					141						RE	VISI	ONS	;												
LTR							[	DESC	RIPT	ION									DAT	E (YR-	MO-E	A)	Al	PRO	WED	
А	Tab	le I	, to	319,	cor	rect	: fo	otno	te.	Ed	ito	rial	cha	ange	s t	hroi	ugho	ut.	. 1990 AUG 22			2	Weekman			ગ
REV																<u> </u>	<u> </u>	Г	Ι	Γ	Г					П
SHEET								_				Н	Н			Н	┢	$\vdash$	┢	$\vdash$	┢	$\vdash$			$\vdash$	Н
REV		Α	Α	Α							$\vdash$		Н				t				<b>-</b>	┢				
SHEET		22	23	24																						
REV ST	ATUS		RE	٧		Α		Α					Α				Α							Α		
OF SH	EETS		SH	IEET		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>-</b>	PMIC N/A STANDARDIZED					بر	PARE GKE	og. VBY	<u>A</u>	<u> </u>	Po	<del>-</del>				DEI	ENS			PONIC N, OH				ENTE	R	
D	MILITARY DRAWING				APPROVED BY					G	ENEF	RATO	CUIT R/MI IC S	CRO	CYCL	TAL E LI	, BI ENGT	BIPOLAR CLOCK IGTH CONTROLLER,								
THIS DE FOR USE AND DEPAR	RAWING BY ALI AGENG RTMENT	L DEI	PART OF TI	MENT HE	rs	DRAWING APPROVAL CATE  8 APRIL 1988  REVISION LEVEL					SIZE			372				59	962-88598							
AMSC						ME	13101	- LE	7 F.L.		A					SHE	ET									1

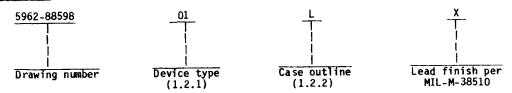
 $\bullet$  U.S. Government printing office: 1987 — 748-129/60911  $5962\!-\!E1744$ 

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  $1.\overline{2.1}$  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:

Device type	Generic number	Circuit function	Maximum operating frequency
01	2925	Clock generator	31 MHz
02	2925 <b>A</b>	Clock generator	50 MHz

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

> Case outline Outline letter D=9 (24-lead, 1.280" x .310" x .200"), dual-in-line package C=4 (28-terminal, .460" x .460" x .100"), chip carrier package 3

1.3 Absolute maximum ratings.

```
Supply voltage range - - - - - - - - - - - - - -
                                            -0.5 V dc to +7.0 V dc
                                           -0.5 V dc to +5.5 V dc
-65°C to +150°C
Maximum power dissipation (P_D) 1/-----
                                            660 mW
Lead temperature (soldering, 10 seconds) - - - -
                                            +300°C
Thermal resistance, junction-to-case (0,0):
(See MIL-M-38510, appendix C)
                                            +175°C
DC voltage applied to outputs for high
                                            -0.5 V dc to +V_{CC} maximum
 output state - - - - - - - - - - - - - - - -
DC output current into outputs - - - - - - - -
                                            30 mA
DC input current - - - - - - - - - - - - - - - -
                                            -30 mA to +5.0 mA
```

1.4 Recommended operating conditions.

+4.5 V dc to +5.5 V dc +2.0 V dc Minimum high level input voltage ( $V_{IH}$ ) - - - - - +2.0 V dc Maximum low level input voltage ( $V_{IL}$ ) - - - - - - +0.7 V dc 

1/ Must withstand the added PD due to short circuit test; e.g., IOS.

STANDARDIZED MILITARY DRAWING	SIZE A			5962-88598	
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		REVISION LEVEL	-	SHEET	2

DESC FORM 193A **SEP 87** 

★ U. S. GOVERNMENT PRINTING OFFICE: 1989--749-033

#### 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 Standardization 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 Function tables. The function tables shall be as specified on figure 2.
  - 3.2.3 Logic diagram. The logic diagram shall be as specified on figure 3.
  - 3.2.4 Case outlines. The case outlines shall be in accordance with 1.2.2 herein.
- 3.3 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in table I and shall 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 tests 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).

STANDARDIZED MILITARY DRAWING	SIZE A			5962-88598	
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		REVISION L	EVEL A	SHEET	3

DESC FORM 193A SEP 87

Test	  Symbol	   -55°C	Conditions $\leq T_C \leq +1$	Conditions $-55^{\circ}\text{C} < \text{T}_{\text{C}} < +125^{\circ}\text{C}$ 4.5 V $<$ V $_{\text{CC}} <$ 5.5 V ess otherwise specified			Limits		Unit
	1	unless ot	herwise s	pecified	   		Min	Max	!   
Output high voltage	V <sub>OH</sub>	V <sub>CC</sub> = Min  V <sub>IN</sub> = V <sub>IH</sub>  or V <sub>IL</sub>	I <sub>OH</sub> = -1	.O mA	1,2,3	A11	2.5		V   
Input low voltage	VOL	  V <sub>CC</sub> = Min  V <sub>IN</sub> = V <sub>IH</sub>  or V <sub>IL</sub>		I <sub>OL</sub> = 4.0 mA				0.4	V
	   	lor V <sub>IL</sub>   	WAITACK C <sub>1</sub> , C <sub>2</sub>	  I <sub>OL =</sub> 8.0 mA 	! ! !	! !		0.45	
	   	 	C3, C4	I OL = 12 mA	   	 	- T	0.5	   
		 	F <sub>0</sub>	I <sub>OL</sub> = 16 mA	<b>!</b>   <del>!</del>			0.5	! !
Input high level $\frac{1}{2}$	VIH	   Guaranteed   voltage for	Guaranteed input logical HIGH voltage for all inputs				2.0		V
Input low level <u>1</u> /	I I I I I	   Guaranteed   voltage for	 	 		0.7	V   		
Input clamp voltage <u>1</u> /	V <sub>IC</sub>	V <sub>CC</sub> = Min.,	!   	 		-1.5	V		
Input low current	IIIL	V <sub>CC</sub> = Max    V <sub>IN</sub> = 0.4 V	Max   READY, INIT, L1, L2, L3			 		-0.4	l mA
	]   	!   	WAITREQ,		 	   		-0.8	   
	   	 	SSNO, SSNC, RUN, HALT			<u> </u> 		-1.0	 
	<u> </u>	 	С	x	 	 		-1.2	-    
		   	Firs	t/LAST	 	   		-1.5	† †
ee footnotes at e	nd of t	able.							
STAND	ARDIZ	ED	SIZ	1			5962-8		

⇒ U. S. GOVERNMENT PRINTING OFFICE: 1989 -749-033

Test	Symbol	-55°C	Conditions <u>&lt; T<sub>C</sub> &lt; +125</u> °C	   Group A  subgroups	Device type	Limits		Unit
	   	4.5 V   unless of	$\frac{1}{4}$ $V_{CC}^{-4}$ 5.5 V therwise specified	]   		Min	   Max 	
Input high current	IIIH	V <sub>CC</sub> = Max   V <sub>IN</sub> = 2.7	READY, INIT, L1, L2, L3	1,2,3	A11		20	μА
		! !	WAITREQ	]   -1			50	
	 		SSNO, SSNC, RUN, HALT	 			-500	
			c <sub>X</sub>				70	   
	İ		First/LAST	<u>.</u> 1			  -750	<u>.</u>
	   		<b>x</b> <sub>1</sub>				500	   
Input high current	III	V <sub>CC</sub> = Max	READY, INIT, L1, L2, L3				100	     μ <b>A</b>
	! ! !	 	WAITREQ, CX	† 			1.0	mA
	1	 	SSNO,SSNC, RUN, HALT	· [	j ! j		100	μA
	 	! 	First/LAST	1   	[		1.0	mΑ
	 	V <sub>CC</sub> = Max	x <sub>1</sub>	- 1 1			1.0	   mA 
Output short circuit current	1 <sub>0S</sub>	V <sub>CC</sub> = Max		1,2,3	A11   	-30	   -85   	mA
Power supply current <u>3</u> /	Icc	V <sub>CC</sub> = Max		 			   120 	mA
Functional test		See 4.3.1c		7,8	 		 	   
ee footnotes at en	d of ta	ole.			· · · · · · · · · · · · · · · · · · ·			
STANDA MILITARY			SIZE A			5962-8	9500	

 $\dot{\mathbf{x}}$  U. S. GOVERNMENT PRINTING OFFICE: 1989—749-033

Test	Symbol	-55°C < T	itions C < +125°C	Group A subgroups		Liı	nits	Unit  -
; !		4.5 V < V unless other	CC < 5.5 V wise specified			Min	Max	
frequency (TTL input)	f <sub>MAX1</sub>	C <sub>L</sub> = 15 pF R <sub>L</sub> = 280Ω		9,10,11	01	31	1	MHz
4/ 5/		See figure 4			02	55		MHz
ofrequency (crystal input)	fMAX2				01	31	] 	MHZ
4/ 5/				1	02	45		MHZ
G ( +) to C <sub>1</sub> , C <sub>2</sub> , C <sub>3</sub> , C <sub>4</sub> , or WAITACK (+ )	toffset 3	$C_L$ = 50 pF $R_L$ = 2.0 k $\Omega$ See figure 4		9,10,11	A11		8.5 8.5	ns
C <sub>2</sub> , C <sub>3</sub> , C <sub>4</sub> , or	<sup>‡</sup> offset				01		18	ns
C <sub>2</sub> , C <sub>3</sub> , C <sub>4</sub> , or	4				02		8.5	ns
C <sub>1</sub> ( + ) to C <sub>2</sub> ( + )	t <sub>SKEW</sub>				01	-2	2	ns
C2 ( † )	5			1	02	-5	5	ns
C <sub>1</sub> (+ ) to C <sub>3</sub> (+ )	tSKEW			İ	01	-2	2	ns
03 ( 1	6				02	-5	5	ns
C <sub>1</sub> († ) to C <sub>4</sub> ( + ) opposite transition	t <sub>SKEW</sub>			 	All	-11	!   11   !	ns
ee footnotes at e	nd of tal	ble.			•			
STANDARDIZED MILITARY DRAWING	SIZE							

Test	  Symbol	   Cond   -55°C < T	itions C < +125°C	   Group A    subgroups		Limits		Unit
	   	4.5 V ₹ V   Unless other 	CC ≤ 5.5 V wise specified			Min	Max	 
L <sub>1</sub> , L <sub>2</sub> , L <sub>3</sub> to C <sub>1</sub>	ts	C <sub>L</sub> = 50 pF   R <sub>L</sub> = 2.0 kΩ		9,10,11	01	7		ns
-( + -) - <u>6</u> /-	8	See figure 4		İ	02	15		ns
L <sub>1</sub> , L <sub>2</sub> , L <sub>3</sub> to C <sub>1</sub>	t <sub>H</sub>	   		1	01	11		ns
· · · · · · · · · · · · · · · · · · ·	9	;   			02	0		l ns
C <sub>X</sub> to F <sub>0</sub> ( † )	ts	 			01	25		ns
9/ 1/	10	;   			02	15		ns
C <sub>X</sub> to F <sub>0</sub> († ) 6/ 7/	t <sub>H</sub>   11				A11     A11	0		ns
WAITREQ to	t <sub>S</sub>				01	25		ns
F <sub>0</sub> ( + ) 6/ 8/	12				02     02	15		ns
WAITREQ to F <sub>0</sub> ( + ) 	t <sub>H</sub>	] 			A11   	0		ns
READY to	t <sub>S</sub>				01	25		ns
F <sub>0</sub> ( † ) <u>6</u> / <u>8</u> /	14	1   			02	15		ns
READY to F <sub>0</sub> ( + ) 6/8/	t <sub>H</sub>	 			A11	0		ns
RUN, HALT ( +)	ts	1			01	25		ns
to F <sub>0</sub> ( + ) 6/ <u>8</u> / <u>9</u> /	16	!   			02   	15		ns
SSNC, SSNO to	t <sub>H</sub>	 		 	01	25		ns
F <sub>0</sub> ( † ) 6/ <u>8</u> / <u>9</u> /	17	1			02	15		ns
see footnotes at e	end of ta	ble.						-
STANDARDIZED MILITARY DRAWING	SIZE A			5962-88	3598			
DEFENSE ELECT				REVISION LEVE	<u> </u>	SHE	ET	

 $\dot{\mathbf{x}}$  U. S. GOVERNMENT PRINTING OFFICE: 1989—749-033

Test	Symbol	Conditions -55°C < T <sub>C</sub> < +125°C	Group A		Lin	nits	Unit
	   	Conditions $-55^{\circ}\text{C} < \text{T}_{\text{C}} < +125^{\circ}\text{C}$ $4.5 \text{ V} < \text{VCC} < 5.5 \text{ V}$ unless otherwise specified	Min		Min	Max	 
FIRST/LAST to	ts	C <sub>L</sub> = 50 pF   R <sub>I</sub> = 2.0 kΩ	9,10,11	01	35		ns
F <sub>0</sub> (+ ) 6/ 10/	1 1 18	K[ = 2.0 K"   See figure 4	İ	02	20		ns
INIT ( +) to	ts			01	35		ns
F <sub>0</sub> ( † )   19   19	19 19		i 1	02	20		ns
INIT low pulse	tpWL		9,10,11	01	25		ns
width	20	   		02	12	l 	ns
INIT to WAITACK	եթ <u>L</u> H			01		27	ns
	1   <del> </del>		1	02		17	ns I
Propagation delay	tpLH	C <sub>L</sub> = 15 pF	9,10,11	01		26	ns
Propagation delay! $x_1$ to $x_2$ $\frac{11}{12}$	 	R_ = 280 kΩ   See figure 4 		02		16	ns
Propagation delay	t <sub>PHL</sub>			01		23	ns
X <sub>1</sub> to F <sub>0</sub> 11/ 12/				02		13	ns

Does not apply to  $X_1$  and  $X_2$ . Not more than one output should be shorted at a time. Duration of the short circuit test should not exceed 1 second.

In the frequency of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section in the section of the section in the section of the section in the section of the section in the section of the section in the section of the section in the section of the section of the section in the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of

These setup and hold times apply to the Fo low-to-high transition of the period in

which C<sub>X</sub> goes low. These inputs are synchronized internally. Failure to meet  $t_S$  may cause a  $1/F_0$  delay but will not cause incorrect operation. These inputs are "debounced" by an internal R-S flip-flop and are intended to be connected to

manual break-before-make switches.

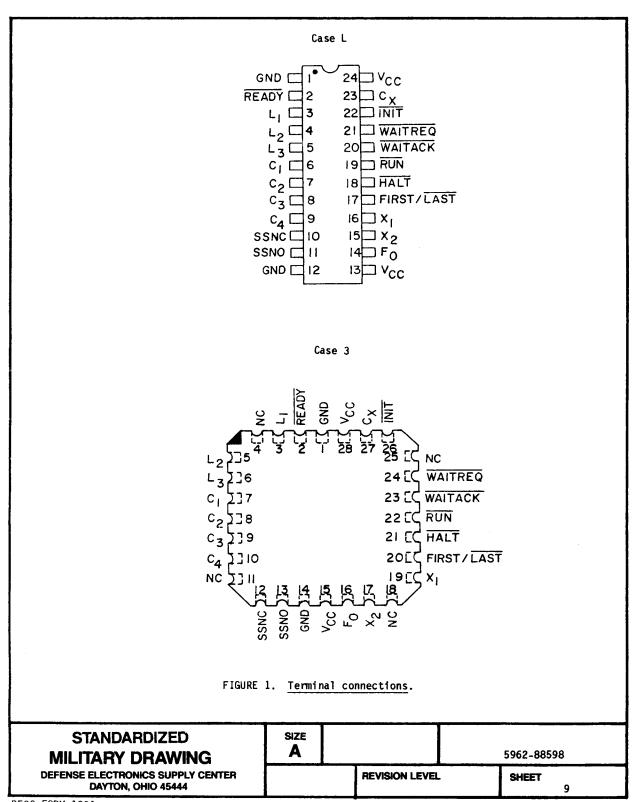
FIRST/LAST normally wired high or low.
Reference point of T offset has been moved forward which has increased T offsets.

 $\overline{12}$ / Test at 50 pF system load correlated to 15 pF.

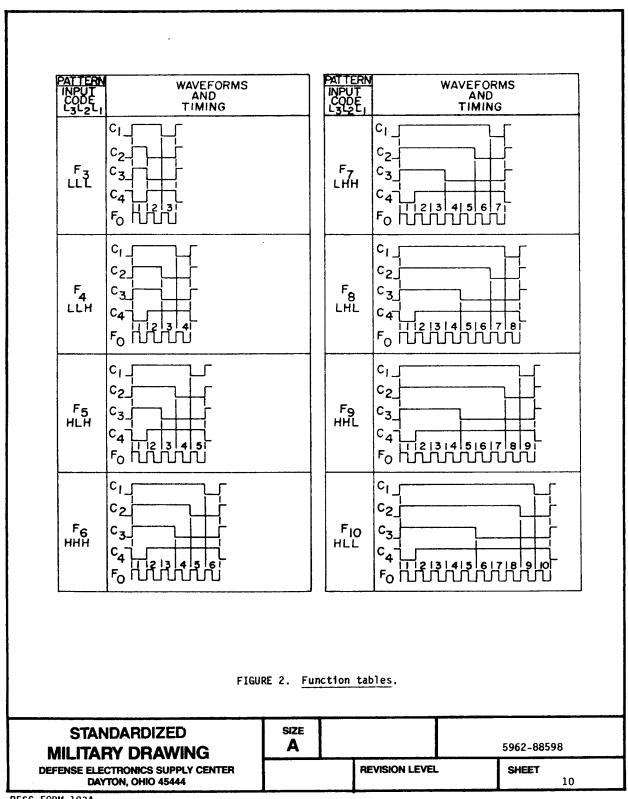
STANDARDIZED MILITARY DRAWING	SIZE A		59	962-88598	
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		REVISION LEVEL		SHEET	8

DESC FORM 193A SEP 87

± U. S. GOVERNMENT PRINTING OFFICE: 1989-749-033



せ U. S. GOVERNMENT PRINTING OFFICE: 1989—749-033



★ U. S. GOVERNMENT PRINTING OFFICE: 1989-749-033

# Functional descriptions

Pin number (see note)	   Name	I/0	Description
6, 7, 8, 9	C <sub>1</sub> -C <sub>4</sub>	0	System clock outputs. These outputs are all active during every system clock cycle. Their timing is determined by clock cycle length controls, $L_1$ , $L_2$ , and $L_3$ .
3, 4, 5	L <sub>1</sub> -L <sub>3</sub>	I         	Clock cycle length control inputs. These inputs receive the microcode bits that select the microcycle lengths. They form a control word which selects one of the eight microcycle waveform patterns F <sub>3</sub> through F <sub>10</sub> .
14	F <sub>0</sub>	0	Buffered oscillator output. F <sub>0</sub> internally generates all of the timing edges for outputs $C_1$ , $C_2$ , $C_3$ , $C_4$ and WAITACK. F <sub>0</sub> rises just prior to all of the $C_1$ , $C_2$ , $C_3$ , $C_4$ transitions.
18,19	HALT, RUN	í     1	Debounce inputs. These inouts determine whether the output clocks run or not. A LOW input on $\overline{HALT}$ ( $\overline{RUN}$ = HIGH) will stop all clock outputs.
17	FIRST/LAST  	I	HALT time control input. A HIGH input in conjunction with a HALT command will cause a halt to occur when $C_4$ = LOW and $C_1$ = $C_2$ = $C_3$ = HIGH (see clock waveforms). A LOW input causes a HALT to occur when $C_1$ = $C_2$ = $C_3$ = LOW and $C_4$ = HIGH.
10,11	SSNO,SSNC	I	Single-step control inputs. These debounced inputs allow system clock cycle single stepping while HALT is activated LOW.
21	WAITREQ	I I	WAIT REQUEST. When LOW this input will cause the outputs to halt during the next oscillator cycle after the $C_\chi$ input goes LOW.
23	C <sub>X</sub>	I	Wait cycle control input. The clock outputs respond to a wait request one oscillator clock cycle after C $\chi$ goes LOW. C $\chi$ is normally tied to any one of C1, C2, C3 or C4.

FIGURE 2. Function tables - Continued.

STANDARDIZED MILITARY DRAWING	SIZE A		!	5962-88598	
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		REVISION LEVEL	•	SHEET 1	.1

DESC FORM 193A SEP 87

 $\pm$  U. S. GOVERNMENT PRINTING OFFICE: 1988—549-904

## Functional descriptions

Pin number (see note)	Name	1/0	Description
20	WAITACK	0	WAIT ACKNOWLEDGE. When LOW, this output indicates that all clock outputs are in the "WAIT" state.
2	READY	I	READY. The READY active LOW input is used to continue normal clock output patterns after a wait stage.
22	INIT	I I	INITIALIZE. This input is intended for use during power-up initialization of the system. When LOW all clock outputs free run regardless of the state of the Halt, Single Step, Wait, Request, an Ready inputs.
15,16	X <sub>1</sub> , X <sub>2</sub>	1/0	External crystal connections. $X_1$ can also be driven by a TTL frequency source. $X_2$ is a output for the crystal oscillator. It should be left floating if $X_1$ is driven directly.

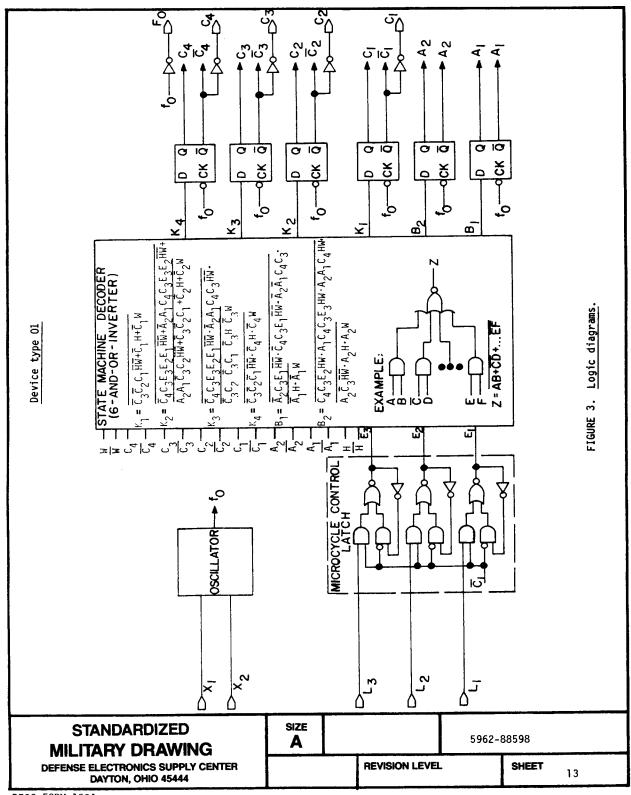
NOTE: Pin numbers apply to case outline L only.

FIGURE 2. Function tables - Continued.

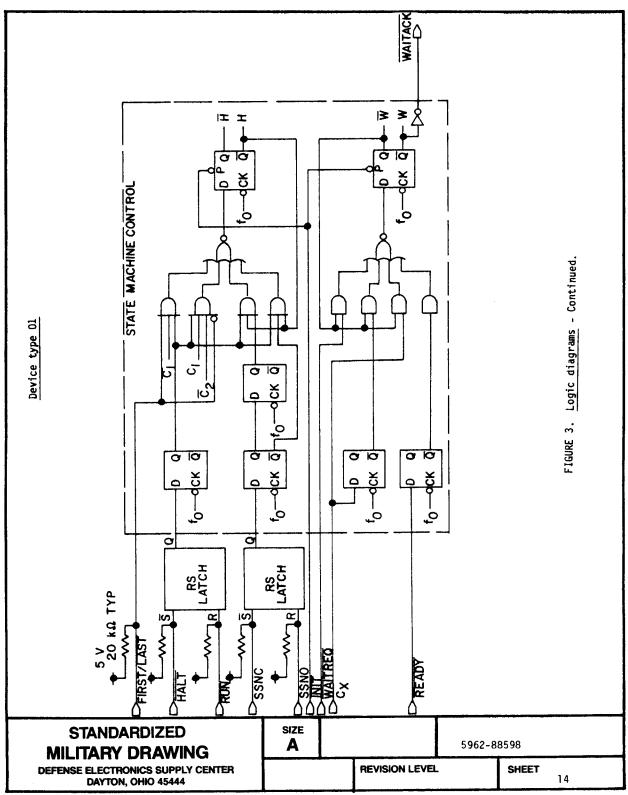
STANDARDIZED
MILITARY DRAWING
DEFENSE ELECTRONICS SUPPLY CENTER
DAYTON, OHIO 45444
SIZE
A
5962-88598
REVISION LEVEL
SHEET
A
12

DESC FORM 193A SEP 87

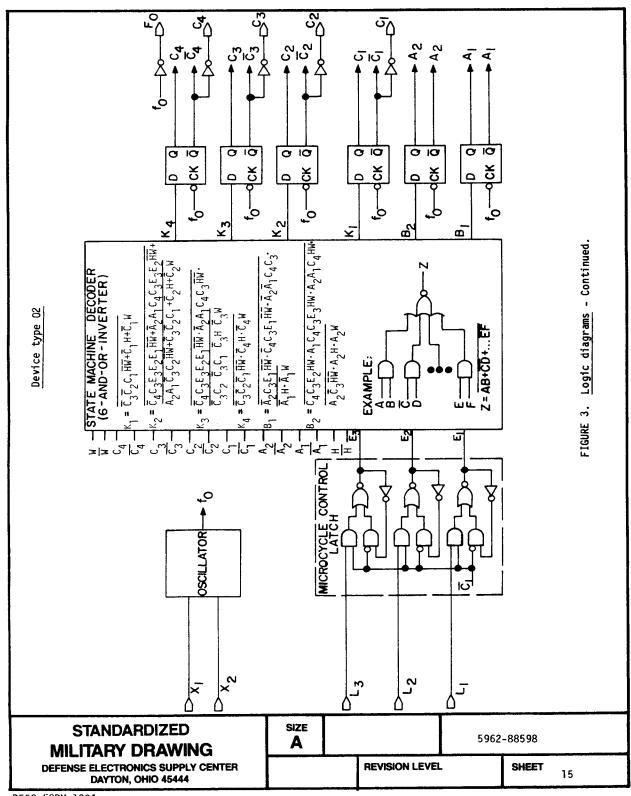
± U. S. GOVERNMENT PRINTING OFFICE: 1989—749-033



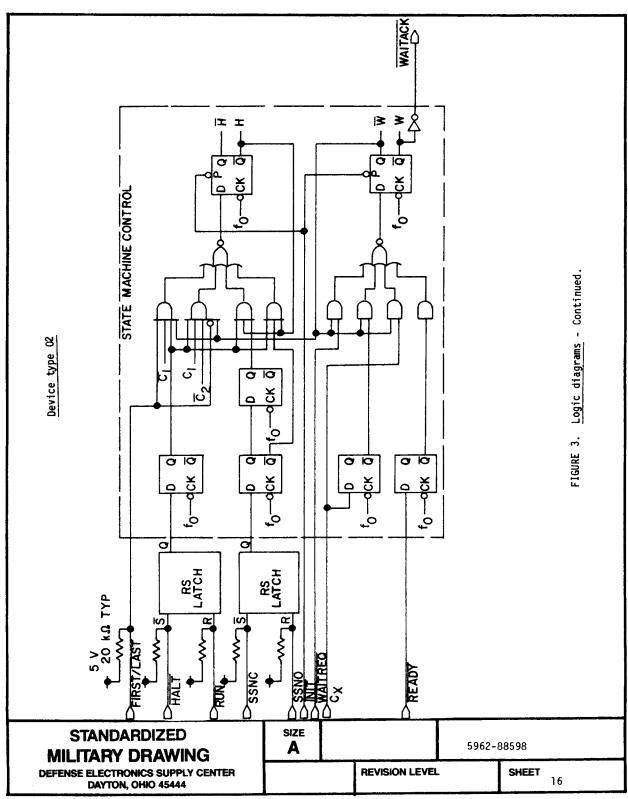
☆U.S. GOVERNMENT PRINTING OFFICE: 1987 - 748-129-66913



 $\dot{\Re}$  U.S. GOVERNMENT PRINTING OFFICE: 1987 - 748-129-60913

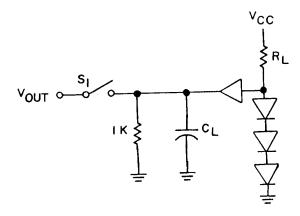


 $\dot{\mathfrak{D}}$  U.S. GOVERNMENT PRINTING OFFICE: 1987 - 748-129-60913



\$ U.S. GOVERNMENT PRINTING OFFICE: 1987 - 748-129-60913

# Switching test circuits



## NOTES:

- C<sub>l</sub> and R<sub>l</sub> values for various outputs indicated on the electrical performance tables.
   C<sub>l</sub> includes scope probe, wiring, and stray capacitances without a device in the test fixture.

3. Programmable loads are used for automatic testing.

## Setup and hold times

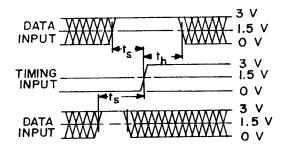


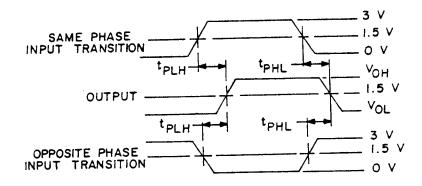
FIGURE 4. Switching waveforms and test circuit.

SIZE **STANDARDIZED** A 5962-88598 **MILITARY DRAWING** DEFENSE ELECTRONICS SUPPLY CENTER **REVISION LEVEL** SHEET DAYTON, OHIO 45444 17

DESC FORM 193A SEP 87

# U. S. GOVERNMENT PRINTING OFFICE: 1988-549-904

# Propagation delay



## Pusle width

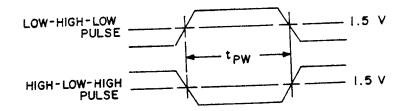


FIGURE 4. Switching waveforms and test circuit - Continued.

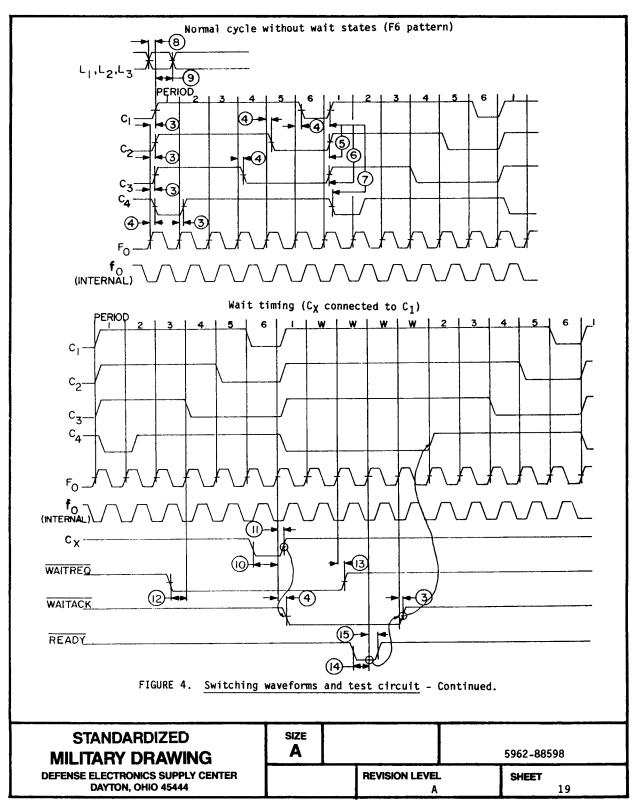
STANDARDIZED
MILITARY DRAWING
DEFENSE ELECTRONICS SUPPLY CENTER
DAYTON, OHIO 45444

SIZE
A
5962-88598

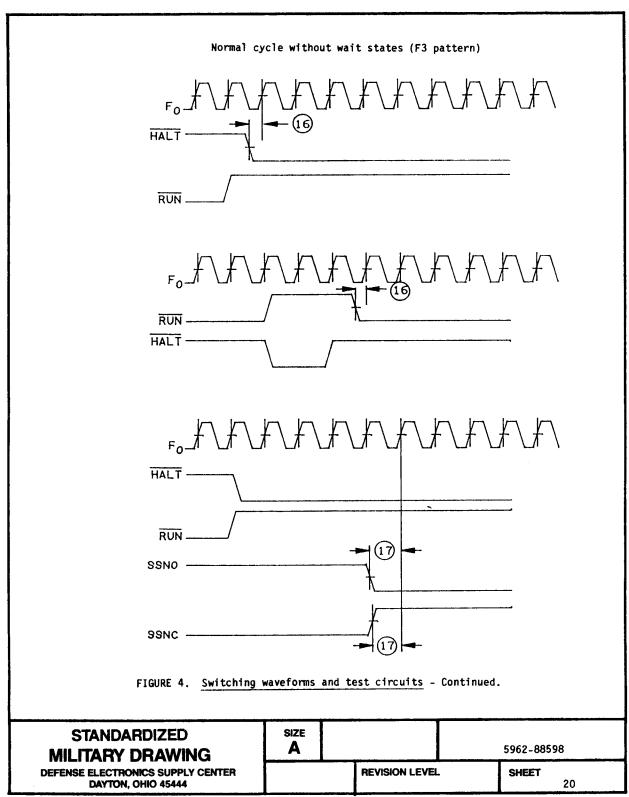
REVISION LEVEL
SHEET
18

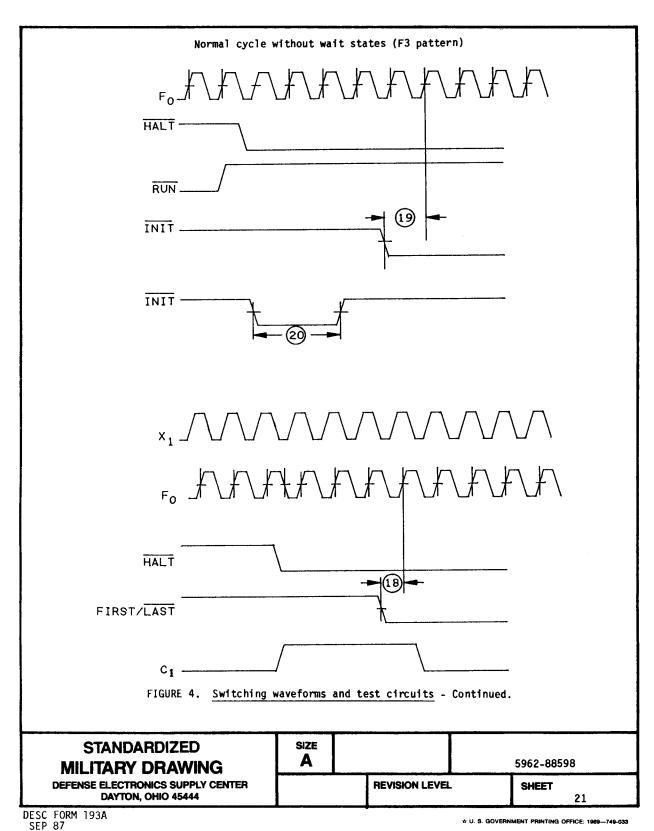
DESC FORM 193A SEP 87

☆ U. S. GOVERNMENT PRINTING OFFICE: 1969-749-033



# U. S. GOVERNMENT PRINTING OFFICE: 1989-749-033





- 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 6.6. The certificate of compliance submitted to DESC-ECC 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.
- 3.8 Notification of change. Notification of change to DESC-ECC shall be required in accordance with ML-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.
  - 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).
- 4.2 <u>Screening</u>. 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, C, or D using the circuit submitted with the certificate of compliance (see 3.6 herein).
    - (2)  $T_A = +125^{\circ}C$ , 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. Subgroups 7 and 8 tests sufficient to verify the function table.
  - 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 conditions, method 1005 of MIL-STD-883.
      - Test condition A, C, or D using the circuit submitted with the certificate of compliance (see 3.6 herein).
      - (2)  $T_A = +125^{\circ}C$ , minimum.
      - (3) Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

STANDARDIZED MILITARY DRAWING	SIZE <b>A</b>		5962-88598
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444		REVISION LEVEL A	SHEET 22

SEP 87

## TABLE II. Electrical test requirements.

MIL-STD-883 test requirements 	Subgroups   (per method)     5005, table I)
   Interim electrical parameters   (method 5004)	
   Final electrical test parameters   (method 5004)	1*,2,3,7,8, 9,10,11
   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, 9,10,11

<sup>\*</sup> PDA applies to subgroup 1.

#### 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 Defense Electronics Supply Center when a system application requires configuration control and the applicable SMD. DESC will maintain record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronics devices (FSC 5962) should contact DESC-ECC, telephone (513) 296-6022.
- 6.5 Comments. Comments on this drawing should be directed to DESC-ECC, Dayton, Ohio 45444, or telephone (513) 296-5375.

STANDARDIZED MILITARY DRAWING	SIZE A 5962-88598					
DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OHIO 45444			REVISION LEVEL A	•	SHEET 23	

DESC FORM 193A SEP 87

# U. S. GOVERNMENT PRINTING OFFICE: 1989-749-033

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

Military drawing part number	Vendor     CAGE     number	Vendor similar part number <u>1</u> /
5962-8859801LX	34335	AM2925/BLA
5962-88598013X	34335	AM2925/B3A
5962-8859802LX	34335	AM2925A/BLA
5962-88598023X	34335	AM2925A/B3A

 $\frac{1}{acquisition.} \begin{tabular}{ll} Do not use this number for item \\ \hline acquisition. Items acquired to this number may not \\ satisfy the performance requirements of this drawing. \\ \end{tabular}$ 

Vendor CAGE number

34335

Vendor name and address

Advanced Micro Devices, Incorporated 901 Thompson Place P.O. Box 3453 Sunnyvale, CA 94088

STANDARDIZED
MILITARY DRAWING
DEFENSE ELECTRONICS SUPPLY CENTER

DAYTON, OHIO 45444

DESC FORM 193A SEP 87

& U. S. GOVERNMENT PRINTING OFFICE: 1989-749-033

JAN 07 1891

019368 \_\_\_\_\_