXCB
INTA
IACK
IEI
CS
DTACK
R-W
CLK
RESET
RXDA
TXDA
AXRDYA
TXRDYA
SYNCA
RTSA
CTSA
DTRA
DCDA
RXDB
TXDB
AXRDYB
TXRDYB
SYNCB
RTSB
CTSB
DTRB
DCDB
IEO
XTAL1
XTAL2
68564
D1
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
DB15
A0
A1
A2
DBEN
BYTE
CE
R-W
RESET
RXSI
RXC
RXDA
RXSA
RXA
RXE
S-F
TXSO
TXC
TXU
TXBE
TXA
TXE
MM
68652
E1
A0
A1
CE0
CE1
R-W
D0
D1
D2
D3
D4
D5
D6
D7
INT
68653

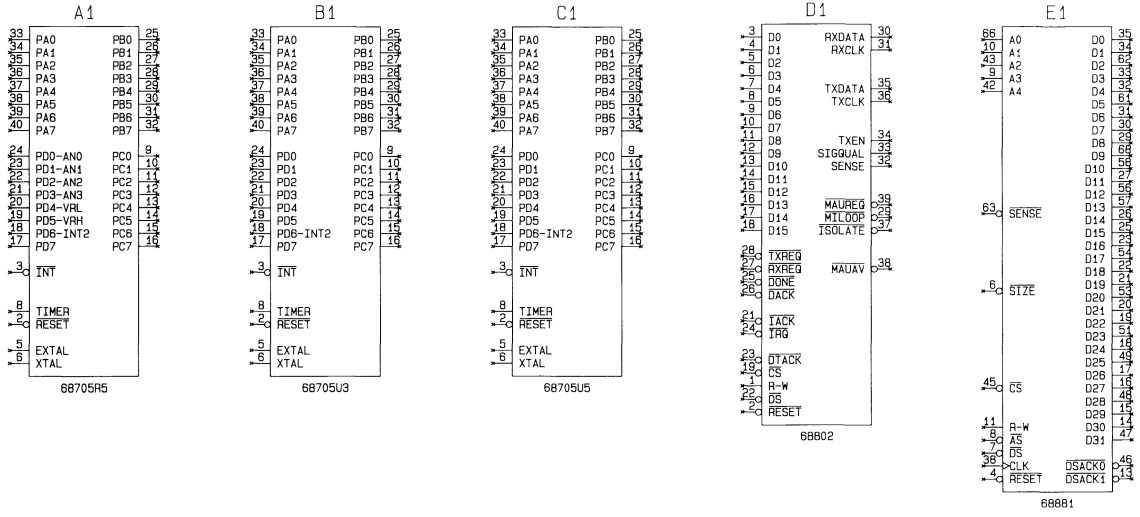
PLOT NO. 15

COMPONENT PLOTS

Plot 16



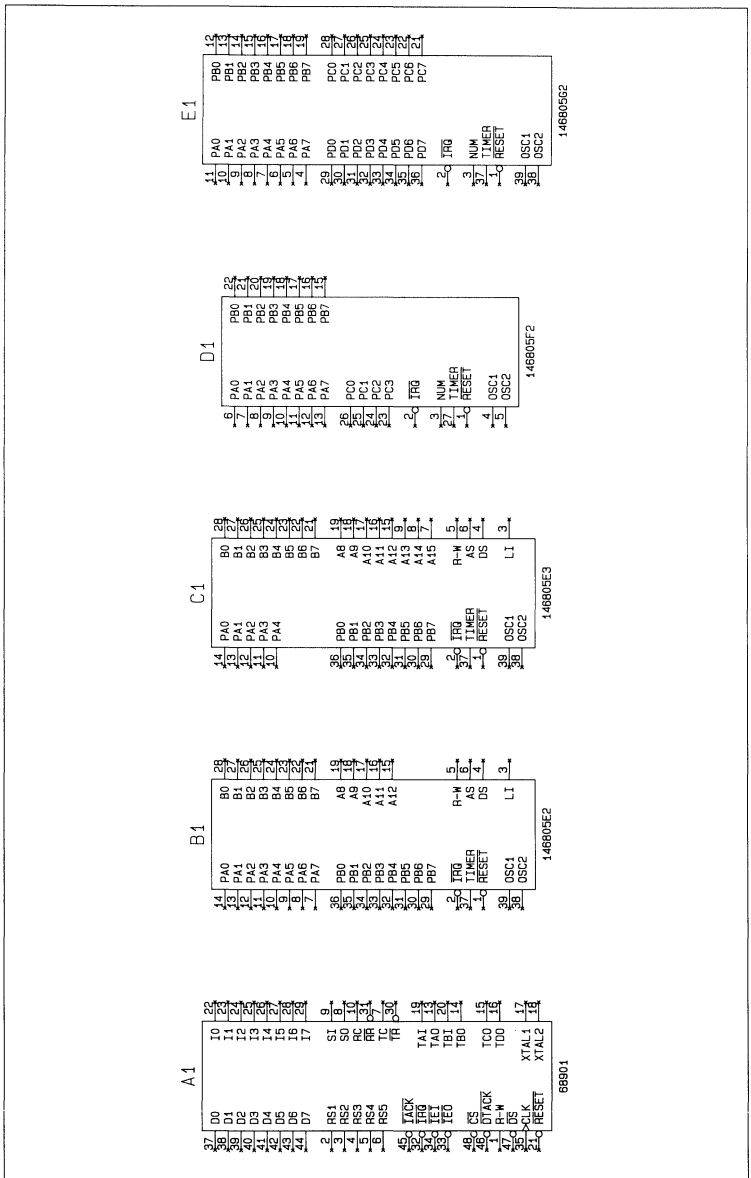
000-0128-00


A1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0-AN0
PD1-AN1
PD2-AN2
PD3-AN3
PD4-VRL
PD5-VRH
PD6-INT2
PD7
INT
TIMER
RESET
EXTAL
XTAL
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
68705R5
B1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0
PD1
PD2
PD3
PD4
PD5
PD6-INT2
PD7
INT
TIMER
RESET
EXTAL
XTAL
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
68705U3
C1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0
PD1
PD2
PD3
PD4
PD5
PD6-INT2
PD7
INT
TIMER
RESET
EXTAL
XTAL
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
68705U5
D1
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
TXREQ
RXREQ
DONE
DACK
IACK
IRQ
DTACK
CS
R-W
DS
RESET
RXDATA
RXCLK
TXDATA
TXCLK
TXEN
SIGQUAL
SENSE
MAUREQ
MILOOP
ISOLATE
MAUAV
68802
E1
A0
A1
A2
A3
A4
SENSE
SIZE
CS
R-W
AS
DS
CLK
RESET
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
D30
D31
DSACK0
DSACK1
68881

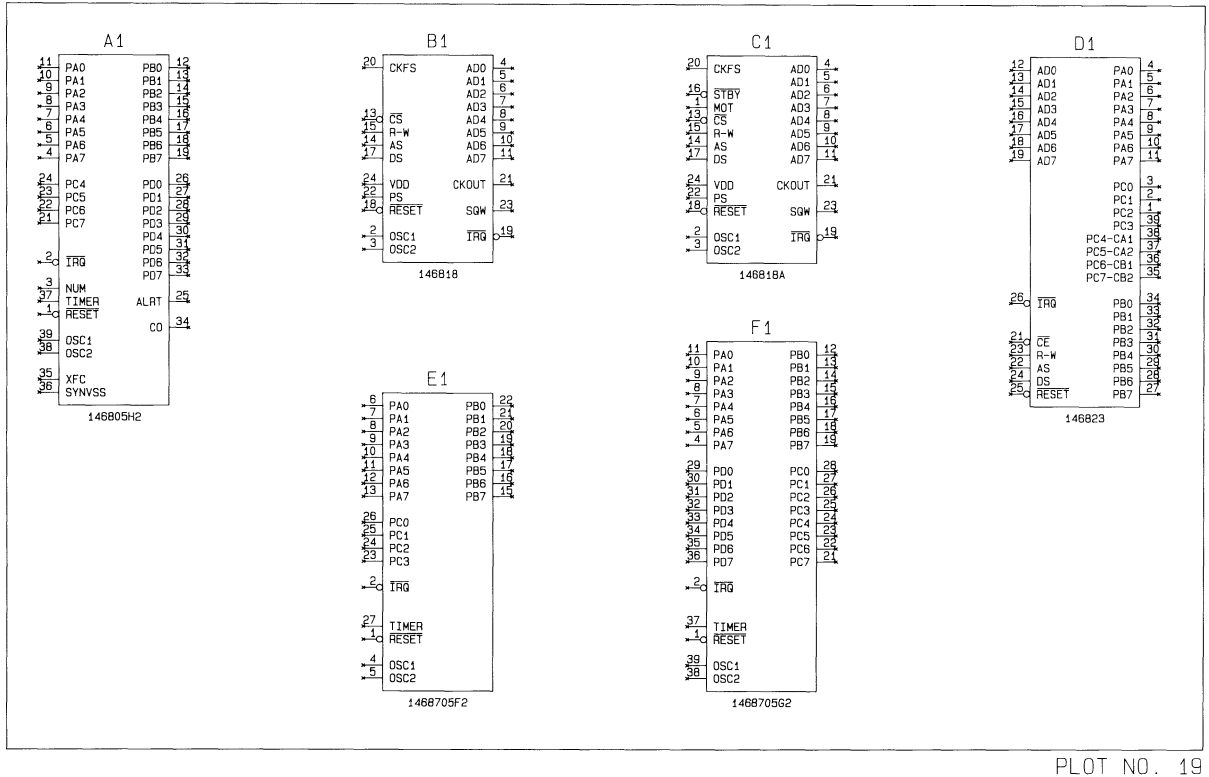
PLOT NO. 17

COMPONENT PLOTS

Plot 18



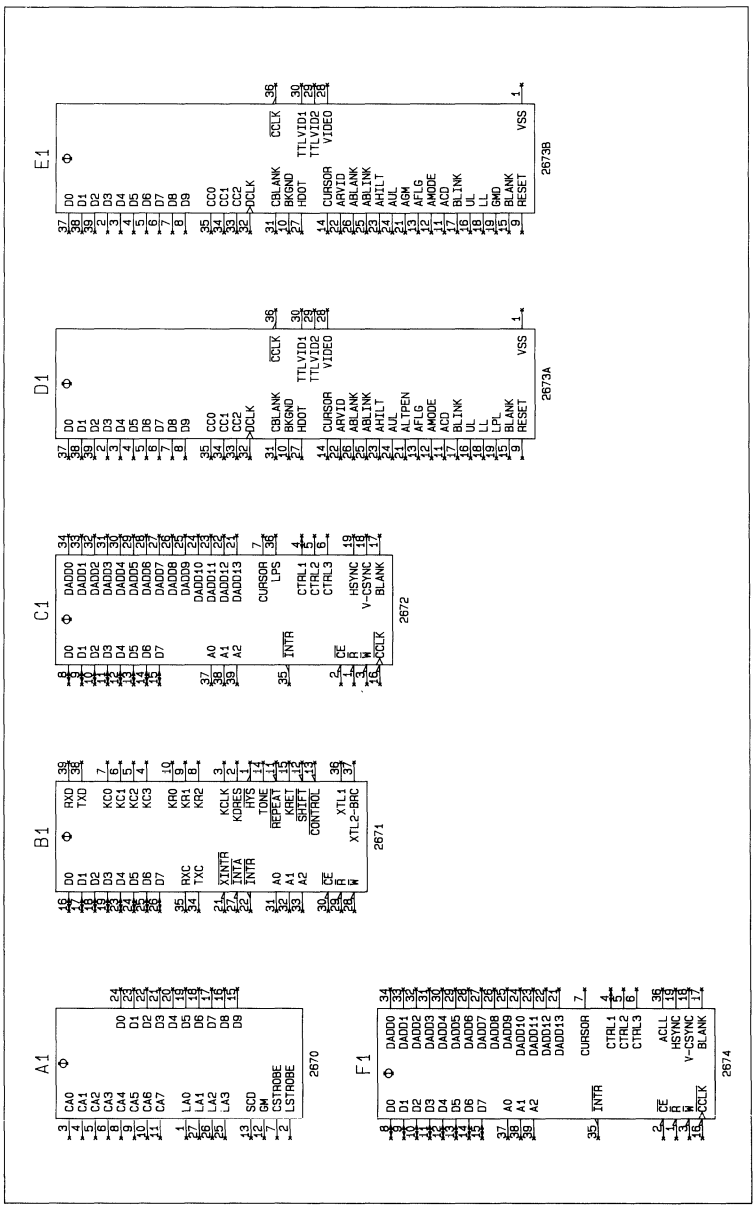
000-0128-00


A1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC4
PC5
PC6
PC7
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
IRQ
NUM
TIMER
RESET
ALRT
CO
OSC1
OSC2
XFC
SYNVSS
146805H2
B1
CKFS
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
CS
R-W
AS
DS
VDD
PS
RESET
CKOUT
SQW
IRQ
OSC1
OSC2
146818
C1
CKFS
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
STBY
MOT
CS
R-W
AS
DS
VDD
PS
RESET
CKOUT
SQW
IRQ
OSC1
OSC2
146818A
D1
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PC0
PC1
PC2
PC3
PC4-CA1
PC5-CA2
PC6-CB1
PC7-CB2
IRQ
PB0
PB1
PB2
CE
PB3
R-W
PB4
AS
PB5
DS
PB6
RESET
PB7
146823
E1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
IRQ
TIMER
RESET
OSC1
OSC2
1468705F2
F1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
IRQ
TIMER
RESET
OSC1
OSC2
146870562

PLOT NO. 19

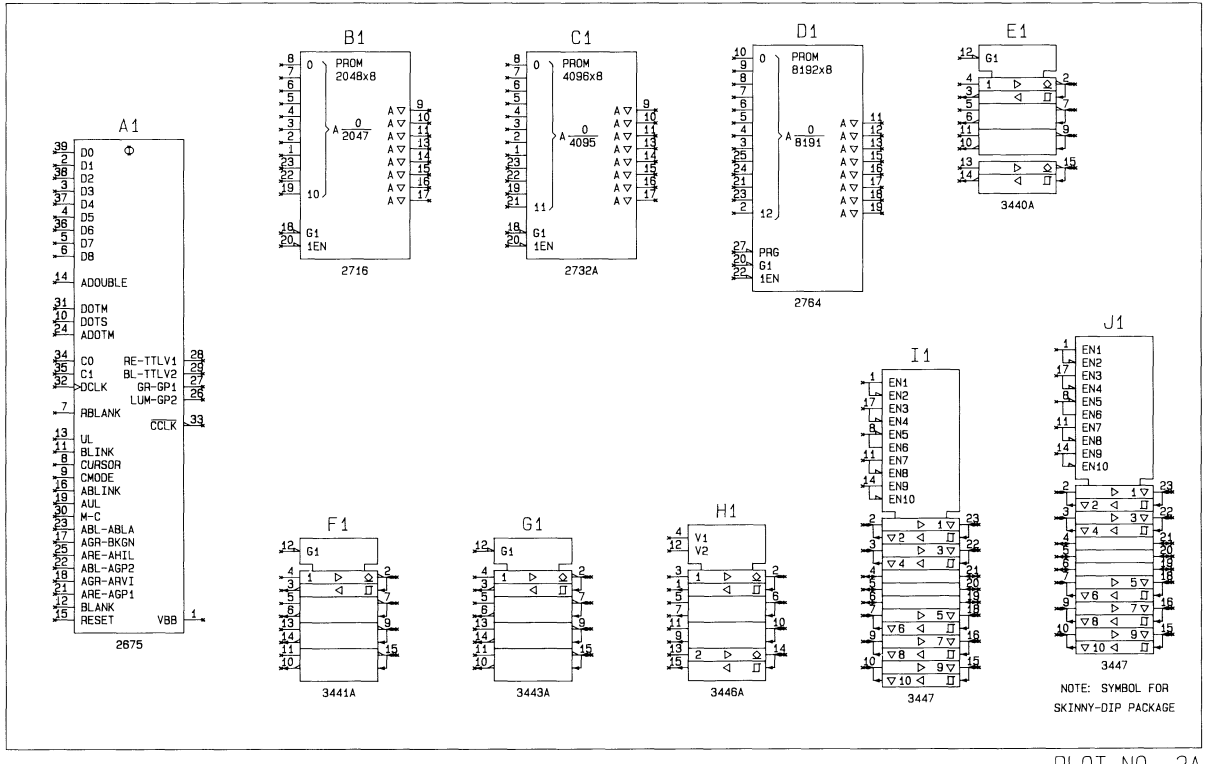
COMPONENT PLOTS

Plot 1A



PLOT NO. 1A

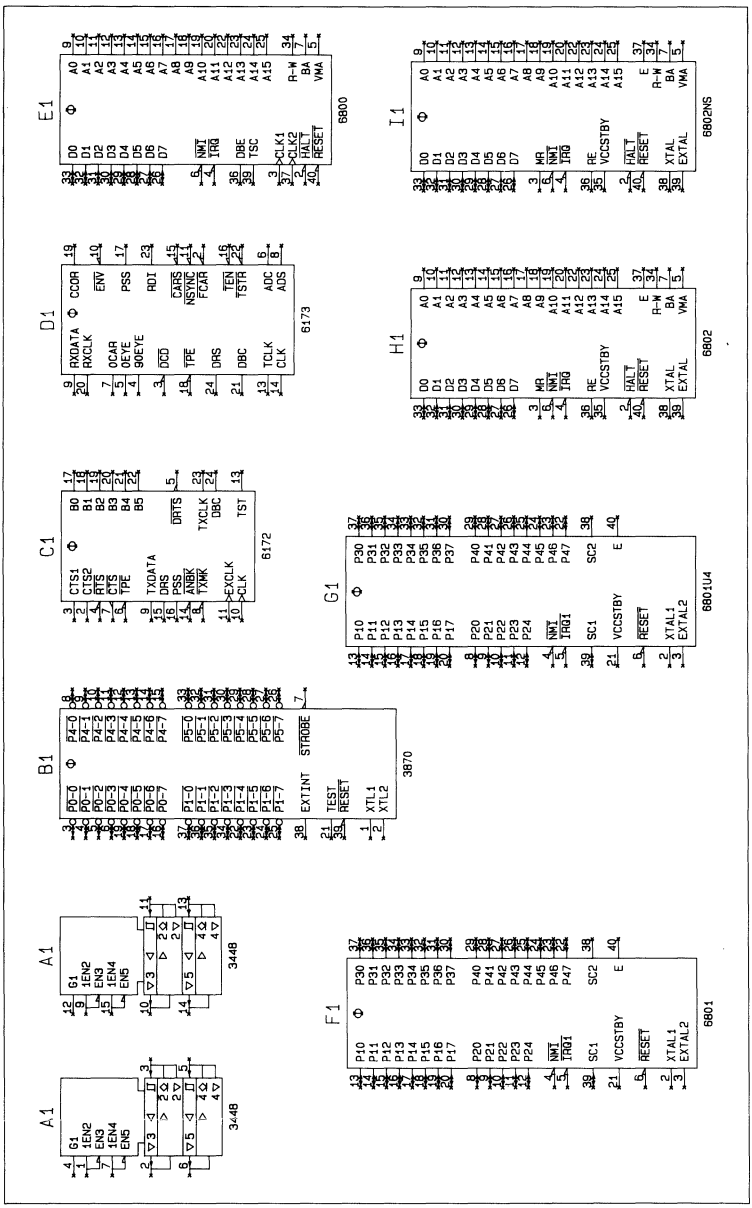
000-0128-00


A1
Φ
D0
D1
D2
D3
D4
D5
D6
D7
DB
ADOUBLE
DOTM
DOTS
ADOTM
CO
C1
DCLK
ABLANK
UL
BLINK
CURSOR
CMODE
ABLINK
AUL
M-C
ABL-ABLA
AGR-BKGN
ARE-AHIL
ABL-AGP2
AGR-ARVI
ARE-AGP1
BLANK
RESET
VBB
RE-TTLV1
BL-TTLV2
GR-GP1
LUM-GP2
CCLK
2675
B1
PROM
2048x8
A 0/2047
G1
1EN
2716
C1
PROM
4096x8
A 0/4095
G1
1EN
2732A
D1
PROM
8192x8
A 0/8191
PRG
G1
1EN
2764
E1
G1
3440A
F1
G1
3441A
G1
G1
3443A
H1
V1
V2
3446A
I1
EN1
EN2
EN3
EN4
EN5
EN6
EN7
EN8
EN9
EN10
3447
J1
EN1
EN2
EN3
EN4
EN5
EN6
EN7
EN8
EN9
EN10
3447
NOTE: SYMBOL FOR
SKINNY-DIP PACKAGE

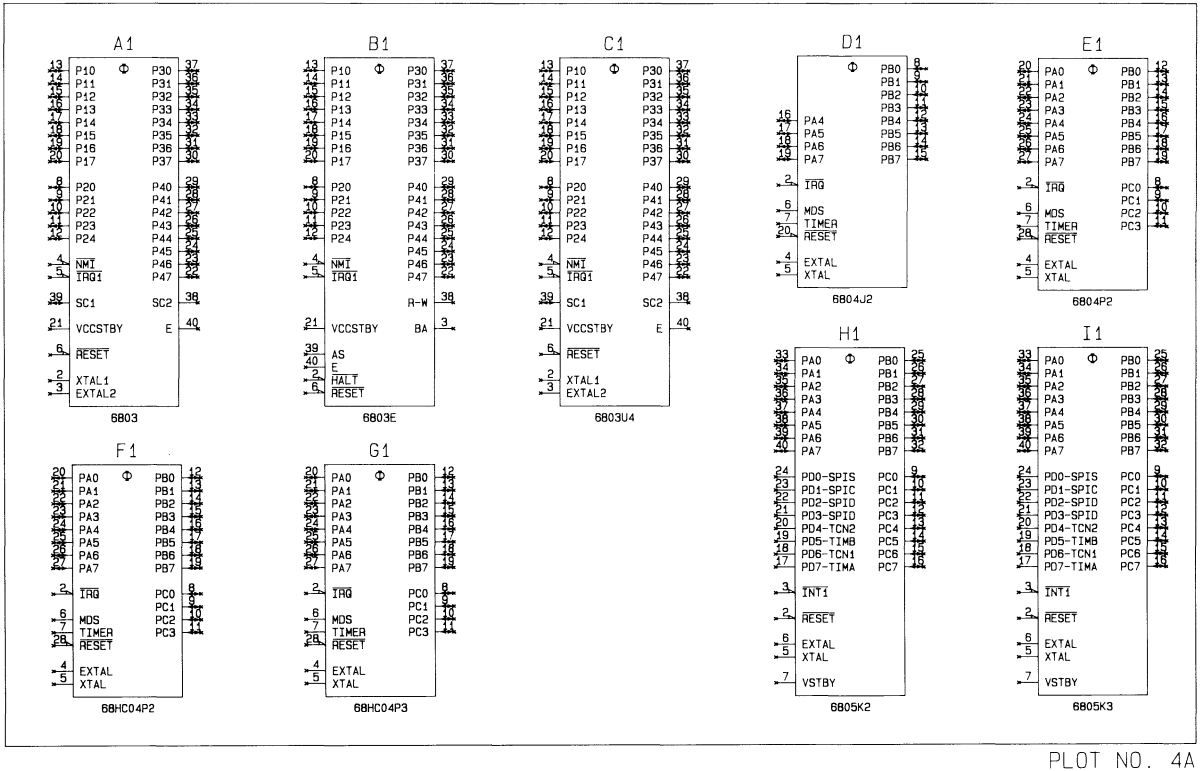
PLOT NO. 2A

COMPONENT PLOTS

Plot 3A



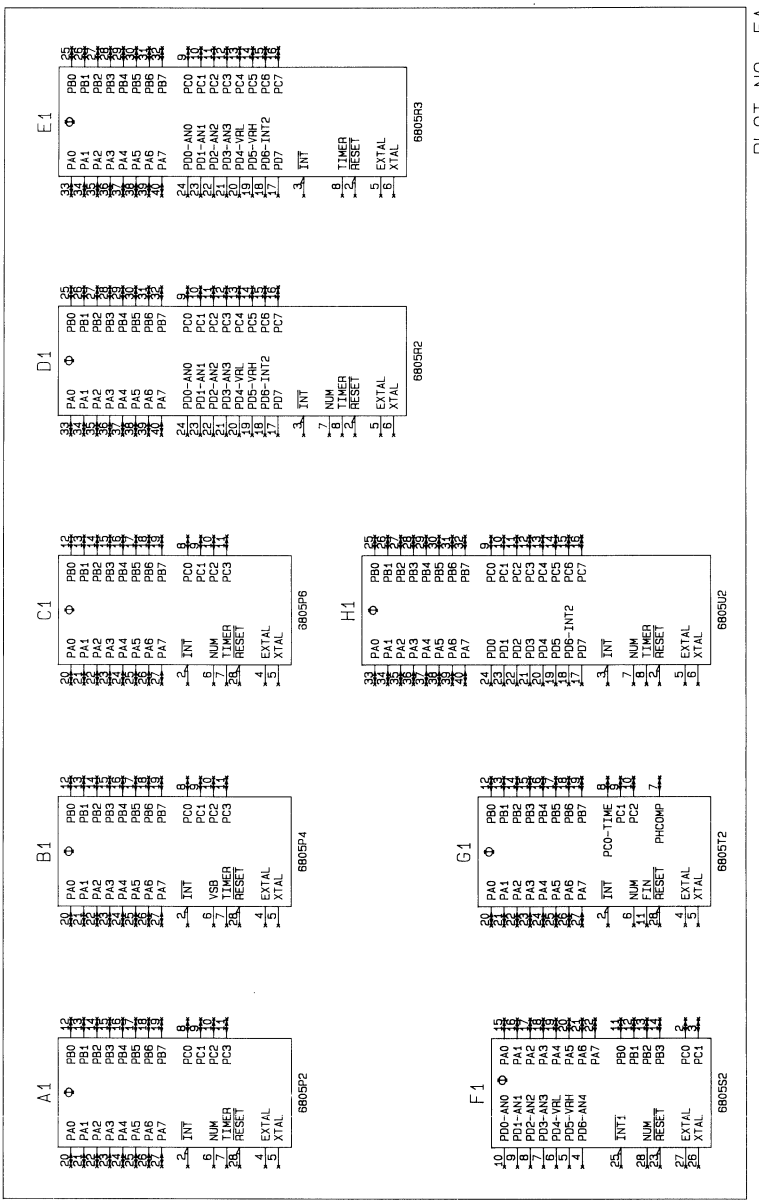
000-0128-00


A1
P10 P11 P12 P13 P14 P15 P16 P17
P30 P31 P32 P33 P34 P35 P36 P37
P20 P21 P22 P23 P24
P40 P41 P42 P43 P44 P45 P46 P47
NMI
IRQ1
SC1
SC2
VCCSTBY
E
RESET
XTAL1
EXTAL2
6803
B1
P10 P11 P12 P13 P14 P15 P16 P17
P30 P31 P32 P33 P34 P35 P36 P37
P20 P21 P22 P23 P24
P40 P41 P42 P43 P44 P45 P46 P47
NMI
IRQ1
R-W
VCCSTBY
BA
AS
E
HALT
RESET
6803E
C1
P10 P11 P12 P13 P14 P15 P16 P17
P30 P31 P32 P33 P34 P35 P36 P37
P20 P21 P22 P23 P24
P40 P41 P42 P43 P44 P45 P46 P47
NMI
IRQ1
SC1
SC2
VCCSTBY
E
RESET
XTAL1
EXTAL2
6803U4
D1
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
PA4 PA5 PA6 PA7
IRQ
MDS
TIMER
RESET
EXTAL
XTAL
6804J2
E1
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
IRQ
MDS
TIMER
RESET
PC0 PC1 PC2 PC3
EXTAL
XTAL
6804P2
H1
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
PD0-SPIS PD1-SPIC PD2-SPID PD3-SPID PD4-TCN2 PD5-TIMB PD6-TCN1 PD7-TIMA
PC0 PC1 PC2 PC3 PC4 PC5 PC6 PC7
INT1
RESET
EXTAL
XTAL
VSTBY
6805K2
I1
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
PD0-SPIS PD1-SPIC PD2-SPID PD3-SPID PD4-TCN2 PD5-TIMB PD6-TCN1 PD7-TIMA
PC0 PC1 PC2 PC3 PC4 PC5 PC6 PC7
INT1
RESET
EXTAL
XTAL
VSTBY
6805K3
F1
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
IRQ
MDS
TIMER
RESET
PC0 PC1 PC2 PC3
EXTAL
XTAL
68HC04P2
G1
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
IRQ
MDS
TIMER
RESET
PC0 PC1 PC2 PC3
EXTAL
XTAL
68HC04P3

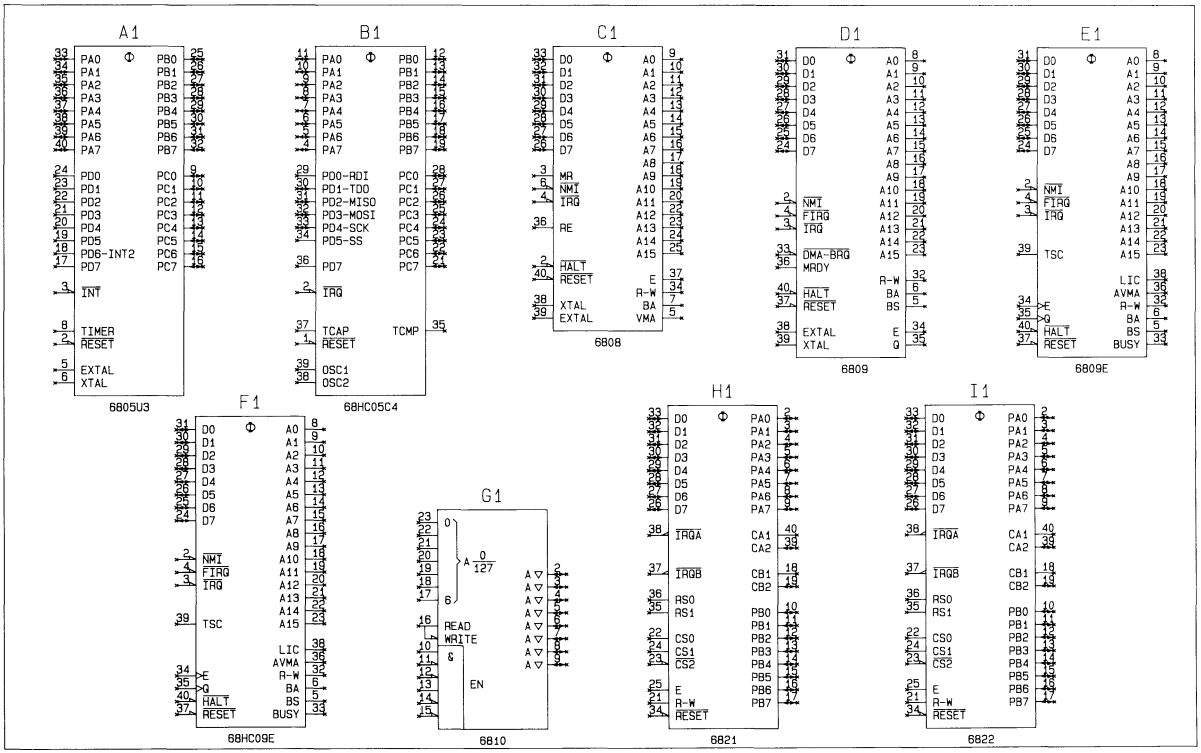
PLOT NO. 4A

COMPONENT PLOTS

Plot 5A

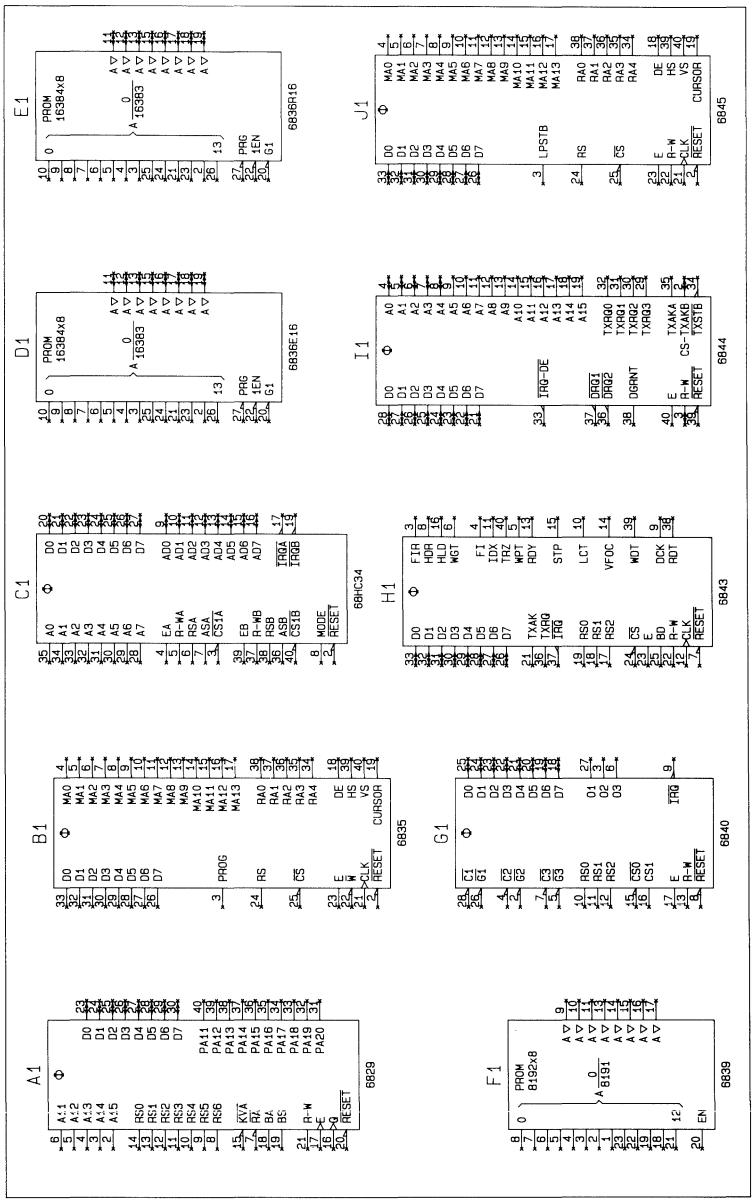


000-0128-00

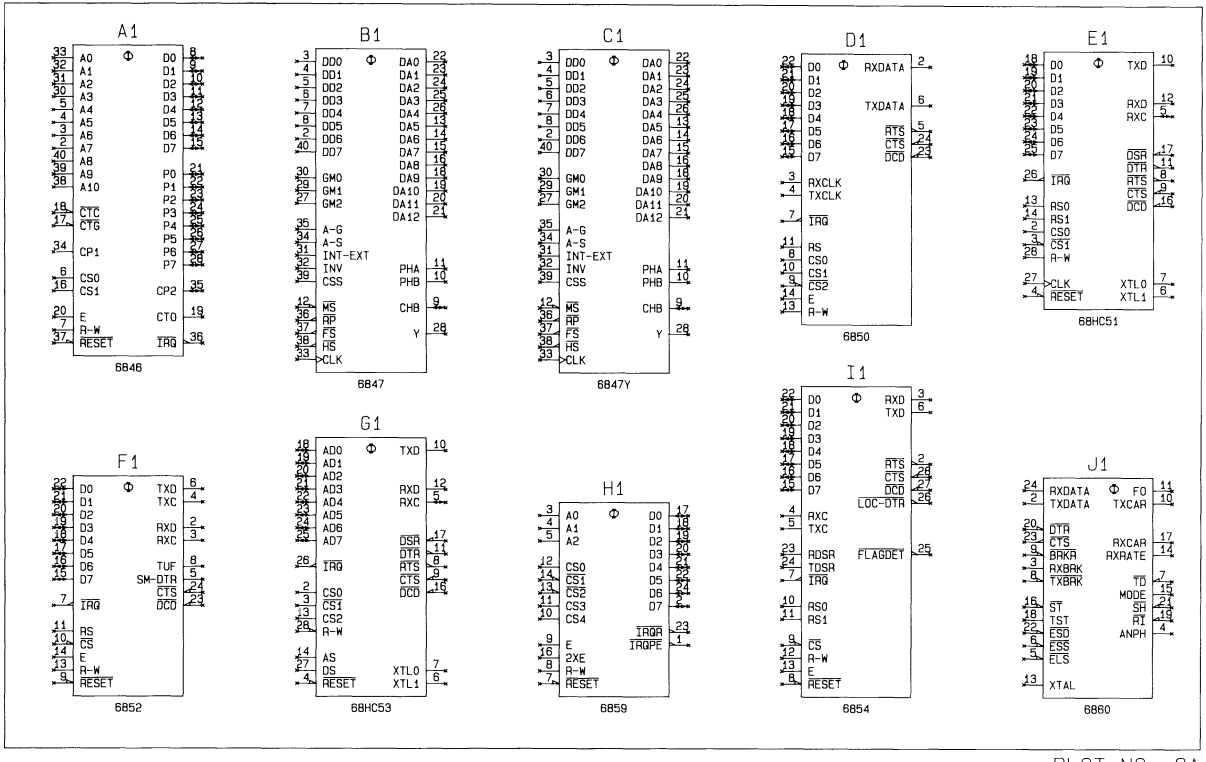

A1
6805U3
B1
68HC05C4
C1
6808
D1
6809
E1
6809E
F1
68HC09E
G1
6810
H1
6821
I1
6822
PLOT NO. 6A

COMPONENT PLOTS

Plot 7A



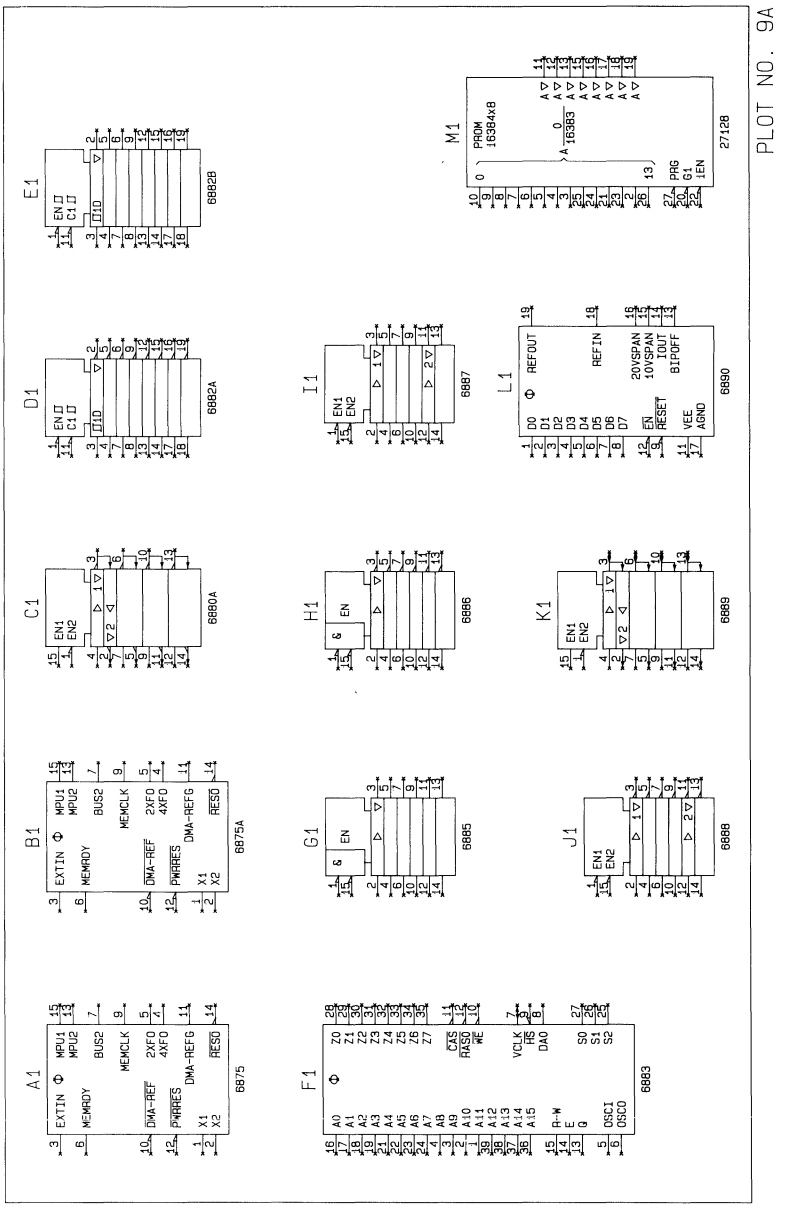
000-0128-00


A1
6846
B1
6847
C1
6847Y
D1
6850
E1
68HC51
F1
6852
G1
68HC53
H1
6859
I1
6854
J1
6860

PLOT NO. 8A

COMPONENT PLOTS

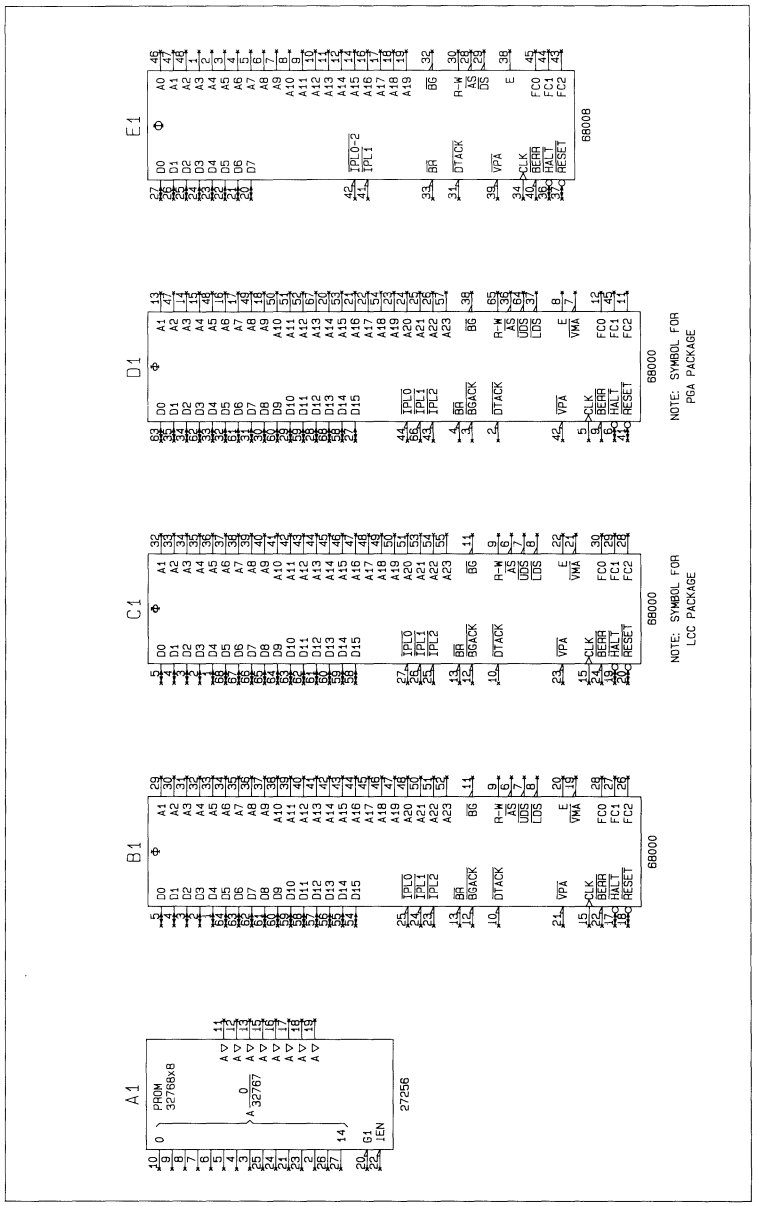
Plot 9A



000-0128-00

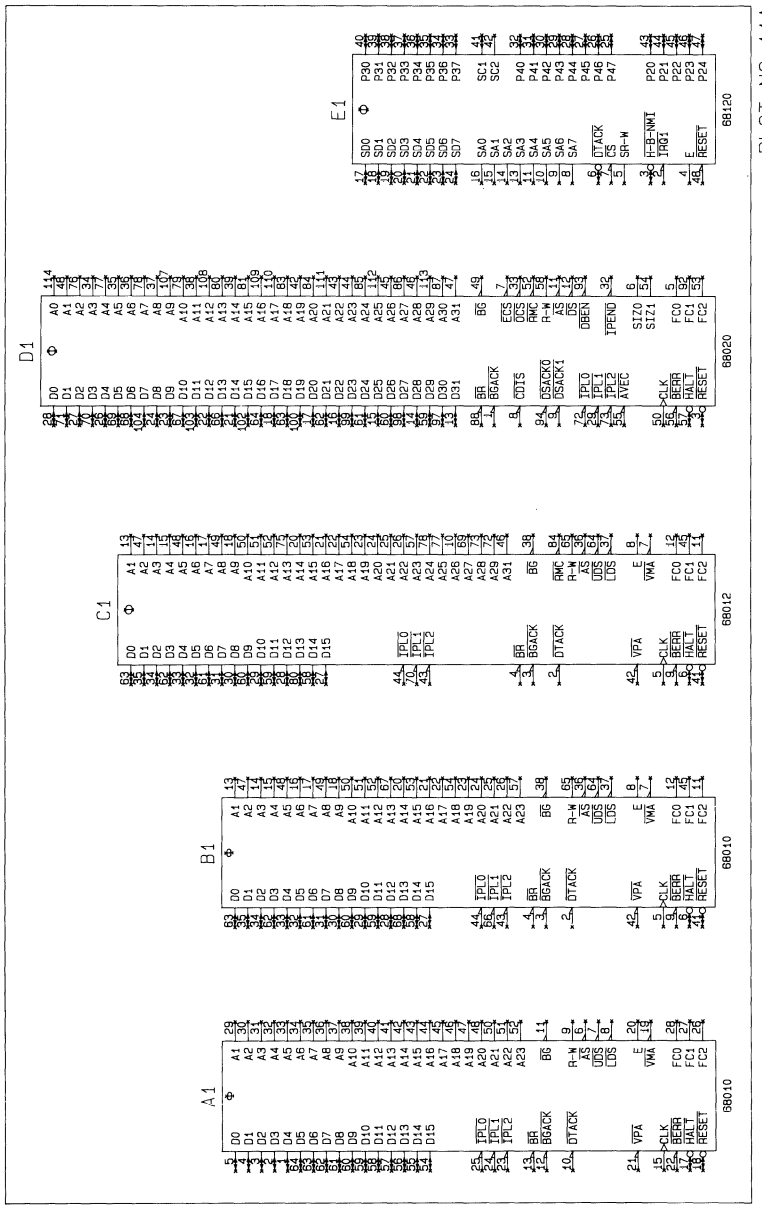
COMPONENT PLOTS

Plot 10A

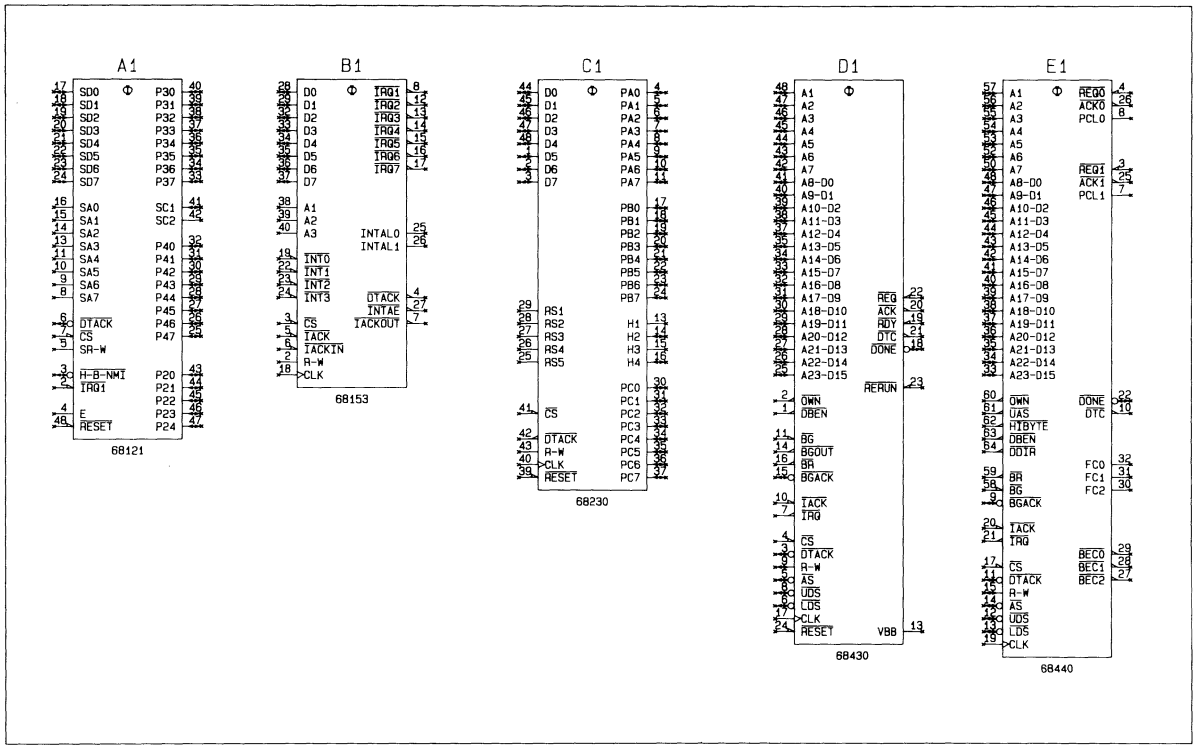


COMPONENT PLOTS

Plot 11A



000-0128-00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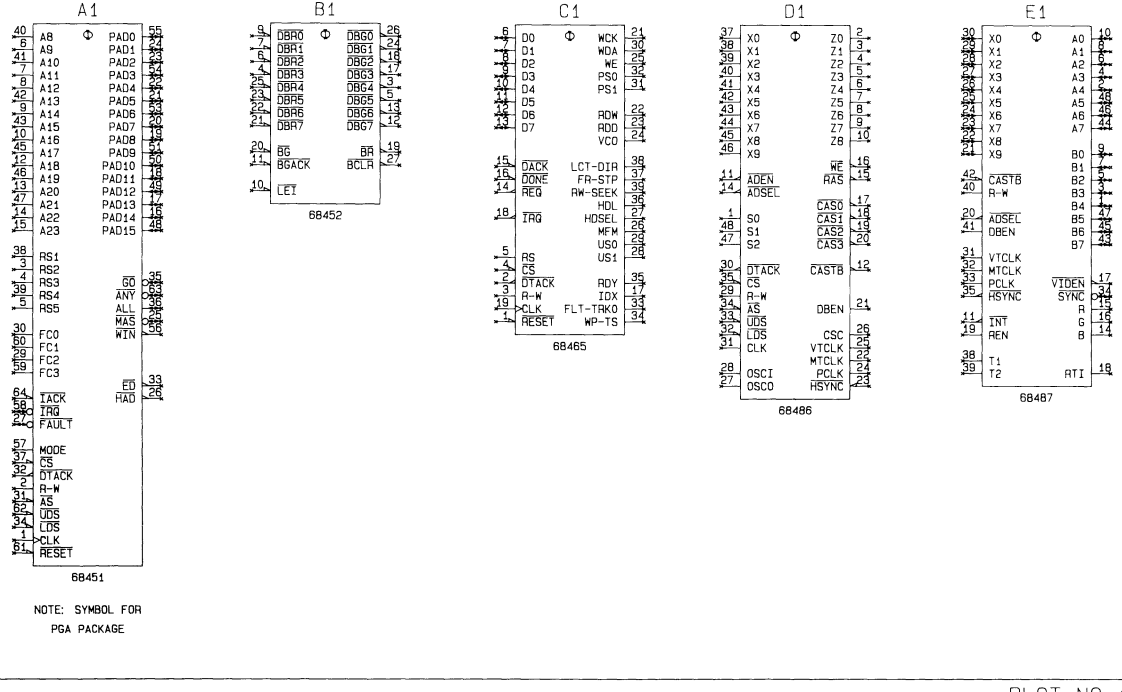
SD0
SD1
SD2
SD3
SD4
SD5
SD6
SD7
SA0
SA1
SA2
SA3
SA4
SA5
SA6
SA7
DTACK
CS
SR-W
H-B-NMI
IRQ1
E
RESET
P30
P31
P32
P33
P34
P35
P36
P37
SC1
SC2
P40
P41
P42
P43
P44
P45
P46
P47
P20
P21
P22
P23
P24
68121
B1
D0
D1
D2
D3
D4
D5
D6
D7
A1
A2
A3
INT0
INT1
INT2
INT3
CS
IACK
IACKIN
R-W
CLK
IRQ1
IRQ2
IRQ3
IRQ4
IRQ5
IRQ6
IRQ7
INTAL0
INTAL1
DTACK
INTAE
IACKOUT
68153
C1
D0
D1
D2
D3
D4
D5
D6
D7
RS1
RS2
RS3
RS4
RS5
CS
DTACK
R-W
CLK
RESET
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
H1
H2
H3
H4
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
68230
D1
A1
A2
A3
A4
A5
A6
A7
A8-D0
A9-D1
A10-D2
A11-D3
A12-D4
A13-D5
A14-D6
A15-D7
A16-D8
A17-D9
A18-D10
A19-D11
A20-D12
A21-D13
A22-D14
A23-D15
OWN
DBEN
BG
BGOUT
BR
BGACK
IACK
IRQ
CS
DTACK
R-W
AS
UDS
LDS
CLK
RESET
REQ
ACK
RDY
DTC
DONE
RERUN
VBB
68430
E1
A1
A2
A3
A4
A5
A6
A7
A8-D0
A9-D1
A10-D2
A11-D3
A12-D4
A13-D5
A14-D6
A15-D7
A16-D8
A17-D9
A18-D10
A19-D11
A20-D12
A21-D13
A22-D14
A23-D15
OWN
UAS
HIBYTE
DBEN
DDIR
BR
BG
BGACK
IACK
IRQ
CS
DTACK
R-W
AS
UDS
LDS
CLK
REQ0
ACK0
PCL0
REQ1
ACK1
PCL1
DONE
DTC
FC0
FC1
FC2
BEC0
BEC1
BEC2
68440

PLOT NO.12A

A1
B1
C1
D1
E1
68440
68450
68450
68451
68451
NOTE: SYMBOL FOR PGA PACKAGE
NOTE: SYMBOL FOR PGA PACKAGE
NOTE: SYMBOL FOR LCC PACKAGE

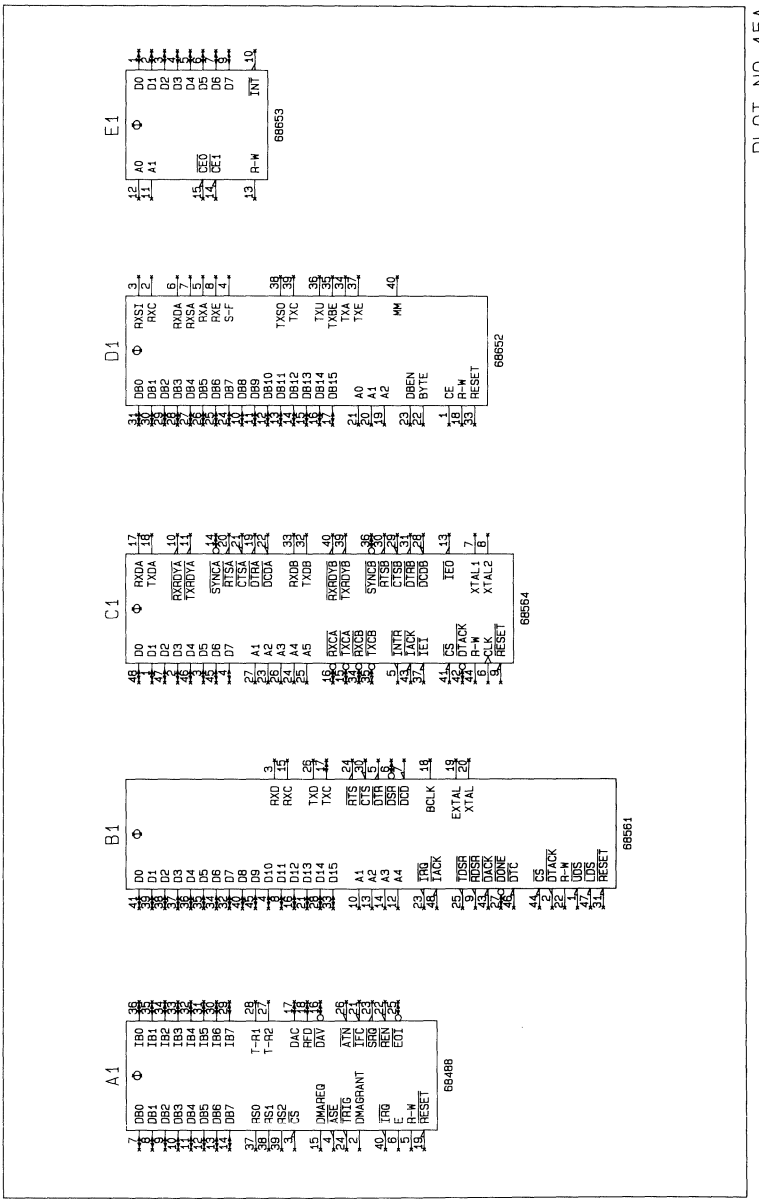
PLOT NO.13A


A1
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22
A23
PAD0
PAD1
PAD2
PAD3
PAD4
PAD5
PAD6
PAD7
PAD8
PAD9
PAD10
PAD11
PAD12
PAD13
PAD14
PAD15
RS1
RS2
RS3
RS4
RS5
FC0
FC1
FC2
FC3
IACK
IRQ
FAULT
MODE
CS
DTACK
R-W
AS
UDS
LDS
CLK
RESET
GO
ANY
ALL
MAS
WIN
ED
HAD
68451
NOTE: SYMBOL FOR
PGA PACKAGE
B1
DBR0
DBR1
DBR2
DBR3
DBR4
DBR5
DBR6
DBR7
DBG0
DBG1
DBG2
DBG3
DBG4
DBG5
DBG6
DBG7
BG
BGACK
BR
BCLR
LET
68452
C1
D0
D1
D2
D3
D4
D5
D6
D7
DACK
DONE
REQ
IRQ
RS
CS
DTACK
R-W
CLK
RESET
WCK
WDA
WE
PS0
PS1
RDW
RDD
VCO
LCT-DIR
FR-STP
RW-SEEK
HDL
HDSEL
MFM
US0
US1
RDY
IDX
FLT-TAK0
WP-TS
68465
D1
X0
X1
X2
X3
X4
X5
X6
X7
X8
X9
ADEN
ADSEL
S0
S1
S2
DTACK
CS
R-W
AS
UDS
LDS
CLK
OSCI
OSCO
Z0
Z1
Z2
Z3
Z4
Z5
Z6
Z7
Z8
WE
RAS
CAS0
CAS1
CAS2
CAS3
CASTB
DBEN
CSC
VTCLK
MTCLK
PCLK
HSYNC
68486
E1
X0
X1
X2
X3
X4
X5
X6
X7
X8
X9
CASTB
R-W
ADSEL
DBEN
INT
REN
T1
T2
A0
A1
A2
A3
A4
A5
A6
A7
B0
B1
B2
B3
B4
B5
B6
B7
VTCLK
MTCLK
PCLK
HSYNC
VIDEN
SYNC
R
G
B
ATI
68487

PLOT NO. 14A

COMPONENT PLOTS

Plot 15A



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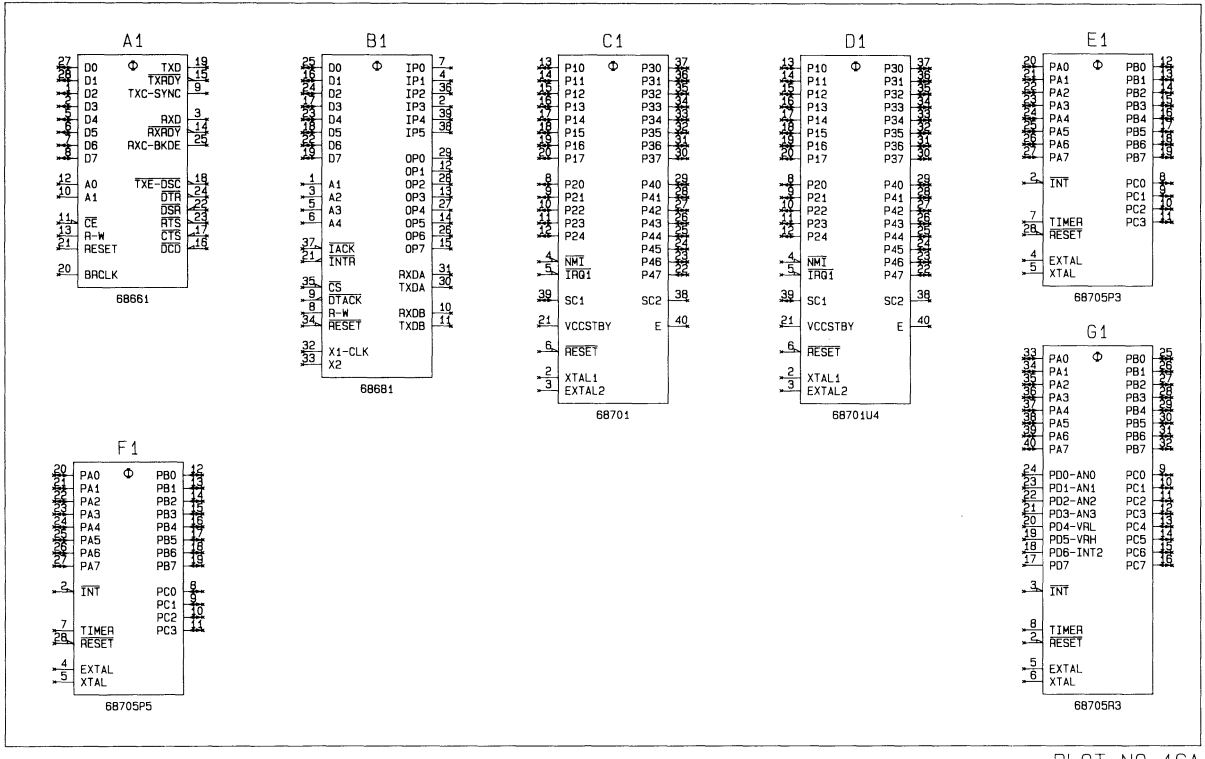
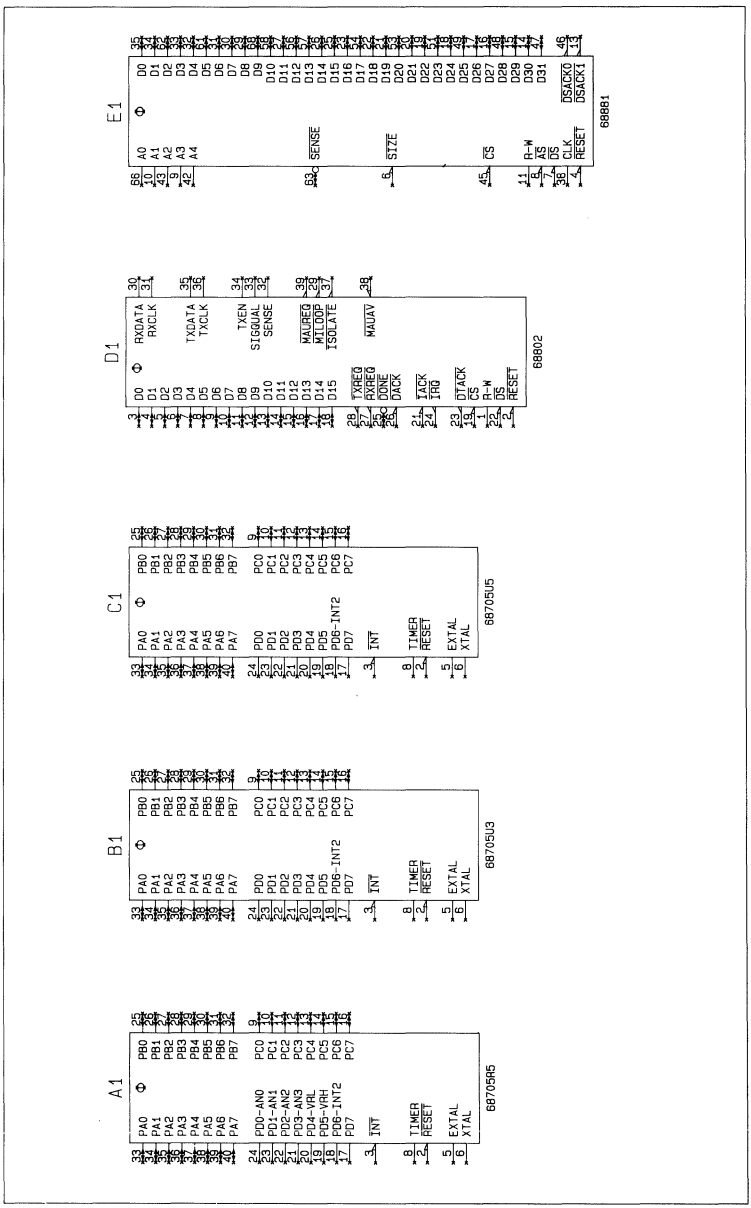

A1
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
CE
R-W
RESET
BACLK
Φ
TXD
TXRDY
TXC-SYNC
RXD
RXRDY
RXC-BKDE
TXE-DSC
DTR
DSR
RTS
CTS
DCD
68661
B1
D0
D1
D2
D3
D4
D5
D6
D7
A1
A2
A3
A4
IACK
INTR
CS
DTACK
R-W
RESET
X1-CLK
X2
Φ
IP0
IP1
IP2
IP3
IP4
IP5
OP0
OP1
OP2
OP3
OP4
OP5
OP6
OP7
RXDA
TXDA
RXDB
TXDB
68681
C1
P10
P11
P12
P13
P14
P15
P16
P17
P20
P21
P22
P23
P24
NMI
IRQ1
SC1
VCCSTBY
RESET
XTAL1
EXTAL2
Φ
P30
P31
P32
P33
P34
P35
P36
P37
P40
P41
P42
P43
P44
P45
P46
P47
SC2
E
68701
D1
P10
P11
P12
P13
P14
P15
P16
P17
P20
P21
P22
P23
P24
NMI
IRQ1
SC1
VCCSTBY
RESET
XTAL1
EXTAL2
Φ
P30
P31
P32
P33
P34
P35
P36
P37
P40
P41
P42
P43
P44
P45
P46
P47
SC2
E
68701U4
E1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
INT
TIMER
RESET
EXTAL
XTAL
Φ
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
68705P3
G1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PD0-AN0
PD1-AN1
PD2-AN2
PD3-AN3
PD4-VRL
PD5-VRH
PD6-INT2
PD7
INT
TIMER
RESET
EXTAL
XTAL
Φ
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
68705R3
F1
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
INT
TIMER
RESET
EXTAL
XTAL
Φ
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PC0
PC1
PC2
PC3
68705P5

PLOT NO. 16A

COMPONENT PLOTS

Plot 17A



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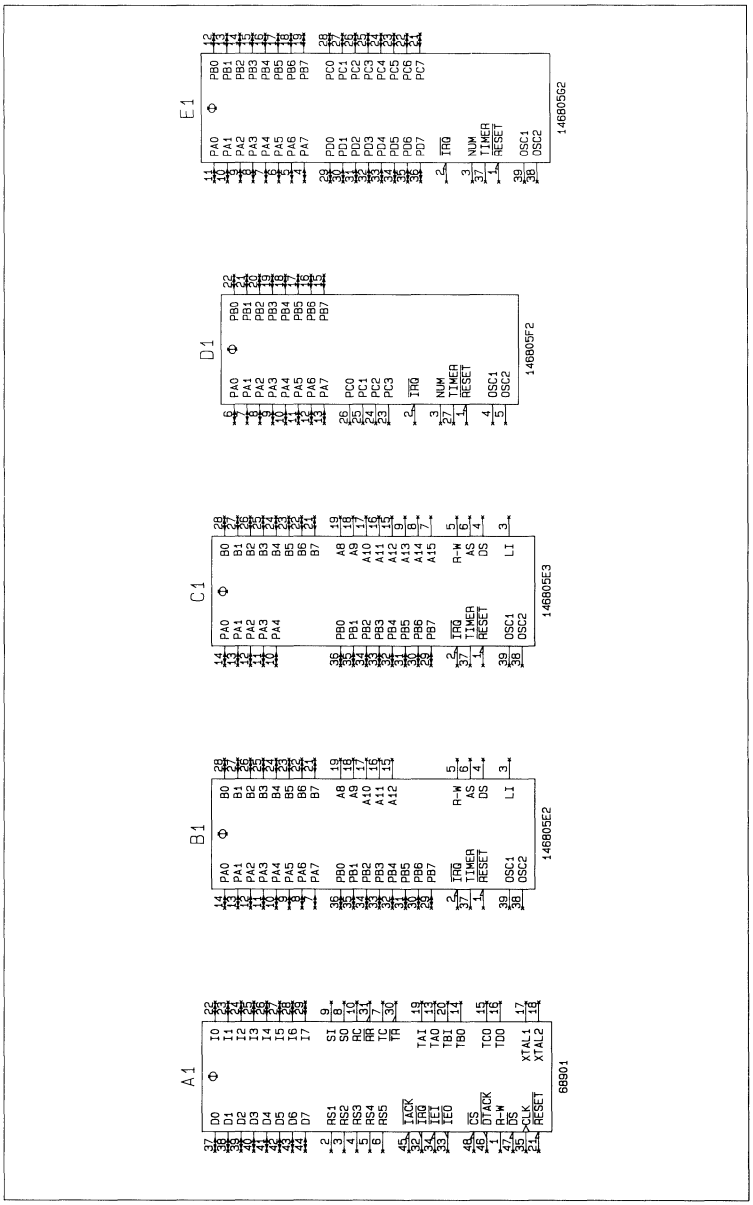
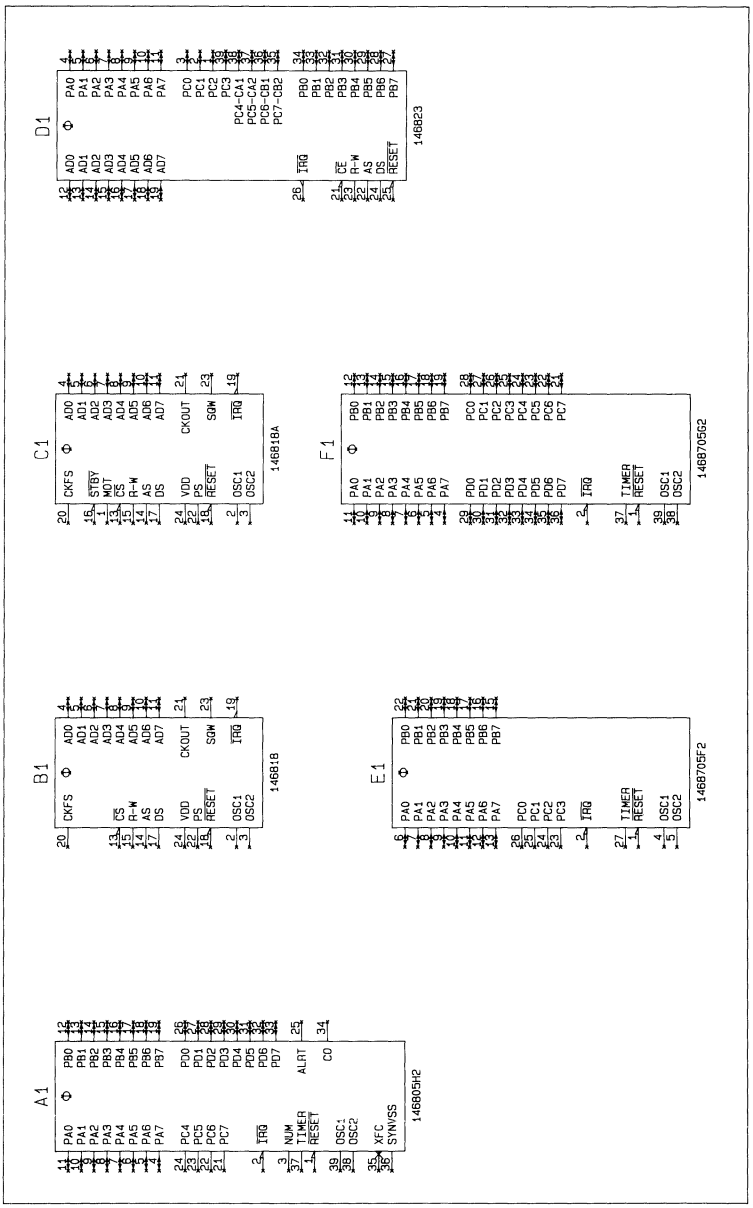
COMPONENT PLOTS

Plot 18A



COMPONENT PLOTS

Plot 19A



PLOT NO. 19A

000-0128-00