

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	IEZS: RTC	6-15-89	

APPLICATIONS		SILICON GRAPHICS INC.						
	drw	<h1>IP10</h1>						
	chk							
	iss.							
030-8029		NOM.	DRAWING NUMBER	REV	DATE	SHEET		
NEXT ASSEMBLY	USED ON	APPROVALS	DATE	IP10	032-8029-001	1	9 MAY 1989	1 OF 31

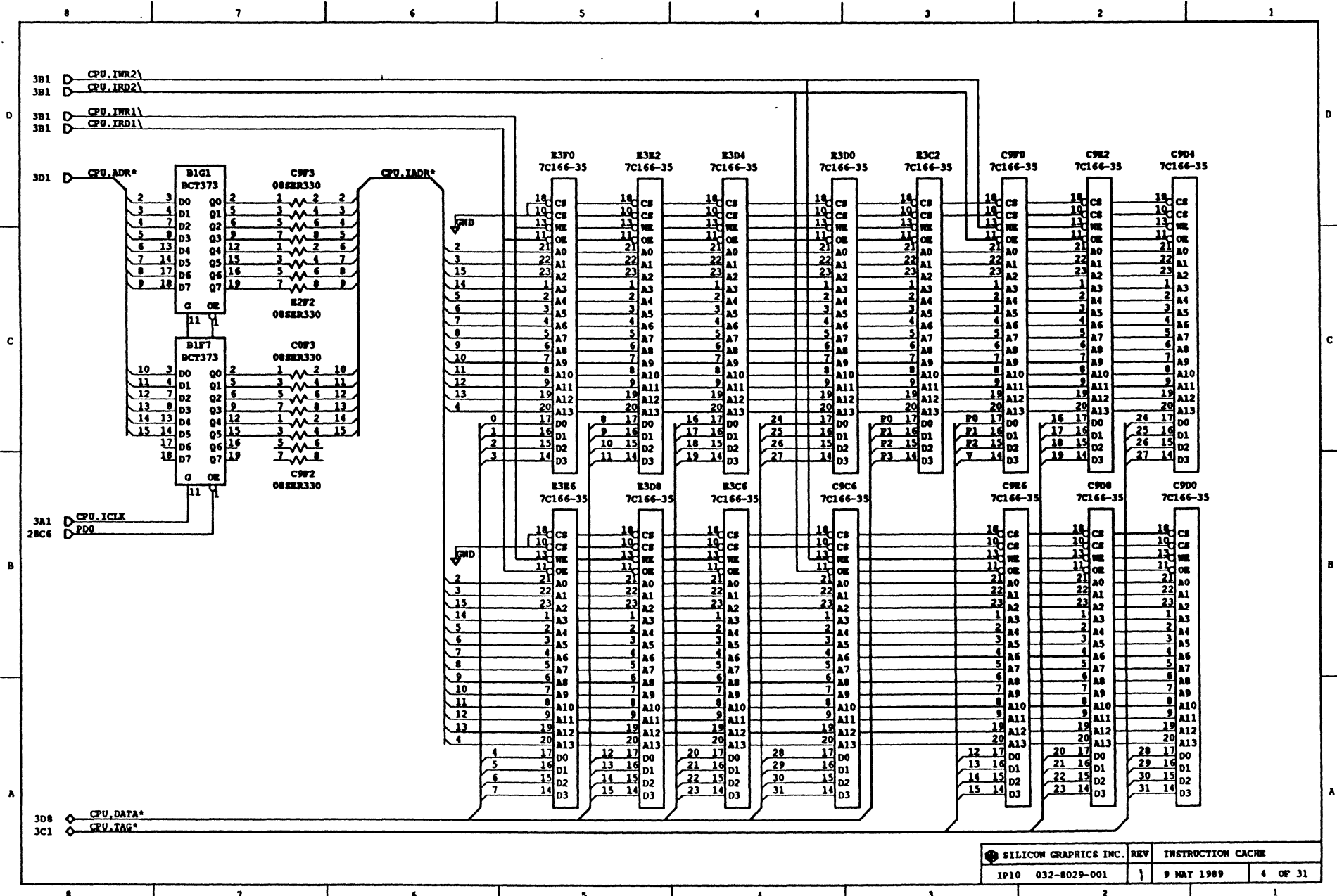
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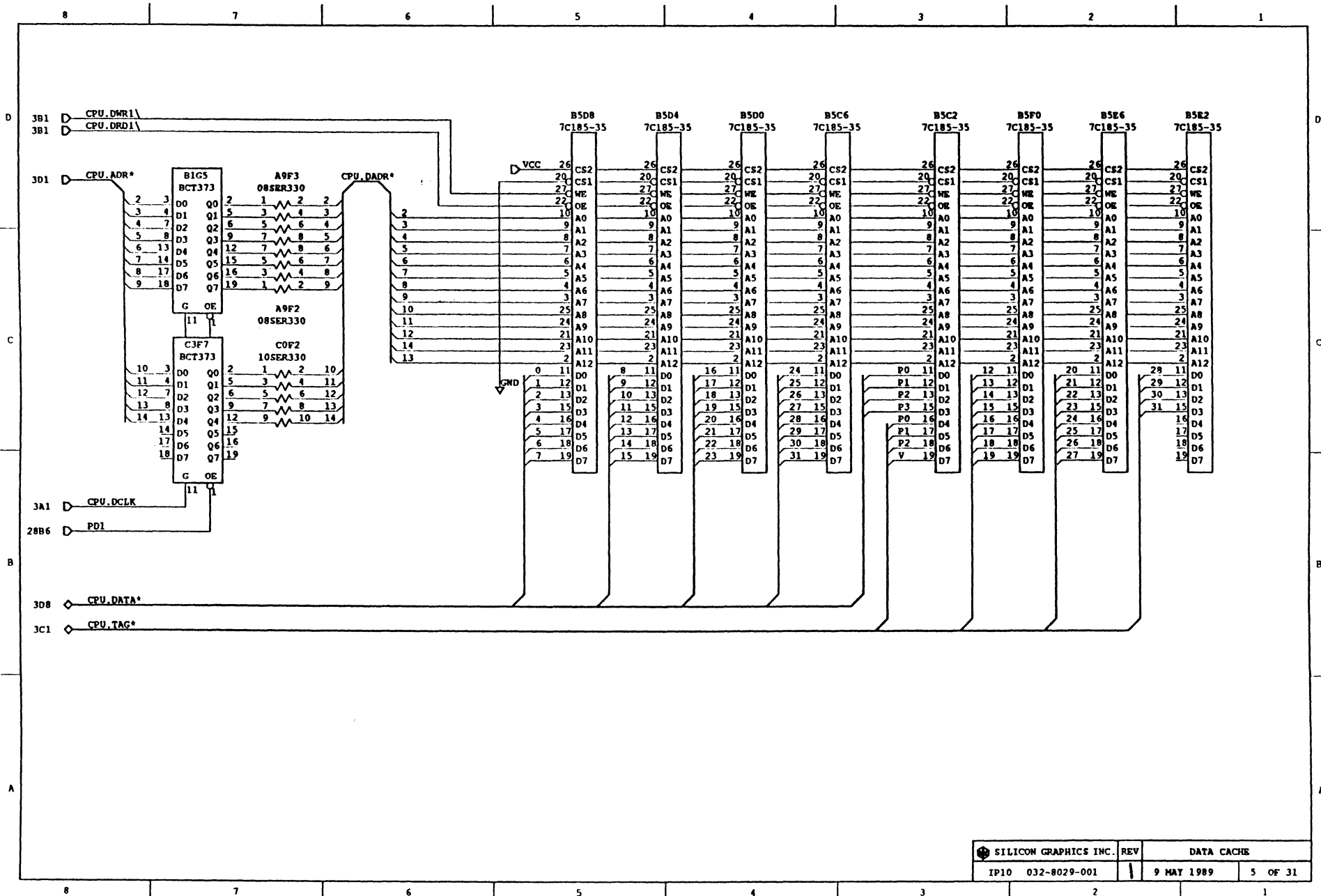
PAGE # DESCRIPTION

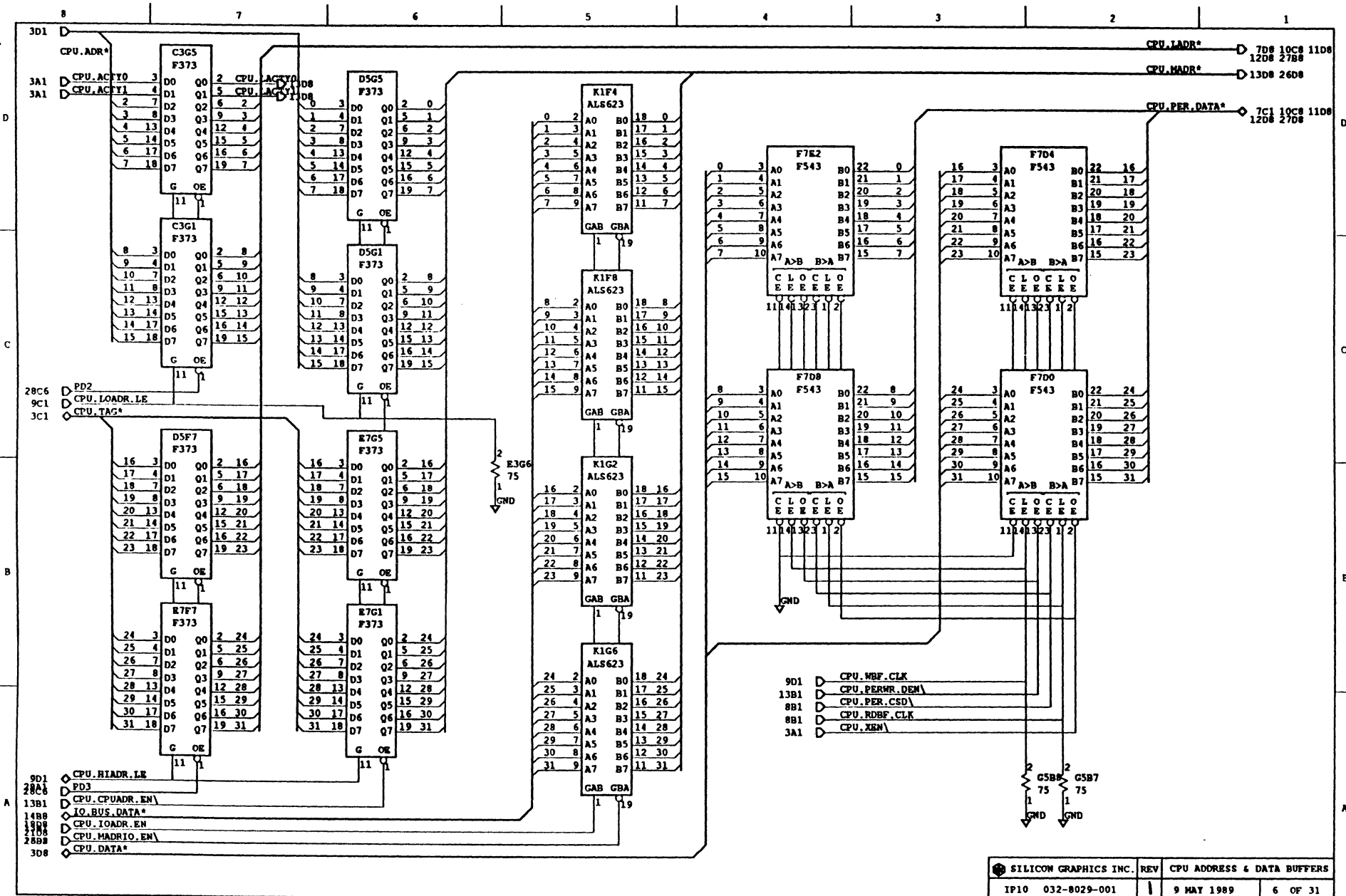
- 03 CPU AND FPU
- 04 INSTRUCTION CACHE
- 05 DATA CACHE
- 06 CPU ADDRESS AND DATA BUFFERS
- 07 BOOT PROM, LED REGISTER, ADDRESS DECODE
- 08 CPU INTERRUPTS
- 09 CPU BUFFER ENABLES
- 10 DUART0: KEYBOARD AND MOUSE
- 11 DUART1: PORTS 1 AND 2
- 12 TIMER AND RTC
- 13 CTL1 GATE ARRAY
- 14 IOCL GATE ARRAY AND MAP
- 15 ETHERNET, SCSI AND PRINTER
- 16 AUDIO I/O
- 17 GRAPHICS I/F AND I/O CLOCKS
- 18 GRAPHICS BUFFERS AND PORT
- 19 RAS DECODE AND WE BUFFERS
- 20 RAS, CAS AND ADDRESS BUFFERS
- 21 DATA BUFFERS, WRITE ENABLES, PARITY GENERATION AND CHECK
- 22 MEMORY BANK 0
- 23 MEMORY BANK 1
- 24 MEMORY BANK 2
- 25 MEMORY BANK 3
- 26 VME DATAPATH
- 27 INTERRUPT CONTROLLER
- 28 CLOCKS, PUPS AND PUDS
- 29 EB1 AND EP2 CONNECTORS
- 30 SERIAL, POWER, ETHERNET, SCSI AND PRINTER CONNECTORS
- 31 VME BUS TERMINATIONS

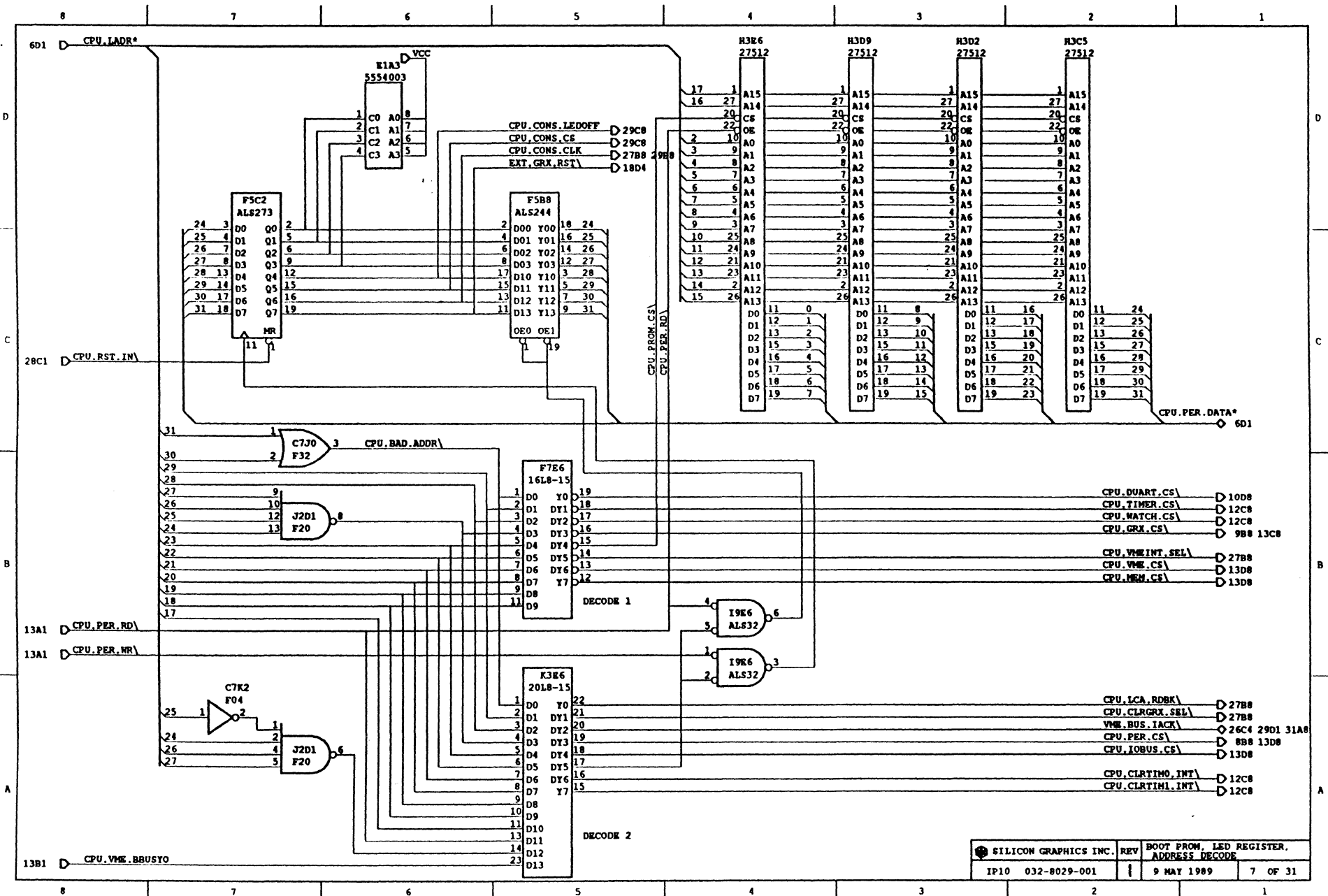
SILICON GRAPHICS INC.		REV	TABLE OF CONTENTS	
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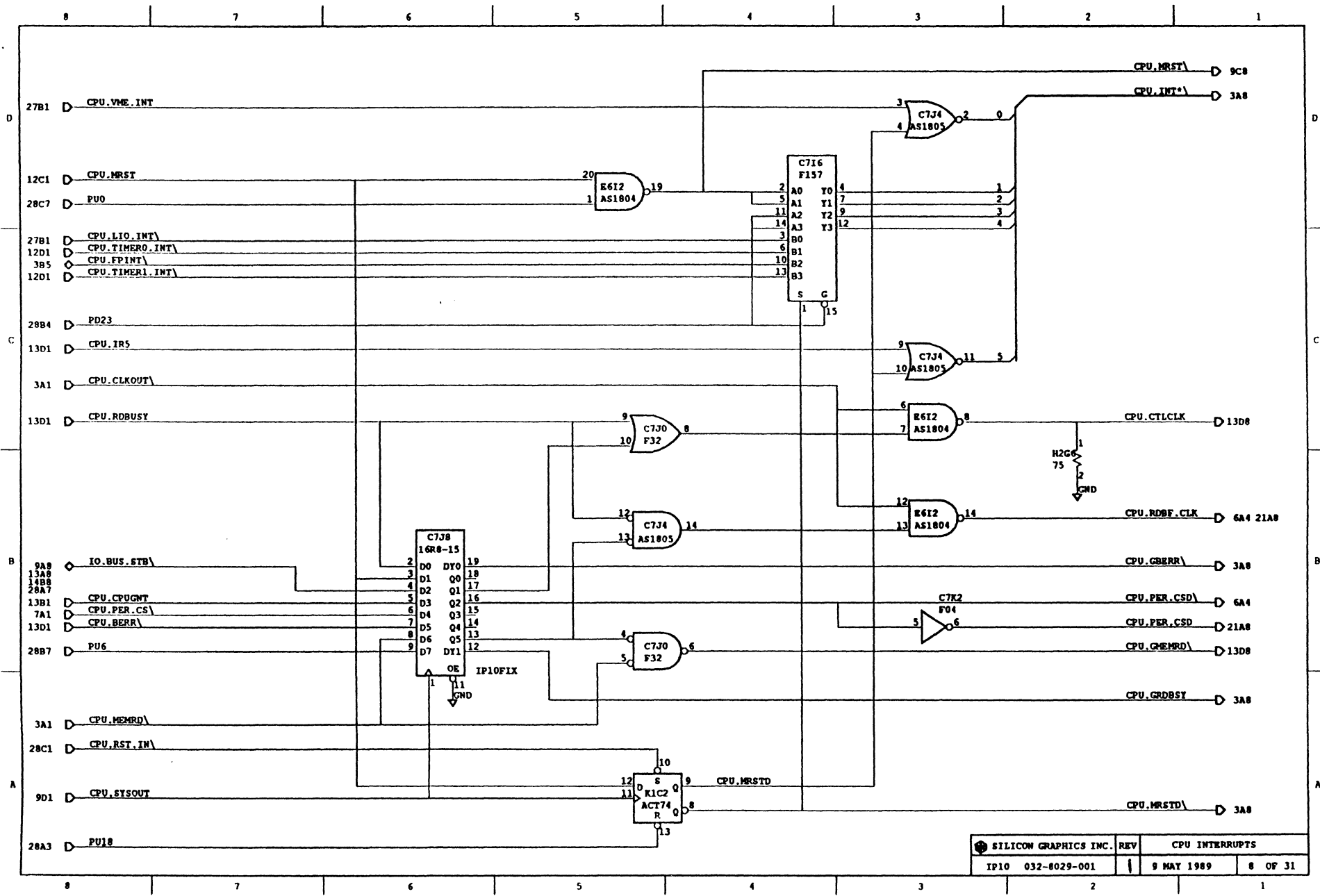
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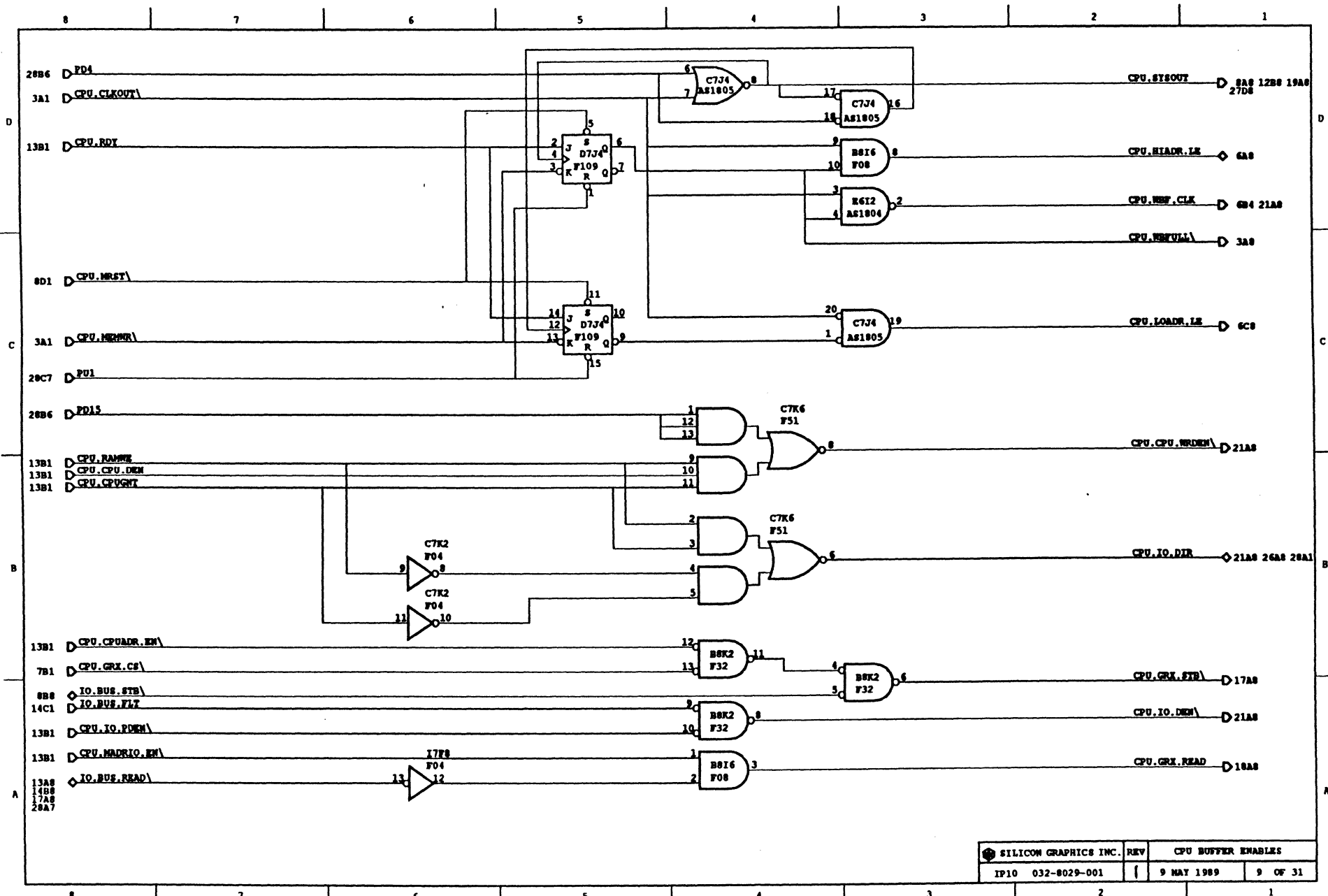




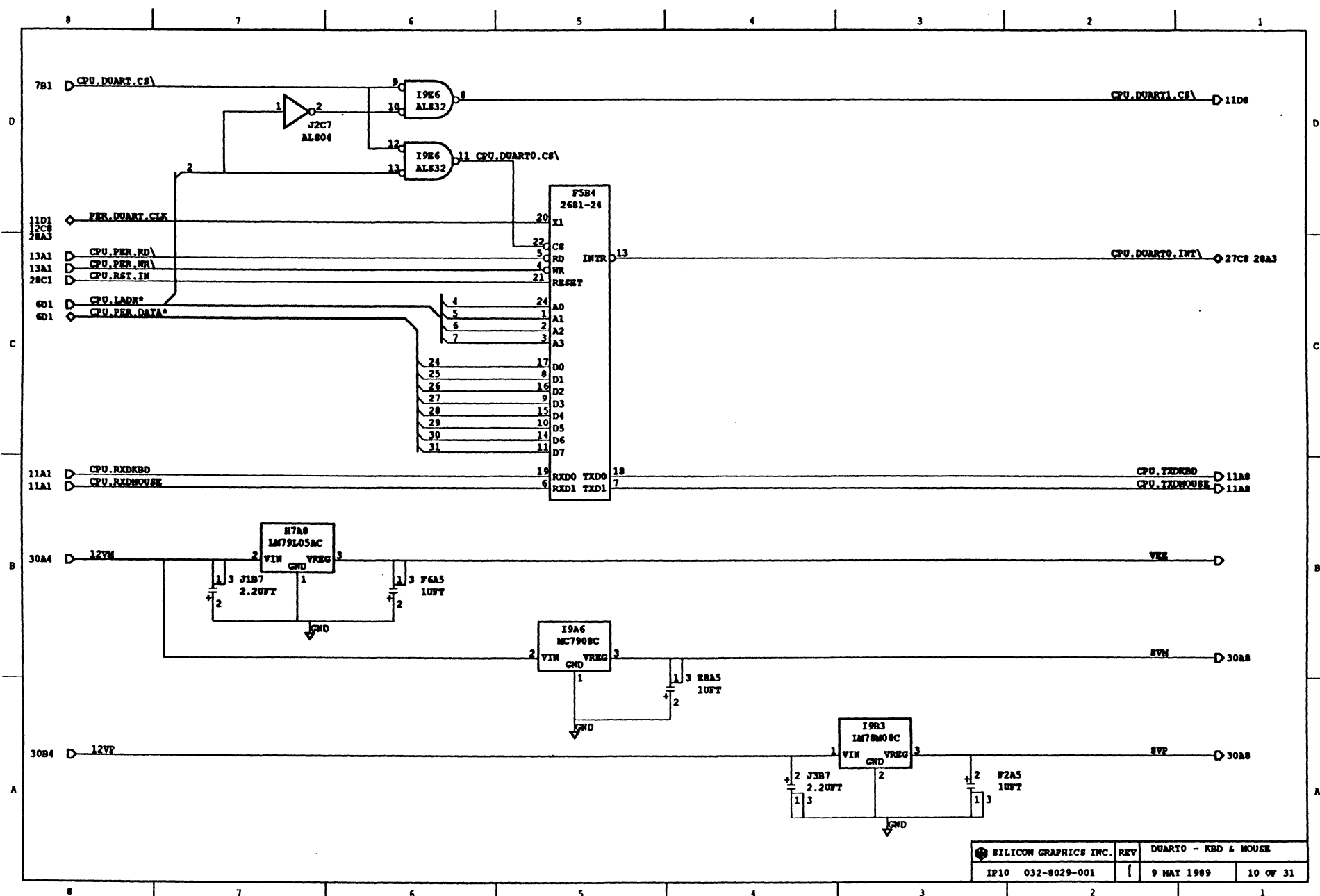


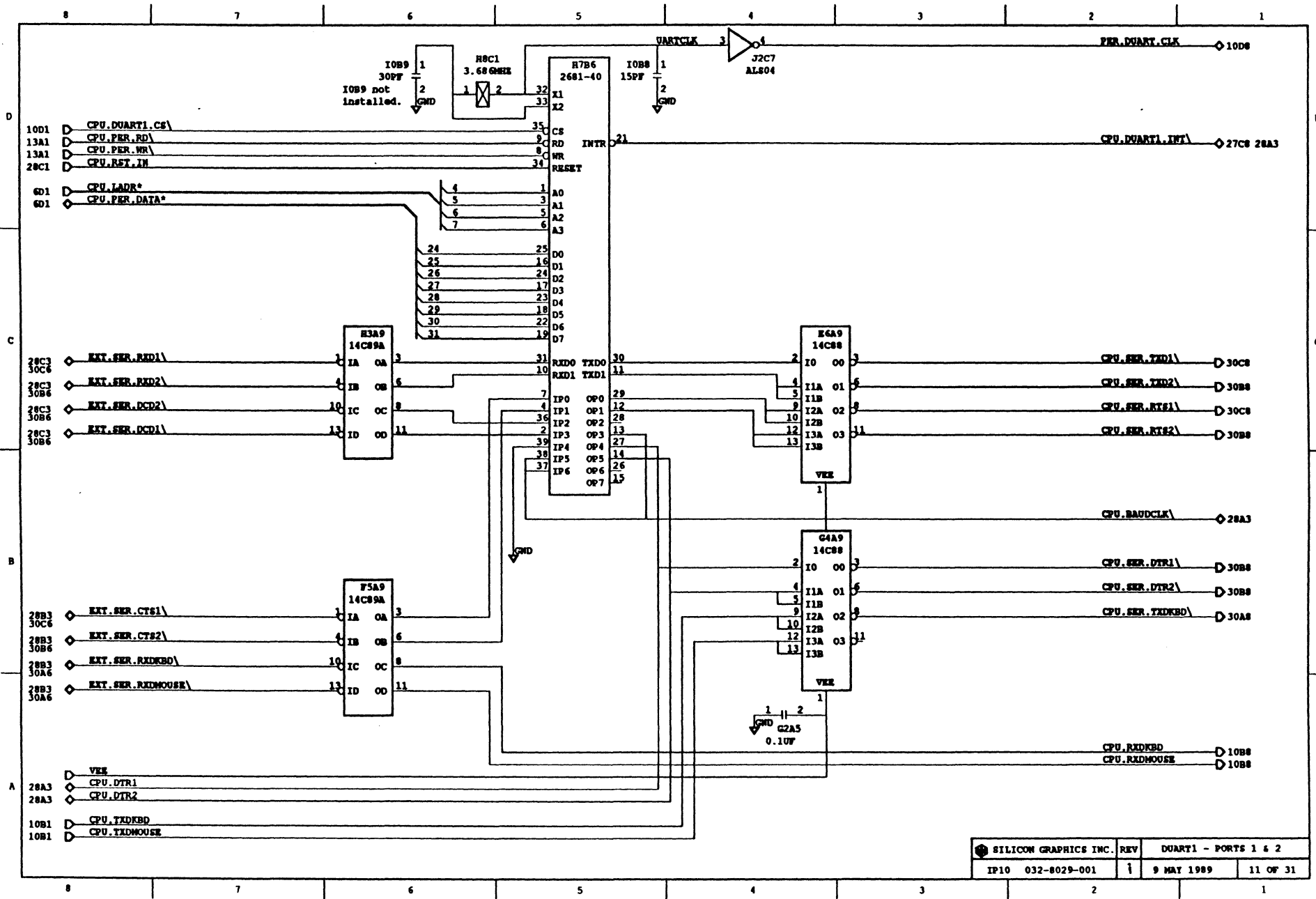


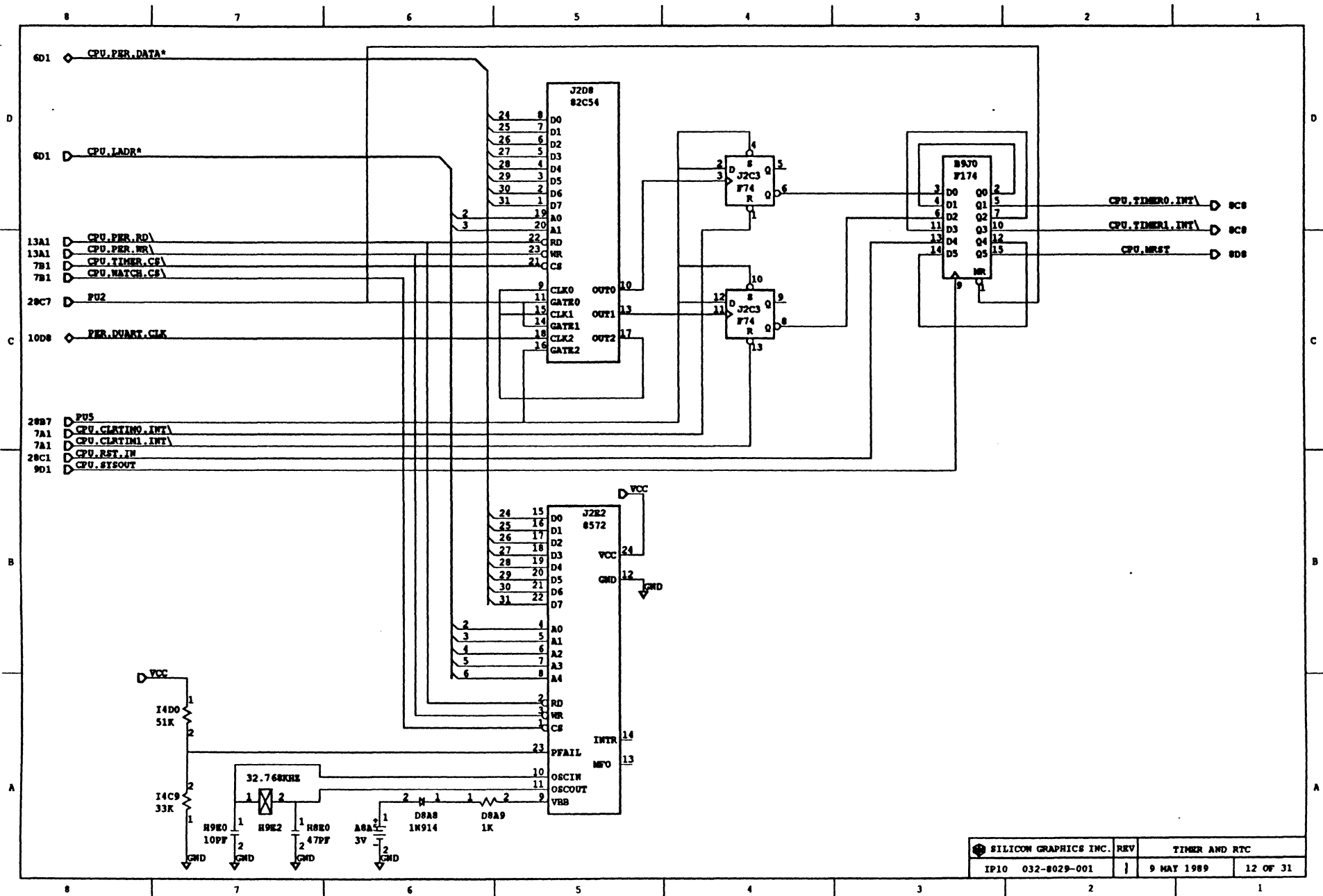




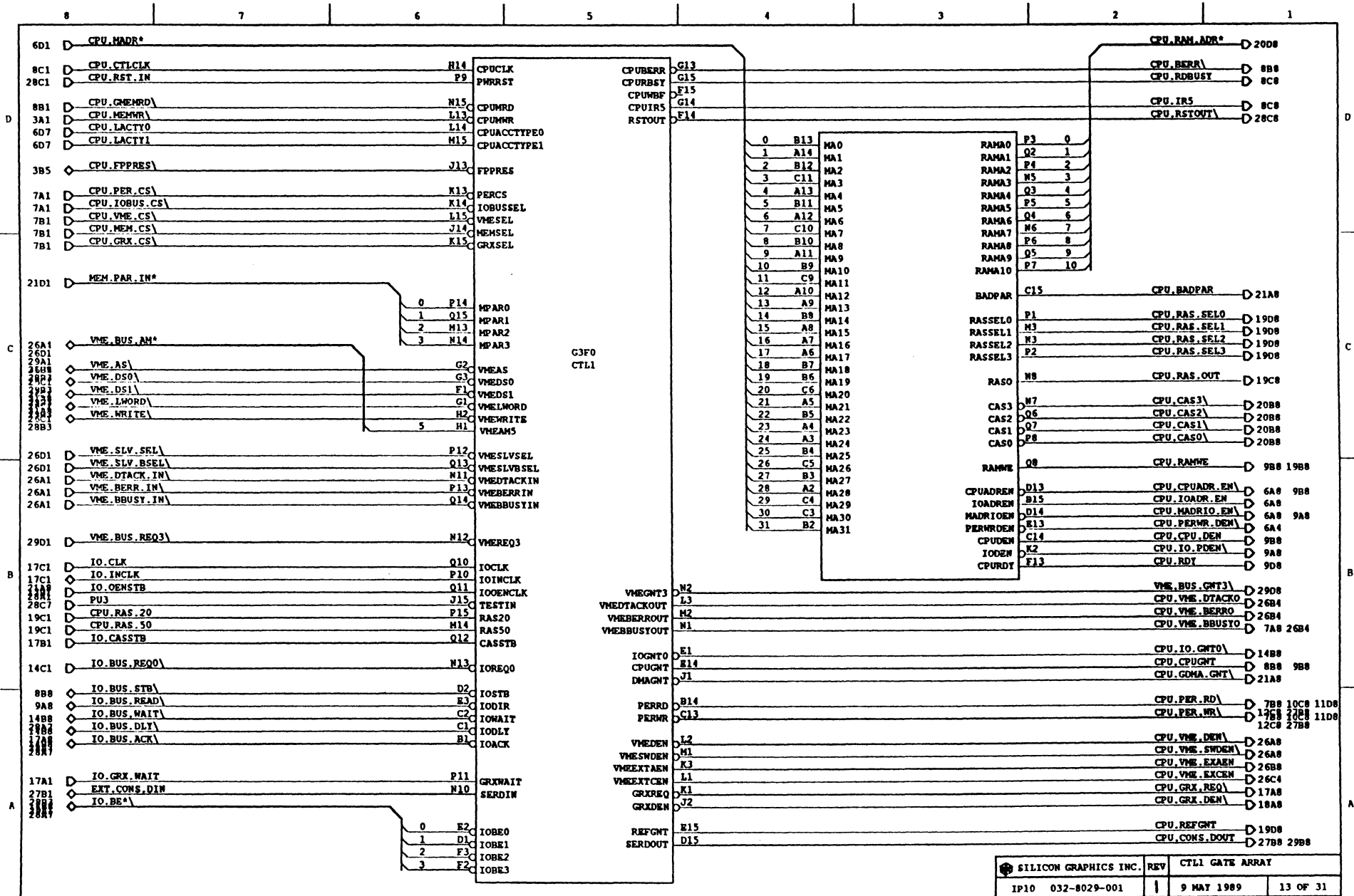
SILICON GRAPHICS INC.	REV	CPU BUFFER ENABLES	
	IP10 032-8029-001		9 MAY 1989 9 OF 31

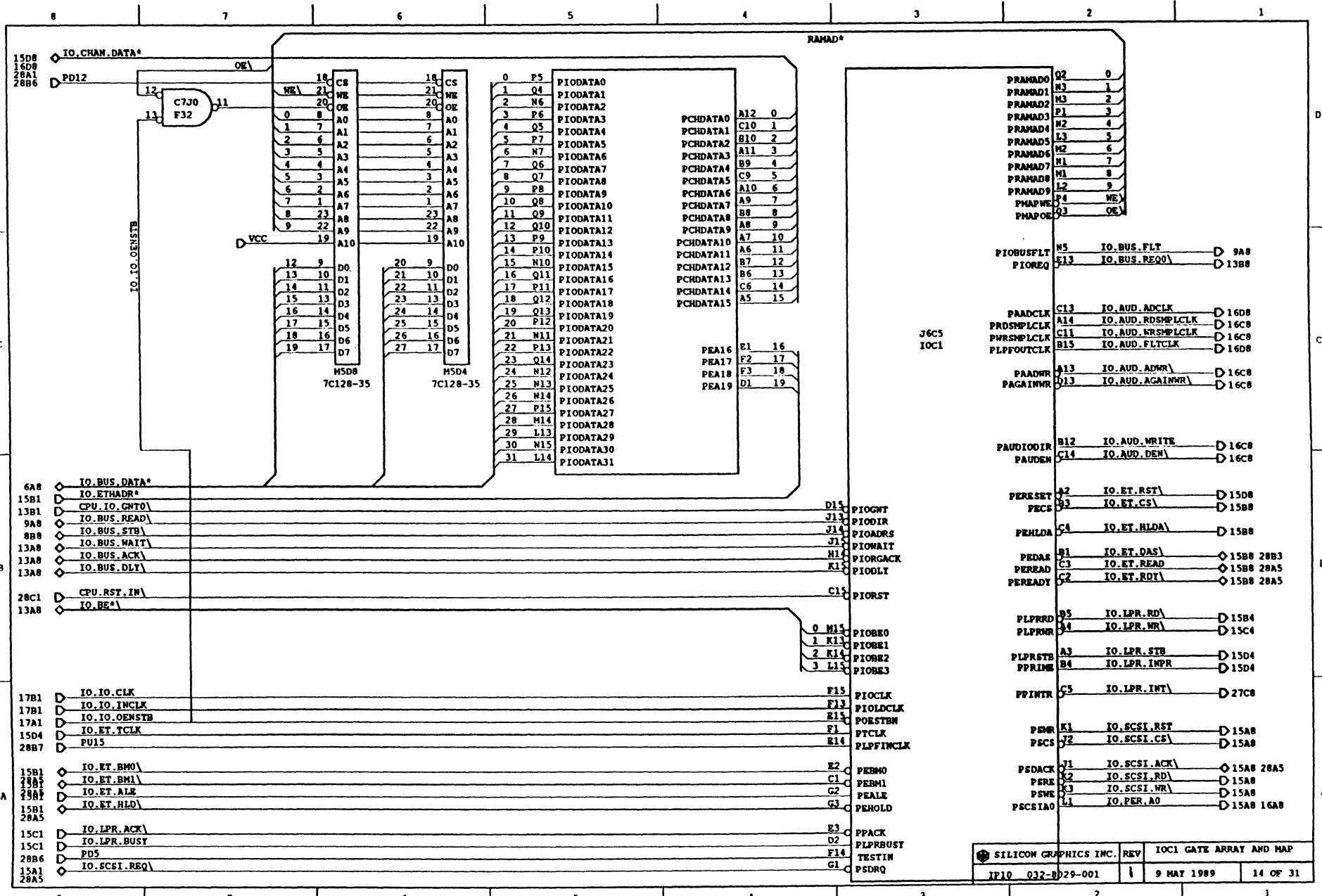


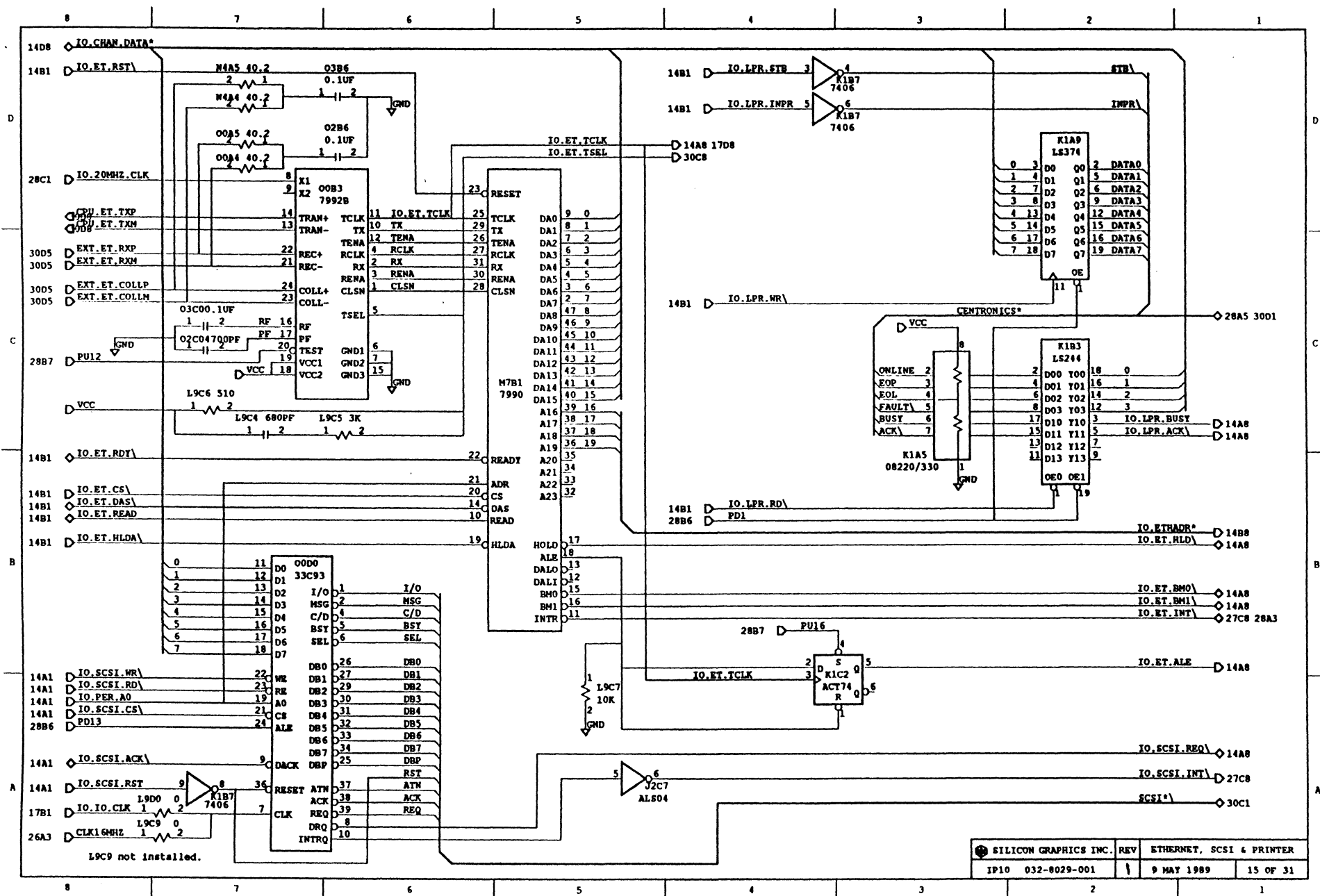


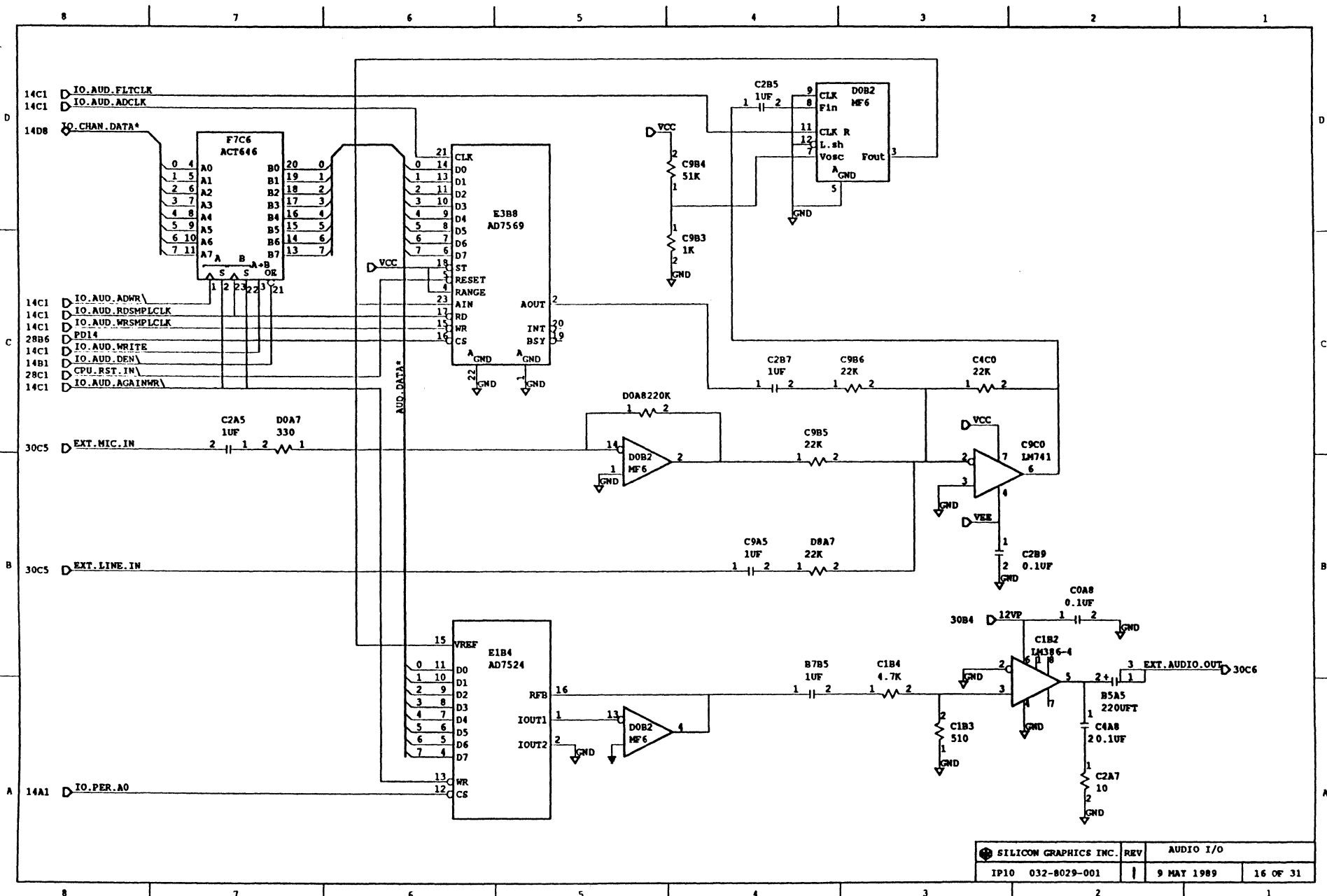


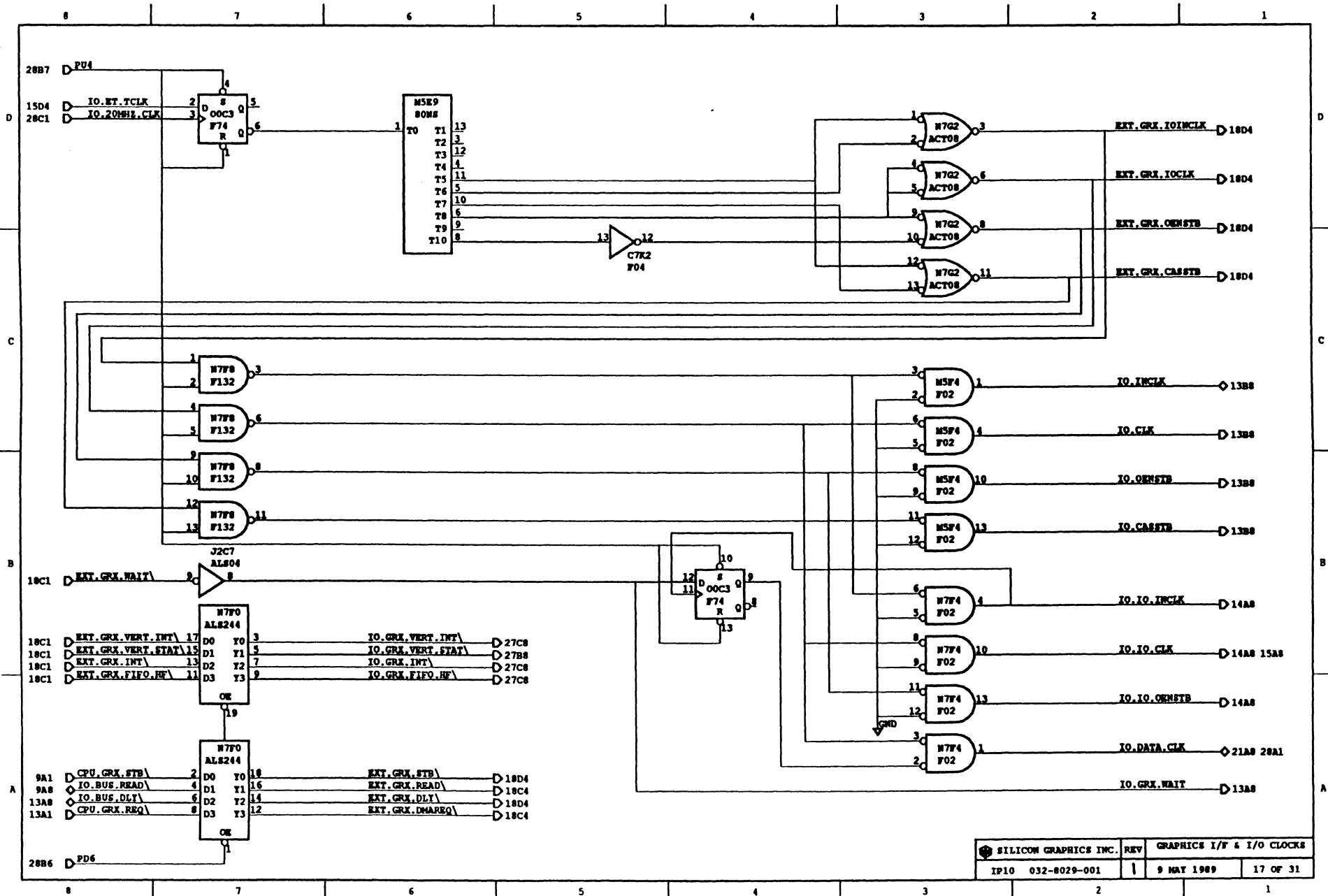
SILICON GRAPHICS INC. REV		TIMER AND RTC	
IP10	032-8029-001	1	9 MAY 1989 12 OF 31

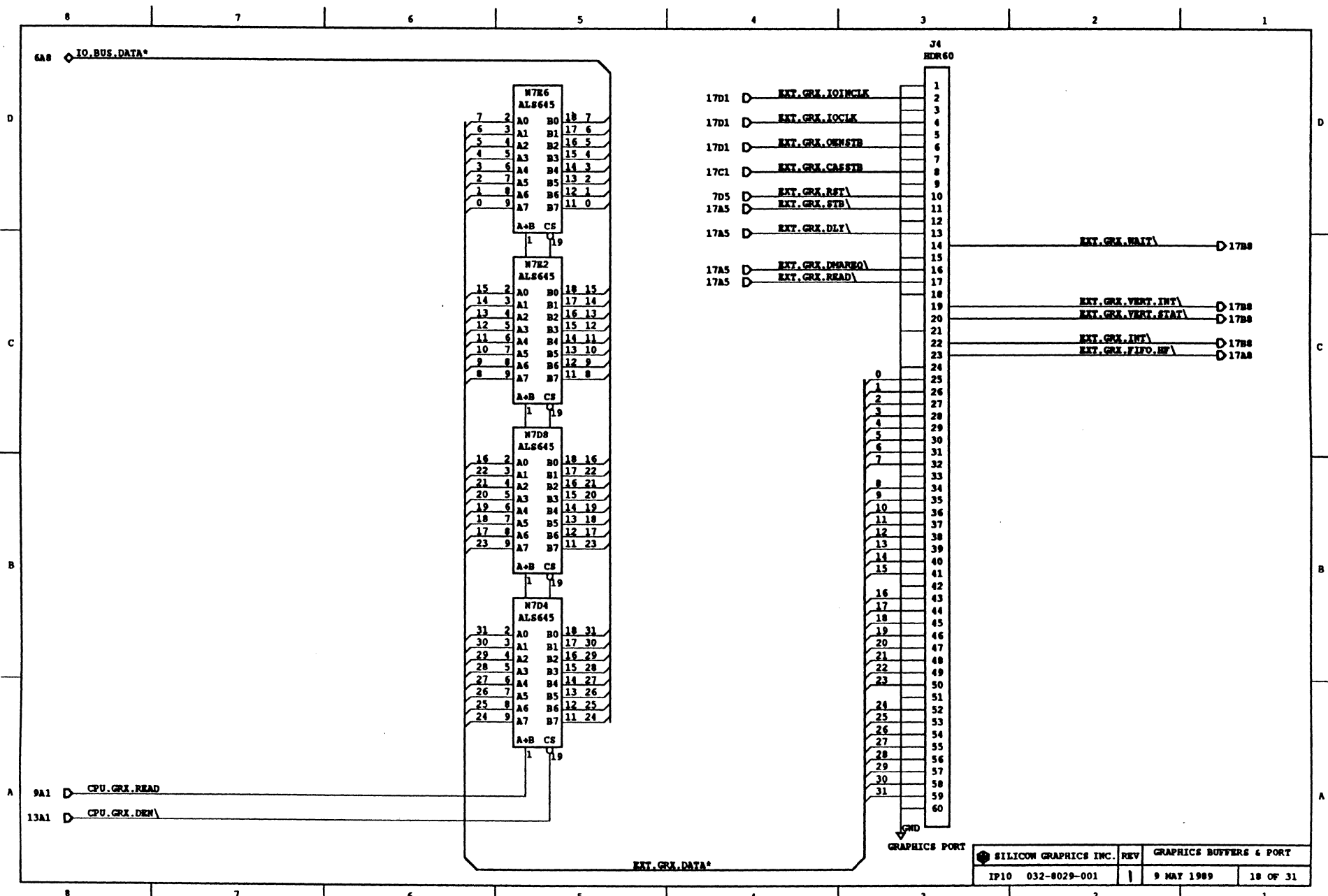


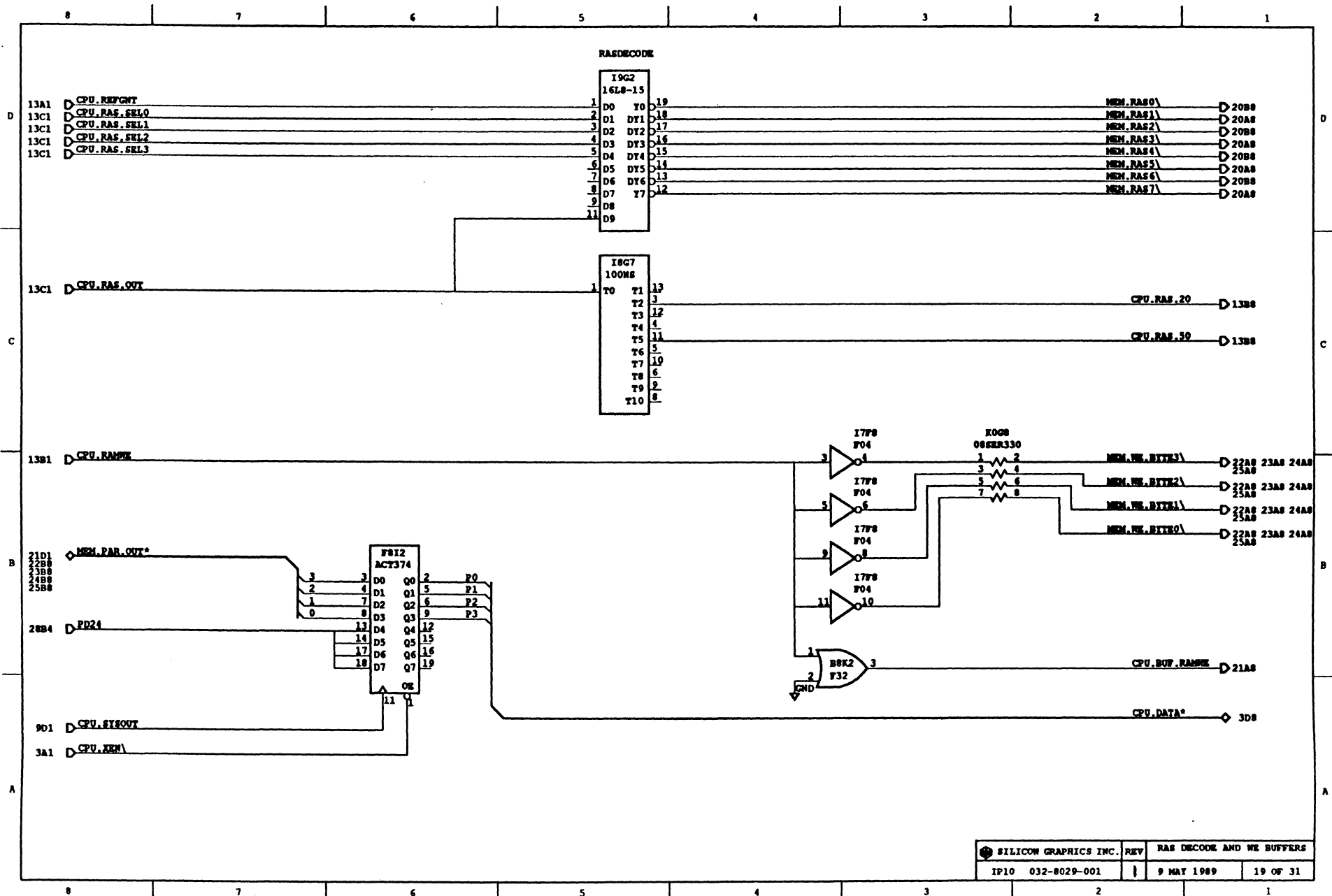




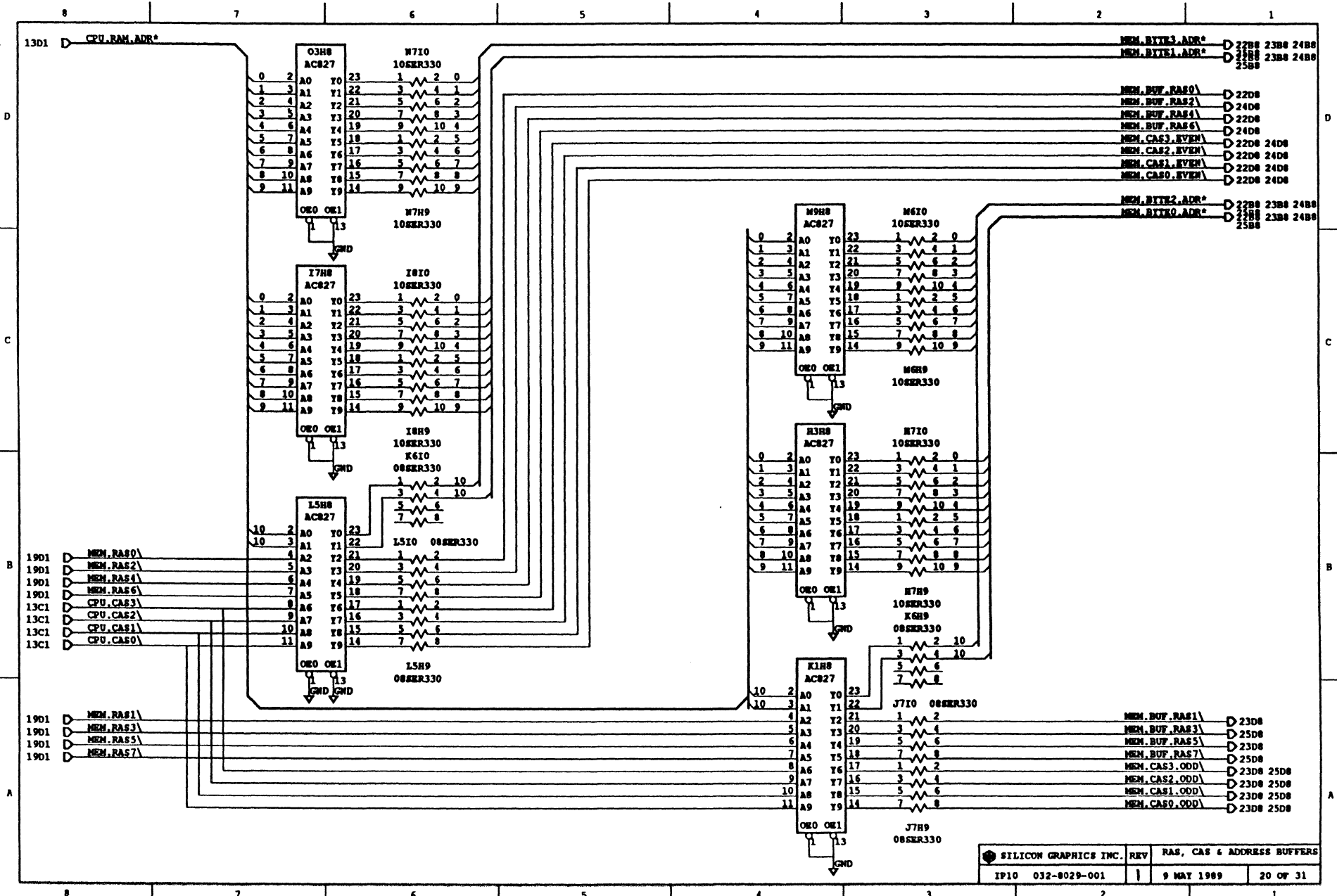


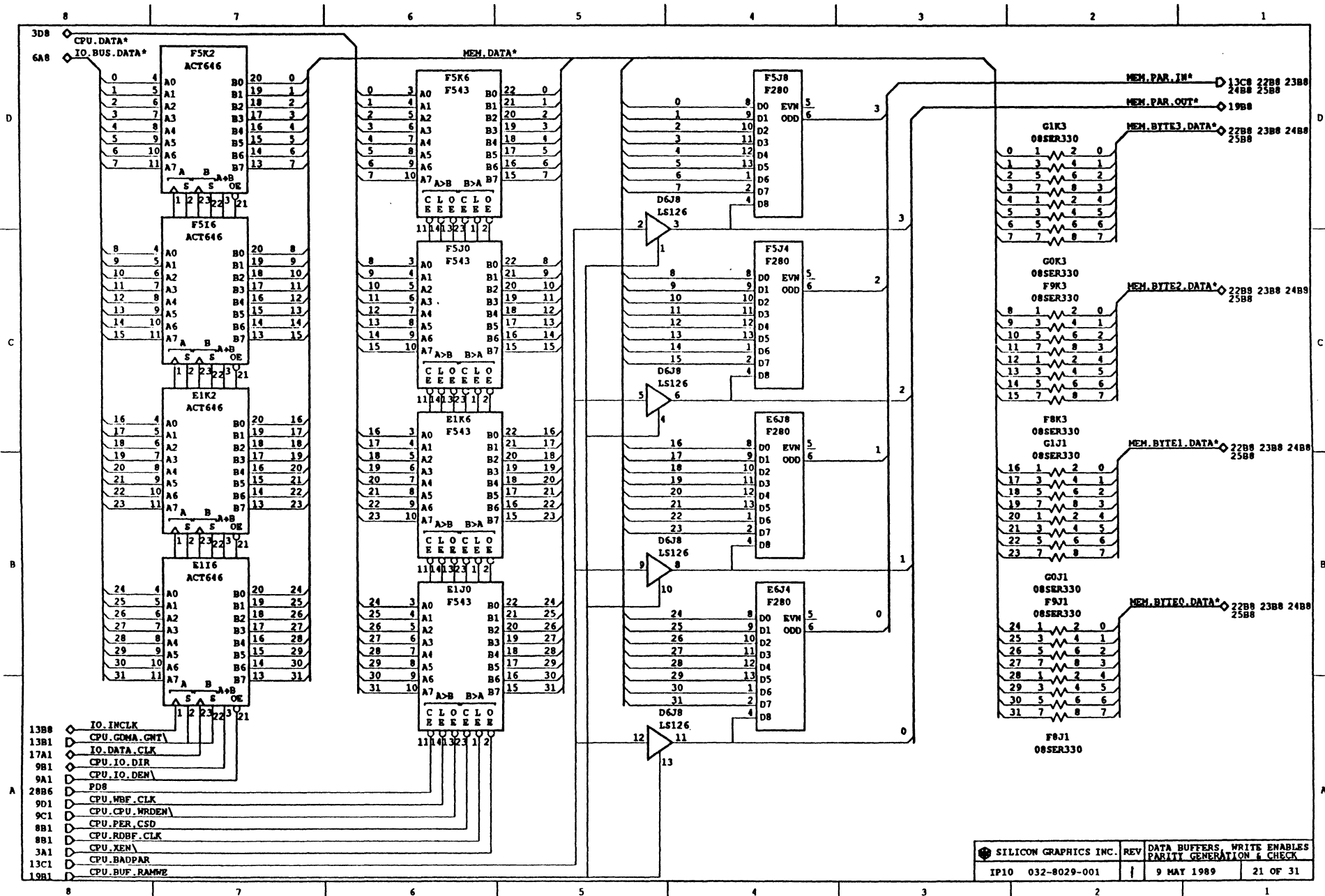




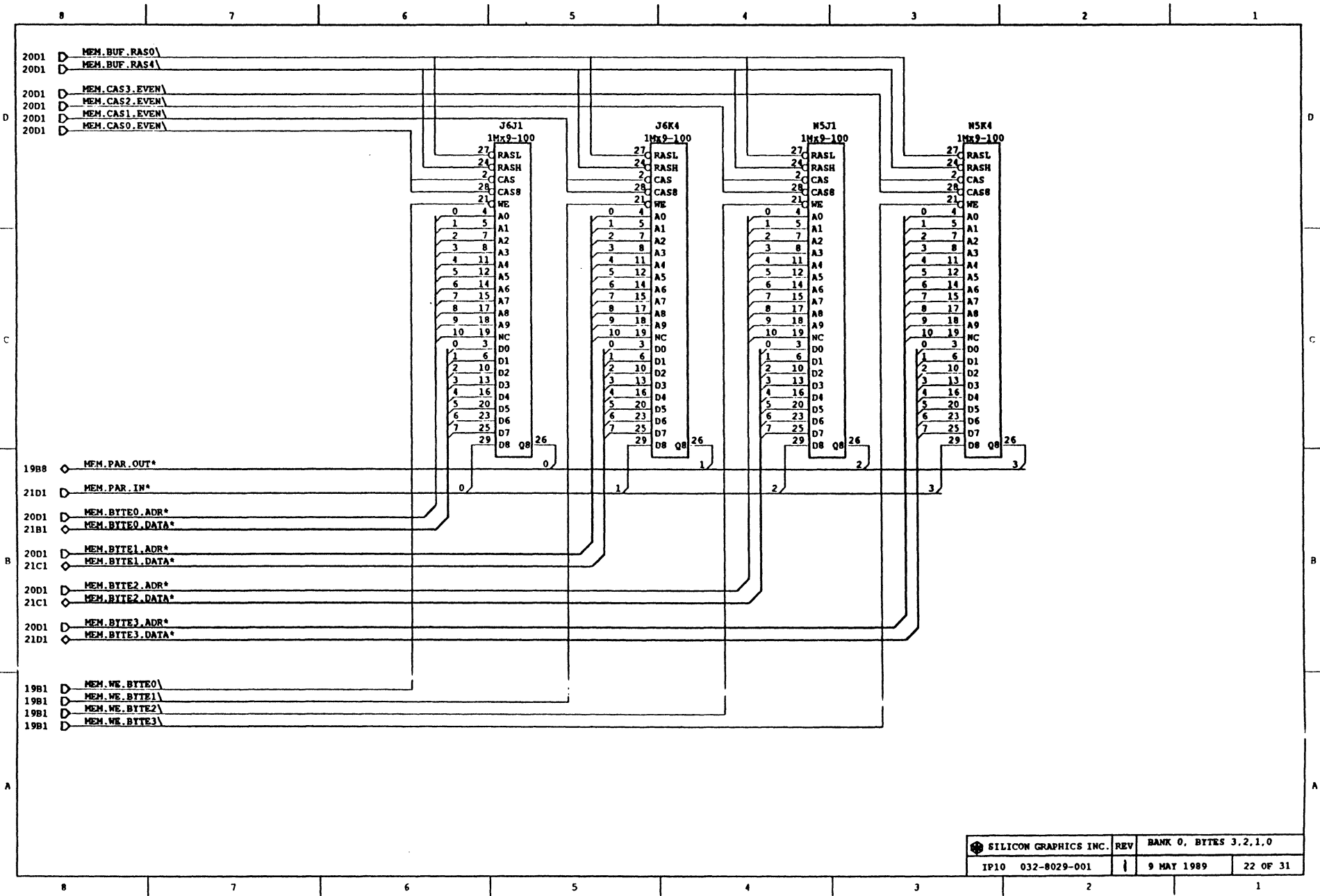


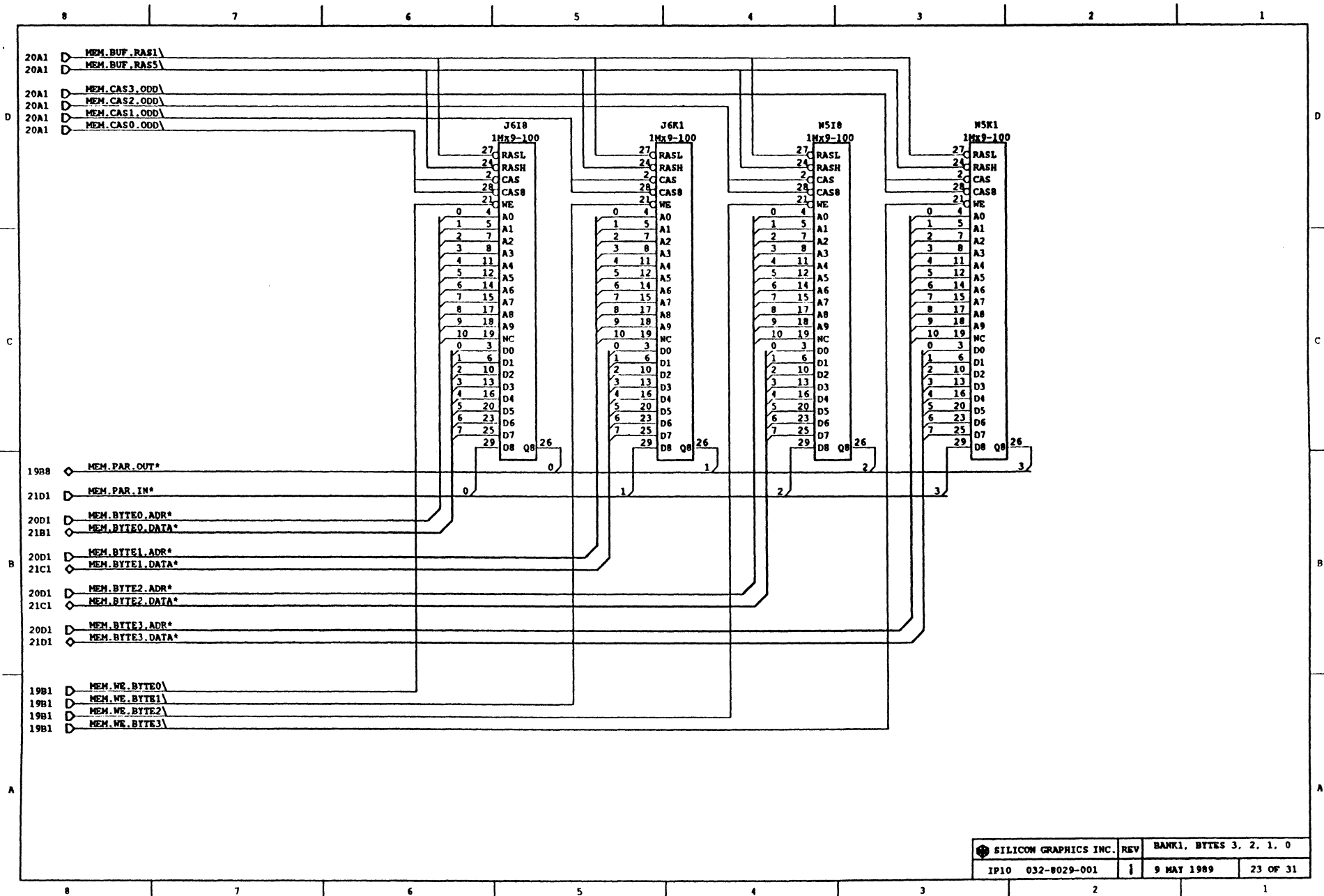
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IP10	032-8029-001	9 MAY 1989	19 OF 31

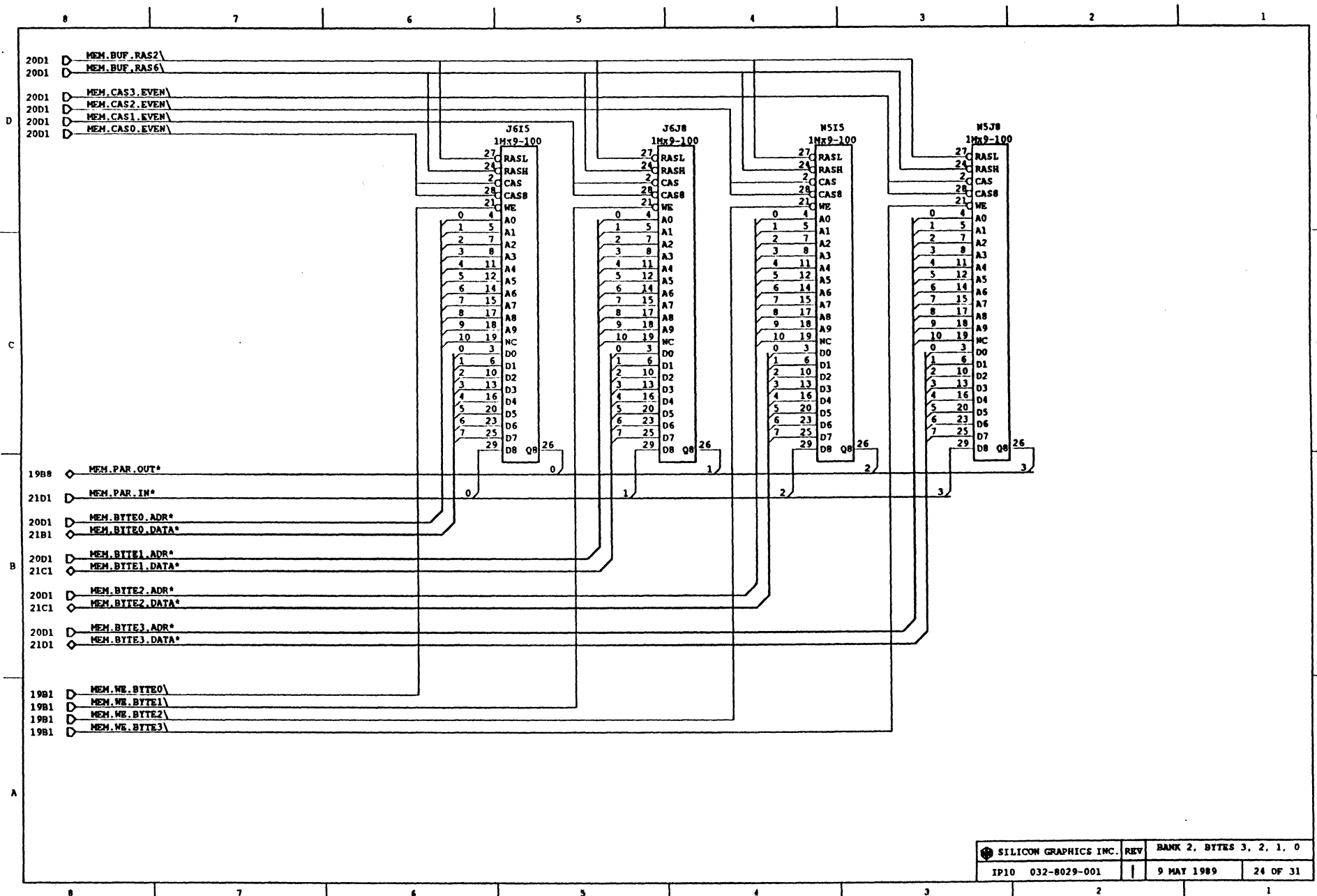


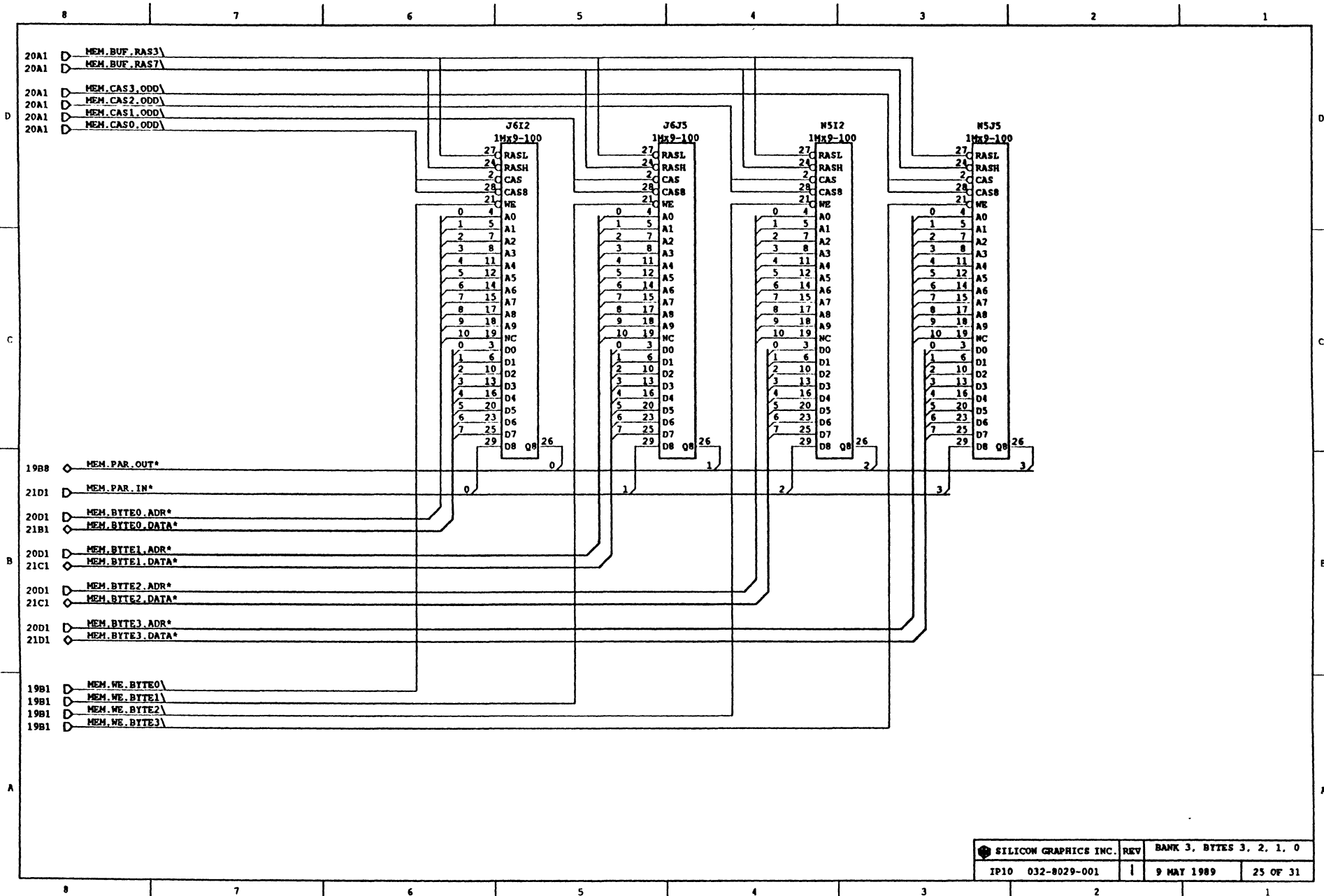


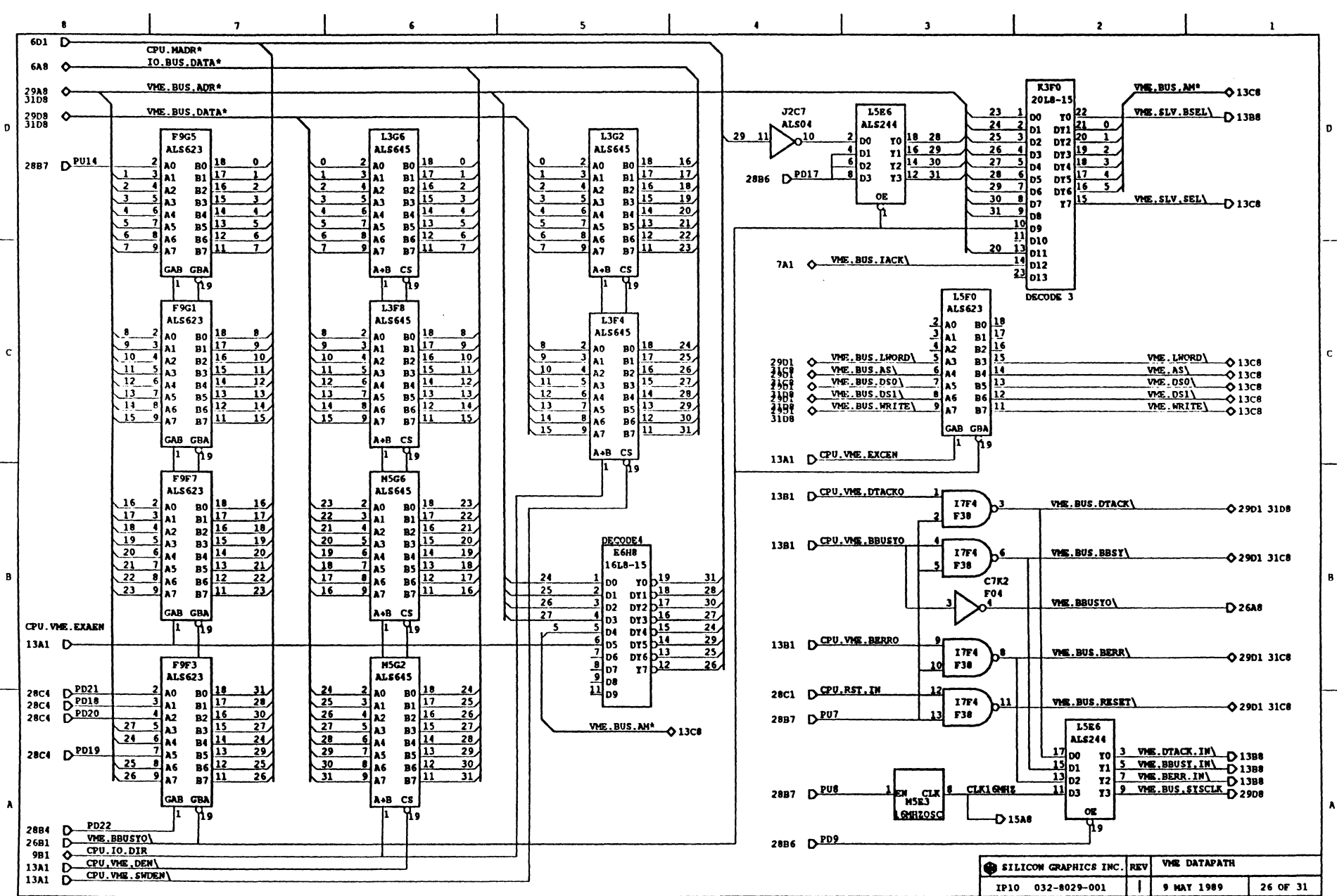
SILICON GRAPHICS INC.	REV	DATA BUFFERS WRITE ENABLES PARITY GENERATION & CHECK	
	IP10 032-8029-001	9 MAY 1989	21 OF 31

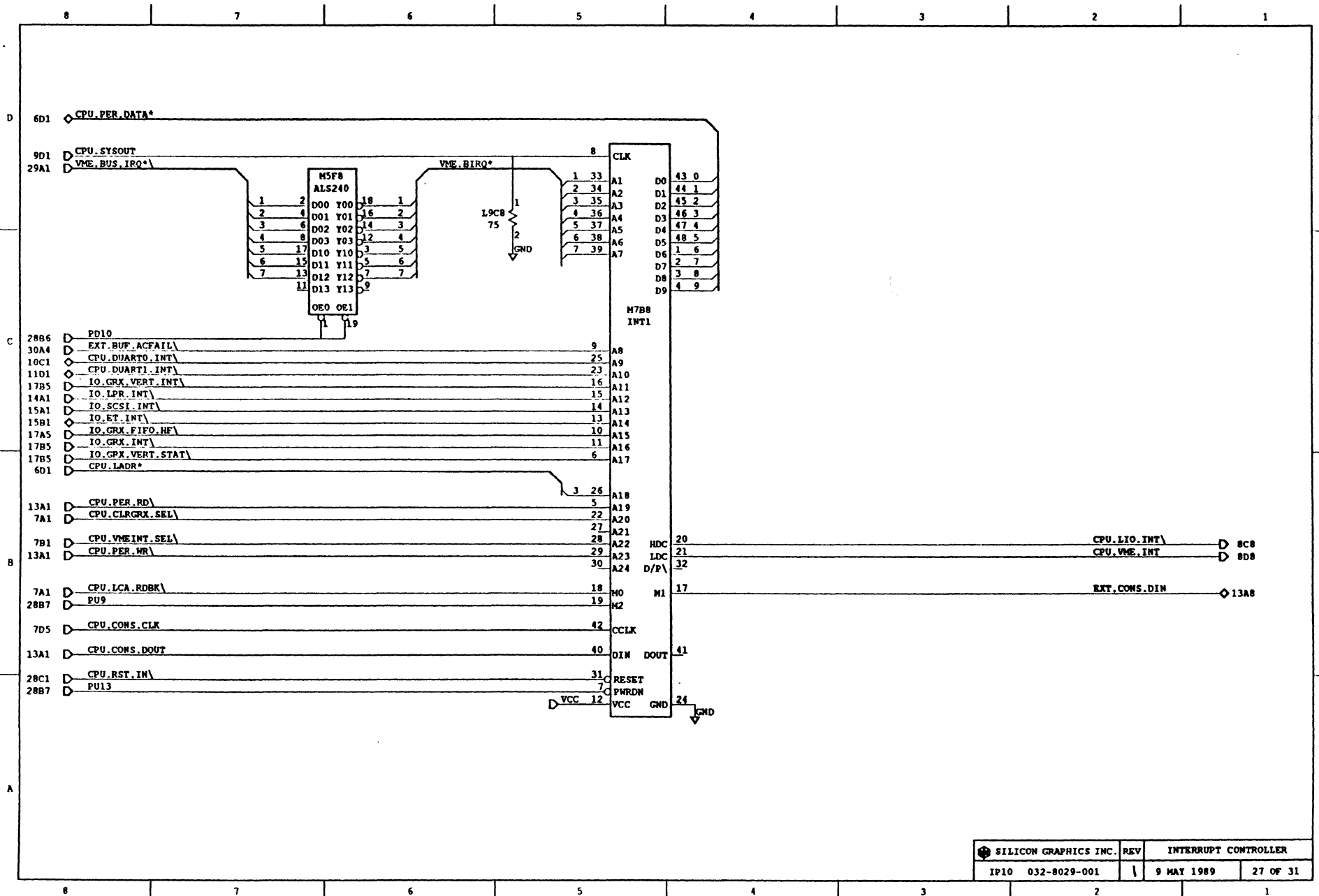


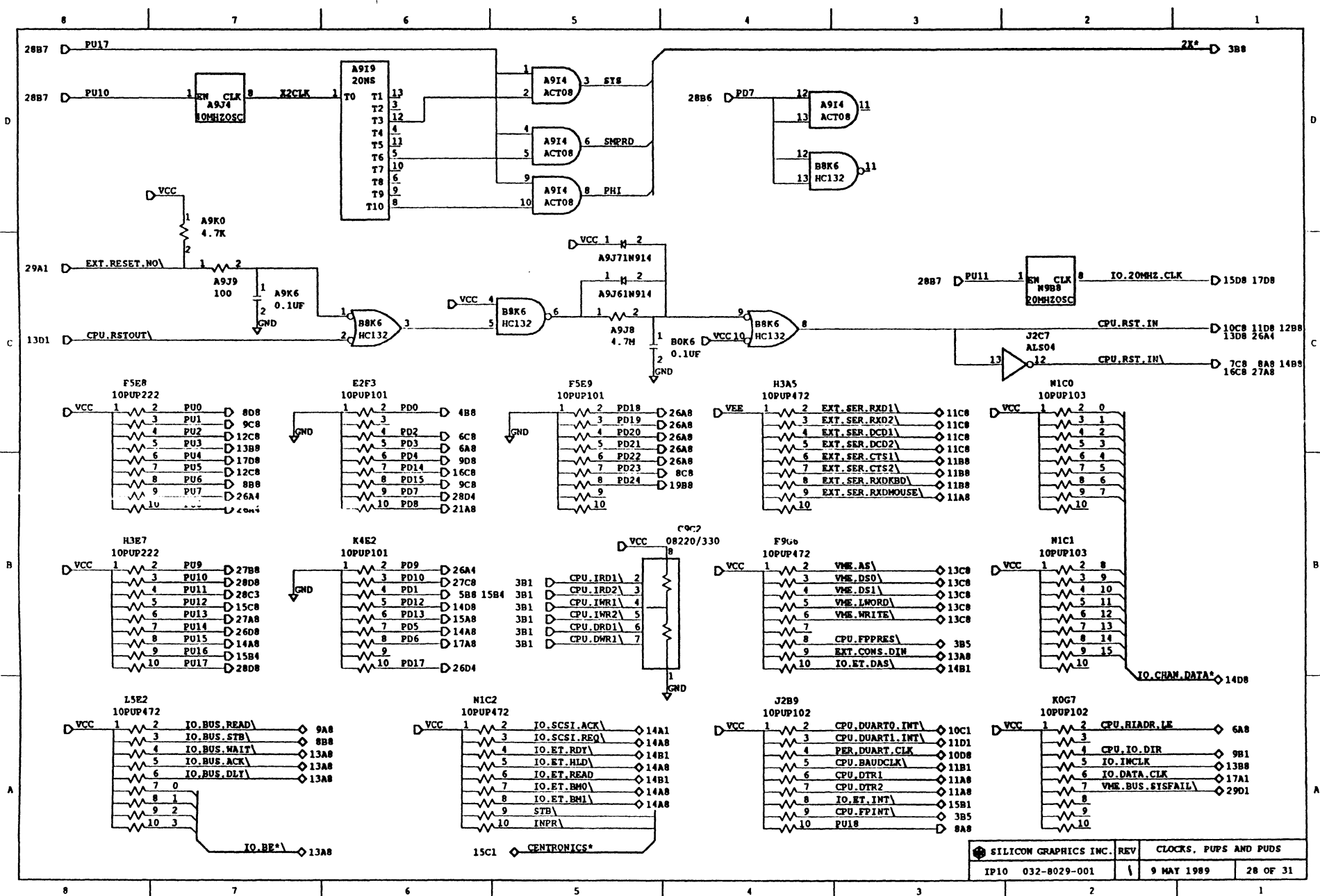


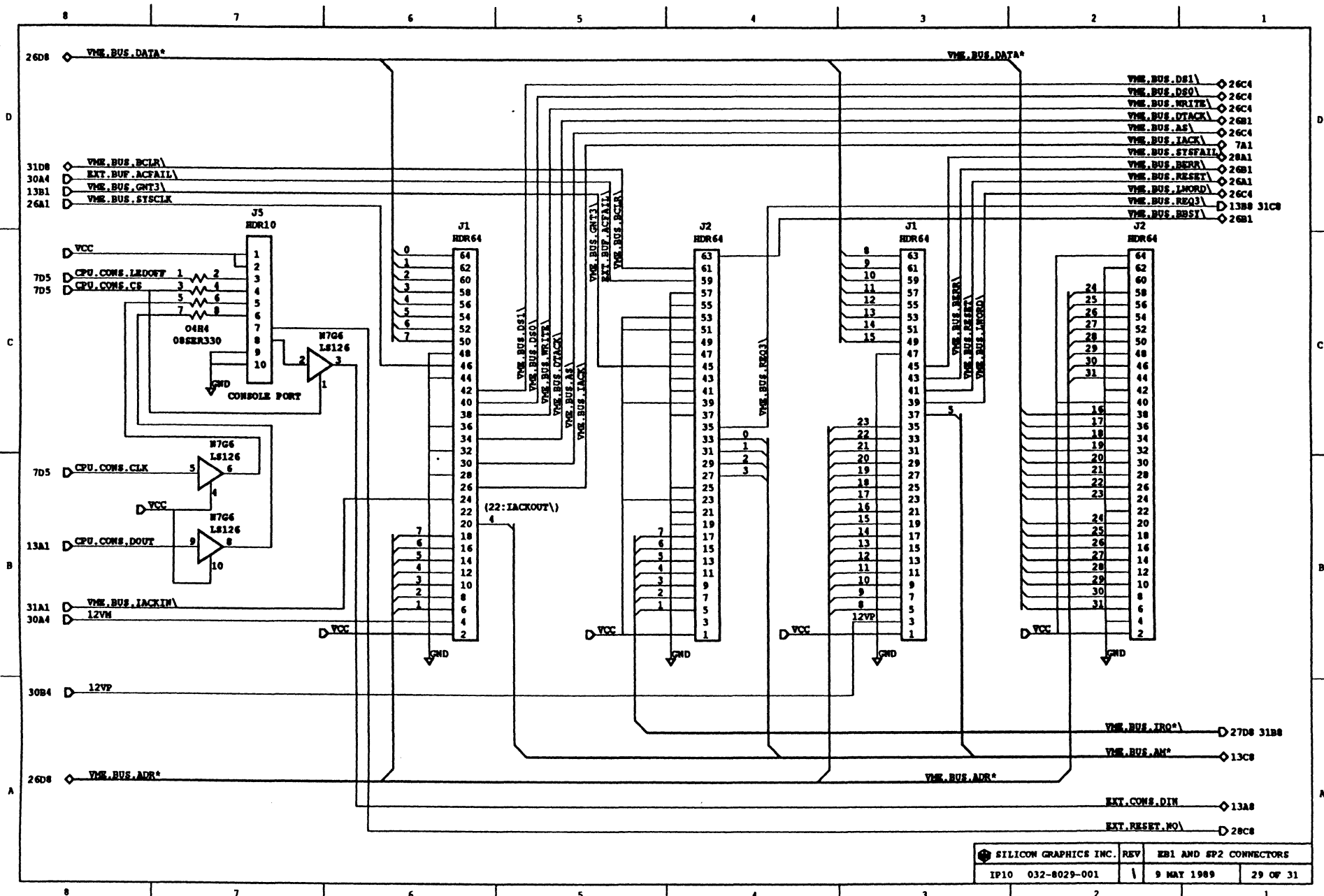


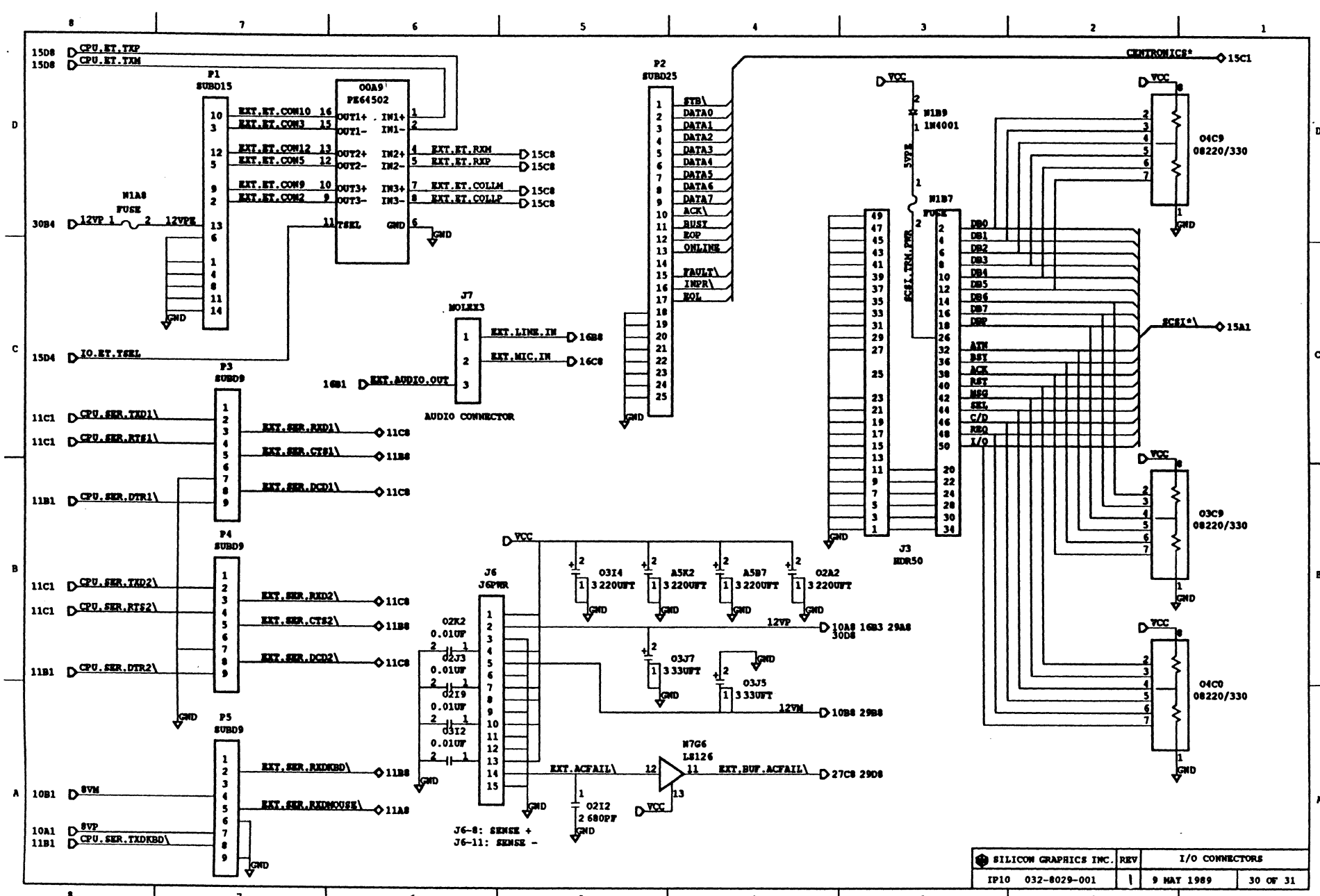


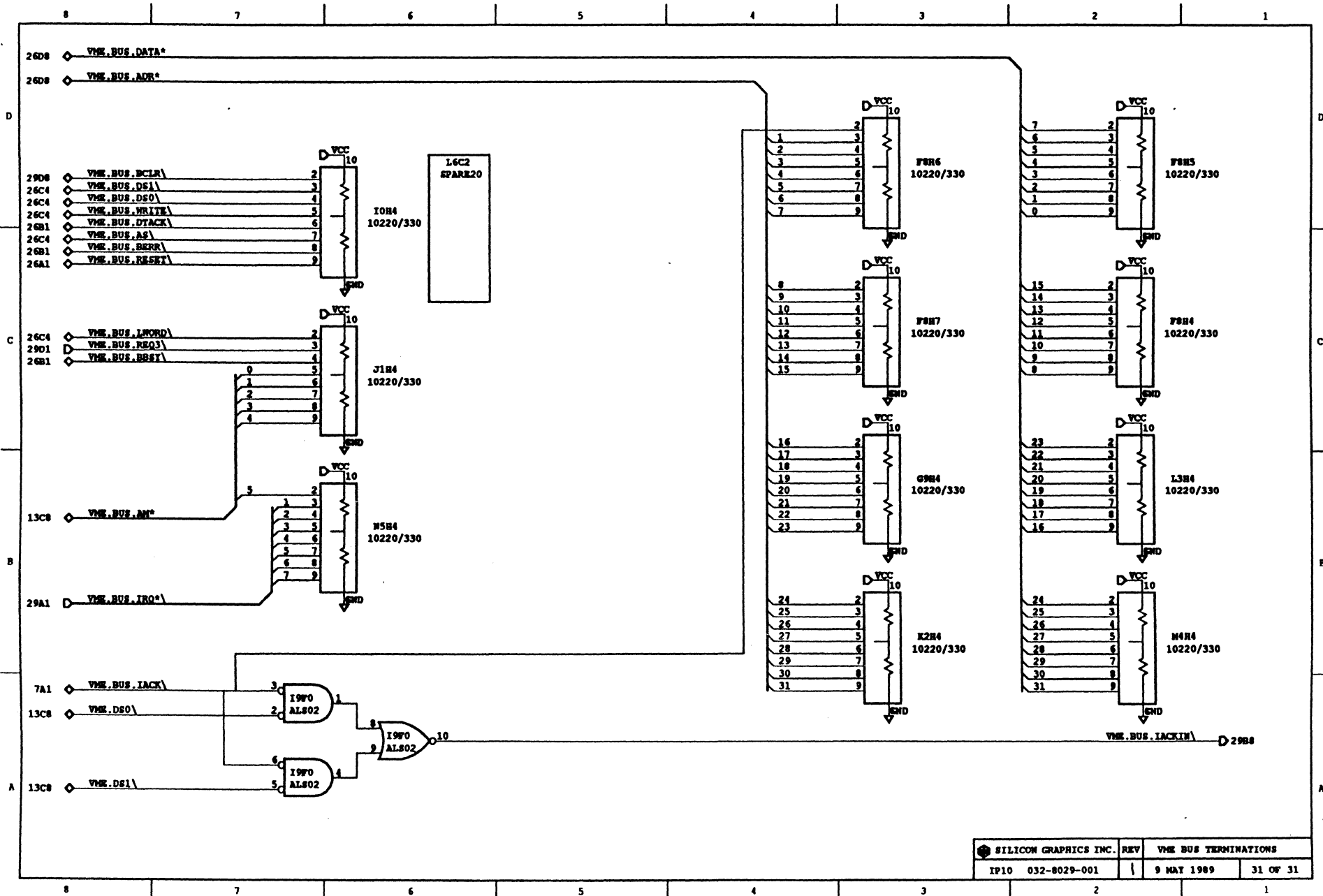












EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC	DESCRIPTION	S T S A P	EXTENDED	START	CLOSE	OPR LT	STORES
		PROD.CODE	COM.CD	C Y P B L U M	QTY PER	DATE	S/N	SEQ OFF	ACCOUNT
0001	032-8029-001	1	SCHEMATIC, IP10						
		E		D 1 * U EA	0			10	0 ECAG
0002	033-8029-001	1	PCB ARTWORK, IP10						
		E		D 1 * P EA	0			10	0 ECAG
0003	034-8029-001	1	PCB FAB, IP10						
		E		P 1 B P EA	1			10	0 ECAG
0004	035-8000	A	PCB TEST PROCEDURE, IP6,GR1,BP4,ZB3						
		E		D 1 D U EA	0			10	0 ECAG
0005	036-8000-003	B	PCB, FUNCTIONAL DECRPTION, IP6						
		E		D 1 * P EA	0			10	0 ECAG
0006	021-8000-003	A	BOARD BLANK, IP6						
		E		D 1 * P EA	0			10	0 ECAG
0007	7270805	A	SCR,6-32X1/4,TRI,PN HD,PH,STL,ZNC						
		E		P 1 C P EA	4			10	0 ECAG
0008	9018067		IC, 7406						
		EC		P 1 C P EA	1			10	0 ECAG
			K1B7						
0009	9000004		IC, 74ALS04						
		EC		P 1 C P EA	1			10	0 ECAG
			J2C7						
0010	9000032		IC, 74ALS32 QUAD. 2-INPUT POS-OR GT						
		EC		P 1 C P EA	1			10	0 ECAG
			I9E6						
0011	9000240		IC, 74ALS240 OCTAL BUFFERS/DRIVERS						
		EC		P 1 C P EA	1			10	0 ECAG
			M5F8						
0012	9000244		IC, 74ALS244 OCTAL BUFFER						
		EC		P 1 C P EA	3			10	0 ECAG
			F5B8,N7F0,L5E6						
0013	9000273		IC, 74ALS273						
		EC		P 1 C P EA	1			10	0 ECAG
			F5C2						
0014	9000623		IC, 74ALS623 BUS TRANSCIEVER						
		EC		P 1 B P EA	9			10	0 ECAG
			K1G6,K1G2,K1F8,K1F4						
			F9G5,F9G1,F9F7,F9F3						
			L5F0						
0015	90006451		IC, 74ALS645-1 OCTAL XCVR						
		EC		P 1 B P EA	10			10	0 ECAG
			N7E6,N7E2,N7D8,N7D4						
			M5G2,M5G6,L3G2,L3G6						
			L3F8,L3F4						
0016	9013244		IC, 74LS244						
		EC		P 1 C P EA	1			10	0 ECAG
			K1B3						
0017	9013374		IC, 74LS374						
		EC		P 1 C P EA	1			10	0 ECAG
			K1A9						

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD. CODE	DESCRIPTION COM. CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE S/N	CLOSE DATE S/N	OPR LT SEQ OFF	STORES ACCOUNT
0018	90141804	EC	IC, 74AS1804 HEX 2-IN DR	P 1 C P EA	1			10 0	ECAG
			E6I2						
0019	9018057	EC	IC, 74HC132	P 1 C P EA	1			10 0	ECAG
			B8K6						
0020	9018064	EC	IC, DELAY LINE 100NS 10TAP	P 1 C P EA	1			10 0	ECAG
			I8G7						
0021	9011002	EC	IC, 74F02	P 1 C P EA	2			10 0	ECAG
			M5F4,N7F4						
0022	9011004	EC	IC, 74FO4	P 1 C P EA	2			10 0	ECAG
			I7F8,C7K2						
0023	9011008	EC	IC, 74FO8	P 1 C P EA	1			10 0	ECAG
			B8I6						
0024	9011020	EC	IC, 74F20	P 1 C P EA	1			10 0	ECAG
			J2D1						
0025	9011032	EC	IC, 74F32 QUAD OR GATE	P 1 C P EA	2			10 0	ECAG
			C7J0,B8K2						
0026	9011038	EC	IC, 74F38	P 1 C P EA	1			10 0	ECAG
			I7F4						
0027	9011051	EC	IC, 74F51 DUAL 2-WIDE-2IPS	P 1 C P EA	1			10 0	ECAG
			C7K6						
0028	9011074	EC	IC, 74F74	P 1 C P EA	2			10 0	ECAG
			J2C3,O6C3						
0029	9011109	EC	IC, 74F109	P 1 C P EA	1			10 0	ECAG
			D7J4						
0030	9011174	EC	IC, 74F174	P 1 C P EA	1			10 0	ECAG
			B9J0						
0031	9011800	A E	IC, 74F280 PARITY GENERATOR CHECKER	P 1 C P EA	4			10 0	ECAG
			E6J4,E6J8,F5J4,F5J8						
0032	9011373	EC	IC, 74F373	P 1 C P EA	8			10 0	ECAG
			C3G5,C3G1,D5G5,D5G1 D5F7,E7G5,E7G1,E7F7						

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC	DESCRIPTION	S T S A P	EXTENDED	START	CLOSE	OPR LT	STORES
		PROD.CODE	COM.CD	C Y P B L U M	QTY PER	DATE	S/N	SEQ OFF	ACCOUNT
0033	9016026	EC	RAM, STATIC 7C128-35 2K X 8	P 1 B P EA	2			10	0 ECAG
			M5D4,M5D8						
0034	9018135	EC	IC, DUART 2681-24	P 1 C P EA	1			10	0 ECAG
			F5B4						
0035	9018129	EC	IC, DUART 2681-40	P 1 C P EA	1			10	0 ECAG
			H7B6						
0036	9018835	A E	IC,33C93A SCSI NTFC CONTROLLER	P 1 C P EA	1			10	0 ECAG
			O0D0						
0037	9030113	EC	RESISTOR, 40.2 OHM 1/4W 1%	X 1 C P EA	4			10	0 ECAG
			N4A4,N4A5,O0A4,O0A5						
0038	9030044	EC	RESISTOR, 100 OHM 1/4W 5%	X 1 C P EA	2			10	0 ECAG
			A9J9,F7D0						
0039	9030022	EC	RESISTOR, 510 OHM 1/4W 5%	X 1 C P EA	2			10	0 ECAG
			L9C6,C1B3						
0040	9030008	EC	RESISTOR, 4.7K OHM 1/4W 5% CB472-5	X 1 C P EA	2			10	0 ECAG
			C1B4,A9K0						
0041	9030046	EC	RESISTOR, 10K OHM 1/4W 5%	X 1 C P EA	1			10	0 ECAG
			L9C7						
0042	9030030	EC	RESISTOR, 33K OHM 1/4W 5%	X 1 C P EA	1			10	0 ECAG
			I4C9						
0043	9030803	A E	RESISTOR, 4.7M OHM, 1/4W, 5%	X 1 C P EA	1			10	0 ECAG
			A9J8						
0044	7010002	EC	FUSE, 2AMP 273-002	P 1 D P EA	2			10	0 ECAG
			N1A8,N1B7						
0045	9130008	EC	FUSE HOLDER, 281-005	P 1 C P EA	2			10	0 ECAG
			N1A8,N1B7						
0046	9020112	EC	SOCKET, 30 PIN SIMM VERT.SINGLE ROW	P 1 B P EA	16			10	0 ECAG
			J6I2,J6I5,J6I8,J6J1						
			J6J5,J6J8,J6K1,J6K4						
			N5I2,N5I5,N5I8,N5J1						
			N5J5,N5J8,N5K1,N5K4						
0047	9340800	A E	BATTERY, 3V LITHIUM	P 1 C P EA	1			10	0 ECAG
			A8A5						

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PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD.CODE	DESCRIPTION COM.CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE S/N	CLOSE DATE S/N	OPR LT SEQ OFF	STORES ACCOUNT
0048	9018801	A E	IC, DELAY LINE 80NS 10 TAP M5E9	P 1 C P EA	1			10 0	ECAG
0049	9018804	A E	IC, 14C89 CMOS QUAD LINE RECEIVER H3A9,F5A9	P 1 C P EA	2			10 0	ECAG
0050	9018805	A E	IC, 14C88 CMOS QUAD LINE DRIVER E6A9,G4A9	P 1 C P EA	2			10 0	ECAG
0051	9013126	EC	IC, 74LS126 QUD BUS BUFFERS D6J8,N7G6	P 1 C P EA	2			10 0	ECAG
0052	9060801	A E	OSC. 16 MHZ TTL TRISTATE M5E3	P 1 C P EA	1			10 0	ECAG
0053	9060802	A E	OSC. 20 MHZ TTL TRISTATE N9B8	P 1 C P EA	1			10 0	ECAG
0054	9270800	A E	TRANSFORMER, ISOLATION L6C2	P 1 C P EA	1			10 0	ECAG
0055	9700803	A E	GATE ARRAY, IOCl J6C5	P 1 B P EA	1			10 0	ECAG
0056	90141805	A E	IC, 74AS1805 HEX 2 INPUT NOR DRVR C7J4	P 1 C P EA	1			10 0	ECAG
0057	9011132	EC	IC, 74F132 QUAD 2 INPUT NAND N7F8	P 1 C P EA	1			10 0	ECAG
0058	9018254	E	IC, 74BCT29827A 10-BIT BICMOS BUFFER K1H8,H3H8,M9H8,L5H8, I7H8,O3H8	P 1 * P EA	6			10 0	ECAG
0059	9018253	E	IC, 74BCT646 8-BIT BIDIR REG BICMOS F7C6,F5K2,F5I6,E1K2, E1I6	P 1 * P EA	5			10 0	ECAG
0060	9720008	A E	IC, 74ACT08 QUAD 2 INPUT AND N7G2,A9I4	P 1 C P EA	2			10 0	ECAG
0061	9018140	EC	IC, SERIAL INTERFACE ADAPTER 7992 O0B3	P 1 B P EA	1			10 0	ECAG
0062	9018125	EC	IC, LOCAL AREA NTWRL CTLR 7990 M7B1	P 1 B P EA	1			10 0	ECAG

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PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

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ITEM NO	COMPONENT PART NUMBER	ERC PROD. CODE	DESCRIPTION COM. CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE S/N	CLOSE DATE S/N	OPR LT SEQ OFF	STORES ACCOUNT
0063	9030112	EC	RESISTOR, 3K OHM 1/4W 5% L9C5	X 1 C P EA	1			10 0	ECAG
0064	9030121	EC	RESISTOR, 22K OHM 1/4W 5% C4C0,C9B5,C9B6,D8A7 B8I2	X 1 C P EA	5			10 0	ECAG
0065	9030126	EC	RESISTOR, 51K OHM 1/4W 5% I4D0,C9B4	X 1 C P EA	2			10 0	ECAG
0066	9030029	EC	RESISTOR, 33 OHM 8 PIN SIP SERIES A9F2,A9F3,C0F3,C9F2 C9F3,E2F2,F8J1,F9J1 G0J1,G1J1,F8K3,F9K3 G0K3,G1K3,J7H9,J7I0 K6H9,K6I0,L5H9,L5I0 O4H4,K0G8	P 1 C P EA	22			10 0	ECAG
0067	9030098	EC	RESISTOR, 33 OHM 10 PIN SERIES RN C0F2,N7I0,N7H9,I8I0 I8H9,H7H9,H7I0,M6H9 M6I0	P 1 C P EA	9			10 0	ECAG
0068	9030033	EC	RESISTOR, NTRK,10K OHM N1C0,N1C1	P 1 C P EA	2			10 0	ECAG
0069	9030075	EC	RESISTOR, 2.2K OHM 10 PIN PAK F5E8,H3E7	P 1 C P EA	2			10 0	ECAG
0070	9030016	EC	RESISTOR, 4.7K OHM 10PIN L5E2,H3A5,F9G6,N1C2	P 1 C P EA	4			10 0	ECAG
0071	9030015	EC	RESISTOR, 1K OHM 10-PIN J2B9,K0G7	P 1 C P EA	2			10 0	ECAG
0072	9030012	EC	RESISTOR, 220/330 OHM 10 PIN I0H4,J1H4,N5H4,G9H4 F8H5,F8H4,L3H4,M4H4 F8H6,F8H7,K2H4	P 1 C P EA	11			10 0	ECAG
0073	9020007	EC	SOCKET, 28 PIN .6" 10628-01-445 H3E6,H3D9,H3D2,H3C5	P 1 C P EA	4			10 0	ECAG
0074	9020003	EC	SOCKET, 16 PIN 10316-01-445 O0A9	P 1 C P EA	1			10 0	ECAG

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S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD. CODE	DESCRIPTION COM. CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE	S/N	CLOSE DATE	S/N	OPR LT SEQ OFF	STORES ACCOUNT
0075	9030001	EC	RESISTOR, 75.0 OHM 1/4W 5% X 1 C P EA G5B8,E3G6,H2G6,G5B7 L9C8		5					10 0	ECAG
0076	9050001	EC	CAPACITOR, 0.1UF MONOLITHIC X 1 B P EA C2B9,C0A8,C4A8,A9K6 B0K6,G2A5,O2B6,O3B6 O3C0, PLUS 153 UNLABELED LOCATIONS		162					10 0	ECAG
0077	9018809	A E	IC, MF6 6TH ORDER LOW PASS FILTER P 1 C P EA D0B2		1					10 0	ECAG
0078	9018810	A E	IC, AD7569B BIT ANALOG I/O SYSTEM P 1 C P EA E3B8		1					10 0	ECAG
0079	9060021	EC	CRYSTAL 32.768 KHZ P 1 C P EA H9E2		1					10 0	ECAG
0080	9090810	A E	HEADER, SHROUDED 50-POS RT ANG P 1 C P EA J3		1					10 0	ECAG
0081	9090825	A E	HEADER, SHROUDED 60-POS RT ANG V.E. P 1 B P EA J4		1					10 0	ECAG
0082	9090809	A E	HEADER, SHROUDED 10-POS RT ANG P 1 C P EA J5		1					10 0	ECAG
0083	7070805	A E	RECPT. 9-POS RT ANG D-SUB W/LOCK P 1 B P EA P3,P4,P5		3					10 0	ECAG
0084	7070807	A E	RECPT. 15-POS RT ANG D-SUB W/4-40 P 1 C P EA P1		1					10 0	ECAG
0085	7180800	A E	SLIDE LATCH KIT FOR 15-POS D-SUB P 1 C P EA ADD TO CONNECTOR		1					10 0	ECAG
0086	9030070	EC	RESISTOR, 100 OHM 10P MSP10A01-101G P 1 C P EA E2F3,F5E9,K4E2		3					10 0	ECAG
0087	9020057	EC	SOCKET, 145 PIN GRID P 1 B P EA J6C5,G3F0,C011		3					10 0	ECAG
0088	9030161	EC	RESISTOR, 220/330 OHM 8 PIN P 1 C P EA K1A5,O4C9,O3C9,O4C0		4					10 0	ECAG

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD.CODE	DESCRIPTION COM.CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE S/N	CLOSE DATE S/N	OPR LT SEQ OFF	STORES ACCOUNT
0089	9020005	EC	SOCKET, 20 PIN	P 1 C P EA	1			10 0	ECAG
			L6C2						
0090	070-8004-002	1 E	PAL ASSY,DECODE1	P * * P EA	1			10 0	ECAG
			F7E6						
0091	070-8005-002	1 E	PAL ASSY,DECODE 3	P * * P EA	1			10 0	ECAG
			K3F0						
0092	070-8006-002	1 E	PAL ASSY,DECODE 2	P * * P EA	1			10 0	ECAG
			K3E6						
0093	9000002	EC	IC,74ALS02 NOR 2INPUT QUAD ALS TECH	P 1 C P EA	1			10 0	ECAG
			I9F0						
0094	9018814	A E	IC, LM386-4 AUDIO AMP	P 1 C P EA	1			10 0	ECAG
			C1B2						
0095	9018816	A E	IC, AD7524 8-BIT DAC	P 1 C P EA	1			10 0	ECAG
			E1B4						
0096	9030069	EC	RESISTOR, MF 1/4W 1% 100HM	X 1 C P EA	2			10 0	ECAG
			C2A7,L9D0						
0097	9341801	A E	BATTERY SOCKET, LITHIUM CELL	P 1 C P EA	1			10 0	ECAG
			A8A5						
0098	9190008	EC	DIODE, 1N4001	X 1 C P EA	1			10 0	ECAG
			N1B9						
0099	9050807	A E	CAPACITOR, 10 PF, 0.3"	X 1 C P EA	1			10 0	ECAG
			H9E0						
0100	9050808	A E	CAPACITOR, 47 PF, 0.3"	X 1 C P EA	1			10 0	ECAG
			H8E0						
0101	9050809	A E	CAPACITOR, 680 PF, 0.3"	X 1 C P EA	2			10 0	ECAG
			L9C4,O2I2						
0102	9050811	A E	CAPACITOR, 4700 PF, 0.3"	X 1 C P EA	1			10 0	ECAG
			O2C0						
0103	9050810	A E	CAPACITOR, 0.01UF, 0.3"	X 1 C P EA	4			10 0	ECAG
			O3I2,O2I9,O2J3,O2K2						
0104	9090828	A E	HEADER, 5-POS RA .156 CTR	P 1 C P EA	3			10 0	ECAG

J6

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IPI0 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD. CODE	DESCRIPTION COM. CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE S/N	CLOSE DATE S/N	OPR LT SEQ OFF	STORES ACCOUNT
0105	7070819	A	RECPT. 25 PIN RT ANG D-SUB						
		E		P 1 C P EA	1			10 0	ECAG
			P2						
0106	070-8011-002	1	PAL ASSY, RASDECODE						
		E		P * * P EA	1			10 0	ECAG
			I9G2						
0107	9030037	EC	RESISTOR, 330OHM 1/4W 5%	X 1 C P EA	1			10 0	ECAG
			D0A7						
0108	9030006	EC	RESISTOR, 1K OHM 1/4W 5% CB102-5	X 1 C P EA	2			10 0	ECAG
			C9B3, D8A9						
0109	9030802	A	RESISTOR, 220K OHM 1/4W 5%	X 1 C P EA	1			10 0	ECAG
		E							
			D0A8						
0110	9090830	A	SHUNT, 16 PIN	P 1 C P EA	1			10 0	ECAG
		E							
			O0A9						
0111	9190001	EC	DIODE, 1N914	X 1 C P EA	3			10 0	ECAG
			A9J6, A9J7, D8A8						
0112	013-9023	B	ASSY, VME BRACKET	P 1 B P EA	1			10 0	ECAG
		E							
0113	9018108	EC	IC, 8254	P 1 C P EA	1			10 0	ECAG
			J2D8						
0114	9070007	EC	LED, QUAD 555-4003	P 1 C P EA	1			10 0	ECAG
			E1A3						
0115	9018819	A	REGULATOR, -5V TO -92 100MA	P 1 C P EA	1			10 0	ECAG
		E							
			H7A8						
0116	9018084	EC	VOLT REF-8V 7908	P 1 C P EA	1			10 0	ECAG
			I9A6						
0117	9018820	A	REGULATOR, 78M08 +8V 500MA TO-220	P 1 C P EA	1			10 0	ECAG
		E							
			I9B3						
0118	030-8006-001	C	PCA, EB1						
		E		N 1 B P EA	1			10 0	ECAG
0119	9700807	A	GATE ARRAY, CTL1C	P 1 B P EA	1			10 0	ECAG
		E	25						
			G3F0						
0120	9018153	EC	OP AMP 741	P 1 C P EA	1			10 0	ECAG
			C9C0						

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC	DESCRIPTION	S T S A P	EXTENDED	START	CLOSE	OPR LT	STORES
		PROD.CODE	COM.CD	C Y P B L U M	QTY PER	DATE	S/N	SEQ OFF	ACCOUNT
0121	9018803	A	IC, NS8572						
		E		P 1 B P EA	1			10	0 ECAG
			J2E2						
0122	070-8000-005	A	ASSY, PROM, BOOT0						
		E		P 1 B P EA	1			10	0 ECAG
			H3C5						
0123	070-8001-005	A	ASSY, PROM, BOOT1						
		E		P 1 B P EA	1			10	0 ECAG
			H3D2						
0124	070-8002-005	A	ASSY, PROM, BOOT2						
		E		P 1 B P EA	1			10	0 ECAG
			H3D8						
0125	070-8003-005	A	ASSY, PROM, BOOT3						
		E		P 1 B P EA	1			10	0 ECAG
			H3E6						
0126	013-8179-001	1	ASSY, I/O PANEL W/CONN						
		E		N 1 * P EA	1			10	0 ECAG
			20						
0127	070-8024-002	1	PAL ASSY, DECODE 4						
		E		P * * P EA	1			10	0 ECAG
			E6H8						
0128	9720074	A	IC, 74ACT74 DUAL D-FF						
		E		P 1 C P EA	1			10	0 ECAG
			K1C2						
0129	9050806	A	CAPACITOR, 1 UF CERAMIC 0.2"						
		E		P 1 B P EA	5			10	0 ECAG
			C2B5, C2B7, B7B5, C2A5						
			C9A5						
0130	070-8032-002	1	PAL ASSY, IP10 FIX						
		E		P * * P EA	1			10	0 ECAG
			C7J8						
0131	9018112	EC	DELAYLINE 20NS/TAP						
				P 1 C P EA	1			10	0 ECAG
			A9I9						
0132	9020118	EC	SOCKET, 84 PIN GRID ARRAY						
				P 1 C P EA	1			10	0 ECAG
			A5H9						
0133	9700808	A	GATE ARRAY, INT1						
		E		P 1 C P EA	1			10	0 ECAG
			M7B8						
0134	9011157	EC	MUX 2 TO 1 QUAD						
				P 1 C P EA	1			10	0 ECAG
			C7I6						
0135	9060049	EC	CRYSTAL, 3.6864 MHZ PRL RESN						
				P 1 C P EA	1			10	0 ECAG
			H8C1						

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM NO	COMPONENT PART NUMBER	ERC PROD.CODE	DESCRIPTION COM.CD	S T S A P C Y P B L U M	EXTENDED QTY PER	START DATE	S/N	CLOSE DATE	S/N	OPR LT SEQ OFF	STORES ACCOUNT
0136	9050819	A E	15PF CERAMIC CAPACTOR,0.3" AXIAL I0B8	P 1 D P EA	1					10 0	ECAG
0138	9050821	A E	1UFT,TRIPLE-LEAD TANTALUM 20DC F6A5,E8A5,F2A5	P 1 C P EA	3					10 0	ECAG
0139	9050822	A E	2.2UFT, TRIPLE-LEAD TANTALUM 16VDC J1B7,J3B7	P 1 C P EA	2					10 0	ECAG
0140	9050824	A E	33UFT, TRIPLE-LEAD TANTALUM 16VDC O3J5,O3J7	P 1 C P EA	2					10 0	ECAG
0141	9050823	A E	220UFT, TRIPLE-LEAD TANTALUM 10VDC O3I4,A5K2,A5B7,O2A2 B5A5	P 1 C P EA	5					10 0	ECAG
0142	9090886	A E	CONN/HEADER 3-PIN FRICTION LOCK B5A9(J7)	P 1 C P EA	1					10 0	ECAG
0143	9018837	A E	IC,74BCT373,8 BIT LATCH BICMOS B1G1,B1F7,B1G5,C3F7	P 1 * P EA	4					10 0	ECAG
0144	9790374	A E	IC,FCT374,CMOS OCT TIR-ST REGISTER F8I2	P 1 C P EA	1					10 0	ECAG
0145	9060803	A E	OSC, 40MHZ TTL, TRI-STATE A9J4	P 1 C P EA	1					10 0	ECAG
0146	9790543	A E	IC,74FCT543 OCT.LATCH FAST CMOS F7E2,F7D8,F7D4,F7D0 F5K6,F5J0,E1K6,E1J0	P 1 B P EA	8					10 0	ECAG
0147	9018834	A E	IC,R3010-20 PGA FLOAT POINT 20MHZ A5H9	P 1 B P EA	1					10 0	ECAG
0148	9016807	A E	16K X 4 STATIC RAM, W/O E, 20NS E3F0,E3E6,E3E2,E3D8 E3D4,E3C6,E3D0,C9C6 E3C2,C9F0,C9E6,C9E2 C9D8,C9D4,C9D0	P 1 B P EA	15					10 0	ECAG
0149	9016806	A E	8K X 8 STATIC RAM, 20NS B5D8,B5D4,B5D0,B5C6 B5C2,B5F0,B5E6,B5E2	P 1 B P EA	8					10 0	ECAG
0150	9018833	A E	IC,R3000-20 PGA MIPS PROCESS 20MHZ C0I1	P 1 B P EA	1					10 0	ECAG

EFFECTIVITY DATE: 20-Jun-89

S I N G L E L E V E L B I L L S O F M A T E R I A L

PARENT PART: 300-8029-001

IP10 ASSEMBLY, W/OUT SIMM MOD UM: EA PC: E
 ERC: 2 SRCE CODE: A TYPE: 1 ABC: A PL: P

ECN: E309 ASSEMBLY QTY: 1
 DATE: 20-Jun-89

ITEM	ERC	DESCRIPTION	S T S A P	EXTENDED	START	CLOSE	OPR LT	STORES		
NO	COMPONENT	PART NUMBER	PROD.CODE	COM.CD	C Y P B L U M	QTY PER	DATE	S/N	SEQ OFF	ACCOUNT

NOTES:

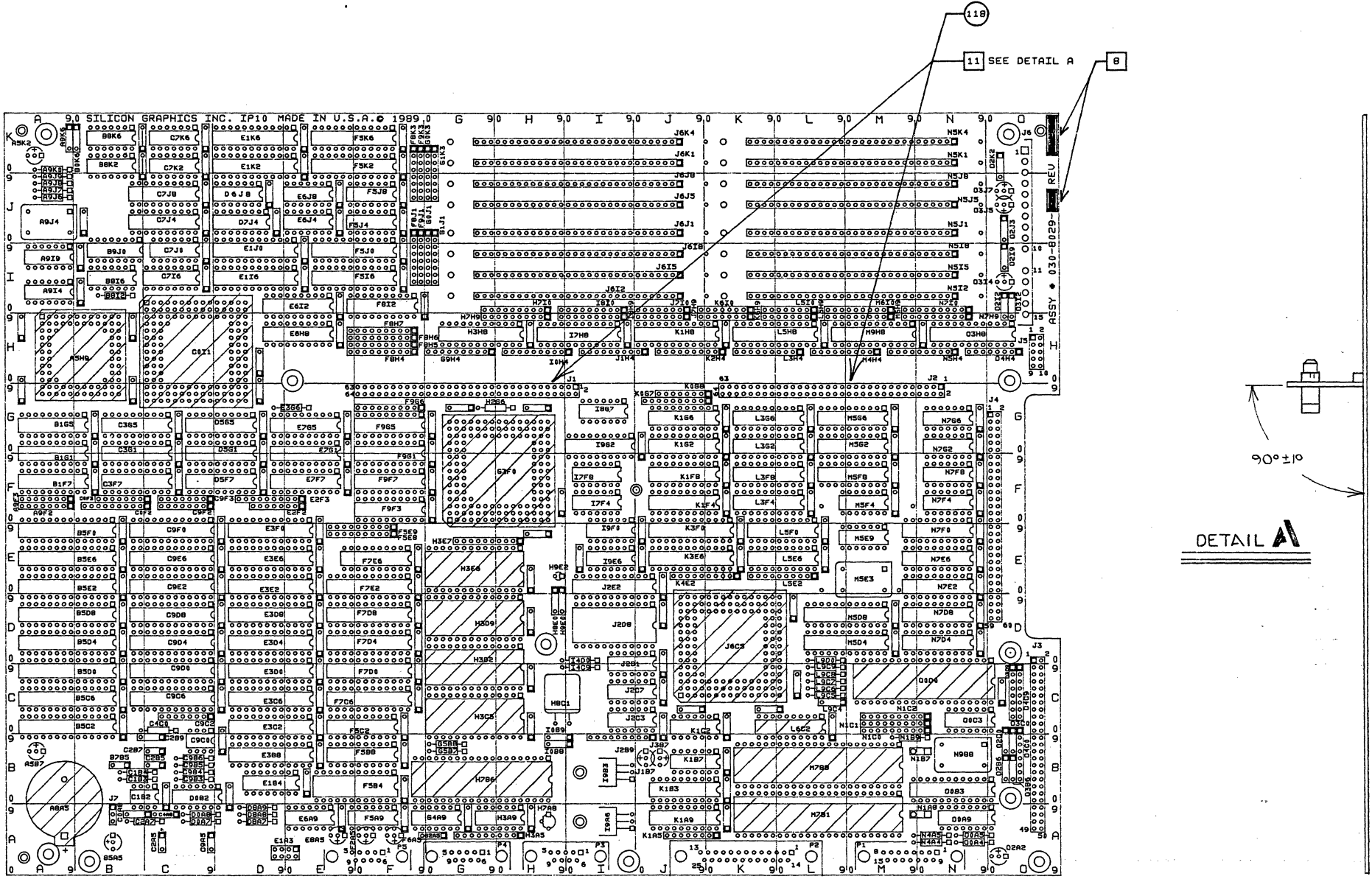
E287: RTC
 E309: ITEM 58 QTY WAS 5, REF
 DESIGNATORS WERE
 F7C6, F5K2, F5I6, E1K2, E1I6.
 ITEM 59 QTY WAS 6, REF
 DESIGNATORS WERE
 K1H8, H3H8, M9H8, L5H8, I7H8,
 O3H8.

NOTES:

UNLESS OTHERWISE SPECIFIED

1. SQUARE PADS INDICATE PIN 1 OF DEVICE.
2. ALL COMPONENTS ARE LOADED FROM SIDE SHOWN.
3. SQUARE PAD INDICATES + END OF CAPACITORS.
4. SQUARE PAD INDICATES CATHODE END OF DIODES.
5. SQUARE PAD INDICATES EMITTER OF TRANSISTORS.
6. THE UNMARKED RECTANGLES NEXT TO IC'S ARE TO BE LOADED WITH BYPASS CAPACITORS. BYPASS CAPACITOR DATA:
QTY = 162 VALUE = 0.1µF
7. COORDINATE SYSTEM EXPLANATION:
 - A. PIN 1 LOCATION DETERMINES THE PHYSICAL NAME. (SEE BILL OF MATERIALS AND SCHEMATIC)
 - B. THE PHYSICAL NAME CONSISTS OF 4 DIGITS = XXXY. XX IS THE +X DISPLACEMENT OF PIN 1 FROM (0.0). YY IS THE +Y DISPLACEMENT OF PIN 1 FROM (0.0).
 - C. FOR BOTH, THE FIRST DIGIT IS ALPHA AND CORRESPONDS TO A MAJOR GRID DIVISION. THE SECOND DIGIT IS NUMERIC AND CORRESPONDS TO A MINOR DIVISION WITHIN THE MAJOR GRID.
8. MARK BOARD WITH CURRENT DASH NUMBER (VERSION) AND CURRENT REVISION LEVEL PER SGI MARKING SPECIFICATION 001-0012-001.
9. REWORK DEFINITIONS:
 - A. LIFT PIN - MEANS DESOLDERING THAT DEVICE PIN AND ISOLATING IT FROM ITS RESPECTIVE PC BOARD HOLE/PAD LOCATION.
 - B. JUMPER - MEANS CONNECTING THE SPECIFIED POINTS WITH A 30 AWG BLUE KYNAR WIRE. BY DEFAULT CONNECTIONS ARE TO BE MADE ON COMPONENT SIDE OF BOARD.
 - C. PIN - REFERS TO THE COMPONENT PIN ITSELF.
 - D. PAD - REFERS TO THE HOLE/PAD LOCATION FOR A LIFTED PIN.
 - E. DRILLOUT - MEANS TO DRILL OUT THE SPECIFIED FEED THRU/COMPONENT PAD TO BREAK AN ELECTRICAL CONNECTION.
10. CROSS-HATCHED DEVICES ARE SOCKETED.
11. EB1 BOARD ASSY* 030-8006-001, ITEM* 118 MUST BE PERPENDICULAR WITH IP10 BOARD WITHIN +/- 1° OF 90°. SEE DETAIL A.

REVISIONS					
ZONE	VERSION	REV.	DESCRIPTION	DATE	APPROVED
		1	E787: RTC	6-21-89	[Signature]
		2	E309: BOM CHANGE ONLY	6-28-89	[Signature]



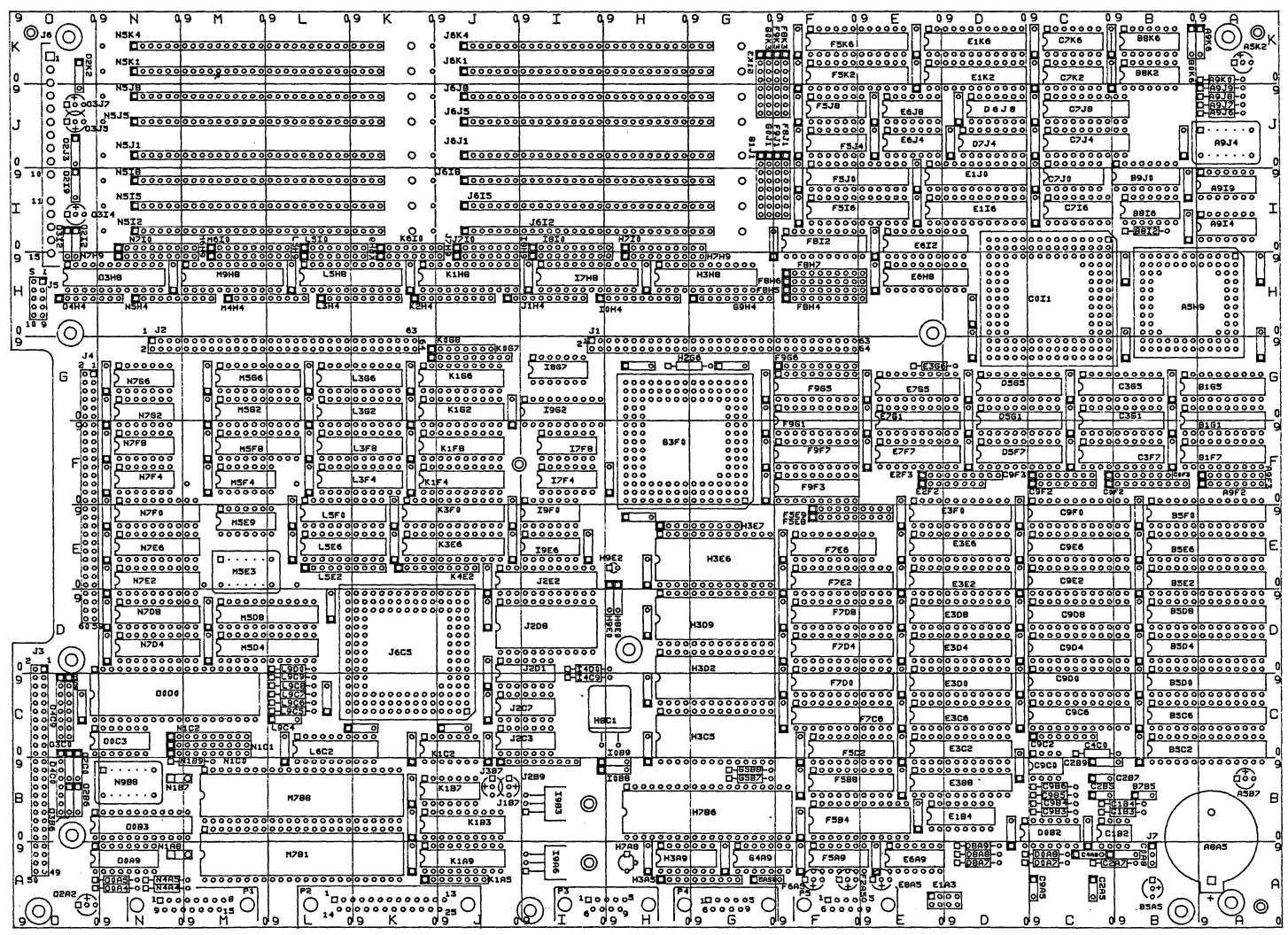
COMPONENT SIDE VIEW

SEE SEPARATE BILL OF MATERIALS

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DO NOT SCALE DRAWING						

NOTES:

REVISIONS					
ZONE	VERSION	REV.	DESCRIPTION	DATE	APPROVED



SOLDER SIDE VIEW

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
= .XX = .XXX =

CONTRACT NO.

APPROVALS DATE

DRAWN

CHECKED

RELEASED

RELEASED

DO NOT SCALE DRAWING

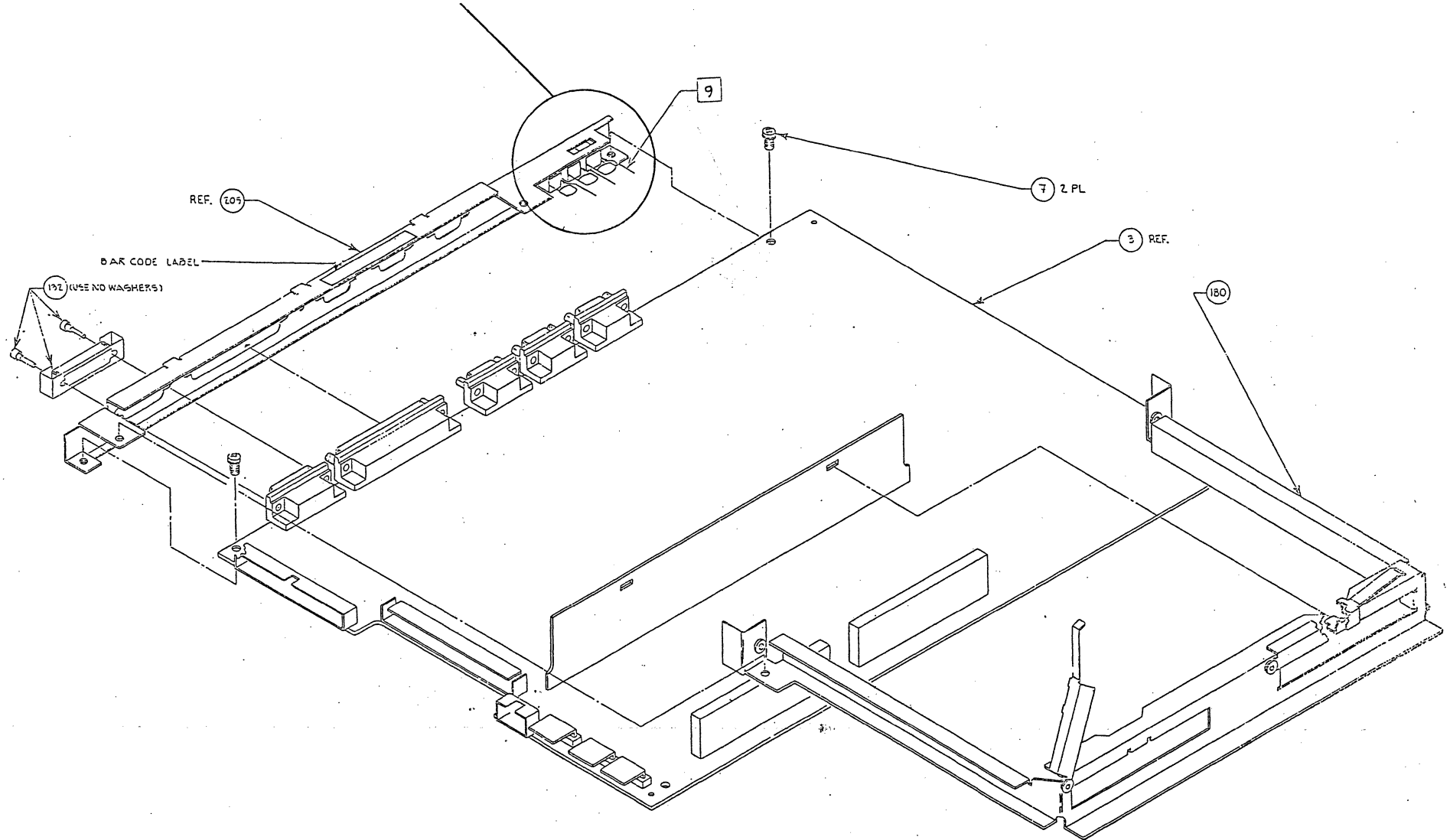
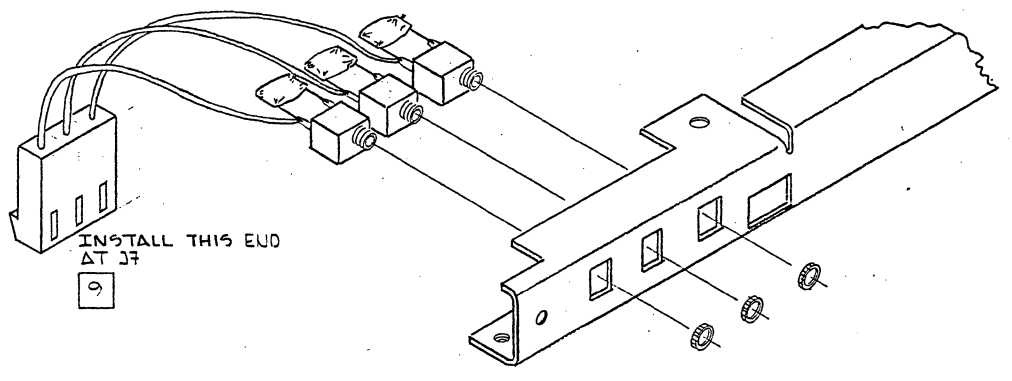
SIZE FSCM NO. DWG. NO. REV.
D 300-8029-001 2

SCALE 1 X 1 SHEET 7 OF 3

SiliconGraphics
Entry Systems Division

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DWG. NO.		SH	REV.	1	
REVISIONS					
ZONE	REV.	DESCRIPTION		DATE	APPROVED



NOTES:
 9 SOLDER WIRE FROM CONNECTOR TO AUDIO JACK CAPACITORS.

QTY	FSCM	PART OR	NOMENCLATURE	MATERIAL
REQD	NO.	IDENTIFYING NO.	OR DESCRIPTION	SPECIFICATION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES = .XX ± = .XXX ±		CONTRACT NO.		
MATERIAL		APPROVALS	DATE	
FINISH		DRAWN	CHECKED	
NEXT ASSY		USED ON	ISSUED	
APPLICATION		DO NOT SCALE DRAWING		SIZE FSCM NO. DWG. NO. REV. D 300-8029-001 2
SCALE		SHEET 5 OF 7		

NOTES:

1. ALL FILM IS POSITIVE. PHOTO IMAGES PLOTTED FULL SIZE WITHOUT ETCH COMPENSATION.
2. TRACE WIDTH TOLERANCE = ± .002".
3. COPPER PLATING > .001" IN HOLES.
4. MATERIAL: .005" MIN. EPOXY LAMINATE. NEMA GRADE FR-4, 1 OZ. COPPER CLAD (2 SIDES). COLOR: NATURAL, MUST MEET 94-1 OR BETTER. STACKED TO A TOTAL BOARD THICKNESS OF .062" ± .007".
5. SOLDERMASK BOTH SIDES AND ALL VIAS WITH DUPONT 8000 SERIES OR DYNACHEM COLOR (GREEN). WRINKLES IN SOLDERMASK NOT TO EXCEED .0005 IN HEIGHT.
6. FR-4 THICKNESSES ARE AS SHOWN
7. FOIL LAMINATION PREFERRED. VENDOR OPTION 0.5 OZ. OR 1.0 OZ. COPPER FOIL. ON OUTER LAYERS ONLY.
8. SILKSCREEN BOTH SIDES. (WHITE)
9. BREAKOUT SPECIFICATIONS:
 OUTER LAYERS- NOT ALLOWED. .002" MINIMUM ANNULAR RING.
 INNER LAYERS- .004" MINIMUM ANNULAR RING WHERE TRACES ENTER PADS.
10. PROGRAM DRILL FROM DRILL FILE
11. AUTOMATIC OPTICAL INSPECTION OF ALL LAYERS IS RECOMMENDED.
12. FABRICATION PER IPC-ML-910A, CLASS 2 USING ARTWORK NO. 033-8029-001, INSPECT BREAKOUT TO NOTE #9 AND FABRICATION QUALITY TO IPC-A-600C CLASS 2.
13. FINISH HOLE SIZES TO BE DIAMETER SHOWN ± .003" TOLERANCE.
14. WARP AND TWIST SHALL NOT EXCEED .010" PER INCH.
15. VENDOR ETCH DATE CODE AND VENDOR LOGO APPROX. WHERE SHOWN ON SOLDER SIDE, NEAR FAB ASSEMBLY NUMBER. MARKING SHALL BE IN ACCORDANCE WITH UL RECOGNIZED COMPONENTS INDEX.
16. ALL NONFUNCTIONAL PADS CAN BE REMOVED.
17. MINIMUM SPACING BETWEEN CONDUCTORS SHALL EQUAL THE MEASURED ARTWORK - .002".
18. FINISHED BOARD THICKNESS SHALL BE MEASURED FROM PLATING TO PLATING.


DWG. NO.		SH	REV.	1	
REVISIONS					
ZONE	VERSION	REV.	DESCRIPTION	DATE	APPROVED
		1	E287: RTC	6-21-89	[Signature]

HOLE, PAD & CLEARANCE CHART							
CODE	SIZE OF HOLE	CLR	PLATE	QTY	EXT LAYER PAD SIZES	SOLDER MASK	DRILL MASTER
-	.021 ± .003	.010	YES	1736	.056 RD	NONE	030 RD
x	.039 ± .003	.010	YES	5408	.064 RD/SQ	.075 RD/SQ	070 X
+	.060 ± .003	.010	YES	6	.090 RD/SQ	.100 RD/SQ	070 +
■	.075 ± .003	.010	YES	15	.100 RD/SQ	.115 RD/SQ	070 RD X
●	.125 ± .003	.190D	YES	10	.175 RD	.190 RD	070 RD +
■	.156 ± .003	.340D	YES	11	.325 RD	.340 RD	070 SQ X
■	.064 ± .003	.007	NO	16	NONE	.075 RD	070 SQ +
●	.095 ± .003	.007	NO	16	NONE	.110 RD	070 DI X
+	.109 ± .003	.175D	NO	4	NONE	.175 RD	070 DI +
■	.125 ± .003	.200D	NO	2	NONE	.200 RD	070 *

NOTE: UNLESS OTHERWISE SPECIFIED...
 DIMENSIONS ARE IN INCHES, D = DIAMETER
 CLR IS ANNULAR, CLEARANCE TO NEAREST COPPER

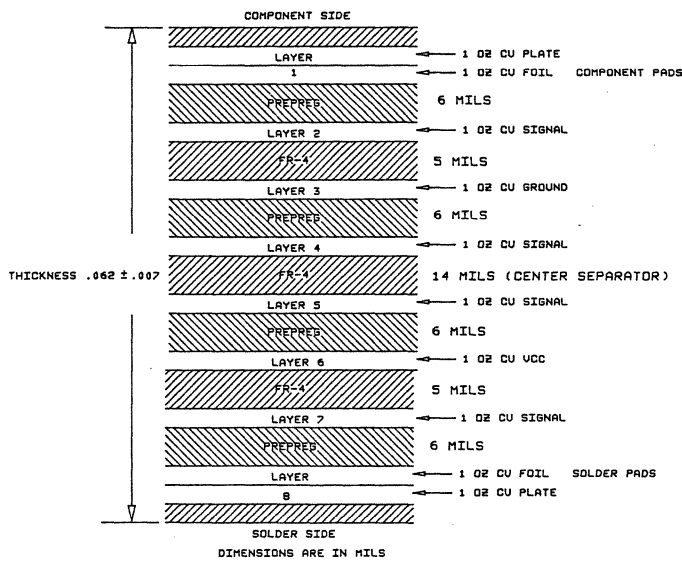
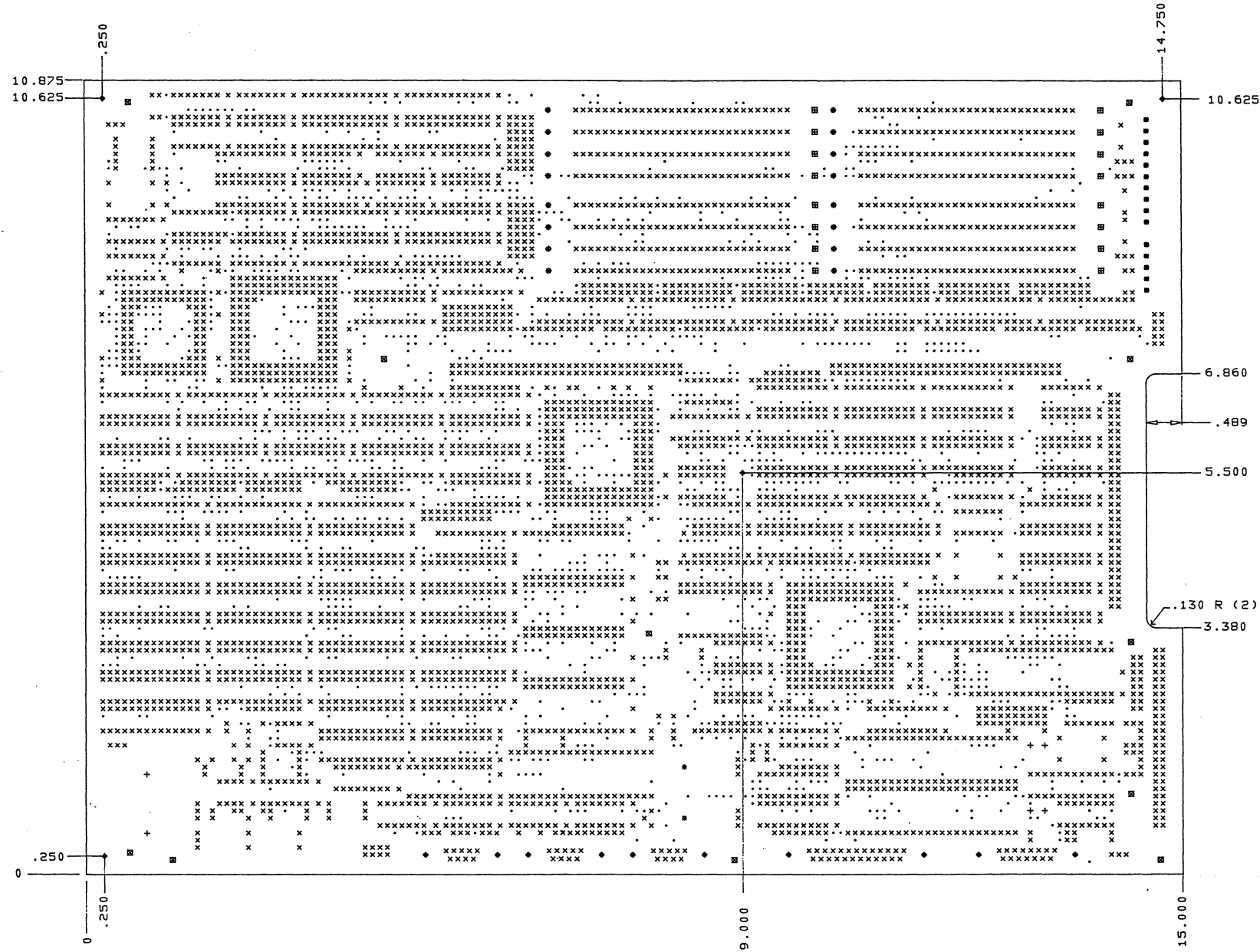
8 LAYER FILM SET							
LAYER	NAME	DIR	TRACE /CH	TRACE WIDTH	PAD SIZE	CLEAR	PLANE WEB
L1	COMPONENT PADS	-	-	-	64	-	-
L2	INT3 SIGNAL	U	1,2	9	55	7	-
L3	GROUND PLANE	-	-	-	60	-	-
L4	INT4 SIGNAL	H	1,2	9	55	7	-
L5	INT1 SIGNAL	U	1,2	9	55	7	-
L6	UCC PLANE	-	-	-	60	-	-
L7	INT2 SIGNAL	H	1,2	9	55	7	-
L8	SOLDER SIDE PADS	-	-	-	64	-	-
SMC	SOLDERMASK COMP.	-	-	-	75	15	-
SM8	SOLDERMASK SOLDER	-	-	-	75	15	-
DM	DRILL TEMPLATE	-	-	-	-	-	-
CS	SILKSCREEN COMP.	-	-	-	-	-	-
SS	SILKSCREEN SOLDER.	-	-	-	-	-	-

DIMENSIONS ARE IN MILS

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	MATERIAL	APPROVALS	DATE	SIZE FSCM NO. DWG. NO. 034-8029-001 REV. 1 SCALE NONE SHEET 1 OF 2	
	FINISH	DRAWN	CHECKED		
	DO NOT SCALE DRAWING	RELEASED	RELEASED		

NOTES:

DWG. NO.			SH	REV.	1
REVISIONS					
ZONE	VERSION	REV.	DESCRIPTION	DATE	APPROVED



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MATERIAL		APPROVALS	DATE		
FINISH		DRAWN	CHECKED	SIZE FSCM NO. DWG. NO. 034-8029-001 REV. 1	
DO NOT SCALE DRAWING		RELEASED	RELEASED	SCALE 1 X 1 SHEET 2 OF 2	