

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	Add vendor CAGE numbers 01295, 18324 and 34335 to the drawing. Added device types 05 and 06 for vendor CAGE number 18324, and device types 07 thru 10 for vendor CAGE number 34335. Changes to absolute maximum ratings and table I. Editorial changes throughout.	1990 MAR 29	<i>M. L. Pelley</i>

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REV STATUS OF SHEETS	REV	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
PMIC N/A		PREPARED BY <i>James E. Jamison</i> CHECKED BY <i>Charles Reusing</i> APPROVED BY <i>Marie L. Pelley</i> DRAWING APPROVAL DATE 20 SEPTEMBER 1987 REVISION LEVEL A									DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444 MICROCIRCUITS, DIGITAL, MEMORY, BIPOLAR, PROGRAMMING LOGIC, MONOLITHIC SILICON													
STANDARDIZED MILITARY DRAWING THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A		SIZE	CAGE CODE																					
		A	67268		5962-87671																			
		SHEET			1		OF			1														

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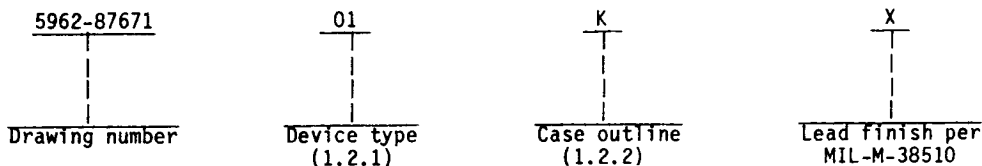
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5962-E1187

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

1. SCOPE

1.1 Scope. This drawing describes device requirements for class B microcircuits in accordance with 1.2.1 of MIL-STD-883, "Provisions for the use of MIL-STD-883 in conjunction with compliant non-JAN devices".

1.2 Part number. The complete part number shall be as shown in the following example:



1.2.1 Device types. The device types shall identify the circuit function as follows:

<u>Device type</u>	<u>Generic number</u>	<u>Circuit function</u>
01	PAL20L8B	20-input 8-output AND-OR invert gate array
02	PAL20R8B	20-input 8-output registered AND-OR gate array
03	PAL20R6B	20-input 6-output registered AND-OR gate array
04	PAL20R4B	20-input 4-output registered AND-OR gate array
05	PLUS20L8	20-input 8-output AND-OR invert gate array
06	PLUS20R8	20-input 8-output registered AND-OR gate array
07	PAL20L8-15	20-input 8-output AND-OR invert gate array
08	PAL20R8-15	20-input 8-output registered AND-OR gate array
09	PAL20R6-15	20-input 6-output registered AND-OR gate array
10	PAL20R4-15	20-input 4-output registered AND-OR gate array

1.2.2 Case outlines. The case outlines shall be as designated in appendix C of MIL-M-38510, and as follows:

<u>Outline letter</u>	<u>Case outline</u>
K	F-6 (24-lead, .640" x .420" x .090"), flat package
L	D-9 (24-lead, 1.280" x .310" x .200"), dual-in-line package
3	C-4 (28-terminal, .460" x .100"), square chip carrier package

1.3 Absolute maximum ratings.

Supply voltage range - - - - -	-0.5 V dc to +7 V dc
Input voltage range - - - - -	-1.5 V dc at -18 mA to +5.5 V
Storage temperature range - - - - -	-65°C to +150°C
Lead temperature (soldering, 10 seconds) - - - - -	+260°C
Thermal resistance, junction-to-case (θ_{JC}) 1/- - - - -	See MIL-M-38510, appendix C
Output voltage applied - - - - -	5.5 V dc
Output sink current - - - - -	100 mA
Maximum power dissipation (P_D) 2/- - - - -	1.2 W
Maximum junction temperature (T_J) - - - - -	+175°C

1/ Heat sinking is recommended to reduce the junction temperature.

2/ Must withstand the added P_D due to short circuit test (e.g., I_{OS}).

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1.4 Recommended operating conditions.

Supply voltage (V_{CC}) - - - - - 4.5 V dc minimum to 5.5 V dc maximum
 Minimum high level input voltage (V_{IH}) - - - - - 2.0 V dc
 Maximum low level input voltage (V_{IL}) - - - - - 0.8 V dc
 Case operating temperature range (T_C) - - - - - -55°C to $+125^{\circ}\text{C}$

2. APPLICABLE DOCUMENTS

2.1 Government specification, standard, and bulletin. Unless otherwise specified, the following specification, standard, and bulletin of the issue listed in that issue of the Department of Defense Index of Specifications and Standards specified in the solicitation, form a part of this drawing to the extent specified herein.

SPECIFICATION

MILITARY

MIL-M-38510 - Microcircuits, General Specification for.

STANDARD

MILITARY

MIL-STD-883 - Test Methods and Procedures for Microelectronics.

BULLETIN

MILITARY

MIL-BUL-103 - List of Standardized Military Drawings (SMD's)

(Copies of the specification, standard, and bulletin required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Order of precedence. In the event of a conflict between the text of this drawing and the references cited herein, the text of this drawing shall take precedence.

3. REQUIREMENTS

3.1 Item requirements. The individual item requirements shall be in accordance with 1.2.1 of MIL-STD-883, "Provisions for the use of MIL-STD-883 in conjunction with compliant non-JAN devices" and as specified herein.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-M-38510 and herein.

3.2.1 Terminal connections. The terminal connections shall be as specified on figure 1.

3.2.2 Truth tables. The truth tables shall be as specified on figure 2.

3.2.2.1 Unprogrammed devices. The truth table for unprogrammed devices for contracts involving no altered item drawing shall be as specified on figure 2. When required in groups A, B, or C (see 4.4), the devices shall be programmed by the manufacturer prior to test with a minimum of 50 percent of the total number of gates programmed or to any altered item drawing pattern which includes at least 25 percent of the total number of gates programmed.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions ^{1/} -55°C < T _C < +125°C 4.5 V ≤ V _{CC} ≤ 5.5 V	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Input clamp voltage	V _{IC}	V _{CC} = 4.5 V, I _I = -18 mA	1	A11		1.5	V
High level output voltage	V _{OH}	V _{CC} = 4.5 V, V _{IL} ≤ 0.8 V, V _{IH} ≥ 2.0 V, I _{OH} = -2 mA	1, 2, 3	A11	2.4		V
Low level output voltage	V _{OL}	V _{CC} = 4.5 V, V _{IL} ≤ 0.8 V, V _{IH} ≥ 2.0 V, I _{OL} = 12 mA	1, 2, 3	A11		0.5	V
High level input voltage	V _{IH}	V _{CC} = 5.5 V <u>2/</u>	1, 2, 3	A11	2.0		V
Low level input voltage	V _{IL}	V _{CC} = 5.5 V <u>2/</u>	1, 2, 3	A11		0.8	V
High level input current	I _{IH}	V _{CC} = 5.5 V, V _I = 2.4 V <u>3/</u>	1, 2, 3	A11			OE
							others
							40
							25
Low level input current	I _{IL}	V _{CC} = 5.5 V, V _I = 0.4 V <u>3/</u>	1, 2, 3	A11		-0.25	mA
Output short circuit current	I _{OS}	V _{CC} = 5.5 V, V _O = 0.5 V <u>4/</u> V _{IH} ≥ 2.0 V; V _{IL} ≤ 0.8 V	1, 2, 3	A11			01, 02, 03, 04, 07, 08, 09, 10
							05, 06
							-30
							-250
							-30
							-90
Input current	I _I	V _{CC} = 5.5 V, V _I = 5.5 V	1, 2, 3	A11		1.0	mA
Off-state output current	I _{OZL}	V _{CC} = 5.5 V, V _{IL} ≤ 0.8 V V _{IH} ≥ 2.0 V, V _O = 0.4 V <u>3/</u>	1, 2, 3	A11		-250	μA
Off-state output current	I _{OZH}	V _{CC} = 5.5 V, V _{IL} ≤ 0.8 V V _{IH} ≥ 2.0 V, V _O = 2.4 V <u>3/</u>	1, 2, 3	A11		100	μA
Supply current	I _{CC}	V _{CC} = 5.5 V	1, 2, 3	A11		210	mA

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C < T _C < +125°C 4.5 V ≤ V _{CC} ≤ 5.5 V	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Propagation delay data input to output	t _{PHL}	V _{CC} = 5.0 V, C _L = 50 pF ±10%, R ₁ = 390Ω, R ₂ = 750Ω, or equivalent	9, 10, 11	01, 03, 04		20	ns
				05		10	
				07, 09, 10		15	
Propagation delay data input to output	t _{PLH}		9, 10, 11	01, 03, 04		20	ns
				05		10	
				07, 09, 10		15	
Propagation delay high impedance to output high	t _{PZH}		9, 10, 11	01, 03, 04		25	ns
				05		12	
				07, 09, 10		15	
Propagation delay high impedance to output low	t _{PZL}		9, 10, 11	01, 03, 04		25	ns
				05		12	
				07, 09, 10		15	
Propagation delay output high to ^{5/} high impedance	t _{PHZ}		9, 10, 11	01, 03, 04		20	ns
				05		12	
				07, 09, 10		15	
Propagation delay output low to ^{5/} high impedance	t _{PLZ}		9, 10, 11	01, 03, 04		20	ns
				05		12	
				07, 09, 10		15	

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions $\frac{1}{4}$ $-55^{\circ}\text{C} \leq T_C \leq +125^{\circ}\text{C}$ $4.5\text{ V} \leq V_{CC} \leq 5.5\text{ V}$	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Propagation delay high impedance to output high (pin 13 to output enable)	t _{PZH}	V _{CC} = 5.0 V, C _L = 50 pF $\pm 10\%$, R _L = 390 Ω , R ₂ = 750 Ω , or equivalent	9, 10, 11	02, 03, 04		20	ns
				06		12	
				08, 09, 10		15	
Propagation delay high impedance to output low (pin 13 to output enable)	t _{PZL}		9, 10, 11	02, 03, 04		20	ns
				06		12	
				08, 09, 10		15	
Propagation delay $\frac{5}{}$ output high to high impedance (pin 13 to output disable)	t _{PHZ}		9, 10, 11	02, 03, 04		20	ns
				06		12	
				08, 09, 10		15	
Propagation delay $\frac{5}{}$ output low to high impedance (pin 13 to output disable)	t _{PLZ}		9, 10, 11	02, 03, 04		20	ns
				07, 09, 10		15	
				06		12	
Clock to output	t _{PCH}		9, 10, 11	02, 03, 04, 08, 09, 10		15	ns
				06		12	
Minimum clock pulse width	t _{p(CL)}		9, 10, 11	02, 03, 04	12		ns
				06, 08, 09, 10	10		
Minimum setup time $\frac{2}{}$	t _{su}		9, 10, 11	02, 03, 04	20		ns
				08, 09, 10	15		

See footnotes at end of table.

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TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions ^{1/} -55°C < T _C < +125°C 4.5 V ≤ V _{CC} ≤ 5.5 V	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Minimum hold time ^{2/} t _H	t _H	V _{CC} = 5.0 V, C _L = 50 pF ±10%, R _L = 390Ω, R _D = 750Ω, or equivalent ^{5/}	9, 10, 11	02, 03, 04, 08, 09, 10	0		ns
Maximum clock frequency ^{2/ 6/} f _{MAX}	f _{MAX}		9, 10, 11	02, 03, 04	41.6		MHz
				08, 09, 10	50		

- 1/ All voltages are referenced to ground.
- 2/ Tested only initially and after any design change.
- 3/ I/O terminal leakage is the worst case of I_{IX} or I_{OZX}.
- 4/ Only one output shorted at a time.
- 5/ C_L = 50 pF. Equivalent testing may be used to simulate the 5 pF load.
- 6/ $f_{MAX} = \frac{1}{2 \times [t_p(C_L)]}$

3.2.2.2 Programmed devices. The truth table for programmed devices shall be as specified by an attached altered drawing.

3.2.3 Logic diagram. The logic diagram for unprogrammed devices shall be as specified on figure 3.

3.2.4 Case outlines. The case outlines shall be in accordance with 1.2.2.

3.3 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in table I and apply over the full case operating temperature range.

3.4 Electrical test requirements. The electrical test requirements shall be the subgroups specified in table II. The electrical test for each subgroup are described in table I.

3.5 Marking. Marking shall be in accordance with MIL-STD-883 (see 3.1 herein). The part shall be marked with the part number listed in 1.2 herein. In addition, the manufacturer's part number may also be marked as listed in MIL-BUL-103 (see 6.6 herein).

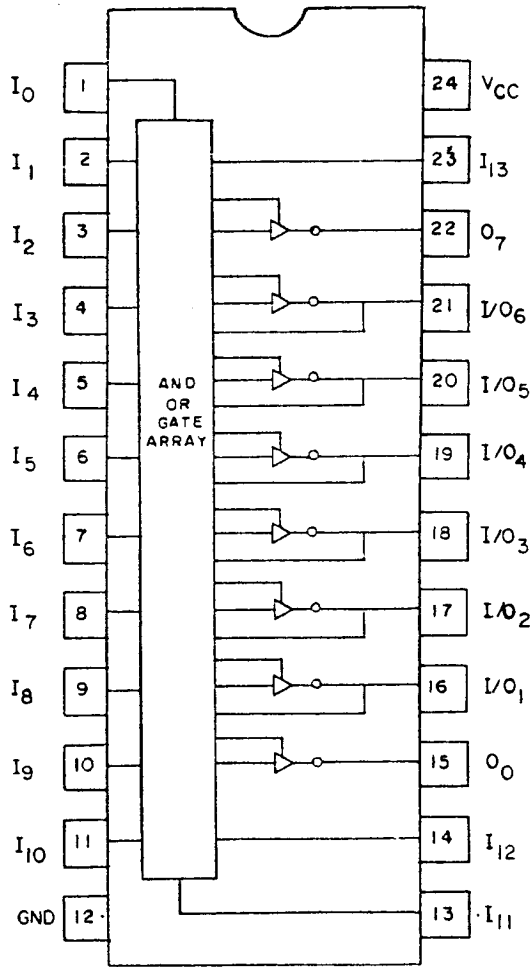
3.6 Certificate of compliance. A certificate of compliance shall be required from a manufacturer in order to be listed as an approved source of supply in MIL-BUL-103 (see 6.6 herein). The certificate of compliance submitted to DESC-ECS prior to listing as an approved source of supply shall affirm that the manufacturer's product meets the requirements of MIL-STD-883 (see 3.1 herein) and the requirements herein.

3.7 Certificate of conformance. A certificate of conformance as required in MIL-STD-883 (see 3.1 herein) shall be provided with each lot of microcircuits delivered to this drawing.

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Device types 01, 05, 07

Cases K and L



Device types 01, 05, 07

Case 3

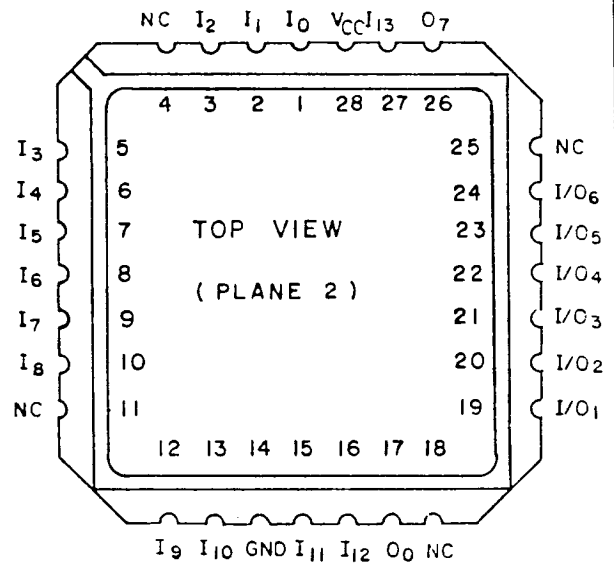


FIGURE 1. Terminal connections.

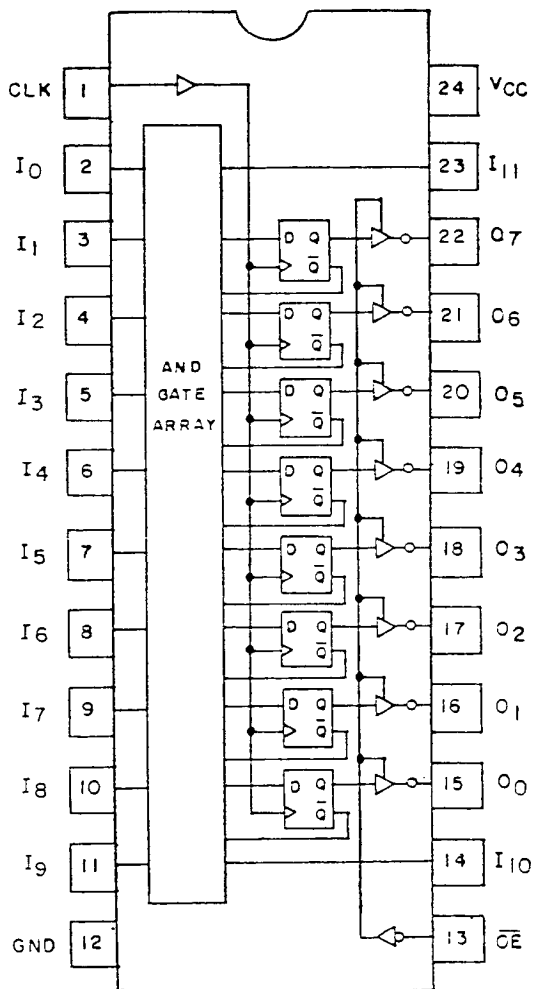
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Device types 02, 06, 08

Cases K and L



Device types 02, 06, 08

Case 3

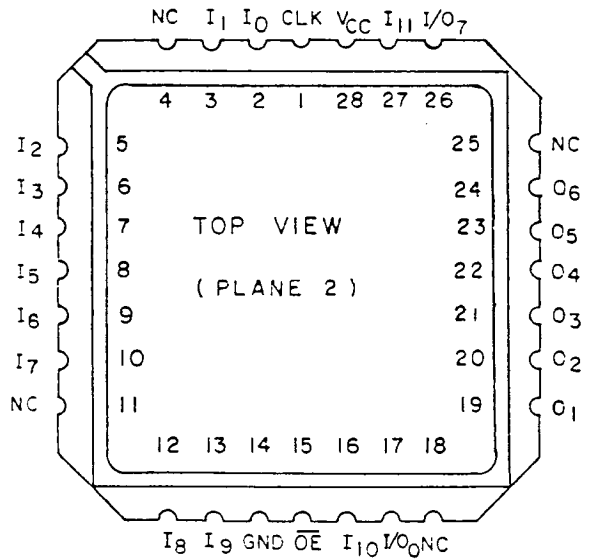


FIGURE 1. Terminal connections - Continued.

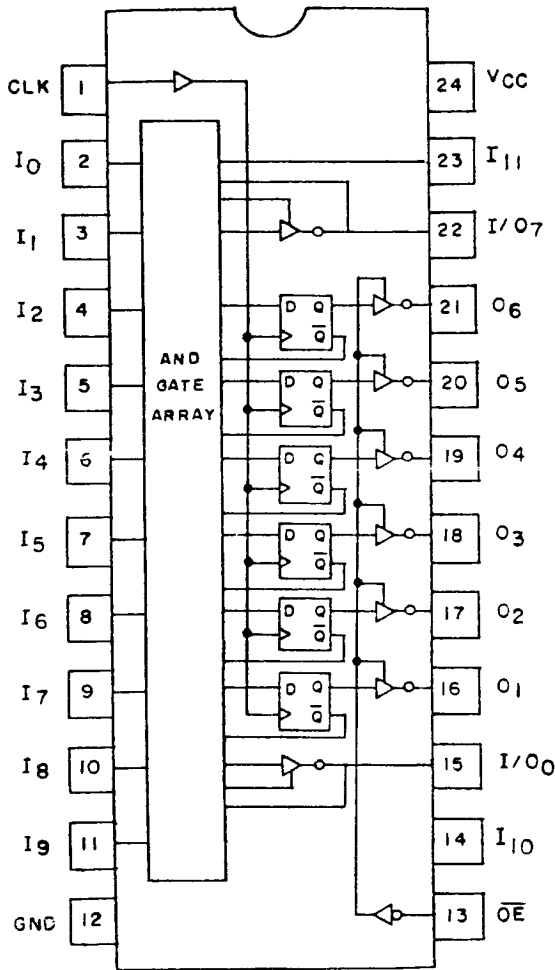
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Device types 03, 09

Cases K and L



Device types 03, 09

Case 3

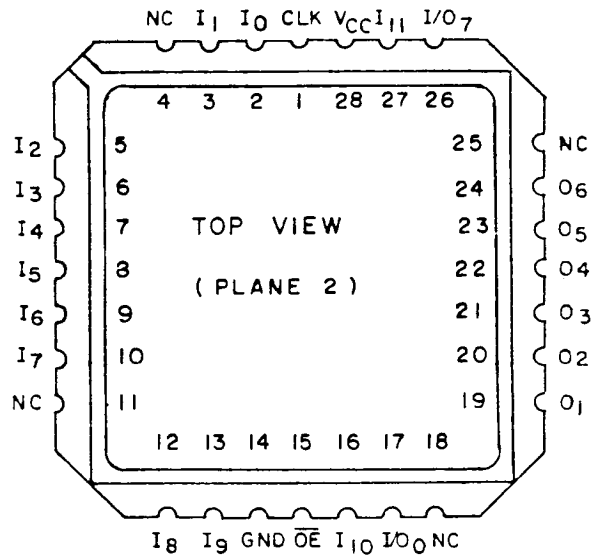


FIGURE 1. Terminal connections - Continued.

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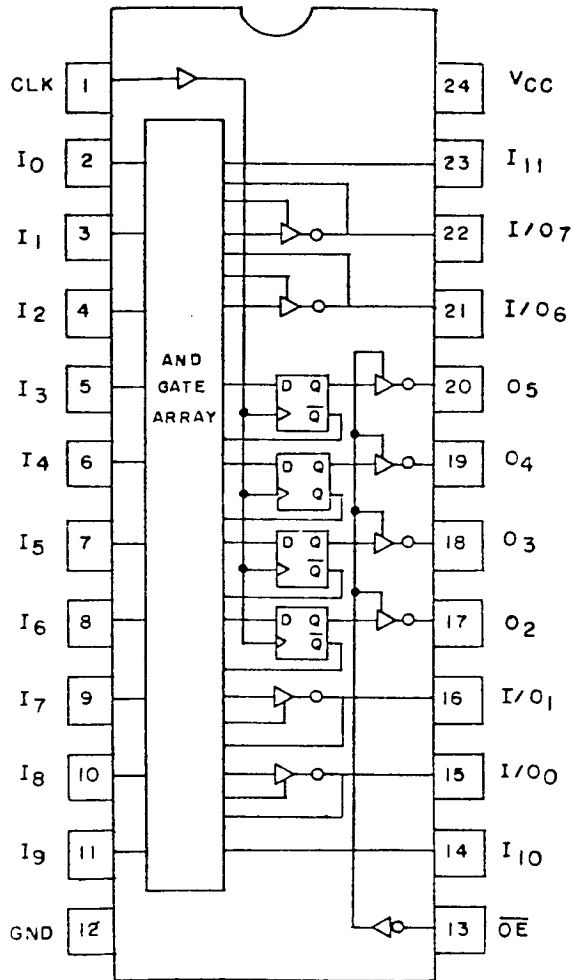
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Device types 04, 10

Cases K and L



Device types 04, 10

Case 3

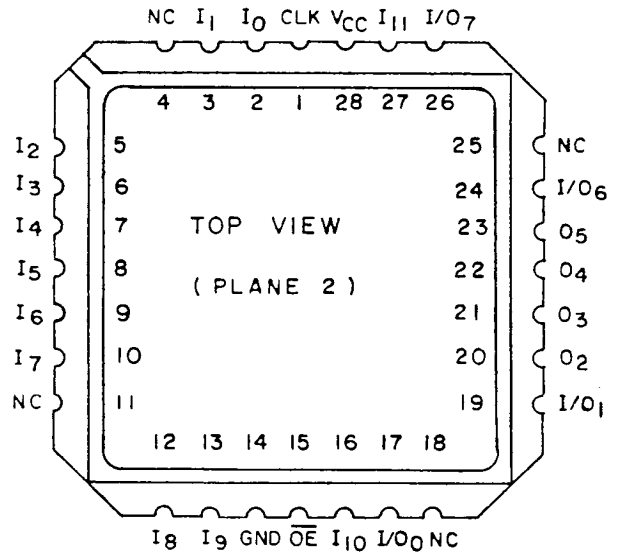


FIGURE 1. Terminal connections - Continued.

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Devices types 01, 05, 07

Inputs														Outputs								
I ₁₃	I ₁₂	I ₁₁	I ₁₀	I ₉	I ₈	I ₇	I ₆	I ₅	I ₄	I ₃	I ₂	I ₁	I ₀	O ₇	I/O ₆	I/O ₅	I/O ₄	I/O ₃	I/O ₂	I/O ₁	O ₀	
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Z	Z	Z	Z	Z	Z	Z	Z

Devices types 02, 06, 08

Inputs														Outputs								
\overline{OE}	I ₁₁	I ₁₀	I ₉	I ₈	I ₇	I ₆	I ₅	I ₄	I ₃	I ₂	I ₁	I ₀	CLK	O ₇	O ₆	O ₅	O ₄	O ₃	O ₂	O ₁	O ₀	
H	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	Z	Z	Z	Z	Z	Z	Z	Z
L	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	H	H	H	H	H	H	H	H

Devices types 03, 09

Inputs														Outputs								
\overline{OE}	I ₁₁	I ₁₀	I ₉	I ₈	I ₇	I ₆	I ₅	I ₄	I ₃	I ₂	I ₁	I ₀	CLK	I/O ₇	O ₆	O ₅	O ₄	O ₃	O ₂	O ₁	I/O ₀	
H	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	Z	Z	Z	Z	Z	Z	Z	Z
L	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	Z	H	H	H	H	H	H	Z

Devices types 04, 10

Inputs														Outputs								
\overline{OE}	I ₁₁	I ₁₀	I ₉	I ₈	I ₇	I ₆	I ₅	I ₄	I ₃	I ₂	I ₁	I ₀	CLK	I/O ₇	I/O ₆	O ₅	O ₄	O ₃	O ₂	I/O ₁	I/O ₀	
H	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	Z	Z	Z	Z	Z	Z	Z	Z
L	X	X	X	X	X	X	X	X	X	X	X	X	X	CLK	Z	Z	H	H	H	H	Z	Z

FIGURE 2. Truth tables (unprogrammed).

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Devices types 01, 05, 07

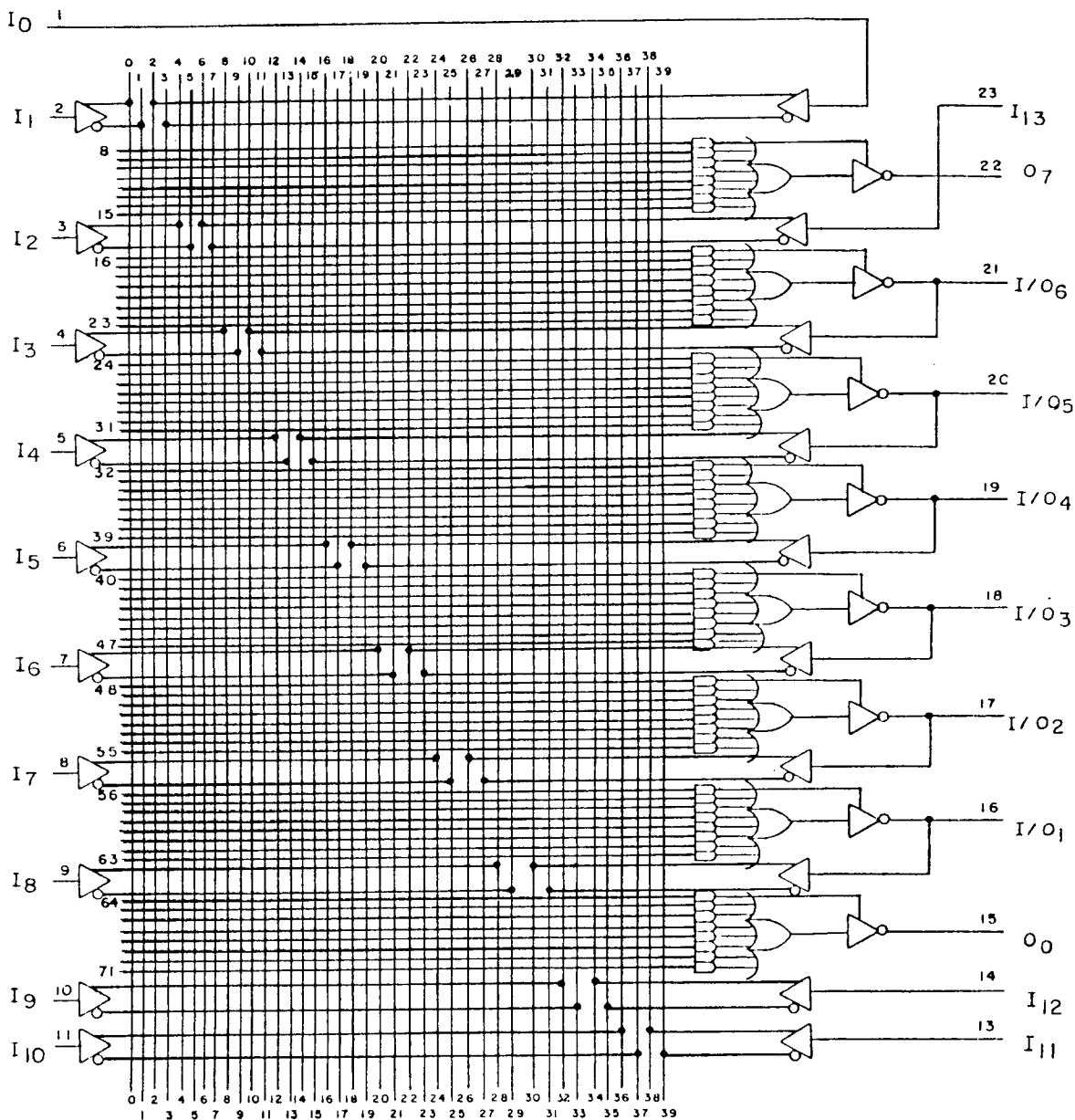


FIGURE 3. Unprogrammed logic diagrams.

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Devices types 02, 06, 08

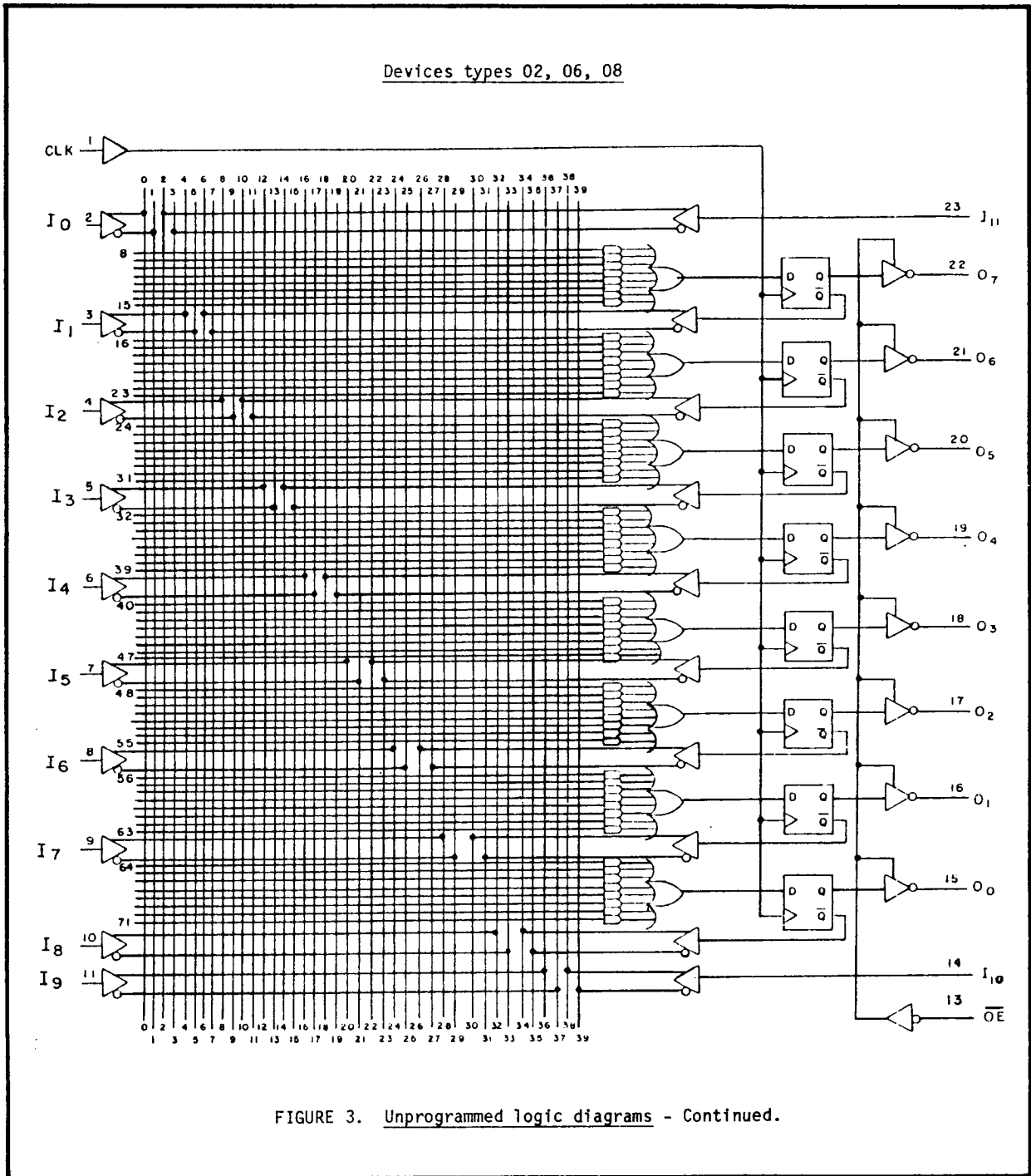


FIGURE 3. Unprogrammed logic diagrams - Continued.

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Device types 03, 09

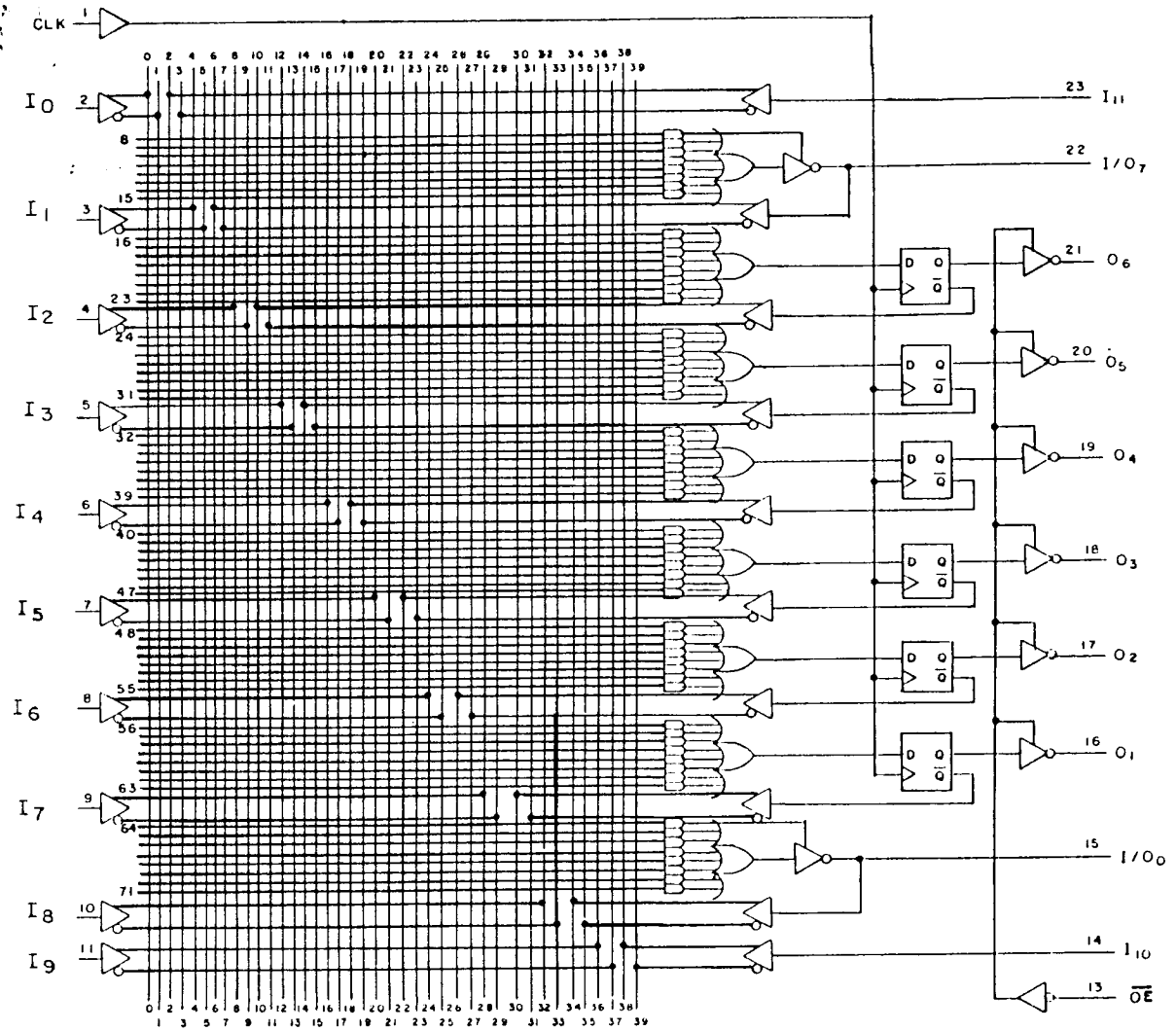


FIGURE 3. Unprogrammed logic diagram - Continued.

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Device types 04, 10

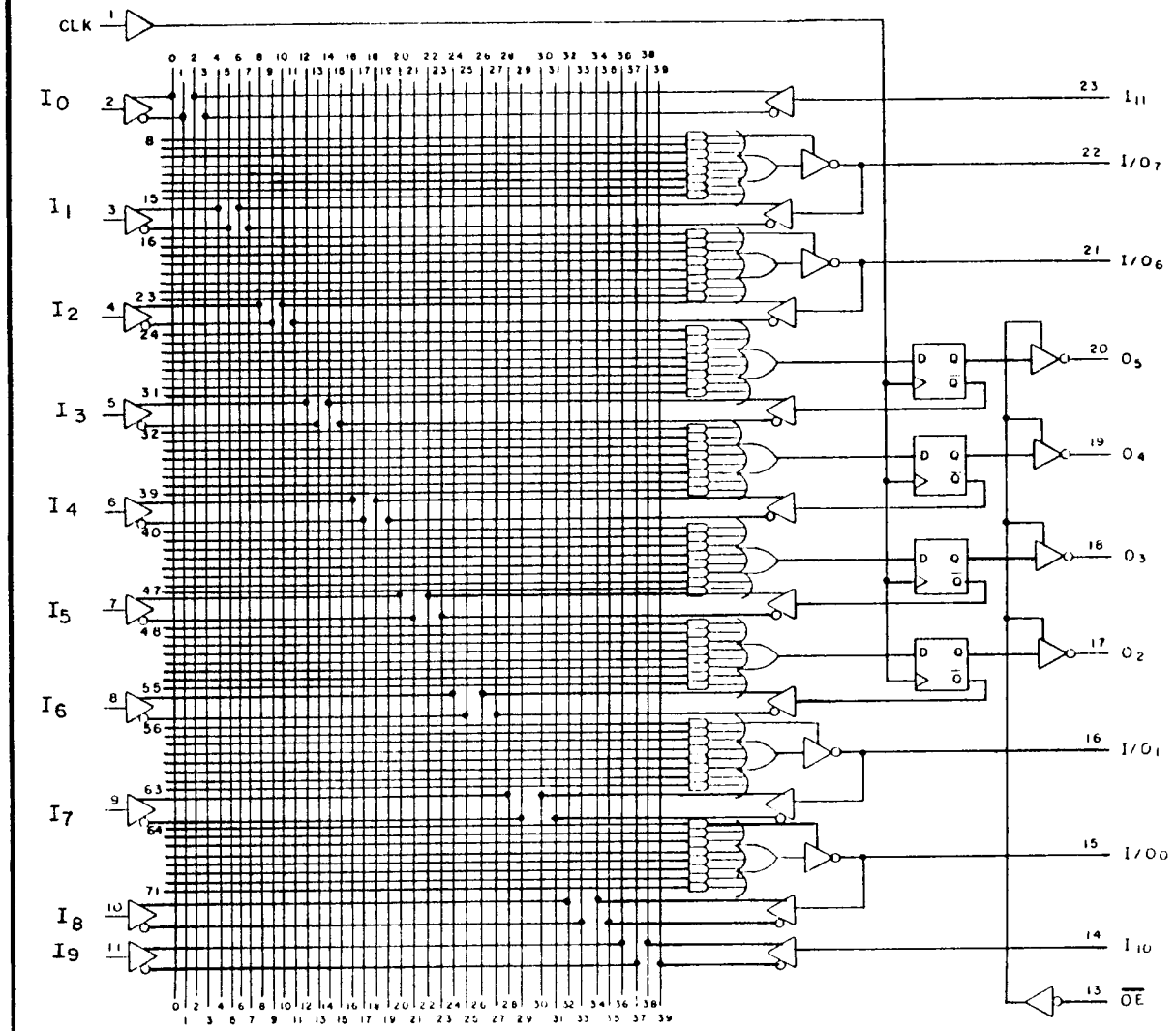


FIGURE 3. Unprogrammed logic diagram - Continued.

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TABLE II. Electrical test requirements. 1/ 2/ 3/

MIL-STD-883 test requirements	Subgroups (per method 5005, table I)
Interim electrical parameters (method 5004)	1
Final electrical test parameters (method 5004) for programmed devices	1*, 2, 3, 7*, 8
Final electrical test parameters (method 5004) for unprogrammed devices	1*, 2, 3, 7*, 8
Group A test requirements (method 5005)	1, 2, 3, 7, 8, 9, 10, 11
Groups C and D end-point electrical parameters (method 5005)	1, 2, 3, 7, 8

- 1/ * PDA applies to subgroups 1 and 7.
 2/ Any or all subgroups may be combined when using high-speed testers.
 3/ Subgroups 7 and 8 functional tests shall also verify the truth table of figure 2 for unprogrammed devices or that the altered item drawing pattern exists for programmed devices.

3.8 Notification of change. Notification of change to DESC-ECS shall be required in accordance with MIL-STD-883 (see 3.1 herein).

3.9 Verification and review. DESC, DESC's agent, and the acquiring activity retain the option to review the manufacturer's facility and applicable required documentation. Offshore documentation shall be made available onshore at the option of the reviewer.

3.10 Processing options. Since the device is capable of being programmed by either the manufacturer or the user to result in a wide variety of configurations, two processing options are provided for selection in the contract, using an altered item drawing.

3.10.1 Unprogrammed device delivered to the user. All testing shall be verified through group A testing as defined in 3.2.2.1 and table II. It is recommended that users perform subgroups 7 and 9 after programming to verify the specific program configuration.

3.10.2 Manufacturer-programmed device delivered to the user. All testing requirements and quality assurance provisions herein, including the requirements of the altered item drawing, shall be satisfied by the manufacturer prior to delivery.

4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with section 4 of MIL-M-38510 to the extent specified in MIL-STD-883 (see 3.1 herein).

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4.2 Screening. Screening shall be in accordance with method 5004 of MIL-STD-883, and shall be conducted on all devices prior to quality conformance inspection. The following additional criteria shall apply:

- a. Burn-in test, method 1015 of MIL-STD-883.
 - (1) Test condition A, B, C, or D using the circuit submitted with the certificate of compliance (see 3.6 herein).
 - (2) $T_A = +125^{\circ}\text{C}$, minimum.
- b. Interim and final electrical test parameters shall be as specified in table II herein, except interim electrical parameter tests prior to burn-in are optional at the discretion of the manufacturer.

4.3 Quality conformance inspection. Quality conformance inspection shall be in accordance with method 5005 of MIL-STD-883 including groups A, B, C, and D inspections. The following additional criteria shall apply.

4.3.1 Group A inspection.

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, and 6 in table I, method 5005 of MIL-STD-883 shall be omitted.
- c. Unprogrammed devices, shall be tested for programmability and ac performance compliance to the requirements of group A, subgroups 9, 10, and 11. Either of two techniques is acceptable.
 - (1) Testing the entire lot using additional built-in test circuitry which allows the manufacturer to verify programmability and ac performance without programming the user array. If this is done, the resulting test patterns shall be verified on all devices during subgroups 9, 10, and 11, group A testing in accordance with the sampling plan specified in MIL-STD-883 method 5005.
 - (2) If each compliance cannot be tested on an unprogrammed device, a sample shall be selected to satisfy programmability requirements prior to performing subgroups 9, 10, and 11. Twelve devices shall be submitted to programming (see 3.2.2.1) If more than two devices fail to program, the lot shall be rejected. At the manufacturer's option, the sample may be increased to 24 total devices with no more than 4 total device failures allowable. Ten devices from programmability sample shall be submitted to the requirements of group A, subgroups 9, 10, and 11. If no more than two total devices fail, the lot shall be rejected. At the manufacturer's option, the sample may be increased to 20 total devices with no more than 4 total device failures allowable.

4.3.2 Groups C and D inspections.

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Steady-state life test (method 1005 of MIL-STD-883) conditions:
 - (1) Test condition A, B, C, or D using the circuit submitted with the certificate of compliance (see 3.6 herein).
 - (2) $T_A = +125^{\circ}\text{C}$, minimum.
 - (3) Test duration: 1,000 hours, except as permitted by appendix B of MIL-M-38510.

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4.4 Programming procedures. The programming procedures shall be as specified by the device manufacturer.

5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-M-38510.

6. NOTES

6.1 Intended use. Microcircuits conforming to this drawing are intended for use when military specifications do not exist and qualified military devices that will perform the required function are not available for OEM application. When a military specification exists and the product covered by this drawing has been qualified for listing on QPL-38510, the device specified herein will be inactivated and will not be used for new design. The QPL-38510 product shall be the preferred item for all applications.

6.2 Replaceability. Microcircuits covered by this drawing will replace the same generic device covered by a contractor-prepared specification or drawing.

6.3 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated with the users of record for the individual documents. This coordination will be accomplished in accordance with MIL-STD-481 using DD Form 1693, Engineering Change Proposal (Short Form).

6.4 Record of users. Military and industrial users shall inform the Defense Electronics Supply Center when a system application requires configuration control and the applicable SMD. DESC will maintain a record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronic devices (FSC 5962) should contact DESC-ECS, telephone (513) 296-6022.

6.5 Comments. Comments on this drawing should be directed to DESC-ECS, Dayton, Ohio 45444, or telephone 513-296-5375.

6.6 Approved sources of supply. Approved sources of supply are listed in MIL-BUL-103. Additional sources will be added to MIL-BUL-103 as they become available. The vendors listed in MIL-BUL-103 have agreed to this drawing and a certificate of compliance (see 3.6 herein) has been submitted to and accepted by DESC-ECS. The approved sources of supply listed below are for information purposes only and are current only to the date of the last action of this document.

Military drawing part number	Vendor CAGE number	Vendor similar part number 1/	Replacement military specification part number
5962-8767101LX	50364 01295	PAL20L8BMJS/883B TIBPAL20L8-20MJTB	
5962-8767101KX	50364 01295	PAL20L8BMW/883B TIBPAL20L8-20MWB	
5962-87671013X	50364 01295	PAL20L8BML/883B TIBPAL20L8-20MFKB	
5962-8767102LX	50364 01295	PAL20R8BMJS/883B TIBPAL20R8-20MJTB	

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Military drawing part number	Vendor CAGE number	Vendor similar part number 1/	Replacement military specification part number
5962-8767102KX	50364 01295	PAL20R8BMW/883B TIBPAL20R8-20MWB	
5962-87671023X	50364 01295	PAL20R8BML/883B TIBPAL20R8-20MFKB	
5962-8767103LX	50364 01295	PAL20R6BMJS/883B TIBPAL20R6-20MJTB	
5962-8767103KX	50364 01295	PAL20R6BMW/883B TIBPAL20R6-20MWB	
5962-87671033X	50364 01295	PAL20R6BML/883B TIBPAL20R6-20MFDB	
5962-8767104LX	50364 01295	PAL20R4BMJS/883B TIBPAL20R4-20MJFB	
5962-8767104KX	50364 01295	PAL20R4BMW/883B TIBPAL20R4-20MWB	
5962-87671043X	50364 01295	PAL20R4BML/883B TIBPAL20R4-20MFDB	
5962-8767105LX	18324	PLUS20L8/BLA	
5962-8767105KX	18324	PLUS20L8/BKA	
5962-87671053X	18324	PLUS20L8/B3A	
5962-8767106LX	18324	PLUS20R8/BLA	
5962-8767106KX	18324	PLUS20R8/BKA	
5962-87671063X	18324	PLUS20R8/B3A	
5962-8767107LX	34335	PAL20L8-15	
5962-8767108LX	34335	PAL20R8-15	
5962-8767109LX	34335	PAL20R6-15	
5962-8767110LX	34335	PAL20R4-15	

1/ Caution. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.

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<u>Vendor CAGE number</u>	<u>Vendor name and address</u>	<u>Fusible-link</u>
50364	MMI/AMD 901 Thompson Place Sunnyvale, CA 94088	Titanium-tungsten
01295	Texas Instruments Inc. 13500 N. Central Expressway P.O. Box 655305 Dallas, TX 75265 Point of contact: I-20 at FM 1788 Midland, TX 79711-0448	Titanium-tungsten
18324	Signetics Company 4130 S. Market Court Sacramento CA 95834	Titanium-tungsten
34335	Advance Micro Devices 901 Thompson Place P.O. Box 3453 Sunnyvale, CA 94088	Titanium-tungsten

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