INCH-POUND MIL-M-38510/339E 22 March 2011 SUPERSEDING MIL-M-38510/339D 18 February 2004

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, BIPOLAR, ADVANCED SCHOTTKY TTL, DATA SELECTORS/MULTIPLEXERS WITH THREE-STATE OUTPUTS, MONOLITHIC SILICON

Reactivated after 18 February 2004 and may be used for either new or existing design acquisition.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product herein shall consist of this specification sheet and MIL-PRF 38535

1. SCOPE

1.1 <u>Scope.</u> This specification covers the detail requirements for monolithic silicon, advanced Schottky TTL, data selectors and multiplexers (three-state) microcircuits. Two product assurance classes and a choice of case outlines and lead finishes are provided for each type and are reflected in the complete part number. For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.3).

1.2 Part or Identifying Number (PIN). The PIN is in accordance with MIL-PRF-38535, and as specified herein.

1.2.1 <u>Device types.</u> The device types are as follows:

Device type	<u>Circuit</u>
01	8 - input, data selector/multiplexer
02	Dual, 4 - input, data selector/multiplexer
03	Quad, 2 - input, data selector/multiplexer
04	Quad, 2 - input, data selector/multiplexer with inverted output
05	8 - input, data selector/multiplexer with 3 - state outputs
06	Quad, 2 - input, data selector/multiplexer with 3 - state outputs
07	Quad, 2 - input, data selector/multiplexer with 3 - state inverted output
08	Dual, 4 - input, data selector/multiplexer with 3 - state outputs
09	Dual, 4 - input, data selector/multiplexer with inverted outputs
10	Dual, 4 - input, data selector/multiplexer with 3 - state inverted outputs

1.2.2 <u>Device class</u>. The device class is the product assurance level as defined in MIL-PRF-38535.

1.2.3 Case outlines. The case outlines are as designated in MIL-STD-1835 and as follows:

Outline letter	Descriptive designator	<u>Terminals</u>	Package style
E	GDIP1-T16 or CDIP2-T16	16	Dual-in-line
F	GDFP2-F16 or CDFP3-F16	16	Flat pack
2	CQCC1-N20	20	Square leadless chip carrier

Comments, suggestions, or questions on this document should be addressed to: DLA Land and Maritime, ATTN: DLA Land and Maritime- VAS, P.O. Box 3990, Columbus, OH 43218-3990, or emailed to <u>bipolar@dscc.dla.mil</u>. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <u>https://assist.daps.dla.mil</u>.

1.3 Absolute maximum ratings.

Supply voltage range Input voltage range Storage temperature range Maximum power dissipation, per device (P _D) 1/	1.2 V dc at -18 mA to +7.0 V dc
Device type 01	. 116 mW
Device type 02	
Device type 03	
Device type 04	
Device type 05	. 132 mW
Device type 06	. 127 mW
Device type 07	. 127 mW
Device type 08	. 121 mW
Device type 09	. 110 mW
Device type 10	. 127 mW
Lead temperature (soldering, 10 seconds)	. +300°C
Thermal resistance, junction to case (θ_{JC}):	
Cases E, F, and 2	. (See MIL-STD-1835)
Junction temperature (T _J) <u>2</u> /	. 175°C

1.4 Recommended operating conditions.

Supply voltage (V _{CC})	4.5 V minimum to 5.5 V maximum
Minimum high level input voltage (VIH)	
Maximum low level input voltage (VIL)	
Case operating temperature range (T _c)	-55° to +125°C

2. APPLICABLE DOCUMENTS

2.1 <u>General.</u> The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 <u>Specifications and Standards</u>. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-38535 - Integrated Circuits (Microcircuits) Manufacturing, General Specification for.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883	-	Tes	t Met	thod	Star	ndard fo	r Mio	croele	ctronics.	

MIL-STD-1835 - Interface Standard Electronic Component Case Outlines

(Copies of these documents are available online at <u>https://assist.daps.dla.mil/quicksearch/</u> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

<u>1</u>/ Must withstand the added P_D due to short-circuit test (e.g., I_{OS}).

^{2/} Maximum junction temperature shall not be exceeded except in accordance with allowable short duration burn-in screening condition in accordance with MIL-PRF-38535.

2.3 <u>Order of precedence.</u> In the event of a conflict between the text of this specification and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 <u>Qualification</u>. Microcircuits furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.3 and 6.4).

3.2 <u>Item requirements</u>. The individual item requirements shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.

3.3 <u>Design, construction, and physical dimensions.</u> The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.

3.3.1 <u>Terminal connections and pin assignments.</u> The terminal connections and pin assignments shall be as specified on figure 1.

3.3.2 Logic diagrams. The logic diagrams shall be as specified on figure 2.

3.3.3 <u>Truth tables</u>. The truth tables shall be as specified on figure 3.

3.3.4 <u>Schematic circuits</u>. The schematic circuits shall be maintained by the manufacturer and made available to the qualifying activity and the preparing activity upon request.

3.3.5 Case outlines. The case outlines shall be as specified in 1.2.3.

3.4 Lead material and finish. The lead material and finish shall be in accordance with MIL-PRF-38535 (see 6.6).

3.5 <u>Electrical performance characteristics</u>. The electrical performance characteristics are as specified in table I, and apply over the full recommended case operating temperature range, unless otherwise specified.

3.6 <u>Electrical test requirements.</u> The electrical test requirements for each device class shall be the subgroups specified in table II. The electrical tests for each subgroup are described in table III.

3.7 Marking. Marking shall be in accordance with MIL-PRF-38535.

3.8 <u>Microcircuit group assignment.</u> The devices covered by this specification shall be in microcircuit group number 11 (see MIL-PRF-38535, appendix A).

4. VERIFICATION

4.1 <u>Sampling and inspection</u>. Sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not effect the form, fit, or function as described herein.

4.2 <u>Screening</u>. Screening shall be in accordance with MIL-PRF-38535 and shall be conducted on all devices prior to qualification and quality conformance inspection. The following additional criteria shall apply:

- a. The burn-in test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
- b. Interim and final electrical test parameters shall be as specified in table II, except interim electrical parameters test prior to burn-in is optional at the discretion of the manufacturer.
- c. Additional screening for space level product shall be as specified in MIL-PRF-38535.
- 4.3 <u>Qualification inspection</u>. Qualification inspection shall be in accordance with MIL-PRF-38535.

4.4 <u>Technology Conformance inspection (TCI)</u>. Technology conformance inspection shall be in accordance with MIL-PRF-38535 and herein for groups A, B, C, and D inspections (see 4.4.1 through 4.4.4).

4.4.1 <u>Group A inspection</u>. Group A inspection shall be in accordance with table III of MIL-PRF-38535 and as follows:

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, and 6 shall be omitted.
- 4.4.2 Group B inspection. Group B inspection shall be in accordance with table II of MIL-PRF-38535.

4.4.3 <u>Group C inspection</u>. Group C inspection shall be in accordance with table IV of MIL-PRF-38535 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. The steady-state life test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.

4.4.4 <u>Group D inspection</u>. Group D inspection shall be in accordance with table V of MIL-PRF-38535. End-point electrical parameters shall be as specified in table II herein.

4.5 <u>Methods of inspection</u>. Methods of inspection shall be specified as follows:

4.5.1 <u>Voltage and current.</u> All voltages given are referenced to the microcircuit ground terminal. Currents given are conventional and positive when flowing into the referenced terminal.

Test	Symbol	$Conditions \\ -55^{\circ}C \leq T_{C} \leq +125^{\circ}C$		Device	Lir	nits	Unit
				type	Min	Max	
High level output voltage	V _{он}	$V_{CC} = 4.5 V,$ $V_{IL} = 0.8 V,$	I _{OH} = -1.0 mA	01, 02, 03, 04, 09	2.5		V
		V _{IH} = 2.0 V	I _{OH} = -3.0 mA	05, 06, 07, 08, 10	2.4		V
Low level output voltage	V _{OL}	$V_{CC} = 4.5 \text{ V}, I_{OL} =$ $V_{IH} = 2.0 \text{ V}, V_{IL} =$		All		0.5	V
Input clamp voltage	Vic	$V_{CC} = 4.5 \text{ V}, \text{ I}_{IN} =$ T _C = +25°C		All		-1.2	V
High level input current	I _{IH1}	$V_{CC} = 5.5 \text{ V}, \text{ V}_{IH} =$	= 2.7 V	All		20	μA
	I _{IH2}	$V_{CC} = 5.5 \text{ V}, \text{ V}_{IH} =$	= 7.0 V	All		100	μA
Low level input current	IIL	$V_{CC} = 5.5 \text{ V}, \text{ V}_{IL} =$	= 0.5 V	All	03	60	mA
Short circuit output current <u>1</u> /	I _{OS}	$V_{CC} = 5.5 \text{ V}, \text{ V}_{OS}$	= 0 V	All	-60	-150	mA
Output drive	I _{OD}	$V_{CC} = 4.5 V,$		01, 04, 09	60		mA
				02, 03, 05, 06, 07, 08, 10	35		mA
Supply current	Icc	V_{CC} = 5.5 V, V_{OS}	= 0 V	01		21	mA
				02		20	mA
				03		23	mA
				04		15	mA
				05		22	mA
High level supply current	I _{CCH}	$V_{CC} = 5.5 V$		06		15	mA
				07		9.5	mA
				08		16	mA
				09		14	mA
				10		14	mA
Low level supply current	I _{CCL}	$V_{CC} = 5.5 V$		06		22	mA
				07		23	mA
				08		23	mA
				09		20	mA
				10		20	mA

TABLE I. Electrical performance characteristics.

 $\underline{1}$ / Not more than one output should be shorted at a time.

Test	Symbol	ctrical performance characteristic Conditions	Device	Lir	nits	Unit
		$-55^{\circ}C \le T_{C} \le +125^{\circ}C$	type	Min	Max	
Off state supply current	I _{CCZ}	V _{CC} = 5.5 V	05		24	mA
		Outputs disabled	06		23	mA
			07		17	mA
			08		23	mA
			10		23	mA
Off state output leakage	I _{OZH}	$V_{CC} = 5.5 \text{ V}, V_{ZH} = 2.7 \text{ V}$	05, 06, 07,		50	μA
cuurent			08, 10			
	I _{OZL}	$V_{CC} = 5.5 \text{ V}, V_{ZL} = 0.5 \text{ V}$			-50	μA
Propagation delay time,	t _{PLH1}	$V_{CC} = 5.5 V$	01	2.5	8.5	ns
low to high level, data to Z		(see figure 4)	02	2.5	9.0	ns
output			03	2.5	7.5	ns
			05	2.5	9.0	ns
			06	2.0	7.0	ns
			08	2.5	9.0	ns
Propagation delay time,	t _{PLH2}		01	2.5	7.5	ns
low to high level, data to \overline{Z}			04	2.5	8.5	ns
output			05	2.5	8.5	ns
			07	2.0	7.5	ns
			09	2.0	9.0	ns
			10	1.5	9.0	ns
Propagation delay time,	t _{PLH3}		01	4.5	13.5	ns
low to high level, select to Z			02	4.5	14.0	ns
output			03	4.0	12.0	ns
			05	3.5	14.0	ns
			06	3.5	11.5	ns
			08	3.5	15.0	ns
Propagation delay time,	t _{PLH4}		01	3.5	11.5	ns
low to high level, select to			04	3.0	10.5	ns
Z output			05	3.5	11.5	ns
			07	3.0	9.5	ns
			09	3.5	14.5	ns
			10	4.0	16.0	ns
Propagation delay time,	t _{PLH5}		01	4.0	12.0	ns
low to high level, enable			02	4.5	11.5	ns
to Z output			03	5.0	13.0	ns
Propagation delay time,	t _{PLH6}		01	3.0	7.5	ns
low to high level, enable to			04	2.5	8.0	ns
Z output			09	3.5	17.0	ns

TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions	Device	Lir	nits	Unit
		$\text{-55°C} \leq T_C \leq \text{+125°C}$	type	Min	Max	
Propagation delay time,	t _{PHL1}	V _{CC} = 5.5 V	01	3.5	9.0	ns
high to low level, data to Z		(see figure 4)	02	2.5	8.0	ns
output			03	1.5	7.5	ns
			05	3.5	9.0	ns
			06	1.5	7.0	ns
			08	2.5	8.0	ns
Propagation delay time,	t _{PHL2}		01	1.5	6.0	ns
high to low level, data to \overline{Z}			04	1.5	5.0	ns
output			05	1.0	6.0	ns
			07	1.0	6.0	ns
			09	1.5	7.5	ns
			10	1.5	7.5	ns
Propagation delay time,	t _{PHL3}		01	4.0	9.5	ns
high to low level, select to Z			02	3.5	11.0	ns
output			03	3.0	9.0	ns
			05	3.0	10.5	ns
			06	2.5	9.0	ns
			08	2.5	11.0	ns
Propagation delay time,	t _{PHL4}		01	3.0	8.0	ns
high to low level, select to			04	2.5	8.0	ns
Z output			05	3.2	8.0	ns
			07	2.5	9.0	ns
			09	3.5	15.0	ns
			10	4.0	14.0	ns
Propagation delay time,	t _{PHL5}		01	3.0	8.0	ns
high to low level, enable			02	2.5	9.0	ns
to Z output			03	2.5	7.5	ns
Propagation delay time,	t _{PHL6}		01	2.5	6.5	ns
high to low level, enable to			04	2.0	8.5	ns
Z output			09	3.0	13.0	ns
Propagation delay time,	t _{PLZ5}		05	1.0	5.5	ns
low level to off state, output			06	2.0	8.5	ns
enable to Z output			08	2.0	8.0	ns
Propagation delay time,	t _{PLZ6}		05	1.0	5.0	ns
low level to off state, output			07	2.0	8.5	ns
enable to \overline{Z} output			10	2.0	8.5	ns

TABLE I. <u>Electrical performance characteristics</u> - Continued.

Test	Symbol	Conditions	Device	Lir	nits	Unit
		$-55^{\circ}C \leq T_{C} \leq +125^{\circ}C$	type	Min	Max	
Propagation delay time,	t _{PHZ5}	$V_{CC} = 5.5 V$	05	2.0	5.5	ns
high level to off state, output		(see figure 4)	06	2.0	7.0	ns
enable to Z output			08	2.0	6.5	ns
Propagation delay time,	t _{PHZ6}		05	2.0	6.0	ns
high level to off state, output			07	1.5	7.0	ns
enable to \overline{Z} output			10	2.0	6.5	ns
Propagation delay time,	t _{PZL5}		05	2.5	9.0	ns
off state to low level output			06	2.5	9.0	ns
enable to Z output			08	2.5	10.0	ns
Propagation delay time,	t _{PZL6}		05	2.5	7.5	ns
off state to low level output			07	2.5	9.0	ns
enable to \overline{Z} output			10	3.0	15.5	ns
Propagation delay time,	t _{PZH5}		05	3.0	8.5	ns
off state to high level output			06	2.0	8.0	ns
enable to Z output			08	2.5	10.0	ns
Propagation delay time,	t _{PZH6}		05	2.0	7.0	ns
off state to high level output			07	2.0	8.0	ns
enable to \overline{Z} output			10	3.0	11.0	ns

TABLE I. <u>Electrical performance characteristics</u> - Continued.

TABLE II.	Electrical test requirements.	

	Subgroups	(see table III)
MIL-PRF-38535	Class S	Class B
test requirements	devices	devices
Interim electrical parameters	1	1
Final electrical test parameters	1*, 2, 3, 7, 9, 10, 11	1*, 2, 3, 7, 9
Group A test requirements	1, 2, 3, 7, 8, 9, 10, 11	1, 2, 3, 7, 8, 9, 10, 11
Group B electrical test parameters when using the method 5005 QCI option	1, 2, 3, 7, 8, 9, 10, 11	N/A
Group C end-point electrical parameters	1, 2, 3, 7, 8, 9, 10, 11	1, 2, 3
Group D end-point electrical parameters	1, 2, 3	1, 2, 3

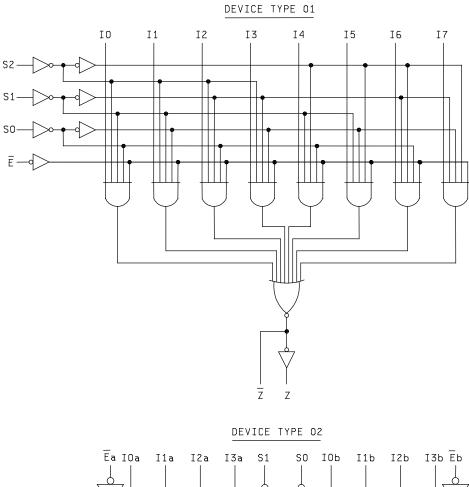
*PDA applies to subgroup 1.

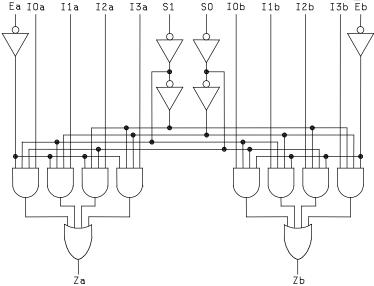
	Terminal assignments									
	Device t	ype 01	Device t	ype 02	Device type 03 Device t			/pe 04	Device ty	/pe 05
Terminal number	Cases E and F	Case 2	Cases E and F	Case 2	Cases E and F	Case 2	Cases E and F	Case 2	Cases E and F	Case 2
1	13	N/C	Ēa	N/C	S	N/C	S	N/C	13	N/C
2	12	13	S1	Ēa	l0a	S	l0a	S	12	13
3	l1	12	l3a	S1	l1a	l0a	l1a	l0a	l1	12
4	10	l1	l2a	l3a	Za	l1a	Za	l1a	10	11
5	Z	10	l1a	l2a	l0b	Za	l0b	Za	Z	10
6	z	N/C	l0a	N/C	l1b	N/C	l1b	N/C	z	N/C
7	Π	Z	Za	l1a	Zb	l0b	Ž b	l0b	QE	Z
8	GND	z	GND	l0a	GND	l1b	GND	l1b	GND	z
9	S2	Ē	Zb	Za	Zd	Zb	Z d	Zb	S2	QE
10	S1	GND	I0b	GND	l1d	GND	l1d	GND	S1	GND
11	S0	N/C	l1b	N/C	l0d	N/C	l0d	N/C	S0	N/C
12	17	S2	l2b	Zb	Zc	Zd	Ž c	Ž d	17	S2
13	16	S1	I3b	l0b	l1c	l1d	l1c	l1d	16	S1
14	15	S0	S0	l1b	l0c	l0d	I0c	l0d	15	S0
15	14	17	Ēb	l2b	Ē	Zc	Ē	- Z c	14	17
16	Vcc	N/C	Vcc	N/C	Vcc	N/C	Vcc	N/C	Vcc	N/C
17		16		I3b		l1c		l1c		16
18		15		S0		l0c		l0c		15
19		14		Ēb		Ē		Ē		14
20		Vcc		Vcc		Vcc		Vcc		Vcc

FIGURE 1. Terminal connections.

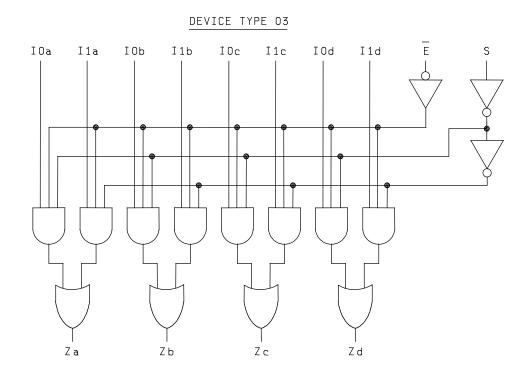
					Terminal as	signmen	ts			
	Device t	ype 06	Device t	type 07	Device ty	/pe 08	Device ty	/pe 09	Device ty	/pe 10
Terminal number	Cases	Case	Cases	Case	Cases	Case	Cases	Case	Cases	Case 2
number	E and F	2	E and F	2	E and F	2	E and F	2	E and F	2
1	S	N/C	S	N/C	OE a	N/C	Ēa	N/C	OE a	N/C
2	l0a	S	l0a	S	S1	OE a	S1	Ēa	S1	OE a
3	l1a	l0a	l1a	l0a	l3a	S1	l3a	S1	l3a	S1
4	Za	l1a	Za	l1a	l2a	l3a	l2a	l3a	l2a	l3a
5	l0b	Za	l0b	Za	l1a	l2a	l1a	l2a	l1a	l2a
6	l1b	N/C	l1b	N/C	l0a	N/C	l0a	N/C	l0a	N/C
7	Zb	l0b	Zb	l0b	Za	l1a	Za	l1a	Za	l1a
8	GND	l1b	GND	l1b	GND	l0a	GND	l0a	GND	l0a
9	Zd	Zb	Ž d	Zb	Zb	Za	Ž b	Za	Ž b	Za
10	l1d	GND	l1d	GND	l0b	GND	l0b	GND	l0b	GND
11	l0d	N/C	l0d	N/C	l1b	N/C	l1b	N/C	l1b	N/C
12	Zc	Zd	Zc	Zd	l2b	Zb	l2b	Zb	l2b	Zb
13	l1c	l1d	l1c	l1d	l3b	l0b	I3b	l0b	I3b	l0b
14	10c	l0d	10c	l0d	S0	l1b	S0	l1b	S0	l1b
15	OE	Zc	OE	Żc	OE b	l2b	Ēb	l2b	OE b	l2b
16	Vcc	N/C	Vcc	N/C	Vcc	N/C	Vcc	N/C	Vcc	N/C
17		l1c		l1c		I3b		I3b		I3b
18		l0c		l0c		S0		S0		S0
19		ŌĒ		ŌĒ		OE b		Ēb		OE b
20		V_{CC}		V_{CC}		V_{CC}		V_{CC}		V _{CC}

FIGURE 1. <u>Terminal connections</u> - Continued.









DEVICE TYPE 04

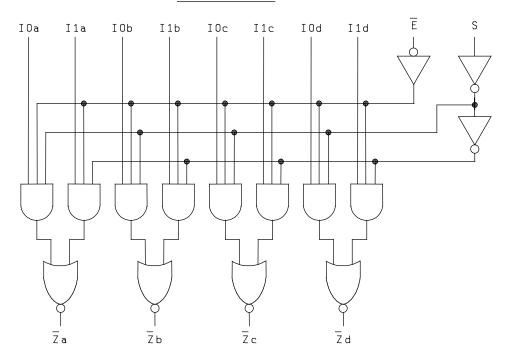
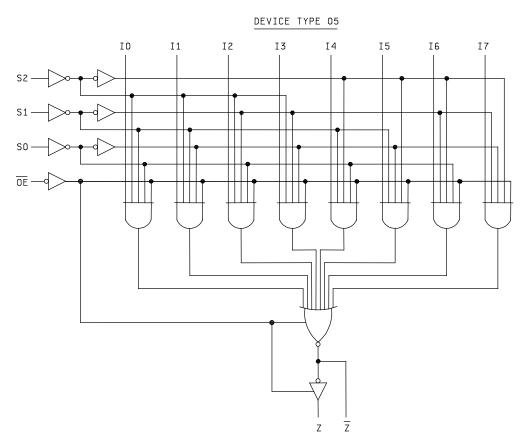


FIGURE 2. Logic diagrams - Continued.



DEVICE TYPE 06

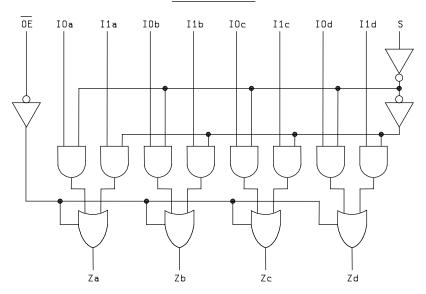
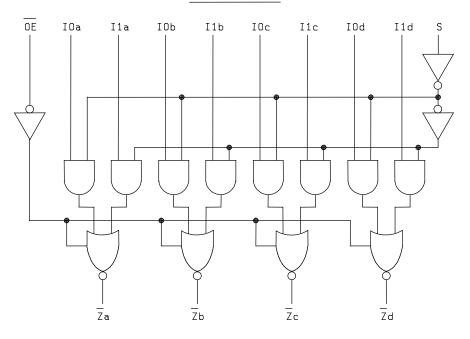


FIGURE 2. Logic diagrams - Continued.





DEVICE TYPE 08

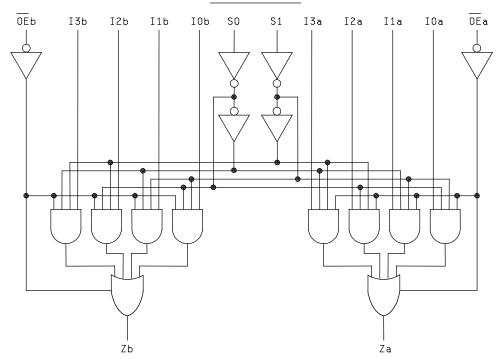
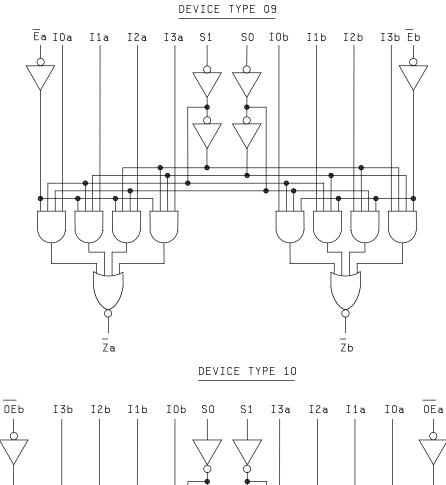


FIGURE 2. Logic diagrams - Continued.



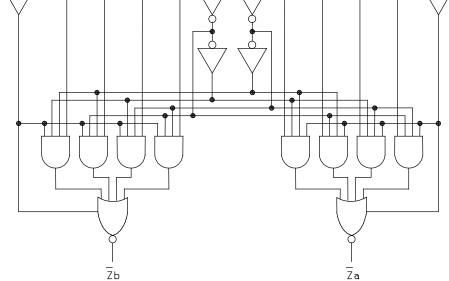


FIGURE 2. Logic diagrams - Continued.

Device type 01

	INP	OUT	PUTS		
Ē	S2	S1	S0	Ī	Z
Н	Х	Х	Х	Н	L
L	L	L	L	ĪO	10
L	L	L	Н	<u> </u>	11
L	L	Н	L	ī 2	12
L	L	Н	Н	<u> </u>	13
L	Н	L	L	<u> </u>	14
L	Н	L	Н	Ī 5	Ι5
L	Н	Н	L	Ī6	16
L	Н	Н	Н	7	١7

Device type 02

SELECT	INPUTS		INP	UTS (a o	r b)		OUTPUT
S0	S1	Ē	10	I 1	12	13	Z
Х	Х	Н	Х	Х	Х	Х	L
L	L	L	L	Х	Х	Х	L
L	L	L	Н	Х	Х	Х	Н
Н	L	L	Х	L	Х	Х	L
Н	L	L	Х	Н	Х	Х	Н
L	Н	L	Х	Х	L	Х	L
L	Н	L	Х	Х	Н	Х	Н
Н	Н	L	Х	Х	Х	L	L
Н	Н	L	Х	Х	Х	Н	Н

H = HIGH voltage level L = LOW voltage level X = Immaterial

FIGURE 3. Truth tables.

Device type 03

	INP	OUTPUT		
Ē	S	10	11	Z
Н	Х	Х	Х	L
L	н	Х	L	L
L	Н	Х	н	Н
L	L	L	Х	L
L	L	н	Х	Н

Device type 04

	INP	OUTPUT		
IE	S	10	11	Z
Н	Х	Х	Х	Н
L	L	L	Х	H
L	L	Н	Х	L
L	Н	Х	L	Н
L	Н	Х	Н	L

Device type 05

	INP	OUTF	PUTS		
OE	S2	S1	S0	ĪZ	Z
Н	Х	Х	Х	Z	Z
L	L	L	L	ĪO	10
L	L	L	Н	1	11
L	L	Н	L	ī 2	12
L	L	Н	Н	<u> </u>	13
L	Н	L	L	<u> </u>	14
L	Н	L	Н	Ī 5	15
L	Н	Н	L	<u> </u>	16
L	Н	Н	Н	_ 7	17

Device type 06

OUTPUT	SELECT	DATE		OUTPUTS
ENABLE	INPUT	INP	UTS	
ŌĒ	S	10	11	Z
Н	Х	Х	Х	(Z)
L	Н	Х	L	L
L	Н	Х	Н	Н
L	L	L	Х	L
L	L	Н	Х	Н

H = HIGH voltage levelL = LOW voltage levelX = Immaterial(Z) = High impedance

FIGURE 3. <u>Truth tables</u> - Continued.

Device type 07

OUTPUT	SELECT	DATE		OUTPUTS
ENABLE	INPUT	INP	UTS	
ŌE	S	10	11	z
Н	Х	Х	Х	Z
L	H	Х	L	Н
L	Н	Х	Н	L
L	L	L	Х	Н
L	L	Н	Х	L

Device type 08

SEL	-		DATA	INPUTS		OUTPUT ENABLE	OUTPUT
S0	S1	10	1	12	13	OE	Z
Х	Х	Х	Х	Х	Х	Н	(Z)
L	L	L	Х	Х	Х	L	L
L	L	Н	Х	Х	Х	L	Н
Н	L	Х	L	Х	Х	L	L
Н	L	Х	Н	Х	Х	L	Н
L	н	Х	Х	L	Х	L	L
L	Н	Х	Х	Н	Х	L	Н
Н	н	Х	Х	Х	L	L	L
Н	н	Х	Х	Х	Н	L	Н

H = HIGH voltage levelL = LOW voltage levelX = Immaterial(Z) = High impedance

FIGURE 3. <u>Truth tables</u> - Continued.

Device type 09

SELECT	INPUTS		IN	PUTS (a or	b)		OUTPUT
S0	S1	Ē	10	11	12	13	z
Х	Х	Н	Х	Х	Х	Х	Н
L	L	L	L	Х	Х	Х	Н
L	L	L	Н	Х	Х	Х	L
Н	L	L	Х	L	Х	Х	Н
Н	L	L	Х	Н	Х	Х	L
L	Н	L	Х	Х	L	Х	Н
L	Н	L	Х	Х	Н	Х	L
Н	Н	L	Х	Х	Х	L	Н
Н	Н	L	Х	Х	Х	Н	L

Device type 10

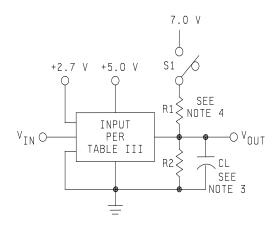
SELECT	INPUTS		DATA II	NPUTS		OUTPUT ENABLE	OUTPUT
S0	S1	10	1	12	13	OE	Z
Х	Х	Х	Х	Х	Х	Н	(Z)
L	L	L	Х	Х	Х	L	Н
L	L	Н	Х	Х	Х	L	L
Н	L	Х	L	Х	Х	L	Н
н	L	Х	Н	Х	Х	L	L
L	Н	Х	Х	L	Х	L	Н
L	Н	Х	Х	Н	Х	L	L
Н	Н	Х	Х	Х	L	L	Н
Н	Н	Х	Х	Х	Н	L	L

Address inputs S0 and S1 are common to both sections

H = HIGH voltage level L = LOW voltage level X = Immaterial

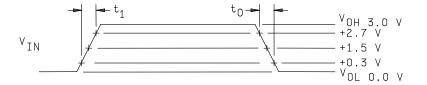
(Z) = High impedance

FIGURE 3. <u>Truth tables</u> - Continued.



Test Circuit

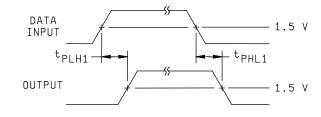
Test Type	S1
t _{PLH}	Open
t _{PHL}	Open
t _{PHZ}	Open
t _{PZH}	Open
t _{PLZ}	Closed
t _{PZL}	Closed

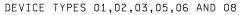


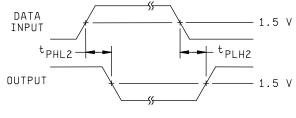
NOTES:

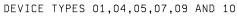
- 1. V_{IN} input pulse has the following characteristics: $t_1 = t_0 \le 2.5$ ns, PRR ≤ 1 MHz, $Z_{OUT} \approx 50\Omega$.
- 2. Inputs not under test are at ground.
- 3. $C_L = 50 \text{ pF} \pm 10\%$ including scope probe, wiring and stray capacitance without package in test fixture.
- 4. $R1 = R2 = 499\Omega \pm 5\%$.
- 5. Voltage measurements are to be made with respect to network ground terminal.

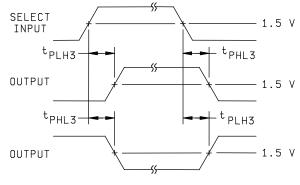
FIGURE 4. Switching time test circuit and waveform for all device types.











DEVICE TYPES 01,02,03,05,06 AND 08

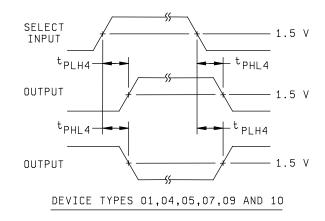


FIGURE 4. Switching time waveform - Continued.

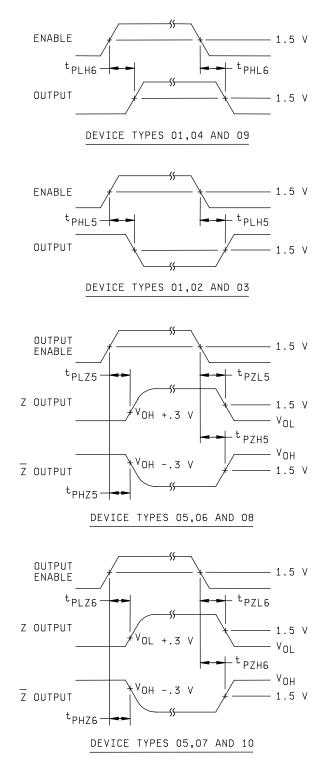


FIGURE 4. Switching time waveform - Continued.

													oe high ≥						
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	13	12	11	10	Z	z	Ē	GND	S2	S1	S0	17	16	15	14	V _{CC}
1	Vol	3007	1				2.0 V		20 mA	0.8 V	GND	0.8 V	0.8 V	0.8 V					4.5 V
Tc = 25°C			2			2.0 V					-		0.8 V	2.0 V					
10 = 25 0			3		2.0 V	2.0 V							2.0 V	0.8 V					
		"	4	2.0 V	2.0 V								2.0 V	2.0 V					
		"	5						"			2.0 V	0.8 V	0.8 V				2.0 V	
		"	6							-	-		0.8 V	2.0 V			2.0 V		
		"	7								-	"	2.0 V	0.8 V		2.0 V			
		"	8									"	2.0 V	2.0 V	2.0 V				
	V	" 3006	9				0.8 V	20 mA	-1.0 mA	" 2.0 V		0.8 V	0.8 V	0.8 V					
	V _{OH}	3006	10																
		"	11				0.8 V			0.8 V		0.8 V	0.8 V	0.8 V					
		"	12			0.8 V						"	0.8 V	2.0 V					
			13	0.8 V	0.8 V								2.0 V	0.8 V					
			14 15	0.8 V	<u> </u>	<u> </u>	<u> </u>					2.0 V	2.0 V 0.8 V	2.0 V 0.8 V				0.8 V	
			15									2.0 V	0.8 V	2.0 V			0.8 V	0.6 V	
		"	17				1	1					2.0 V	0.8 V	-	0.8 V	0.0 v		
		"	18						"			"	2.0 V	2.0 V	0.8 V				
		"	19				2.0 V	-1.0 mA		-	-	0.8 V	0.8 V	0.8 V					
	VIC		20	-18 mA															
			21		-18 mA														
			22			-18 mA	40												
			23 24				-18 mA			-18 mA									
										-10 11/4									
			25									-18 mA							
			26								-		-18 mA	40 4					
			27 28											-18 mA	-18 mA				
			28												-10 IIIA	-18 mA			
			30													1011.01	-18 mA		
			31														-	-18 mA	"
	I _{IH1}	3010	32	2.7 V						4.5 V	-	4.5 V	0.0 V	0.0 V					5.5 V
		"	33		2.7 V						-	"	0.0 V	4.5 V					
			34			2.7 V						"	4.5 V	0.0 V					
			35				2.7 V			" 2.7 V			4.5 V	4.5 V					
			36							2.7 V									
		"	37									2.7 V							
			38		L	L	L		L				2.7 V	0.714					
			39 40							4 5 1/		0.0.1/	0.0 V	2.7 V 0.0 V	2.7 V				
			40							4.5 V		0.0 V	0.0 V 0.0 V	0.0 V 4.5 V	2.1 V	2.7 V			
			41										4.5 V	4.5 V		2.1 V	2.7 V		
		"	43										4.5 V	4.5 V		1		2.7 V	
	I _{IH2}	"	44	7.0 V								4.5 V	0.0 V	0.0 V					"
		"	45		7.0 V								0.0 V	4.5 V					
			46			7.0 V		ļ			-		4.5 V	0.0 V					
			47 48		L	L	7.0 V	<u> </u>	L	" 7.0 V			4.5 V	4.5 V					
										7.0 V									
		"	49								-	7.0 V							
		"	50										7.0 V						
			51							451/		0.01/	0.01/	7.0 V	7.0.1/				
			52 53		<u> </u>	4.5 V		0.0 V	0.0 V 0.0 V	0.0 V 4.5 V	7.0 V	7.0 V							
			53 54					<u> </u>					0.0 V 4.5 V	4.5 V 0.0 V	-	7.0 V	7.0 V		
		"	55					1					4.5 V	4.5 V		1	7.0 V	7.0 V	"
Soo	footno	tes at end		1			t		•									-	

TABLE III. Group A inspection for device type 01.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

See footnotes at end of table.

		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883	Case 2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
5 - 5 - 5	-,	method	<u>1</u> /		-		-		-	-	-						-	-	
			Test no.	13	12	11	10	Z	z	Ē	GND	S2	S1	S0	17	16	15	14	V _{cc}
1	I _{II}	3009	56	0.5 V						0.0 V	GND	0.0 V	4.5 V	4.5 V					5.5 V
Tc = 25°C			57		0.5 V					"	-	"	4.5 V	0.0 V					"
			58			0.5 V				"	-		0.0 V	4.5 V					"
			59				0.5 V			"	-	"	0.0 V	0.0 V					
			60							0.5 V									"
			61									0.5 V							
			62								"		0.5 V						"
			63								-			0.5 V					
			64							0.0 V		4.5 V	4.5 V	4.5 V	0.5 V				"
			65							"	"		4.5 V	0.0 V		0.5 V			
			66							"	-	"	0.0 V	4.5 V			0.5 V		
			67							"	"		0.0 V	0.0 V			0.0 1	0.5 V	
	I _{os}	3011	68				4.5 V	0.0 V		0.0 V	"	0.0 V	0.0 V	0.0 V					
	.05	3011	69					0.0 1	0.0 V	4.5 V	"	0.0 1	0.0 1	0.0 1					
	I _{OD}		70					2.5 V		5.5 V	"								4.5 V
	IOD		71				5.5 V	2.5 V	2.5 V	0.0 V	"	0.0 V	0.0 V	0.0 V					4.5 V
	Icc	3005	72	4.5 V	4.5 V	4.5 V	4.5 V			4.5 V	"	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	5.5 V
2		ests, termina						125°C an	d V. a tests		h	4.0 V	4.0 V	4.0 V	4.0 V	4.0 V	4.0 V	4.0 V	0.0 V
				, and innits	s as subgi	oup i, exc													
3		octe tormin	al conditions	and limite	a ac cubar		opt T	55°C and											
3			al conditions					55°C and	VIC tests a	re omitted	•	в	в	в	Δ	Δ	Δ	Δ	4/
7	Func-	ests, termina 3014 "	73	, and limits A	s as subgr A "	oup 1, exc A	ept T _C = -	55°C and L				B "	B	B	A "	A "	A "	A "	<u>4</u> /
7	Func- tional	3014	73 74	A				55°C and L "	V _{IC} tests a H	re omitted	•		В	A	A "	A "	A "	A "	<u>4</u> / "
7	Func- tional test	3014 "	73 74 75	A				55°C and L "	V _{IC} tests a H	re omitted	•	"	B A	A B	A " "	A "	A "	A "	<u>4/</u> "
7	Func- tional	3014 "	73 74 75 76	A "				55°C and L " "	V _{IC} tests a H	re omitted	•	"	B A A	A B A	A " "	A " "	A " "	A " "	<u>4/</u> ""
7	Func- tional test	3014 "	73 74 75 76 77	A " "				" "	V _{IC} tests a H	re omitted	GND " "	"	B A A B	A B A B	A " " "	A " "	A " "	A " "	<u>4/</u> ""
7	Func- tional test	3014 "	73 74 75 76 77 78	A " "			A " "	L " "	V _{IC} tests a H " "	re omitted	GND " " "	" " A	B A A B B	A B A B A	A " " "	A " " "	A " " "	A " " "	<u>4</u> / " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 79	A " " "	A " " "	A " " "	A " " "	L " " "	V _{IC} tests a H " " "	re omitted	GND " " " "	" " A "	B A A B B A	A B A B A B	11 11 11 11	A " " " "	" " "		<u>4</u> / " " " " " " " " " " " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80	A " " "	A "" "" ""	A " " " " "	A " " "		V _{IC} tests a	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " "	" " A " "	B A B B A A	A B A B A B A	11 11 11 11 11 11 11	1 1 1 1 1	11 11 11 11 11 11	-	<u>4</u> / " " " " " " " " " " " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81	A " " " "	A " " " " " " B	A " " " " " " B	A " " " " "	L " " "	V _{IC} tests a H " " "	re omitted	GND " " " " "	" " A "	B A B B A A B B	A B A B A B A B B	11 11 11 11	A " " " " " " " " " " " "	" " "		4/ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 82	A " " "	A " " " " " B B	A " " " " " B A	A " " " "	 	V _{IC} tests a	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " "	" " A " "	B A B B A A B B B	A B A B A B A B A	11 11 11 11 11 11 11	1 1 1 1 1	11 11 11 11 11 11	-	4/ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 82 83	A " " " " " B	A " " " " " " " " " " " " " " " "	A " " " " " " B	A " " " " "	 	V _{IC} tests a	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " "	" " A " "	B A B B A A B B A	A B A B A B A B B B	11 11 11 11 11 11 11	1 1 1 1 1	11 11 11 11 11 11	-	<u>4/</u> " " " " " " " " " " " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 81 82 83 83	A " " " " " B " " A	A " " " " " B B	A " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " "	L " " " " " " " " "	V _{IC} tests a H " " " " " " L "	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	" A " " B " " " " " " " " " " " " " " "	B A B B A A B B B A A	A B A B A B A B A A	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4/</u> " " " " " " " " " " " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 82 83 83 84 85	A " " " " " B "	A " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " "	L " " " " " " " " "	V _{IC} tests a H " " " " " " L "	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	" " " A " " " B " " "	B A B A A B B B A A B B B	A B A B A B A B A B B A B	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4/</u> 11 11 11 11 11 11 11 11 11 1
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 82 83 82 83 84 85 86	A " " " " " B " " " " " " " " " " "	A " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " "	L " " " " " " " " "	V _{IC} tests a H " " " " " " L " " " "	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	" A " " B " " A " A " A " A A A A A A A	B A B A A B B B A B B B B	A B A B A B A B A B A A	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4</u> / α α α α α α α α α α
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 82 83 84 82 83 84 85 86 87	A " " " " " B " " " " " " " " " " "	A " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H " " " " " " " " " " " " " "	re omitted A " " " " " " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	" A " A " " " B " " A " A " A " A " A "	B A B A A B B A A B B B A	A B A B A B A B A B A B B A B	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4</u> /
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 85 84 85 86 87 88	A " " " " " " " " " " " " " " " " " " "	A " " " " " " " B B A B " " " " " " " "	A " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H " " " " " " " " " " " " " " " " " "	re omitted A " " " " " " " " " " " " " " " " " "	- GND	" A A " " B " A " A " " A " " " " " " "	B A B B A A B A A B B A A A	A B A B A B A B A B A B A B A A	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4</u> /
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 85 86 87 88 88 88 88 88	A " " " " " B " A B " " A B " " "	A " " " " " B B B A B " " " " A	A " " " " " " " " B A B " " " " " A	A " " " " " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H " " " " " L L " " " " " "	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9	" A " A " " B " " A " " A " " " " " " "	B A B B A B B A B B B B A B B B A B	A B A B A B A B A B A B A B A B B A B	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4</u> /
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 83 84 85 86 87 88 88 89 90	A * * * * * * * * * * * * * * * * * * *	A " " " " " " " B B A B " " " " " A A	A " " " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H H H H H H H H H H H H H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9	" A " " B " A " " A " " B " " A " B " " B " B	B A A B B A A A B B B B B B A A A B	A B A B A B A B A B A B A B A A B A	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4/</u> " " " " " " " " " " " " " " " " " " "
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 85 86 85 86 87 88 89 90 90	A * * * * * * * * * * * * * * * * * * *	A a a a a b b c c c c c c c c c c c c c	A " " " " " " " " B A B " " " " " A	A " " " " " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H H H H H H H H H H H H H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9	" A " " B " A " " A " " B " " A " B " " B " B	B A B B A A B B A A A B B A A B B A A	A B B A B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B A B B B A A B B B A A B	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	<u>4</u> /
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 85 86 87 88 88 89 90 91 92	A * * * * * * * * * * * * * * * * * * *	A " " " " " B B A B " " " " A A A	A " " " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " " " "	L " " " " " " " " " " " " " " " " " " "	V _{IC} tests a H H H H H H H H H H H H H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9	" A A " " B " " A " " " B " " " " " " "	B A B B A B B A A B B B A A A A A A	A B A B A B A B A B A B A B A A B A A A A A A A A	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	4/
7	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 83 83 84 83 84 85 86 87 88 85 86 87 88 90 90 91 92 93	A * * * * * * * * * * * * * * * * * * *	A a a a a b b c c c c c c c c c c c c c	A " " " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " " " "		V _{IC} tests a H H H H H H H H H H H H H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	" A " " B " A " " A " " B " " A " B " " B " B	B A B B A A B B A B B A B B A B B A B B A B B A B B A B B B A B B B A B B B B A B B B B B A A B	A B A B A B A B A B B A B B A B B A B B A B B A B B A B B	• • • • • • • • • • • • • • • • • • •	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	4/
7	Func- tional test	3014 "	73 74 75 76 77 78 80 81 82 83 84 85 86 87 88 86 87 88 89 90 91 92 93 94	A * * * * * * * * * * * * * * * * * * *	A a a a a b b c c c c c c c c c c c c c	A " " " " " " " " " " " " " " " " " " "	A " " " " " " " " " " " " " " " " " " "	L	V _{IC} tests a H H H H H H H H H H H H H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	" A A " " B " " A " " " B " " " " " " "	B A B B A A B B A A B B A A B B A A B B B B B B B	A B A B A B A B A B A B A B A B A B A A B A	• • • • • • • • • • • • • • • • • • •	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	4/ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	Func- tional test	3014 "	73 74 75 76 77 78 79 80 81 83 83 84 83 84 85 86 87 88 85 86 87 88 90 90 91 92 93	A * * * * * * * * * * * * * * * * * * *	A	A *	A		V _{IC} tests a H VIC tests a H	re omitted A " " " " " " " " " " " " " " " " " "	GND 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	" " " " " " " " " " " " " " " " " " "	B A B B A A B B A B B A B B A B B A B B A B B A B B A B B B A B B B A B B B B A B B B B B A A B	A B A B A B A B A B B A B B A B B A B B A B B A B B A B B	• • • • • • • • • • • • • • • • • • •	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " "	

See footnotes at end of device types 01.

See footnotes at end of device types 01.

Cases E, F

Case 2 <u>1</u>/

MIL-STD-method

Symbol

Subgroup

9 c = 25°C			Test no.	13	12	11	10	Z	_	_									
									z	Ē	GND	S2	S1	S0	17	16	15	14	V _{CC}
= 25°C	t _{PLH1}	3003	97				IN	OUT		0.0 V	GND	0.0 V	0.0 V	0.0 V					5.0 V
, - 20 0		Fig. 4	98			IN				"	"	"	0.0 V	2.7 V					
			99		IN					"			2.7 V	0.0 V					
			100 101	IN									2.7 V 0.0 V	2.7 V 0.0 V				IN	
			101							"	"	2.7 V	0.0 V	2.7 V			IN	IIN	
			102					"		"	"	"	2.7 V	0.0 V		IN			
			104					"		"	"	"	2.7 V	2.7 V	IN				"
	t _{PHL1}		105				IN	"		"	"	0.0 V	0.0 V	0.0 V					
			106			IN				"	"	"	0.0 V	2.7 V					"
			107	INI	IN								2.7 V 2.7 V	0.0 V 2.7 V					
			108 109	IN						"	"	2.7 V	0.0 V	0.0 V				IN	
			110					"		"	"	2.7 V	0.0 V	2.7 V			IN		
			111	1				"		"	"	"	2.7 V	0.0 V		IN			"
			112							"	"	"	2.7 V	2.7 V	IN				"
	t _{PLH2}	"	113				IN		OUT	"	"	0.0 V	0.0 V	0.0 V					"
			114			IN			"	"	"	"	0.0 V	2.7 V					"
			115		IN					"	"	"	2.7 V	0.0 V					"
			116	IN						"	"	"	2.7 V	2.7 V					"
			117							"	"	2.7 V	0.0 V	0.0 V				IN	"
			118							"	"	"	0.0 V	2.7 V			IN		"
			119							"	"	"	2.7 V	0.0 V		IN			"
			120							"	"	"	2.7 V	2.7 V	IN				"
	t _{PHL2}		121				IN			"	"	0.0 V	0.0 V	0.0 V					
			122			IN				"	"		0.0 V	2.7 V					
			123		IN					"	"	"	2.7 V	0.0 V					
			124	IN						"	"	"	2.7 V	2.7 V					"
			125							"	"	2.7 V	0.0 V	0.0 V				IN	"
			126						"	"	"	"	0.0 V	2.7 V			IN		"
			127							"	"	"	2.7 V	0.0 V		IN			"
			128							"	"	"	2.7 V	2.7 V	IN				"
	t _{PLH5}		129	2.7 V	2.7 V	2.7 V	2.7 V	OUT		IN	"	0.0 V	0.0 V	0.0 V	2.7 V	2.7 V	2.7 V	2.7 V	"
Γ	t _{PHL5}		130	2.7 V	2.7 V	2.7 V	2.7 V	OUT		IN	"	0.0 V	0.0 V	0.0 V		2.7 V	2.7 V	2.7 V	"
	t _{PLH6}		131	0.0 V	0.0 V	0.0 V	0.0 V		OUT	"	"	2.7 V	2.7 V	2.7 V		0.0 V	0.0 V	0.0 V	"
	t _{PHL6}		132	0.0 V	0.0 V	0.0 V	0.0 V		OUT	"	"	2.7 V	2.7 V	2.7 V		0.0 V	0.0 V	0.0 V	
Γ	t _{PLH3}	"	133			2.7 V	0.0 V	OUT		0.0 V	"	0.0 V	0.0 V	IN					"
			134	ļ	2.7 V			"		"		0.0 V	IN	0.0 V		ļ			"
- F	+		135	l	l	0.0 V	" 2.7 V					IN 0.0 V	0.0 V 0.0 V	0.0 V IN		l		2.7 V	
	t _{PHL3}		136 137	 	0.0 V	0.0 V	2.7 V			"		0.0 V 0.0 V	IN	0.0 V		 			
			137		0.0 V			"		"	"	IN	0.0 V	0.0 V				0.0 V	

TABLE III. Group A inspection for device type 01- Continued.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

TABLE III. Group A inspection for device type 01 - Continued. Terminal conditions (pins not designated may be high \ge 2.0 V; low \le 0.8 V; or open).
 Cases
 1
 2
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		MIL-STD-	E, F																
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	13	12	11	10	Z	z	Ē	GND	S2	S1	S0	17	16	15	14	V _{cc}
9	t _{PLH4}	3003	139			0.0 V	2.7 V		OUT	0.0 V	GND	0.0 V	0.0 V	IN					5.0 V
		Fig 4	140		0.0 V		"		"	"	"	0.0 V	IN	0.0 V					
			141							"	"	IN	0.0 V	0.0 V				0.0 V	"
	t _{PHL4}		142			2.7 V	0.0 V			"	"	0.0 V	0.0 V	IN					
			143		2.7 V					"	"	0.0 V	IN	0.0 V					"
			144				-				"	IN	0.0 V	0.0 V				2.7 V	
10																			
			minal conditi																
		$t_{PLH1} = 2.5 t_{O}$	o 8.5 ns		$t_{PHL1} = 3.5$	to 9.0 ns		$t_{PLH2} = 2.5$	to 7.5 ns		$t_{PHL2} = 1.5$								
		t _{PLH3} = 4.5 to							to 11.5 ns		$t_{PHL4} = 3.0$								
		t _{PLH5} = 4.0 to	o 12.0 ns		$t_{PHL5} = 3.0$	to 8.0 ns		$t_{PLH6} = 3.0$	to 7.5 ns		$t_{PHL6} = 2.5$	5 to 6.5 ns	6						
11	Same te	sts, termina	l conditions	and limits	as for sub	group 10,	except T _C	= -55°C.											

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Min/Max I	imits in mA f	or circuit
Test	А	В	С
I _{IL}	25/60	03/60	03/60

 $\underline{3}'$ A = 2.5 V, B = 0.5 V. H \geq 1.5 V, L \leq 1.5 V. $\underline{4}'$ Perform function sequence at V_{cc} = 4.5 V and repeat at V_{cc} = 5.5 V.

Г

		MIL-STD-	Е, Г																
Subgroup	Symbol	883 method	Case 2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
		method	<u>1</u> / Test no.	-	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	l3b	S0	_	V _{cc}
	N	0000		Ēa		15a	124	IIa				20	doi	110	120	130		Ēb	
1	V _{OH}	3006	1	0.8 V	0.8 V			0.01/	2.0 V	-1 mA	GND						0.8 V		4.5 \
; = 25°C			2		0.8 V			2.0 V									2.0 V		
			3		2.0 V	0.01/	2.0 V										0.8 V		
			4		2.0 V	2.0 V							0.01/				2.0 V		
			5		0.8 V							-1 mA	2.0 V	0.01/			0.8 V	0.8 V	
			6		0.8 V									2.0 V	0.01/		2.0 V		
			7		2.0 V										2.0 V	0.014	0.8 V		
		0007	8	0.014	2.0 V					00 A						2.0 V	2.0 V		
	V _{OL}	3007	9 10	2.0 V 0.8 V	0.8 V				0.8 V	20 mA							0.8 V		
			10	0.8 V	0.8 V			0.8 V	0.0 V								2.0 V		
			12	"	2.0 V		0.8 V	0.0 V									2.0 V 0.8 V		
			12	"	2.0 V	0.8 V	0.0 V										2.0 V		
			13		2.0 V	0.0 V						20 mA					2.0 V	2.0 V	
			14		0.8 V							20 MA	0.8 V				0.8 V	0.8 V	
		"	15		0.8 V		<u> </u>						0.0 V	0.8 V			2.0 V	U.O V "	
		"	10		2.0 V									0.0 v	0.8 V		0.8 V	"	
		"	17		2.0 V 2.0 V										0.0 V	0.8 V	2.0 V	"	
	VIC		19	-18 mA	2.0 V											0.0 v	2.0 V		
	•10																		
			20		-18 mA														
			21			-18 mA													
			22				-18 mA				"								
			23					-18 mA											
			24						-18 mA										
			25										-18 mA						
			26											-18 mA					
			27												-18 mA	10.1			
			28													-18 mA	40		
			29														-18 mA	10 1	
			30															-18 mA	
	I _{IH1}	3010	31	2.7 V															5.5 \
		"	32		2.7 V						"								"
		"	33	4.5 V	0.0 V	2.7 V					"						0.0 V		"
		"	34	"	0.0 V		2.7 V				"						4.5 V		"
		"	35	"	4.5 V			2.7 V			"						0.0 V		"
		"	36	"	"				2.7 V								4.5 V		"
		"	37		"								2.7 V				4.5 V	4.5 V	
		"	38		"									2.7 V			0.0 V	"	"
		"	39		0.0 V										2.7 V		4.5 V	"	"
		"	40		0.0 V						-					2.7 V	0.0 V	"	"
		"	41														2.7 V		
		"	42															2.7 V	
	I _{IH2}	"	43	7.0 V							"								"
			44	<u> </u>	7.0 V		<u> </u>												
			44	4.5 V	7.0 V 0.0 V	7.0 V											0.0 V		
		"	45	4.5 V	0.0 V 0.0 V	1.0 V	7.0 V										4.5 V		
		"	40	"	4.5 V		7.0 V	7.0 V									4.5 V 0.0 V		
		"	47	"	ч.5 V "		<u> </u>	7.0 V	7.0 V								4.5 V		
		"	40		"				1.0 V				7.0 V				4.5 V	4.5 V	"
		"	49 50		"								1.0 V	7.0 V			4.5 V 0.0 V	ч. <u>ј</u> v	
		"	51		0.0 V									7.0 V	7.0 V		4.5 V	"	
		"	52		0.0 V										7.0 V	7.0 V	0.0 V	"	
			53		0.0 V											7.0 V	7.0 V		"
														1			7.0 V		L
		"	54															7.0 V	

TABLE III. Group A inspection for device type 02.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

15

16

27

Cases E, F

MIL-STD-

2

1

	r	r	<u> </u>		_	_		-		-			4.0		40	4.0			10
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	Ēa	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	l3b	S0	Ē b	V _{CC}
1	I _{IL1}	3009	55	0.5 V							GND								5.5 V
Tc = 25°C			56		0.5 V						"								"
		"	57	0.0 V	4.5 V	0.5 V					"						4.5 V		
			58	"	4.5 V		0.5 V										0.0 V		
			59		0.0 V			0.5 V									4.5 V		
			60						0.5 V				051/				0.0 V	0.0.1/	
			61 62										0.5 V	0.5 V			0.0 V 4.5 V	0.0 V	
			63		4.5 V						"			0.5 V	0.5 V		4.3 V 0.0 V		
			64		4.5 V						"				0.0 V	0.5 V	4.5 V		
			65	1													0.5 V		
			66															0.5 V	"
	Ios	3011	67	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	4.5 V	0.0 V							0.0 V		
		3011	68		0.0 V						"	0.0 V	4.5 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	
	lod		69	5.5 V						2.5 V									4.5 V
			70	0.0 V								2.5 V						5.5 V	4.5 V
	I _{CC}	3005	71	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V		. "		0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	5.5 V
2		ests, termina																	
3	Func-	ests, termina 3014	al conditions 72	A A	s as subgr A	oup 1, exc A	ept I _c = -: A	A	V _{IC} tests a	re omitted	GND	1	А	А	А	А	А	А	4/
/ Tc = 25°C	tional	3014	72	B	B	А "	А "	- A "	B	L	GND "	L	B	A "	A "	A "	B	B	4/
10 = 25 0	test		74	"	"	"			A	Н	"	H	A	"	"	"	B	"	
	3/		75	"	"	"	"	В	"	L	"	L	"	В	"	"	A	"	
	-		76	"	"	"	"	Α		Н	"	Н	"	A	"	"	Α	"	
		"	77	"	А	"	В	=		L	-	L	=	"	В	"	В	-	
		"	78	"	"	"	Α			Н		Н		"	A	"	В	"	
		"	79	"	"	В	"	-		L		L		"	"	В	A	"	
			80	"	"	A				н		н		"	"	A	A		
			81 82	A "	B					L		L					B	A	
			83	"	A	"						"		"	"	"	A B	"	
8	Same t	ests, termina		and limite		baroun 7	except To	= +125°C	and To -	-55°C		1		1	1	1			1
9	t _{PLH1}	3003	84	0.0 V	0.0 V	- 3.0 ap 7,			IN	OUT	GND						0.0 V		5.0 V
T _C = 25°C		Fig. 4	85	"	0.0 V			IN				1				1	2.7 V		"
			86	"	2.7 V		IN										0.0 V		"
		"	87	"	2.7 V	IN					-						2.7 V		
			88		0.0 V							OUT	IN				0.0 V	0.0 V	
			89		0.0 V									IN	INI		2.7 V		L
			90 91		2.7 V 2.7 V										IN	IN	0.0 V 2.7 V		
	t _{PHL1}		91	0.0 V	2.7 V 0.0 V				IN	OUT						IIN	2.7 V 0.0 V		
	PHL1		92	0.0 v	0.0 V			IN		"							2.7 V		
			94	"	2.7 V		IN										0.0 V		
		"	95	"	2.7 V	IN						İ 👘				l I	2.7 V		"
		"	96		0.0 V						-	OUT	IN				0.0 V	0.0 V	"
		"	97		0.0 V									IN			2.7 V	"	
		"	98		2.7 V							"			IN		0.0 V	"	
			99		2.7 V											IN	2.7 V	"	

TABLE III. Group A inspection for device type 02 - Continued. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

See footnotes at end of table.

		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	Ēa	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	I3b	S0	Ēb	V _{CC}
9	t _{PLH5}	3003	100	IN	0.0 V				2.7 V	OUT	GND						0.0 V		5.0 V
T _C = 25°C		Fig. 4	101									OUT	2.7 V					IN	"
	t _{PHL5}	"	102	IN			1		2.7 V	OUT				1			"		"
		"	103		"							OUT	2.7 V				"	IN	"
	t _{PLH3}	"	104	0.0 V	2.7 V	0.0 V	2.7 V			OUT							IN		
			105		2.7 V							OUT			2.7 V	0.0 V	IN	0.0 V	
		"	106	0.0 V	IN	2.7 V		0.0 V		OUT							2.7 V		
		"	107		IN							OUT		0.0 V		2.7 V	2.7 V	0.0 V	
	t _{PHL3}	"	108	0.0 V	0.0 V			0.0 V	2.7 V	OUT	-						IN		
1		"	109		0.0 V						-	OUT	2.7 V	0.0 V			IN	0.0 V	-
		"	110	0.0 V	IN		0.0 V		2.7 V	OUT	-						0.0 V		
1		"	111		IN							OUT	2.7 V		0.0 V		0.0 V	0.0 V	
10		ests and terr $t_{PLH1} = 2.5$ to $t_{PLH3} = 4.5$ to $t_{PLH5} = 4.5$ to	o 9.0 ns o 14.0 ns		bgroup 9, $t_{PHL1} = 2.5$ $t_{PHL3} = 3.5$ $t_{PHL5} = 2.5$	to 8.0 ns to 11.0 ns	S	and for the	e following	limits.									

TABLE III. Group A inspection for device type 02 - Continued. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Mir	n/Max limits in	n mA for circ	uit
Test	А	В	С	D
I	25/60	03/60	03/60	0.0/-0.30

 $\underline{3}/~$ A = 2.5 V, B = 0.5 V. ~ H \geq 1.5 V, L \leq 1.5 V. $\underline{4}/~$ Perform function sequence at V_{CC} = 4.5 V and repeat at V_{CC} = 5.5 V.

Same tests, terminal conditions and limits as for subgroup 10, except T_C = -55°C.

ML_SD. Cases 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 15 Subgrop ML_SD. Case 2 2 3 4 5 7 8 9 10 11 12 13 14 15 17 18 19 C = 200 ML Case 3 00 10 10 10 12 13 14 15 17 18 19 20 C = 200 ML C = 0 <thc 0<="" =="" th=""> C = 0 C = 0</thc>									001101110			Jignato.	2ay 10	<u>eg. =</u>			·, •. •p			
Subsymp Symple Bass method Case 2 2 3 4 5 7 8 9 10 12 13 14 15 17 18 19 20 1 1 0.8 0.8 10a 11a 2a 10b 11b 2b GND 2d 11d 10d 2c 11c 0.0c \overline{z} V_{cc} 2 0 0 0.8 2.0 200 0.8 2.0 200			MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Image: constraint of the second sec	Subgroup	Symbol	883	Case 2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
1 0307 1 0.8 V 0.8 V 2 0.V 0 0.V <td></td> <td></td> <td>method</td> <td></td> <td>S</td> <td>l0a</td> <td>l1a</td> <td>Za</td> <td>l0b</td> <td>l1b</td> <td>Zb</td> <td>GND</td> <td>Zd</td> <td>l1d</td> <td>l0d</td> <td>Zc</td> <td>l1c</td> <td>l0c</td> <td>Ē</td> <td>V_{CC}</td>			method		S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	Ē	V _{CC}
C + 25C Image: Section of the section of	1	V.	2007	1	081/	081/	201/	20 mA				GND								4.5.V
Normal 1 3 0.8 V 1 0.8 V 20 V 20 N 20 M 1 <th1< th=""> 1 <th1< th=""> <th1< th=""></th1<></th1<></th1<>		VOL	3007									GND "							0.0 V	4.5 V
Image: black Image: black <th< td=""><td>10 = 25 0</td><td></td><td></td><td></td><td></td><td>2.0 V</td><td>0.0 V</td><td>20 11/4</td><td>0.9.1/</td><td>201/</td><td>20 m A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>"</td><td></td></th<>	10 = 25 0					2.0 V	0.0 V	20 11/4	0.9.1/	201/	20 m A								"	
Nor 5 0.8% 0.8																			"	
Norm 6 2.0 V Norm 0.8 V 2.0 V Norm 2.0 V 0.8 V 0.8 V 2.0 V 0.8 V 2.0 V 0.8 V 2.0 V 0.8 V 2.0 V 0.8 V <th0.0 th="" v<=""> <th0.0 th="" v<=""> <th0.0 td="" th<="" v<=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.0 V</td><td>0.0 V</td><td>20 11/4</td><td></td><td>20 mA</td><td>2 0 V</td><td>0.8.V</td><td></td><td></td><td></td><td>"</td><td></td></th0.0></th0.0></th0.0>									2.0 V	0.0 V	20 11/4		20 mA	2 0 V	0.8.V				"	
Not 7 0.8.V - </td <td></td> <td>"</td> <td></td>																			"	
Nort 8 2.0.V 0.0 0.0.V 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 2.0 1.00 2.0 1.00 2.0 1.00 2.0 1.00 1.													201101	0.0 ¥	2.0 V	20 mA	20V	0.8 V	"	"
Vn+ 300 9 0.8.V 2.0.V 0.8.V -1 mA n												"							"	"
No. 10 2.0.V 0.8.V 2.0.V 1.1mA -		Voh	3006			2.0 V	0.8 V	-1 mA											"	"
No. 11 0.8 V 1 0.8 V 0.8 V 1 mA 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 1 0 V 0 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <th1< th=""> <th1< th=""></th1<></th1<>		- 011										"							"	"
No. 12 2.0.V 0.8.V 2.0.V 11mA 0				11					2.0 V	0.8 V	-1 mA								"	"
No. 13 0.8.V n n n n 0.8.V 2.0.V n				12	2.0 V						-1 mA	"							"	"
Image: Normal relation Image: Normal relation<												"	-1 mA	0.8 V	2.0 V				"	"
Nic 16 2.0.V m<					2.0 V							"	-1 mA	2.0 V	0.8 V				"	
Vic 17 -18 mA Image: boot of the second												"				-1 mA	0.8 V	2.0 V		"
Vic 11 -10 IIM -18 mA												-				-1 mA	2.0 V	0.8 V	"	
Image: here Image: here <td></td> <td>VIC</td> <td></td> <td></td> <td>-18 mA</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>"</td>		VIC			-18 mA							-								"
Normal Problem 20 m						-18 mA														"
Image: Problem of the second							-18 mA													
Image: state of the s									-18 mA											"
Image: Normal relation Image: Normal relation<				21						-18 mA		"								"
Image: Problem of the state of the														-18 mA						"
$\left \begin{array}{c c c c c c c c c c c c c c c c c c c $															-18 mA					
Image: Normal system Image: No				24													-18 mA			
Image: Normal state of the state o																		-18 mA		
$I_{H2} = \left[\begin{array}{c ccccccccccccccccccccccccccccccccccc$																				
29 0.0 V 2.7 V 0		I _{IH1}	3010																4.5 V	5.5 V
$\mathbb{I}_{\mathbb{H}^2} = \begin{bmatrix} 29 & 0.0 & 2.7 & 2.7 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & $						2.7 V													"	"
$I_{H2} = \begin{bmatrix} 31 & 0.0 \lor & 0.0 $			"				2.7 V												"	"
32 0.0 V 1 1 1 1 2.7 V 1 <th1< th=""> 1 1 1</th1<>									2.7 V										"	"
33 4.5 V 2.7 V <	1					L				2.7 V				071/			L			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														2.7 V	071					
36 4.5 V <td>1</td> <td></td> <td></td> <td>33</td> <td></td> <td>l</td> <td>├──</td> <td>├──</td> <td>├──</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2.7 V</td> <td></td> <td>271</td> <td>├──</td> <td></td> <td></td>	1			33		l	├ ──	├ ──	├ ──						2.7 V		271	├ ──		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1																2.1 V	271/	"	
Image: Normal system Solution Solutititetee Solution Solu					4.5 V	<u> </u>	<u> </u>	<u> </u>	<u> </u>									2.1 V	271/	
38 4.5 V 7.0 V " " " " " " " 39 0.0 V 7.0 V " " " " " " " 40 4.5 V 7.0 V " " " " " " 41 0.0 V 7.0 V " " " " " 42 0.0 V 1 1 " " " " 43 4.5 V 1 1 " " " " 44 0.0 V 1 1 " " 7.0 V " " 45 4.5 V 1 1 1 " " 7.0 V " "		L																		
39 0.0 V 7.0 V " " I "		I _{IH2}		37															4.5 V	"
40 4.5 V 7.0 V " Image: Constraint of the second se	1					7.0 V														
41 0.0 V 7.0 V " - - "	1					L	7.0 V		7.01/								L			
42 0.0 V " 7.0 V " <th"< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>7.0 V</td><td>701/</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th"<>									7.0 V	701/										
43 4.5 V " 7.0 V " " 44 0.0 V " " 7.0 V " " 45 4.5 V " " " 7.0 V " "	1									7.0 V				701/						
44 0.0 V " " 7.0 V " " " 45 4.5 V " " " 7.0 V " "	1													7.0 V	701/					
" 45 4.5 V											<u> </u>				7.0 V		701/			
	1																7.0 V	701/	"	
					4.3 V	<u> </u>	+	<u> </u>	<u> </u>									7.0 V	7 0 V	
				40															7.0 V	

TABLE III. Group A inspection for device type 03.Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

See footnotes at end of table.

								Jonanio	na (pina	not ucc	ignatoc	i may i	/⊂ nign ∠	2.0 V, K	$0.0 \ge 0.0$	V; or op	·en).		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	Iμ	V _{CC}
1	I _{IL1}	3009	47	0.5 V							GND								5.5 V
Tc = 25°C		"	48	0.0 V	0.5 V														"
		"	49	4.5 V		0.5 V													"
		"	50	0.0 V				0.5 V											"
		"	51	4.5 V					0.5 V		"								"
			52	4.5 V									0.5 V						"
			53	0.0 V										0.5 V					"
			54	4.5 V												0.5 V			"
			55	0.0 V												0.0 1	0.5 V		"
			56	0.0 V		0.0 V			0.0 V				0.0 V			0.0 V	0.0 V	0.5 V	"
						0.0 1			0.0 V				0.0 V			0.0 V			
ľ	los	3011	57	0.0 V	4.5 V		0.0 V											0.0 V	"
ľ		"	58	"				4.5 V		0.0 V								"	"
ľ		"	59								"	0.0 V		4.5 V					"
ľ		"	60	"							"				0.0 V		4.5 V		"
	I _{OD}		61				2.5 V											5.5 V	4.5 V
			62							2.5 V									"
			63									2.5 V						-	"
			64												2.5 V				"
	Icc	3005	65	4.5 V	4.5 V	4.5 V		4.5 V	4.5 V				4.5 V	4.5 V		4.5 V	4.5 V	4.5 V	5.5 V
2		ests, termina					ept $T_{c} = +$			are omitte	he								
3		ests, termina																	
7	Func-	3014	66	A	A	A		A	A		GND	1	Α	А	1	А	Α	А	4/
, Tc = 25°C	tional	"	67	B	"	A	L	"	A	L	"	Ĺ	A	"	L	A	"	A	<u>4</u> /
10 - 25 0	test		68	B	"	В	H		В	Н		H	В	"	H	В	"	В	
	<u>3</u> /		69	A	"	B	L		B	L			B		L	B	"	 "	
	<u>3</u> /		70	B	В	A		В	A	L			A	В	L	A	В		
			70	A	B	A	L H	B	A	H							B		
8	0					A			A										
9		esis, termina				haroun 7			These			Н	A	В	Н	A	D		
-	t _{PLH1}	2002	al conditions	, and limit	s as for su	bgroup 7,	except T _c		and T _c =			г	A	В	н	A		0.0.1/	501
$T_{\rm C} = 25^{\circ}{\rm C}$		3003	al conditions 72	s, and limits 0.0 V			except T _c OUT		and T _c =		GND		A	В	н	A	Б	0.0 V	5.0 V
		3003 Fig. 4	al conditions 72 73	, and limit 0.0 V 2.7 V	s as for su	bgroup 7, IN	except T _c	; = +125°C	and T _c =	-55°C.	GND	н	A	В	Н	A		0.0 V	5.0 V "
			al conditions 72 73 74	s, and limits 0.0 V 2.7 V 0.0 V	s as for su		except T _c OUT			-55°C.		н 	A	В		A			
			al conditions 72 73 74 75	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V	s as for su		except T _c OUT	; = +125°C	and T _c =	-55°C.	GND " "				H			0.0 V	5.0 V "
			al conditions 72 73 74 75 76	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V	s as for su		except T _c OUT	; = +125°C		-55°C.		OUT	A I IN						
			al conditions 72 73 74 75 76 77	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 0.0 V	s as for su		except T _c OUT	; = +125°C		-55°C.									
			al conditions 72 73 74 75 76 77 78	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 0.0 V 2.7 V	s as for su		except T _c OUT	; = +125°C		-55°C.		OUT			OUT	A N			
			al conditions 72 73 74 75 76 77 78 78 79	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V	s as for su IN		except T _c OUT OUT	; = +125°C		-55°C.		OUT							
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 0.0 V	s as for su			; = +125°C		-55°C.		OUT			OUT				
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81	s, and limits 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 0.0 V 2.7 V	s as for su IN		except T _c OUT OUT	= +125°C		55°C. OUT OUT	11 11 11 11 11 11 11 11	OUT			OUT				
	t _{PHL1}		al conditions 72 73 74 75 76 77 77 78 79 80 81 82	s, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 0.0 V 2.7 V 0.0 V	s as for su IN			; = +125°C		55°C. OUT OUT OUT		OUT			OUT				
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 80 81 82 83	s, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V	s as for su IN			= +125°C		55°C. OUT OUT	11 11 11 11 11 11 11 11	OUTOUT			OUT				
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81 81 82 83 84	, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V	s as for su IN			= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT OUT			OUT				
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81 82 83 83 84 85	, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 0.0 V	s as for su IN			= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT			OUT OUT			8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81 82 83 84 83 84 85 86	and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V	s as for su IN			= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT OUT			OUT		IN		
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81 80 81 82 83 84 85 86 86 87	s, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 0.0 V	s as for su IN		OUT OUT OUT OUT OUT OUT	= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT OUT			OUT OUT			1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	t _{PHL1}		al conditions 72 73 74 75 76 77 78 79 80 81 82 83 84 83 84 85 86	and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V	s as for su IN			= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT OUT			OUT		IN	8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
			al conditions 72 73 74 75 76 77 78 79 80 81 80 81 82 83 84 85 86 86 87	s, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 0.0 V 2.7 V 0.0 V 0	s as for su IN		OUT OUT OUT OUT OUT OUT	= +125°C		55°C. OUT OUT OUT	11 11 11 11 11 11 11 11	OUT OUT OUT			OUT		IN	1 1 1 1 1 1 1 1 1 1 1 1 1 1	
			al conditions 72 73 74 75 76 77 78 79 80 81 82 83 84 83 84 85 86 87 88	s, and limit: 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 0.0 V 2.7 V 2.7 V 0.0 V 2.7 V 2.7 V 2.7 V 0.0 V 2.7 V	s as for su IN		OUT OUT OUT OUT OUT OUT	= +125°C		-55°C.		OUT OUT OUT			OUT		IN	11 11 12 14 14 14 14 14 14 14 14 14 14 14 14 14	8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

TABLE III. Group A inspection for device type 03.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

See footnotes at end of table.

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TABLE III. Group A inspection for device type 03. ~ ~ **/.

													in for devi						
						Te	ərminal	conditic	Jns (pinຄ	s not der	signater	J may h	be high \geq	2.0 V; I	$ow \le 0.8$	V; or or	ben).		
,		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	l 883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
i ,		'	Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	Ē	V _{CC}
9	t _{PHL5}	3003	92	0.0 V	2.7 V	· · · · ·	OUT			· [· · ·	GND	· · · ·					,	IN	5.0 V
$T_{C} = 25^{\circ}C$		Fig. 4	93			· · · · ·		2.7 V		OUT	"	· · · ·					, , , , , , , , , , , , , , , , , , ,	"	"
1 '			94			1			· [· · · · · · · · · · · · · · · · · ·	,	"	OUT		2.7 V			· · · ·	"	"
1 '	'		95			·				,	"	,		·	OUT		2.7 V	"	"
1 '	t _{PLH3}		96	IN	2.7 V	0.0 V	OUT	1		· · · · · · · · · · · · · · · · · · ·	"	· ['	1	· · · ·		1	,	0.0 V	
1 '		1	97	"		ſ'		2.7 V	0.0 V	OUT	"			ſ'			·'	"	"
1 '	'	1 " "	98	"		· · · · ·				<u> </u>	"	OUT	0.0 V	2.7 V			'	"	
1 '	L'		99			· · · ·					"	'		· · · · ·	OUT	0.0 V	2.7 V	"	
1 '	t _{PHL3}	· · ·	100		0.0 V	2.7 V	OUT		′	'	"	<u> </u>		'			<u> </u>	"	-
1 '	'	1	101	"	<u> </u>	<u> </u>		0.0 V	2.7 V	OUT	"	<u> </u>		<u> </u>			<u> </u>	"	
1 '	'	1	102	"	<u> </u>	<u> </u>			Ĺ'	Ĺ'	"	OUT	2.7 V	0.0 V		'	<u> </u>	"	
1'	'L'		103								"	· '			OUT	2.7 V	0.0 V	<u> </u>	
10	Same t	tests and terr	minal condit	tions as su	ıbgroup 9,	except T _C	= +125°C	and use li	mits from t	able I.									
11	Same t	tests, termina	al conditions	s and limit	s as for su'	baroup 10	. except T	c = -55°C.						-			-		
						<u>.</u>				-	-								
	_																		

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 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Min/Max limits in mA for circuit											
Test	А	В	С	D								
I _{IL}	25/60	03/60	03/60	0.0/-0.30								

 $\begin{array}{ll} \underline{3} / & \mathsf{A} = 2.5 \; \mathsf{V}, \; \mathsf{B} = 0.5 \; \mathsf{V}, \; \mathsf{H} \geq 1.5 \; \mathsf{V}, \; \mathsf{L} \leq 1.5 \; \mathsf{V}, \\ \underline{4} / & \mathsf{Perform} \; \mathsf{function} \; \mathsf{sequence} \; \mathsf{at} \; \mathsf{V}_{\mathsf{CC}} = 4.5 \; \mathsf{V} \; \mathsf{and} \; \mathsf{repeat} \; \mathsf{at} \; \mathsf{V}_{\mathsf{CC}} = 5.5 \; \mathsf{V}, \\ \underline{5} / & \mathsf{I}_{\mathsf{OD}} \; \mathsf{minimum} \; \mathsf{limit} \; \mathsf{for} \; \mathsf{circuit} \; \mathsf{D} \; \mathsf{shall} \; \mathsf{be} \; 35 \; \mathsf{mA}. \end{array}$

			_, .																
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Ζc	l1c	l0c	Ē	V _{CC}
1	V _{OL}	3007	1	0.8 V	2.0 V	0.8 V	20 mA				GND							0.8 V	4.5 V
Tc = 25°C		"	2	2.0 V	0.8 V	2.0 V	20 mA				"							"	"
		"	3	0.8 V				2.0 V	0.8 V	20 mA								"	
		"	4	2.0 V				0.8 V	2.0 V	20 mA								"	
			5	0.8 V								20 mA	2.0 V	0.8 V					
		"	6	2.0 V							"	20 mA	0.8 V	2.0 V				"	
		"	7	0.8 V							"				20 mA	2.0 V	0.8 V	"	"
		"	8	2.0 V							"				20 mA	0.8 V	2.0 V	"	"
	V _{OH}	3006	9	0.8 V	0.8 V	2.0 V	-1 mA											"	
			10	2.0 V	2.0 V	0.8 V	-1 mA											"	"
		"	11	0.8 V				0.8 V	2.0 V	-1 mA								"	
			12	2.0 V				2.0 V	0.8 V	-1 mA								"	"
		"	13	0.8 V							"	-1 mA	0.8 V	2.0 V				"	"
			14	2.0 V								-1 mA	2.0 V	0.8 V				"	"
		"	15	0.8 V											-1 mA	0.8 V	2.0 V	"	"
		"	16	2.0 V							"				-1 mA	2.0 V	0.8 V	"	"
	VIC		17	-18 mA															
			18 19		-18 mA	-18 mA													
			20			10 11/1		-18 mA			"								
			21						-18 mA										
			22 23										-18 mA	-18 mA					
			24											-10111A		-18 mA			
			25								"						-18 mA		
			26															-18 mA	
	I _{IH1}	3010	27	2.7 V							"							4.5 V	5.5 V
		"	28	4.5 V	2.7 V						-								
			29	0.0 V		2.7 V													
			30	4.5 V 0.0 V				2.7 V	2.7 V										
			31 32	0.0 V					2.7 V				2.7 V						
			33	4.5 V							"		2.1 V	2.7 V				"	
		"	34	0.0 V							"					2.7 V		"	
		"	35	4.5 V							"						2.7 V	"	
		"	36								"							2.7 V	
	I _{IH2}	"	37	7.0 V							"							4.5 V	"
		"	38	4.5 V	7.0 V														
			39	0.0 V		7.0 V													
			40	4.5 V				7.0 V	7.0.1/										
			41	0.0 V					7.0 V				7.0.1/						
			42 43	0.0 V 4.5 V									7.0 V	7.0 V					
			43	4.5 V 0.0 V		<u> </u>	<u> </u>	<u> </u>				-		7.0 V		7.0 V			
			44	4.5 V												7.0 V	7.0 V	"	
			45	ч.5 v	1											1	7.0 V	7.0 V	
	1																		l

TABLE III. Group A inspection for device type 04.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

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See footnotes at end of table.

MIL-STD- Cases E, F

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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Subgroup	Symbol			2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
Tc = 25°C N 48 0.0V 0.5V N				Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Ζc	l1c	l0c	Ē	V _{CC}
Tc = 25°C N 48 0.0 V 0.5 V N	1	11.1	3009	47	0.5 V							GND								5.5 V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Tc = 25°C	1021	"			0.5 V						"								"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	10 - 20 0			-			05V													
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$							0.0 V		05V											
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$									0.0 V	05V										
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$										0.5 V				0.5.1/						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														0.5 V	0.5.1/					
Image: Normal conditions and limits as subgroup 1, except T _c = +125°C and V _{1c} tests are omitted. **** **** **** ***** ************************************															0.5 V		051/			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$																	0.5 V	0514		
Instruction 3011 57 0.0 0.0 4.5 0.0 * * * * * 0.0 * * * 0.0 * * 0.0 * * 0.0 * 0.0 * * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * * 0.0 * * 0.0 * * 0.0 * * 0.0 * * 0.0 * * 0.0 * * 0.0 * * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 * 0.0 0.0 * 0.0 * 0.0 0.0 0.0 0.0 0.0 0.0 0.0 <t< td=""><td></td><td></td><td></td><td></td><td>0.0 V</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0.1/</td><td></td><td></td><td>0.01/</td><td>0.5 V</td><td>0.5.1/</td><td></td></t<>					0.0 V									0.0.1/			0.01/	0.5 V	0.5.1/	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				56								-		0.0 V			0.0 V		0.5 V	-
$ \left \begin{array}{c c c c c c c c c c c c c c c c c c c $		I _{OS}	3011	57	0.0 V	0.0 V	4.5 V	0.0 V											0.0 V	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			"	58	"				0.0 V	4.5 V	0.0 V								"	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			"	59									0.0 V	4.5 V	0.0 V		1		"	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			"	60	"											0.0 V	4.5 V	0.0 V	"	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		I _{OD}		61	"	5.5 V		2.5 V											5.5 V	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				62					5.5 V		2.5 V								"	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				63									2.5 V		5.5 V				"	"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				64												2.5 V		5.5 V	"	"
2 Same tests, terminal conditions, and limits as subgroup 1, except T _c = +125°C and V _{1c} tests are omitted. 3 Same tests, terminal conditions, and limits as subgroup 1, except T _c = -55°C and V _{1c} tests are omitted. 7 Func- tional 3014 (a) 66 A A H A A H A A H A A A A A A A A A A A A A H A A H A A A A A H A A H Constrained conditions, and limits as subgroup 1, except T _c = +55°C and V _{1c} tests are omitted. 1 test " 68 B<"		lcc	3005	65	4.5 V	4.5 V	4.5 V		4.5 V	4.5 V				4.5 V	4.5 V		4.5 V	4.5 V	4.5 V	
$ \frac{3}{16} Same tests, terminal conditions, and limits as subgroup 1, except T_{c} = -55°C and V_{1c} tests are omitted. $	2	Same te	ests, termina	al conditions	, and limits	s as subgr	oup 1, exc	ept T _c = +	125°C an	d V _{IC} tests	are omitte	ed.								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3																			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													Н	Α	Α	Н	Α	Α	А	4/
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tc = 25°C																			"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			"					L				"			"	L				"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			"					H			н Н	"	н			н Н				"
Image: Normal and the state of the		<u> </u>	"			В			В			"			В			В	"	"
8 Same tests, terminal conditions, and limits as for subgroup 7, except T _c = +125°C and T _c = -55°C. 9 tPLH2 3003 72 0.0 V IN OUT GND 0.0 V T _c = 25°C Fig. 4 73 2.7 V IN OUT " 0.0 V " " 74 0.0 V IN OUT " IN OUT " " " 74 0.0 V IN OUT " " IN OUT " " " " " 75 2.7 V IN OUT " IN OUT " " " " " 76 2.7 V IN OUT " OUT IN OUT " " " " " " " IN IN <td></td> <td></td> <td>"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1 i</td> <td>"</td> <td>1 i</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>"</td> <td>"</td>			"								1 i	"	1 i						"	"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	8	Same to	ests termina					excent T.			-55°C						,		1	
74 0.0 V IN OUT " IN OUT " IN							sgroup 7,		- +125 C			GND							0.0 V	5.0 V
74 0.0 v IN OUT IN OUT IN IN <t< td=""><td>$T_{\rm C} = 25^{\circ}{\rm C}$</td><td></td><td>Fig. 4</td><td>73</td><td>2.7 V</td><td></td><td>IN</td><td>OUT</td><td></td><td></td><td></td><td>"</td><td></td><td></td><td></td><td></td><td></td><td></td><td>"</td><td>"</td></t<>	$T_{\rm C} = 25^{\circ}{\rm C}$		Fig. 4	73	2.7 V		IN	OUT				"							"	"
76 2.7 V Image: Constraint of the second se			"	74	0.0 V				IN		OUT	"							"	"
" 77 0.0 V " OUT IN OUT IN " OUT IN " " OUT "			"	75	2.7 V					IN	OUT	"	<u> </u>						"	"
			"	76	2.7 V							"	OUT	IN						"
" 78 2.7 V OUT IN "			"	77	0.0 V							"	OUT		IN					"
			"	78	2.7 V							"				OUT	IN			"
" 79 0.0 V " OUT IN "			"	79	0.0 V							"				OUT		IN	"	"

TABLE III. Group A inspection for device type 04.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

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See footnotes at end of table.

MIL-STD- Cases E, F

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Subgroup Sy	Symbol t _{PHL2}	883 method 3003 Fig. 4 "	Case 2 <u>1</u> / Test no. 80 81	2 S 0.0 V	3 I0a IN	4 I1a	5	7	8	9	10	12	13	14	15	17	18	19	20
	t _{PHL2}	Fig. 4 "	80	0.0 V		l1a			·	· '	· '	''	' <u> </u>	·'	· '	''	''	1	
	t _{PHL2}	Fig. 4 "			IN	·	Za	l0b	l1b	Z b	GND	Z d	l1d	l0d	Ζc	l1c	10c	Ē	V _{cc}
「 _C = 25°C		"	81			, _,	OUT	,,	, terrer 1	,,	GND		,,	ıı	17	ı	·	0.0 V	5.0 V
				2.7 V	,	IN	OUT	· [,	, ,	·			ı,	ı — ,	17	1 T	ر	["]	"
			82	0.0 V	,			IN	, t	OUT		· [ı'	1	1				"
		• •	83	2.7 V	,	· [· [,	IN	OUT	"		ı,	ı — ,	17	1 T	ر		"
			84	2.7 V	· · · · · ·	1	1	· [1	· · · · ·	"	OUT	IN	1	1	<u>г</u>	· · · ·		"
	1	1 ⁻ F	85	0.0 V	·	1	1	·	†	· ["	OUT	ſ'	IN	1	T I	<u>г</u>	"	"
1		1 " "	86	2.7 V	· [1	+	†	,		├ ──†	,	1	OUT	IN		"	"
1	ļ	1 " "	87	0.0 V	· '	1	1	+	1	· · · · ·	"	†+	ſ'	(OUT	·	IN		"
	t _{PLH6}	í "†	88	2.7 V	· ['	2.7 V	OUT	·'	1	1 '	"	†+	ſ'	(—)	í′	† †	· · · · ·	IN	"
	ļ	1 - 1	89	"	· '	1	1	+	2.7 V	OUT		†+	ſ'	(1	·	[†		"
	ļ	1 ^{- +}	90	"	├ ── '	├ ──'	<u> </u>	+'	†'	†'		OUT	2.7 V	(í	├ ── '			"
			91	"	· ['	1	1	·'	1	1 '	· · · · · · · · · · · · · · · · · · ·	†+	ſ'	(—)	OUT	2.7 V	· · · · ·		"
-	t _{PHL6}	i " +	92	0.0 V	2.7 V	├ ──'	OUT	+'	†'	('		├ ── †	ſ'	(í	 '			"
			93	"	├ ── '	+	<u> </u>	2.7 V	†'	OUT		├ ── †	((í′	├ ── '	·	["	"
	1	1 " *	94	 "	1'	·'	+	·'	+'	1'	1	OUT	(2.7 V	í′	├ ── '	 	"	"
	1	1 . 1	95		<u> </u>	├ ──'	<u> </u>	'	†'	├ ── '		++	ſ,	(—)	OUT	├ ── '	2.7 V	"	"
<u> </u>	t _{PLH3}	1 ***	96	IN	0.0 V	2.7 V	OUT	+'	+'	1'	"	++	((í′	├ ── '	· · · · ·	0.0 V	"
	ļ		97		├ ── '	├ ──'	<u> </u>	0.0 V	2.7 V	OUT		├ ── †	(,	(í	†			"
	1		98		<u> </u>	├ ──'	<u> </u>	'	†'	├ ── '		OUT	2.7 V	0.0 V	í′	├ ── '	· · · · ·		"
		"	99	"	1	·'	+	·'	+'	1'	"	++	((OUT	2.7 V	0.0 V		"
-	t _{PHL4}	· · · · · · · · · · · · · · · · · · ·	100		2.7 V	0.0 V	OUT	+'	+'	1'	<u>† </u>	++	· · · · ·	+	·'	++	—	· · ·	"
	ļ		101	"	1	'	+	2.7 V	0.0 V	OUT		++	((í	├ ── '	· · · · ·		"
]	1 * *	102	"	1'	'	+	+'	+'	1'	"	OUT	0.0 V	2.7 V	í′	 '	· · · · ·	"	"
1	1	1 - 1	103	"	1'	├ ──	<u> </u>	+	+'	1'	"	++	· · · · ·	(OUT	0.0 V	2.7 V	"	"

TABLE III. Group A inspection for device type 04.Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

 $\underline{1}/~$ For case 2 pins not referenced are N/C. $\underline{2}/~$ I_{IL} limits shall be as follows:

	Min/Max limits in mA for circuit												
Test	А	В	С	D									
I _{IL}	25/60	03/60	03/60	0.0/-0.30									

						10		Jonunio	na (pina	not ucc	signated	i may t	/c nign ∠	2.0 0, 1	$0.0 \ge 0.0$	v, 01 0p	Jong.		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883	Case 2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
		method	<u>1</u> / Test no.	13	12	l1	10	Z	_	_	GND	S2	S1	S0	17	16	15	14	V
			Test no.	13	IZ	11		2	z	QE					17	10	G	14	V _{cc}
1	V _{OL}	3007	1				2.0 V		20 mA	0.8 V	GND	0.8 V	0.8 V	0.8 V					4.5 V
Tc = 25°C		"	2			2.0 V				=	=		0.8 V	2.0 V					
		"	3		2.0 V								2.0 V	0.8 V					
			4	2.0 V									2.0 V	2.0 V				0.01/	
			5									2.0 V	0.8 V 0.8 V	0.8 V 2.0 V			2.0 V	2.0 V	
		"	7										2.0 V	0.8 V		2.0 V	2.0 V		
		"	8									"	2.0 V	2.0 V	2.0 V	2.0 1			"
		"	9				0.8 V	20 mA		"		0.8 V	0.8 V	0.8 V					"
	V _{OH}	3006	10					-3.0 mA		0.8 V		0.8 V	0.8 V	0.8 V					
		"	11				0.8 V		-3.0 mA					0.8 V					
		"	12			0.8 V			"	"			"	2.0 V		1			
		"	13		0.8 V				"	"	-		2.0 V	0.8 V					"
		"	14	0.8 V							-		2.0 V	2.0 V					
		"	15									2.0 V	0.8 V	0.8 V				0.8 V	
			16										0.8 V	2.0 V		0.01/	0.8 V		
			17 18										2.0 V	0.8 V	0.8 V	0.8 V			
	VIC		18	-18 mA									2.0 V	2.0 V	0.8 V				
	VIC		20	-10111A	-18 mA														
			21		10 1121	-18 mA													
			22				-18 mA												"
			23							-18 mA									"
			24									-18 mA							
			24									-10 IIIA	-18 mA						
			26										-10 11/4	-18 mA					"
			27												-18 mA	1			
			28								-					-18 mA			"
			29								-						-18 mA		-
			30								-							-18 mA	
	I _{IH1}	3010	31	2.7 V						4.5 V		4.5 V	0.0 V	0.0 V					5.5 V
			32		2.7 V	0714							0.0 V	4.5 V					
			33 34			2.7 V	2.7 V						4.5 V 4.5 V	0.0 V 4.5 V					
		"	35				2.1 V			2.7 V			4.J V	4.J V					
										2.7 V									
		"	36									2.7 V							
			37										2.7 V	0.7.1/					
			38 39							4.5 V		0.0.1/	0.0 V	2.7 V	271/				
		"	<u> </u>		<u> </u>		-			4.3 V		0.0 V "	0.0 V 0.0 V	0.0 V 4.5 V	2.7 V	2.7 V	<u> </u>	-	
		"	40		<u> </u>								4.5 V	4.5 V 0.0 V		2.1 V	2.7 V		
		"	42	İ			İ					"	4.5 V	4.5 V				2.7 V	
	I _{IH2}	"	43	7.0 V							=	4.5 V	0.0 V	0.0 V		1			"
		"	44		7.0 V						-		0.0 V	4.5 V					
		"	45			7.0 V							4.5 V	0.0 V					
			46				7.0 V			7 0 1 /		"	4.5 V	4.5 V					
			47							7.0 V									
		"	48	İ	1		İ				-	7.0 V		İ		1	1		
		"	49								-		7.0 V						
		"	50											7.0 V					
		"	51								-	0.0 V	0.0 V	0.0 V	7.0 V				"
			52										0.0 V	4.5 V		7.0 V	-		
			53		├ ──								4.5 V	0.0 V		├ ──	7.0 V	7.0 V	
L	<u> </u>		54 of table	I	I	1	L	I	I	l	I	I	4.5 V	4.5 V	l	L	L	7.U V	1

TABLE III. Group A inspection for device type 05.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).MIL-STD-Cases12345678910111213141516

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See footnotes at end of table.

Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	13	12	11	10	Z	z	QE	GND	S2	S1	S0	17	16	15	14	V _{CC}
1	I _{II}	3009	55	0.5 V						0.0 V	GND	0.0 V	4.5 V	4.5 V					5.5 V
Тс = 25°С	·IL	"	56	0.0 1	0.5 V					"	"	"	4.5 V	0.0 V					"
10 - 20 0			57	<u>├</u> ──┤	0.0 ¥	0.5 V							0.0 V	4.5 V					
			58			0.5 V	0.5 V						0.0 V	4.3 V 0.0 V					
			59	├ ────┦			0.5 V			0.5 V			0.0 V	0.0 V					
			59							0.5 V									
			60							0.0 V		0.5 V							
			61										0.5 V						
			62								"			0.5 V					
			63							0.0 V		4.5 V	4.5 V	4.5 V	0.5 V				
			64										4.5 V	0.0 V		0.5 V			
			65							-	-	-	0.0 V	4.5 V			0.5 V		
			66							-	-	-	0.0 V	0.0 V				0.5 V	
	I _{OZH}		67				0.0 V	2.7 V		4.5 V	"	0.0 V	0.0 V	0.0 V					"
			68				4.5 V		2.7 V				-	"					
	I _{OZL}		69	┝───┦			4.5 V	0.5 V											
	'OZL		70				0.0 V	0.0 V	0.5 V	"	"								
					'														
	los	3011	71		'		4.5 V	0.0 V		0.0 V									
		3011	72				0.0 V		0.0 V										
	I _{OD}		73				0.0 V	2.5 V			"	"		"					4.5 V
			74				5.5 V		2.5 V	"	"	-	"	"					4.5 V
			14																
	laa	3005		45 V	45 V	45V	45 V					45 V	45 V	45 V	45 V	45 V	45 V	45 V	55V
	I _{CC}	3005 3005	75	4.5 V 4 5 V	4.5 V 4 5 V	4.5 V 4 5 V	4.5 V 4 5 V			" 45V	-	4.5 V 4 5 V	4.5 V 4.5 V	4.5 V	4.5 V 4 5 V	4.5 V 4 5 V	4.5 V 4 5 V	4.5 V 4.5 V	5.5 V
2	I _{ccz}	3005	75 76	4.5 V	4.5 V	4.5 V	4.5 V	125°C an	d V. a tests	4.5 V	" "	4.5 V 4.5 V	4.5 V 4.5 V	4.5 V 4.5 V	4.5 V 4.5 V	4.5 V 4.5 V	4.5 V 4.5 V	4.5 V 4.5 V	5.5 V 5.5 V
2	I _{CCZ} Same te	3005 ests, termina	75 76 al conditions	4.5 V s, and limits	4.5 V s as subgr	4.5 V oup 1, exc	4.5 V ept T _C = +			are omitte									5.5 V 5.5 V
3	I _{CCZ} Same te Same te	3005 ests, termina ests, termina	75 76 al conditions al conditions	4.5 V s, and limits s, and limits	4.5 V s as subgr s as subgr	4.5 V oup 1, exc oup 1, exc	4.5 V ept T _C = + ept T _C = -	55°C and	V _{IC} tests a	are omitte		4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	5.5 V
3 7	I _{CCZ} Same te Same te Func-	3005 ests, termina	75 76 al conditions al conditions 77	4.5 V s, and limits	4.5 V s as subgr s as subgr B	4.5 V oup 1, exc oup 1, exc B	$4.5 V$ $ept T_C = +$ $ept T_C = -4$			are omitte			4.5 V B	4.5 V B					5.5 V 5.5 V <u>4/</u>
3	I _{CCZ} Same te Same te Func- tional	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78	4.5 V s, and limits s, and limits B "	4.5 V s as subgro s as subgro B B	4.5 V oup 1, exc oup 1, exc B A	4.5 V ept T _C = + ept T _C = -	55°C and H	V _{IC} tests a	are omitte		4.5 V B	4.5 V B B	4.5 V B A	4.5 V B	4.5 V B	4.5 V B	4.5 V B	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79	4.5 V s, and limits s, and limits B "	4.5 V s as subgro s as subgro B B A	4.5 V oup 1, exc oup 1, exc B	$4.5 V$ $ept T_C = +$ $ept T_C = -4$	55°C and H	V _{IC} tests a	are omitte	GND "	4.5 V B	4.5 V B B A	4.5 V B A B	4.5 V B	4.5 V B	4.5 V B	4.5 V B	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80	4.5 V s, and limits s, and limits B " A	4.5 V s as subgro s as subgro B B	4.5 V oup 1, exc oup 1, exc B A	$4.5 V$ $ept T_C = +$ $ept T_C = -4$	55°C and H "	V _{IC} tests a	are omitte	GND "	4.5 V B "	4.5 V B A A	4.5 V B A B A	4.5 V B "	4.5 V B	4.5 V B	4.5 V B "	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81	4.5 V s, and limits s, and limits B "	4.5 V s as subgro s as subgro B B A	4.5 V oup 1, exc oup 1, exc B A	$4.5 V$ $ept T_C = +$ $ept T_C = -4$	55°C and H "	V _{IC} tests a	are omitte	GND " "	4.5 V B	4.5 V B B A A B	4.5 V B A B A B B	4.5 V B "	4.5 V B	4.5 V B "	4.5 V B " " A	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 81 82	4.5 V s, and limits s, and limits B " A	4.5 V s as subgro s as subgro B B A	4.5 V oup 1, exc oup 1, exc B A	$4.5 V$ $ept T_C = +$ $ept T_C = -4$	55°C and H "	V _{IC} tests a	are omitte	GND " "	4.5 V B "	4.5 V B A A B B B	4.5 V B A B A B A	4.5 V B " "	4.5 V B " "	4.5 V B " " A	4.5 V B "	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 81 82 83	4.5 V s, and limits s, and limits " " A B "	4.5 V s as subgro s as subgro B A B B 	4.5 V oup 1, exc oup 1, exc B A B " "	4.5 V ept T _C = + ept T _C = - A B " "	55°C and H " " "	V _{IC} tests a	are omitte	GND " " "	4.5 V B " " A	4.5 V B A A B B A	4.5 V B A B A B A B B	4.5 V	4.5 V B " " " A	4.5 V B " " A B	4.5 V B " " A B	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 81 82 83 84	4.5 V s, and limits s, and limits " " A B " "	4.5 V s as subgro s as subgro B B A B B " "	4.5 V oup 1, exc oup 1, exc B A B " " "	4.5 V ept T _C = + ept T _C = - A B " "	55°C and H " " " " "	V _{1C} tests a	are omitte	GND " " "	4.5 V B " " A " "	4.5 V B A A B B B A A A	4.5 V B A B A B A A A	4.5 V B " "	4.5 V B " " " A B	4.5 V B " " A B B	4.5 V B " A B "	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 81 82 83 83 84 85	4.5 V s, and limits s, and limits B " A B " " " A	4.5 V s as subgro s as subgro B B A B " " " " A	4.5 V oup 1, exc oup 1, exc B A B " " " " " A	4.5 V ept T _C = + ept T _C = - A B " "	55°C and H " " "	V _{IC} tests a	are omitte	GND " " "	4.5 V B " " A	4.5 V B A A B B B A A B B B A B B	4.5 V B A B A B A B A B A B B	4.5 V B " " " " " " " " " " " "	4.5 V B " " " A	4.5 V B " " A B	4.5 V B " " A B	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 82 83 83 84 85 86	4.5 V s, and limits s, and limits " " A B " "	4.5 V s as subgro s as subgro B B A B " " " " A A	4.5 V oup 1, exc oup 1, exc B A B " " " " " A B	4.5 V ept T _C = + ept T _C = - A B " " " "	55°C and H " " " " " " L	V _{1C} tests a	are omitted re omitted " " " " " " "	GND " " " " " " "	4.5 V B " " A " " " " " B	4.5 V B A A B B A A A B B B B B B	4.5 V B A B A B A B A B A A A	4.5 V B " " " " " A	4.5 V B " " " " " A B A	4.5 V B " " A B B	4.5 V B " A B " A	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions 77 78 79 80 81 82 83 83 84 83 84 85 86 87	4.5 V s, and limits s, and limits " A B " " A A " "	4.5 V s as subgr s as subgr B A B " " " A A A B B	4.5 V oup 1, exc oup 1, exc B A B " " " " " A	4.5 V ept T _C = + ept T _C = - A B " " " " " " "	55°C and H " " " " " " L	V _{1C} tests a 	are omitted re omitted " " " " " " "	GND " " " " " " " " " " " "	4.5 V B " " " " " " " " " " " " " "	4.5 V B A A B B A A B B B A	4.5 V B A B A B A B A B A B B A B B	4.5 V B " " " " " A " "	4.5 V B " " " " " A B A	4.5 V B " " A B B	4.5 V B " A B " A	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 83 84 85 86 87 88	4.5 V s, and limits s, and limits " A B " A A " A B " B	4.5 V s as subgro s as subgro B B A B " " " " A A	4.5 V oup 1, exc oup 1, exc B A B " " " " " A B	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " "	55°C and H " " " " " " L "	V _{IC} tests a	are omitted re omitted " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " " A " " A " " " " " " " "	4.5 V B A A B B A A B B A A A	4.5 V B A B A B A B A B A B A B A A	4.5 V B " " " " " A " " " "	4.5 V B " " " A B A " "	4.5 V B " " A B B	4.5 V B " A B " A B " " " "	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 79 80 81 82 83 84 85 84 85 86 87 88 88 88 88 88 88 88 88 88 88 88 88	4.5 V s, and limits s, and limits " A B " A A " A B C A	4.5 V s as subgr s as subgr B A B " " " A A A B B	4.5 V oup 1, exc oup 1, exc B A B " " " " " A B	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitted re omitted " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " " A " " B " "	4.5 V B B A A B B A A B B A A B B A A B B A A B B A A B B A A A B B A A A A B B A A A A A A A A A A A A A	4.5 V B A B A B A B B A B B A B B A B B A B	4.5 V	4.5 V B " " A B A " " " "	4.5 V B " " A B B A " " "	4.5 V B " A B " A " " A "	5.5 V
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 84 85 86 87 88 88 88 89 90	4.5 V s, and limits s, and limits B a a b b c c c c c c c c c c c c c	4.5 V s as subgroups s as subgroups B B A B " " " " A A A B A A B A a "	4.5 V oup 1, exc oup 1, exc B A B " " " " " " A B A " " A B A " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " "	V _{IC} tests a L " " " " " " " " " " " " " " " " "	are omitter re omitter B " " " " " " " " " " " " " " " " "	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.5 V B " " A " " B " " " A "	4.5 V B B A A B B B B B B A A A A A A A A	4.5 V B A B A B A B A B A B B B B B B	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B B B A " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V <u>4/</u> " " " " " " " " " " " " " " " " " " "
3 7	I _{CCZ} Same te Same te Func- tional test	3005 ests, termina ests, termina	75 76 al conditions 77 78 79 80 81 81 83 83 84 83 84 85 86 87 88 88 87 88 89 90 91	4.5 V s, and limits s, and limits " A B " A A " A B C A	4.5 V s as subgro s as subgro B A B A B a A A A A A A B A A	4.5 V oup 1, exc oup 1, exc B A B " " " " A B A B A R A " "	4.5 V ept T _C = + ept T _C = - A " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omittec B " " " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " " A " " " " " A	4.5 V B B A A B B A A B B A A A A A A	4.5 V B A B A B A B A B A B B A B B A	4.5 V	4.5 V B " " A B A " " " "	4.5 V B " " A B A B A " " " " " " "	4.5 V B " " A B " " A " " " B	5.5 V
3 7 Tc = 25°C	I _{ccz} Same te Func- tional test <u>3</u> /	3005 ests, termina ests, termina 3014 " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 86 87 88 86 87 88 89 90 91 92	4.5 V s, and limits s, and limits B A B C A C A C A C C C C C C C C C C C C C	4.5 V s as subgr B B A A B A A A A B A A B A A S B A a S A	4.5 V oup 1, exc oup 1, exc B A B " " " " A B A B A " " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " "	55°C and H " " " " " " L " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " " " " " " "	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.5 V B " " A " " B " " " A "	4.5 V B B A A B B B B B B A A A A A A A A	4.5 V B A B A B A B A B A B B B B B B	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B B B A " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V <u>4/</u> " " " " " " " " " " " " " " " " " " "
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ests, termina 3014 " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 79 80 81 82 83 84 85 84 85 86 87 88 88 89 90 91 92 al conditions	4.5 V s, and limits s, and limits B A B C A C A C A C C C C C C C C C C C C C	4.5 V s as subgr B B A A B A A A A B A A B A A S B A a S A	4.5 V oup 1, exc oup 1, exc B A B " " " " A B A B A " " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " A " B " B " " A " " "	4.5 V B A A B B A B B A A B A A B B A A B B A A B B A A B B A A A B B A A A A B B A A A A B B A A A A A A A A A A B B A A A A A A A A A A A A A	4.5 V B A B A B A B A B A B A B A B A A A A A A A A A A A A A	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B A B A " " " " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V
3 7 Tc = 25°C	I _{ccz} Same te Func- tional test <u>3</u> /	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 86 87 88 86 87 88 88 89 90 91 92 al conditions 93	4.5 V s, and limits s, and limits B A B C A C A C A C C C C C C C C C C C C C	4.5 V s as subgr B B A A B A A A A B A A B A A S B A a S A	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " "	55°C and H " " " " " " L " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " " " " " " "	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4.5 V B " " A " " B " " " A "	4.5 V B B A A B B B B B B A A A B B C.0 V	4.5 V B A B A B B A B B A B B B B B A A A C O V V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B A B A " " " " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V <u>4/</u> " " " " " " " " " " " " " " " " " " "
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ests, termina 3014 " " " " " " " " " " " " " " " " " " "	75 76 al conditions 77 78 79 80 81 82 83 84 85 86 85 86 87 88 88 89 90 91 92 al conditions 93 94	4.5 V s, and limits s, and limits B A B C A C A C A C C C C C C C C C C C C C	4.5 V s as subgr B B A B B B A " " A A A A A S as for su	4.5 V oup 1, exc oup 1, exc B A B " " " " A B A B A " " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " A " B " B " " B " " " A " "	4.5 V B B A A B B A A B B A A A B B A A A B C.0 V 0.0 V	4.5 V B A B A B A B B A B B A B B A A B B A A C O O V 2.7 V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B A B A " " " " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 84 85 86 87 88 86 87 88 89 90 91 92 al conditions 93 94 95	4.5 V s, and limits s, and limits B A B C A C A C A C C A C C C C C C C C C C C C C	4.5 V s as subgr B B A A B A A A A B A A B A A S B A a S A	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B * * * * * * * * * * * * * * * * * *	4.5 V B B A B B A A B B A A B A A B A A B C O V 0.0 V 2.7 V	4.5 V B A B A B A A B B A A B B B A A C O V 2.7 V O.0 V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B A B A " " " " " " "	4.5 V B " A B " A A " " " " " " " " " "	5.5 V
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 79 80 81 82 83 84 85 86 87 88 88 87 88 89 90 91 92 al conditions 93 94 95 96	4.5 V s, and limits s, and limits B A B C A C A C A C C C C C C C C C C C C C	4.5 V s as subgr B B A B B B A " " A A A A A S as for su	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " A " B " B " B " A " A " " 0.0 V " "	4.5 V B B A A B B A A B B A A A B B A A A B B A A A C C V C C V C Z.7 V	4.5 V B A B A B A B A B B A B B A B B A B A B C C V 2.7 V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V B " " A B A B A " " " " " " "	4.5 V	5.5 V
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 86 87 88 88 87 88 88 89 90 91 92 al conditions 93 94 95 96 97	4.5 V s, and limits s, and limits B A B C A C A C A C C A C C C C C C C C C C C C C	4.5 V s as subgr B B A B B B A " " A A A A A S as for su	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B * * * * * * * * * * * * *	4.5 V B B A A B B A A B B A A A B A A A B B A A A A B C C V C C V C C V C C V C C V C C V C C V C C C C C C C C C C C C C	4.5 V B A B A B A B A B A B A B B A B B A A B B A A B C C V C Z.7 V 0.0 V C Z.7 V 0.0 V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V	4.5 V B " A B " A A " " " " " " " " " "	5.5 V
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 86 87 88 87 88 89 90 91 92 91 92 91 92 93 94 95 96 97 98	4.5 V s, and limits s, and limits B A B C A C A C A C C A C C C C C C C C C C C C C	4.5 V s as subgr B B A B B B A " " A A A A A S as for su	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " A " B " B " B " A " C A " " C A " " " " " " " " " " " " "	4.5 V B B A A B B A A B B A A B A A B A A B C C V C O V C C O V C C O V C C O V C C O V C C O V C C O V C C C C C C C C C C C C C	4.5 V B A B A B A A A B A A A B A A A B A A A B A A A B A A A B A A A B A A A B A A A A A B B A A A A A A A A A A A A A	4.5 V	4.5 V	4.5 V B " " A B A B A " " " " " " "	4.5 V	5.5 V
3 7 Tc = 25°C	I _{CCZ} Same te Same te Func- tional test <u>3</u> / Same te	3005 ests, termina ssts, termina " " " " " " " " " " " " " " " " " " "	75 76 al conditions al conditions 77 78 79 80 81 82 83 84 85 86 87 88 88 87 88 88 89 90 91 92 al conditions 93 94 95 96 97	4.5 V s, and limits s, and limits B A B C A C A C A C C A C C C C C C C C C C C C C	4.5 V s as subgr B B A B B B A " " A A A A A S as for su	4.5 V oup 1, exc oup 1, exc B B A B " " " " A B A B A " " " " " " "	4.5 V ept T _C = + ept T _C = - A B " " " " " " " " " " " " " " " " " "	55°C and H " " " " " " " " " " " " " " " " " "	V _{IC} tests a	are omitter re omitter B " " " " " " " " " " " " "	GND " " " " " " " " " " " " "	4.5 V B " A " B " B " B " A " C A " " C A " " " " " " " " " " " " "	4.5 V B B A A B B A A B B A A A B A A A B B A A A A B C C V C C V C C V C C V C C V C C V C C V C C C C C C C C C C C C C	4.5 V B A B A B A B A B A B A B B A B B A A B B A A B C C V C Z.7 V 0.0 V C Z.7 V 0.0 V	4.5 V	4.5 V B " " " " A B A " " " " " B	4.5 V	4.5 V	5.5 V

TABLE III. Group A inspection for device type 05.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

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See footnotes at end of table.

Cases E, F

MIL-STD-

2

1

						Te	erminal o	conditio	ns (pins	s not des	signated	d may be	e high ≥	2.0 V; I	ow ≤ 0.8	V; or op	ben).		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	13	12	l1	10	Z	z	QE	GND	S2	S1	S0	17	16	15	14	V _{cc}
9	t _{PHL1}	3003	101				IN	OUT		0.0 V	GND	0.0 V	0.0 V	0.0 V					5.0 V
Tc = 25°C		Fig. 4	102			IN		-		"		"	0.0 V	2.7 V					"
			103		IN								2.7 V	0.0 V					
			104	IN								"	2.7 V	2.7 V					
			105							"	-	2.7 V	0.0 V	0.0 V				IN	
			106										0.0 V	2.7 V			IN		
			107 108										2.7 V 2.7 V	0.0 V 2.7 V	IN	IN			
	+		108				IN		OUT			0.0 V	0.0 V	0.0 V	IIN				
	t _{PLH2}		110			IN			"	"		0.0 V	0.0 V	2.7 V					
			111		IN								2.7 V	0.0 V					
				INI	IIN														
			112	IN	<u> </u>								2.7 V	2.7 V					
			113									2.7 V	0.0 V	0.0 V				IN	
			114							"			0.0 V	2.7 V			IN		
			115								-	"	2.7 V	0.0 V		IN			
			116							"	-		2.7 V	2.7 V	IN				
	t _{PHL2}		117				IN					0.0 V	0.0 V	0.0 V					
			118			IN				"		"	0.0 V	2.7 V					
			119		IN								2.7 V	0.0 V					"
			120	IN						"			2.7 V	2.7 V					
			121									2.7 V	0.0 V	0.0 V				IN	"
			122							"			0.0 V	2.7 V			IN		"
			123							"			2.7 V	0.0 V		IN			
			124							"			2.7 V	2.7 V	IN				"
	t _{PLH3}		125		l I	2.7 V	0.0 V	OUT		"		0.0 V	0.0 V	IN		1	1	1	
	-		126		2.7 V					"		0.0 V	IN	0.0 V					"
			127				"					IN	0.0 V	0.0 V				2.7 V	
	t _{PHL3}		128		0.01/	0.0 V	2.7 V					0.0 V	0.0 V	IN					
			129		0.0 V							0.0 V	IN	0.0 V				0.0.1/	
	t _{PLH4}		130 131			0.0 V			OUT			IN 0.0 V	0.0 V 0.0 V	0.0 V IN				0.0 V	
	PLH4		131		0.0 V	0.0 V						0.0 V	IN	0.0 V					
					0.0 V									0.0 V 0.0 V				0.01/	L
			133		ļ	0.71/						IN	0.0 V					0.0 V	
	t _{PHL4}		134			2.7 V	0.0 V					0.0 V	0.0 V	IN					
			135		2.7 V		"			"	"	0.0 V	IN	0.0 V					"
			136							"		IN	0.0 V	0.0 V				2.7 V	

TABLE III. Group A inspection for device type 05.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

						10		oonanio		not uo	Signator	a may b	o nign ≞	2.0 0, 1	$0.0 \ge 0.0$	v, or op	ionj.		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	13	12	11	10	Z	z	QE	GND	S2	S1	S0	17	16	15	14	V _{CC}
9	t _{PZH5}	3003	137				2.7 V	OUT		IN	GND	0.0 V	0.0 V	0.0 V					5.0 V
Tc = 25°C	t _{PZH6}	Fig. 4	138				0.0 V		OUT	"	"	"	"	"					"
	t _{PZL5}	"	139				0.0 V	OUT		"	"	"	"	"					"
	t _{PZL6}	"	140				2.7 V		OUT	"	"	"	"	"					"
	t _{PHZ5}	"	141				2.7 V	OUT		"	"	"	"	"					"
	t _{PHZ6}		142				0.0 V		OUT	"	"	"	"	"					"
	t _{PLZ5}	"	143				0.0 V	OUT		"	"	"	"	"					"
	t _{PLZ6}	"	144				2.7 V		OUT	"	"	"	"	"					"
10																			
		ests and terr																	
		$t_{PLH1} = 2.5 t_{O}$			$t_{PLH3} = 3.5$) to 8.5 ns) to 5.5 ns							
		$t_{PLH2} = 2.5 t_{O}$			$t_{PLH4} = 3.5$) to 7.0 ns) to 6.0 ns							
		$t_{PHL1} = 3.5 t_{O}$			$t_{PHL3} = 3.0$				i to 9.0 ns) to 5.5 ns							
		$t_{PHL2} = 1.0 t_{O}$	o 6.0 ns		$t_{PHL4} = 3.2$	to 8.0 ns		$t_{PZL6} = 2.5$	i to 7.5 ns		$t_{PLZ6} = 1.0$) to 5.0 ns							
11	Same te	sts, termina	l conditions	and limits	as for sub	group 10,	except T _C	= -55°C.											
						.													

TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high \ge 2.0 V; low \le 0.8 V; or open).

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 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Min/Max I	limits in mA f	or circuit
Test	А	В	С
I _{IL}	25/60	03/60	03/60

 $\begin{array}{l} \underline{3}/~~A=2.5~V,~B=0.5~V,~~H\geq 1.5~V,~L\leq 1.5~V.\\ \underline{4}/~~Perform~function~sequence~at~V_{CC}$ = 4.5 V and repeat at V_{CC} = 5.5 V.

r		1		· .	-			-	- () -		5			,		,	- /		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	OE	V _{CC}
1	V _{OL}	3007	1	0.8 V	0.8 V	2.0 V	20 mA				GND							0.8 V	4.5 V
Tc = 25°C	VOL	"	2	2.0 V	2.0 V	0.8 V	20 mA				"							0.0 V	ч.5 v "
10 - 25 0			3	0.8 V	2.0 1	0.0 1	201103	0.8 V	2.0 V	20 mA								"	
			4	2.0 V				2.0 V	0.8 V	20 mA								"	
			5	0.8 V				2.0 V	0.0 V	2011/1		20 mA	2.0 V	0.8 V				"	"
			6	2.0 V								20 mA	0.8 V	2.0 V				"	
		"	7	0.8 V											20 mA	2.0 V	0.8 V	"	
		"	8	2.0 V											20 mA	0.8 V	2.0 V	"	"
	V _{OH}	3006	9	0.8 V	2.0 V	0.8 V	-3 mA											"	"
			10	2.0 V	0.8 V	2.0 V	-3 mA				-							"	"
		"	11	0.8 V				2.0 V	0.8 V	-3 mA								"	"
		"	12	2.0 V				0.8 V	2.0 V	-3 mA	-							"	"
		"	13	0.8 V							-	-3 mA	0.8 V	2.0 V				"	"
		"	14	2.0 V							-	-3 mA	2.0 V	0.8 V				"	"
		"	15	0.8 V							-				-3 mA	0.8 V	2.0 V	"	"
		"	16	2.0 V											-3 mA	2.0 V	0.8 V	"	
	VIC		17	-18 mA							-								"
			18		-18 mA						=								"
			19			-18 mA													"
			20					-18 mA											"
			21						-18 mA										
			22										-18 mA						
			23											-18 mA		40			
			24													-18 mA	40		
			25 26														-18 mA	40	
											-							-18 mA	
	I _{IH1}	3010	27	2.7 V														4.5 V	5.5 V
		"	28	4.5 V	2.7 V						-							"	"
		"	29	0.0 V		2.7 V					=							"	
		"	30	4.5 V				2.7 V										"	
		"	31	0.0 V					2.7 V		-							"	"
		"	32	0.0 V									2.7 V					"	
			33	4.5 V										2.7 V					
			34	0.0 V												2.7 V	0714		
			35	4.5 V													2.7 V		
			36															2.7 V	
	I _{IH2}	"	37	7.0 V														4.5 V	
	11.12	"	38	4.5 V	7.0 V													"	"
		"	39	0.0 V		7.0 V												"	
		"	40	4.5 V			1	7.0 V								1	1	"	"
		"	41	0.0 V					7.0 V									"	"
		"	42	0.0 V							-		7.0 V					"	"
1	1	"	43	4.5 V							-			7.0 V				"	"
								1								701/			
		"	44	0.0 V							=					7.0 V			
			44 45 46	0.0 V 4.5 V												7.0 V	7.0 V	" 7.0 V	"

TABLE III. Group A inspection for device type 06. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol		Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
		metriod	Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	OE	V _{cc}
4		0000	47	0514														UL	5.5.1
1	I _{IL1}	3009	47	0.5 V	0.514						GND								5.5 V
Tc = 25°C			48	0.0 V	0.5 V	0.514													
			49	4.5 V		0.5 V		0.5.1/											
			50	0.0 V				0.5 V	0.5.1/										
			51	4.5 V 4.5 V					0.5 V				0.5.1/						
			52 53	4.5 V 0.0 V									0.5 V	0.5 V					
			54	4.5 V										0.5 V		0.5 V			"
			54 55	4.5 V 0.0 V												0.5 V	0.5 V		
			56	0.0 V													0.5 V	0.5 V	
			90															0.5 V	
1	los	3011	57	0.0 V	4.5 V		0.0 V											0.0 V	"
	50	"	58					4.5 V		0.0 V				Ì			Ì		"
		"	59	"								0.0 V		4.5 V					"
1		"	60	"							"			-	0.0 V		4.5 V	"	"
	I _{OD}		61	0.0 V	0.0 V		2.5 V				"							"	4.5 V
			62					0.0 V		2.5 V	-								"
			63								-	2.5 V		0.0 V					"
			64								-				2.5 V		0.0 V		"
	I _{OZH}		65	4.5 V	4.5 V	4.5 V	2.7 V				-							2.0 V	5.5 V
			66	"				4.5 V	4.5 V	2.7 V								"	"
			67	"								2.7 V	4.5 V	4.5 V					"
			68												2.7 V	4.5 V	4.5 V		"
	I _{OZL}		69	0.0 V	0.0 V	4.5 V	0.5 V				=								"
			70					0.0 V	4.5 V	0.5 V	-								"
			71								-	0.5 V	4.5 V	0.0 V					
			72												0.5 V	4.5 V	0.0 V		"
	I _{CCH}	3005	73	4.5 V	0.0 V	4.5 V		0.0 V	4.5 V				4.5 V	0.0 V		4.5 V	0.0 V	0.0 V	"
	ICCL	3005	74	0.0 V	0.0 V	0.0 V		0.0 V	0.0 V				0.0 V	0.0 V		0.0 V	0.0 V	0.0 V	"
	I _{ccz}	3005	75	0.0 V	0.0 V	0.0 V		0.0 V	0.0 V				0.0 V	0.0 V		0.0 V	0.0 V	4.5 V	"
2		ests, termina																	
3		ests, termina					ept T _c = -			re omitteo									
7	Func-	3014	76	Α	А	В	L	Α	В	L	GND	L	В	А	L	В	А	В	<u>4</u> /
Tc = 25°C	tional	"	77	"	В	В	L	В	В	L		L	В	В	L	В	В	"	"
	test	"	78	"	В	А	H	В	Α	Н		Н	A	В	Н	А	В	"	
	<u>3</u> /	"	79	"	A	A	Н	A	A	Н		Н	A	A	Н	A	A	"	
		"	80	В	В	A	L	В	A	L		L	A	В	L	A	В	"	
1		"	81	"	В	В	L	В	В	L		L	В	В	L	В	В	"	
1			82	"	Α	В	Н	A	В	Н		Н	В	A	Н	В	A	"	
	_	"	83		Α	Α	Н	A	A	Н		Н	A	А	Н	A	A	"	
8		ests, termina				bgroup 7,		; = +125°C	; and T _c =	-55°C.				1		1			
9	t _{PLH1}	3003	84	0.0 V	IN		OUT				GND							0.0 V	5.0 V
$T_{C} = 25^{\circ}C$		Fig. 4	85	2.7 V		IN	OUT								ļ				
			86	0.0 V				IN		OUT					ļ			"	
			87	2.7 V					IN	OUT					ļ				
			88	2.7 V								OUT	IN						
			89	0.0 V								OUT		IN					
1			90	2.7 V											OUT	IN			
			91	0.0 V						1		l			OUT		IN	I	

 $\label{eq:table_transform} \begin{array}{l} \mbox{TABLE III.} & \underline{\mbox{Group A inspection for device type 06}}. \\ \mbox{Terminal conditions (pins not designated may be high} \geq 2.0 \ \mbox{V; low} \leq 0.8 \ \mbox{V; or open)}. \end{array}$

ogroup Symbo	MIL-STD-	Cases E, F	1	2									2.0 V; lo					
ogroup Symbo	883	_, ·		2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
	method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	2
		Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Zc	l1c	l0c	OE	V
9 t _{PHL1}	3003	92	0.0 V	IN		OUT				GND							0.0 V	5.0
= 25°C	Fig. 4	93	2.7 V		IN	OUT				"							"	
		94	0.0 V				IN		OUT									
		95	2.7 V					IN	OUT									
		96	2.7 V							"	OUT	IN						
		97	0.0 V								OUT		IN	OUT				_
		98	2.7 V	-										OUT	IN	15.1		-
+		99 100	0.0 V IN	0.0 V	2.7 V	OUT								OUT		IN		-
t _{PLH3}		100	"	0.0 V	2.1 V	001	0.0 V	2.7 V	OUT									-
		101					0.0 V	2.1 V	001		OUT	2.7 V	0.0 V					1
		103	"							"		2 1	0.0 1	OUT	2.7 V	0.0 V		
t _{PHL3}		104	"	2.7 V	0.0 V	OUT												
		105	"				2.7 V	0.0 V	OUT	"							"	
		106									OUT	0.0 V	2.7 V					
		107	"											OUT	0.0 V	2.7 V		
t _{PZH5}		108	0.0 V	2.7 V		OUT											IN	
		109					2.7 V		OUT									
	•	110									OUT		2.7 V					
		111	"											OUT		2.7 V		1
t _{PZL5}	"	112	2.7 V		0.0 V	OUT				"								T
		113						0.0 V	OUT						1			T
		114								"	OUT	0.0 V						t
		115	"											OUT	0.0 V			t
t _{PHZ5}		116			2.7 V	OUT												
		117	"					2.7 V	OUT								"	$\frac{1}{1}$
		118	"							"	OUT	2.7 V					"	+
		119	"											OUT	2.7 V		"	$\frac{1}{1}$
t _{PLZ5}	"	120	0.0 V	0.0 V		OUT											"	$\frac{1}{1}$
		121	"				0.0 V		OUT								"	+
		122	"								OUT		0.0 V				"	+
		123												OUT		0.0 V	"	+

TABLE III. Group A inspection for device type 06.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).34567891011121314

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Mir	n/Max limits i	n mA for circ	uit
Test	A	В	С	D
IIL	25/60	03/60	03/60	0.0/-0.30

 $\underline{3}/~$ A = 2.5 V, B = 0.5 V. ~ H \geq 1.5 V, L \leq 1.5 V. $\underline{4}/~$ Perform function sequence at V_{CC} = 4.5 V and repeat at V_{CC} = 5.5 V.

Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Z d	l1d	l0d	Ζc	l1c	l0c	OE	V _{cc}
1	V _{OL}	3007	1	0.8 V	2.0 V	0.8 V	20 mA				GND							0.8 V	4.5 V
Tc = 25°C		"	2	2.0 V	0.8 V	2.0 V	20 mA											"	
		"	3	0.8 V				2.0 V	0.8 V	20 mA								"	"
		"	4	2.0 V				0.8 V	2.0 V	20 mA								"	"
		"	5	0.8 V								20 mA	0.8 V	2.0 V V				"	"
		"	6	2.0 V								20 mA	2.0 V V	0.8 V				"	
		"	7	0.8 V											20 mA	0.8 V	2.0 V	"	"
		"	8	2.0 V											20 mA	2.0 V	0.8 V	"	"
	V _{OH}	3006	9	0.8 V	0.8 V	2.0 V	-3 mA											"	"
		"	10	2.0 V	2.0 V	0.8 V	-3 mA											"	"
		"	11	0.8 V				0.8 V	2.0 V	-3 mA								"	"
		"	12	2.0 V				2.0 V	0.8 V	-3 mA								"	"
		"	13	0.8 V								-3 mA	2.0 V	0.8 V				"	
		"	14	2.0 V								-3 mA	0.8 V	2.0 V				"	"
		"	15	0.8 V											-3 mA	2.0 V	0.8 V	"	"
		"	16	2.0 V											-3 mA	0.8 V	2.0 V	"	"
	VIC		17	-18 mA															
			18		-18 mA	10 1													
			19 20			-18 mA		-18 mA											
			21						-18 mA										"
			22 23										-18 mA	-18 mA					
			24								"			-101114		-18 mA			
			25														-18 mA		
			26															-18 mA	
	I _{IH1}	3010	27	2.7 V														4.5 V	5.5 V
			28 29	4.5 V 0.0 V	2.7 V	2.7 V													
		"	30	4.5 V		2.7 V		2.7 V										"	
		"	31	0.0 V					2.7 V									"	
			32	0.0 V									2.7 V	0.7.1/					
		"	33 34	4.5 V 0.0 V										2.7 V		2.7 V		"	
		"	35	4.5 V												2.7 V	2.7 V	"	
		"	36															2.7 V	
	I _{IH2}	"	37	7.0 V														4.5 V	
	·IH2	"	38	4.5 V	7.0 V													"	
		"	39	0.0 V		7.0 V												"	
		"	40	4.5 V				7.0 V										"	
		"	41	0.0 V					7.0 V									"	
			42	0.0 V									7.0 V	7.0.1					
			43	4.5 V										7.0 V		701/			
			44 45	0.0 V 4.5 V												7.0 V	7.0 V		
		"	46											1				7.0 V	
Soo	footnot	os at on	d of table	<u> </u>					I		[[I	[L	I		I

TABLE III. Group A inspection for device type 07.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

15

16

43

See footnotes at end of table.

Cases E, F

MIL-STD-

2

1

Number in the second se							Te	erminal of	conditio	ns (pins	not des	signated	l may b	e high \geq	2.0 V; lo	$8.0 \ge wc$	V; or op	ben).		
Image Image <t< td=""><td></td><td></td><td></td><td>Cases E, F</td><td>1</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>15</td><td>16</td></t<>				Cases E, F	1	2													15	16
Image: state in the	Subgroup	Symbol	883 method		2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
Tc = 2°C N <				Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Zd	l1d	l0d	Ζc	l1c	l0c	OE	V _{cc}
Table in the state in the st	1	I _{IL1}	3009	47	0.5 V							GND								5.5 V
Image: state Image: state<	Tc = 25°C			48	0.0 V	0.5 V						"								
Image: state in the state interplane inter							0.5 V					"								
Image: state Image: state<									0.5 V			"								
Image: biase of the section of the sectin of the section of the section o										0.5 V		"		0.51/						
Normal Sect												"		0.5 V	0.5.1/					
Image: Problem information informatinformattec information information information informa												"			0.5 V		05V			
Image: sector												"					0.5 V	0.5 V		"
Image: brain												"							0.5 V	"
Image: Problem information informatinformatteness information information information info		Ios	3011	57	0.0 V	0.0 V	4.5 V	0.0 V				"							0.0 V	"
Image: book Image: book				58	"				0.0 V	4.5 V	0.0 V	"							"	"
Indication Indicat				59	"							"	0.0 V	4.5 V	0.0 V				"	"
Image: Problem information of the state strate st				60	"							"				0.0 V	4.5 V	0.0 V	"	"
Normal Problem Normal		I _{OD}		61		5.5 V		2.5 V				"							"	4.5 V
Image: border				62					5.5 V		2.5 V	"								"
Income Income<					"							"	2.5 V		5.5 V				"	"
Image: book of the sector of the se												"				2.5 V		5.5 V	"	"
Image: Register of the second secon		I _{OZH}				4.5 V	4.5 V	2.7 V				=							2.0 V	5.5 V
Index Index <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>4.5 V</td><td>4.5 V</td><td>2.7 V</td><td>"</td><td></td><td></td><td></td><td></td><td></td><td></td><td>"</td><td>"</td></th<>									4.5 V	4.5 V	2.7 V	"							"	"
Incl. Incl. <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>"</td><td>2.7 V</td><td>4.5 V</td><td>4.5 V</td><td></td><td></td><td></td><td>"</td><td>"</td></th<>												"	2.7 V	4.5 V	4.5 V				"	"
Normal Problem Normal												"				2.7 V	4.5 V	4.5 V	"	"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		I _{OZL}			4.5 V	4.5 V	0.0 V	0.5 V		/		"							"	
Image: branch with the second secon									4.5 V	0.0 V	0.5 V									
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$													0.5 V	0.0 V	4.5 V	0.5.1	0.01/	AEV		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			3005		0.0.1/	0.0.1/	0.0.1/		0.0.1/	0.01/				0.0.1/	0.0.1/	0.5 V			0.0.1/	
Icc 3005 75 0.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.0 V</td> <td></td> <td></td> <td></td> <td></td> <td>"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							0.0 V					"								
2 Same tests, terminal conditions, and limits as subgroup 1, except T _c = +125°C and V _{1C} tests are omitted. 3 Same tests, terminal conditions, and limits as subgroup 1, except T _c = -55°C and V _{1C} tests are omitted. 7 Func- tional 3014 76 B A B L A B L GND L B A L B A L B A/ L B A// L B A// L B A// L B A/// L B A//// L B A///// L B A///// L B A////// L A//////// A//////// A///////// C B A///////// L A/////////// C B///////// C B///////// B////////// C B////////// B////////// A///////////// C B///////////// C B///////////// B////////////// B/////////////// 3// 7//////////////////////////												"								
3 Same tests, terminal conditions, and limits as subgroup 1, except T _c = -55°C and V _{1c} tests are omitted. 7 Func. 3014 76 B A B L A B L GND L B A L B A/ 7 Func. 3014 76 B A B L A B L GND L B A L B A B A/ B A// C B A L B A L B A L B A L B A L B A L B A L B A L B A L B A L C B A L C B A L C B A L C B A L B C B B C C B B C C B B C C B B C C C B	2							ept T _c = +			are omitte	ed.								
7 Func- tional test 3014 76 B A B L A B L GND L B A L B A L B A L B A L B A L B L B A L B A L A L A A L A L C B A L A L A L A A L A A L A A L A A L A A L A A L A A L A A L A A L A A L A L B A L A L B A L B A L B A L B A L B A L B B B <td>-</td> <td>Same te</td> <td>ests, termina</td> <td>al conditions</td> <td>, and limits</td> <td></td> <td>oup 1, exc</td> <td></td> <td></td> <td>V_{IC} tests a</td> <td></td>	-	Same te	ests, termina	al conditions	, and limits		oup 1, exc			V _{IC} tests a										
test " R " B A H B A H " H A B H A B " " " H A B H A B H A B H A B H A B I " " " H A B H A B " " " " H A B H A B " " " B B I " " " B B " " " " B B I " " " B B I " " " B B I " " I		Func-		76		А	В	L	A	В	L	GND				L			В	<u>4</u> /
3/ " B B " B B " " " B B " " " B B " " " B B " " " B B " " " B B " " " B B " " " " B B " " " B B " " " B B " " " " B A " " " B A " " " " B A " " " " B A " " " " B A " " " " B A " " " " B B " " " " B B " " " " " " "	Tc = 25°C		"		"														"	"
10 10<								н		A	н		н			Н				
81 " B B " " " B B " " " B B " " " B B " " " B B " " " B B " " " B B " " " " B B " " " " B B " " " " B B " " " " " B B " " " " B B " " " " " B B " " " " B B " " " " " B B " " " " B B " " " " B B " " " B B " " " B B		<u>3</u> /																		
"82 "B A L B A L "L A B L A B " " "83 "A A L A A L " L A B " " " " L A A " " " " " L A A " " " " L A A L "<					н "															
" 83 " A A L A A L " L A A L A A . " "								1			1		1			1				
								L			L		L							"
	8	Same te	ests, termina	al conditions	, and limits	s as for su	bgroup 7,	except To	; = +125°C	and T _c =	-55°C.									

TABLE III. Group A inspection for device type 07.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

See footnotes at end of table.

						le	erminal	conditic	ons (pins	s not des	signated	i may b	e nign ≥	2.0 V; IC	$0.0 \ge WC$	v; or op	pen).		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	<u>e high ≥</u> 10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	S	l0a	l1a	Za	l0b	l1b	Zb	GND	Z d	l1d	l0d	Ζc	l1c	l0c	OE	V _{CC}
9	t _{PLH2}	3003	84	0.0 V	IN		OUT				GND							0.0 V	5.0 V
_C = 25°C		Fig. 4	85	2.7 V		IN	OUT				"								"
		"	86	0.0 V				IN		OUT	"							"	
		"	87	2.7 V					IN	OUT	"							"	"
		"	88	2.7 V							"	OUT	IN					"	"
		"	89	0.0 V								OUT		IN				"	"
		"	90	2.7 V							"				OUT	IN		"	"
		"	91	0.0 V							"				OUT		IN	"	"
Ī	t _{PHL2}	"	92	0.0 V	IN		OUT				"							"	"
		"	93	2.7 V		IN	OUT				"							"	"
		"	94	0.0 V				IN		OUT	"							"	"
		"	95	2.7 V					IN	OUT	"							"	"
		"	96	2.7 V							"	OUT	IN					"	"
		"	97	0.0 V							"	OUT		IN				"	"
		"	98	2.7 V											OUT	IN		"	"
		"	99	0.0 V							"				OUT		IN	"	"
F	t _{PLH4}	"	100	IN	2.7 V	0.0 V	OUT				"							IN	"
		"	101					2.7 V	0.0 V	OUT	"							"	"
		"	102	"							"	OUT	0.0 V	2.7 V				"	"
		"	103								"				OUT	0.0 V	2.7 V	"	"
	t _{PHL4}	"	104		0.0 V	2.7 V	OUT				"							"	"
		"	105					0.0 V	2.7 V	OUT	"							"	"
		"	106	"							"	OUT	2.7 V	0.0 V		1		"	"
		"	107	"							"				OUT	2.7 V	0.0 V	"	"
-	t _{PZH6}	"	108	0.0 V	0.0 V		OUT				"							"	"
		"	109			1		0.0 V	1	OUT	"					1	1	"	"
		"	110	"							"	OUT		0.0 V			<u> </u>	"	"
		"	111	"							"				OUT		0.0 V	"	"
ŀ	t _{PZL6}	"	112	2.7 V		2.7 V	OUT				"							"	"
			113						2.7 V	OUT	"							"	"
			114	"							"	OUT	2.7 V					"	"
			115					<u> </u>							OUT	2.7 V		"	

TABLE III. Group A inspection for device type 07.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).34567891011121314

See footnotes at end of table.

Cases E, F 3 5 9 10 11 12 13 14 15 16 1 2 4 6 7 8 MIL-STD-883 2 3 4 5 9 10 12 13 14 15 17 18 19 20 Symbol Case 2 7 8 Subgroup method <u>1/</u> l0b GND l0d Test no. S l0a l1a l1b l1d l1c l0c Za Ζb Zd Zc OE V_{CC} 9 3003 116 0.0 V 0.0 V OUT GND IN 5.0 V t_{PHZ6} T_C = 25°C Fig. 4 117 0.0 V OUT OUT 0.0 V 118 . 119 OUT 0.0 V 120 2.7 V 2.7 V OUT t_{PLZ6} 121 2.7 V OUT 122 OUT 2.7 V 2.7 V ... 123 OUT 10 Same tests and terminal conditions as subgroup 9, except $T_c = +125^{\circ}C$ and use limits from table I. 11 Same tests, terminal conditions and limits as for subgroup 10, except T_C = -55°C.

TABLE III. Group A inspection for device type 07. Terminal conditions (pins not designated may be high \ge 2.0 V; low \le 0.8 V; or open).

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Mir	n/Max limits i	n mA for circu	uit
Test	A	В	С	D
I	25/60	03/60	03/60	0.0/-0.30

Subgroup	Symbol	883	Case 2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
ousgioup	0,	method	<u>1/</u>	-	Ŭ		Ũ		°,	Ŭ			10				.0		20
			Test no.	OE a	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	l3b	S0	OE b	V _{CC}
1	V _{OH}	3006	1	0.8 V	0.8 V				2.0 V	-3 mA	GND					1	0.8 V		4.5 V
Tc = 25°C	- 04	"	2	"	0.8 V			2.0 V		"	"						2.0 V		"
			3	"	2.0 V		2.0 V										0.8 V		
			4	"	2.0 V	2.0 V	2.0 1										2.0 V		
			5		0.8 V	2.0 1						-3 mA	2.0 V				0.8 V	0.8 V	
			6		0.8 V							"	2.0 1	2.0 V			2.0 V	"	
			7		2.0 V									2.0 1	2.0 V		0.8 V	"	
			8		2.0 V										2.0 1	2.0 V	2.0 V	"	
. 1	V _{OL}	3007	9	0.8 V	0.8 V				0.8 V	20 mA						2.0 V	0.8 V		
	·OL	"	10	"	0.8 V			0.8 V	0.0 1	"							2.0 V		
			11	"	2.0 V		0.8 V	0.0 1									0.8 V		
			12	"	2.0 V	0.8 V											2.0 V		
			13		0.8 V	0.0 1						20 mA	0.8 V				0.8 V	0.8 V	
			14		0.8 V							"	0.0 1	0.8 V			2.0 V	"	"
		"	15		2.0 V										0.8 V		0.8 V	"	"
		"	16		2.0 V							"				0.8 V	2.0 V	"	
, t	VIC		17	-18 mA															
			18		-18 mA														
			19		-10111A	-18 mA													
			20			10 11/1	-18 mA												
			21				1011/1	-18 mA											
								101103	-18 mA										
			22 23						101101				-18 mA						"
			24											-18 mA					
			25												-18 mA				
			26													-18 mA			
			27														-18 mA		"
			28															-18 mA	
, F	I _{IH1}	3010	29	2.7 V															5.5 V
			00		0714												┟───┤		
			30 31		2.7 V 0.0 V	2.7 V											0.0 V		
			31		0.0 V	2.7 V	2.7 V										4.5 V		
			32		4.5 V		2.7 V	2.7 V									4.5 V 0.0 V		
			33		4.5 V			2.7 V	2.7 V								4.5 V		
			34		"				2.7 V				2.7 V				4.5 V 4.5 V		
			36		"								2.7 V	2.7 V			4.5 V 0.0 V		
			37		0.0 V									2.1 V	2.7 V		4.5 V		
		"	38		0.0 V										2.1 V	2.7 V	4.3 V 0.0 V		
			39		0.0 V											2.1 V	2.7 V		
		"	40														2.7 V	2.7 V	
ŀ	I _{IH2}	"	41	7.0 V							"						╞───┦		
			42		7.0 V												┟────┦		
			42		7.0 V 0.0 V	7.0 V		-								t	0.0 V		
			43		0.0 V	1.0 V	7.0 V										4.5 V		
			44		4.5 V		1.0 V	7.0 V									0.0 V		
			45		v			1.0 V	7.0 V								4.5 V		
		"	40	1	"	1	1	1	7.0 V	1			7.0 V	1		t	4.5 V		
			48		"								1.0 1	7.0 V			0.0 V		-
								1	+			1			7.0.1/	1	<u> </u>		+ .
					00V							1			70V		45V	1	
			49		0.0 V										7.0 V	7 0 V	4.5 V		
			49 50		0.0 V 0.0 V										7.0 V	7.0 V	0.0 V		
			49												7.0 V	7.0 V		7.0 V	"

TABLE III. Group A inspection for device type 08.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

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See footnotes at end of table.

Cases E, F

MIL-STD-

2

1

			Cases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		MIL-STD-	E, F																
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	OE a	S1	13a	l2a	l1a	10a	Za	GND	Zb	l0b	l1b	l2b	l3b	S0	OE b	V _{cc}
1	I _{IL1}	3009	53	0.5 V							GND								5.5 V
Tc = 25°C			54		0.5 V						"								
10 - 20 0			55		4.5 V	0.5 V					"						4.5 V		
			56		4.5 V		0.5 V				"						0.0 V		
			57		0.0 V			0.5 V			"						4.5 V		
			58		"				0.5 V		"						0.0 V		"
			59		=						"		0.5 V				0.0 V		"
			60		=									0.5 V			4.5 V		
			61		4.5 V										0.5 V		0.0 V		
			62		4.5 V						"					0.5 V	4.5 V		
			63								"						0.5 V		
			64															0.5 V	
	Ios	3011	65	0.0 V	0.0 V				4.5 V	0.0 V							0.0 V		
		3011	66		0.0 V						"	0.0 V	4.5 V					0.0 V	
	IOD		67	0.0 V	0.0 V				0.0 V	2.5 V	"						"	0.0 V	4.5 V
			68	0.0 V	0.0 V						"	2.5 V	0.0 V					0.0 V	4.5 V
	I _{OZH}		69	2.0 V	0.0 V				0.0 V	2.7 V	"								5.5 V
			70		0.0 V						"	2.7 V	0.0 V					2.0 V	
	I _{OZL}		71	2.0 V	4.5 V	4.5 V				0.5 V							4.5 V		
		0005	72	0.01/	4.5 V	0.01/	0.01/	0.01/	0.01/			0.5 V	0.01/	0.01/	0.01/	4.5 V	4.5 V	2.0 V	
	I _{CCL}	3005	73	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V				0.0 V						
	I _{CCH}	3005 3005	74 75	0.0 V 4.5 V	0.0 V 0.0 V	4.5 V 0.0 V	0.0 V 0.0 V	0.0 V 0.0 V	4.5 V 0.0 V				4.5 V 0.0 V	0.0 V 0.0 V	0.0 V 0.0 V	4.5 V 0.0 V	0.0 V 0.0 V	0.0 V 4.5 V	
2	I _{CCZ}	ests, termina											0.0 V	4.5 V					
3		ests, termina																	
7	Func-	3014	76	B	B	B B	B	B	B B		GND	L	В	В	В	В	В	В	<u>4</u> /
, Tc = 25°C	tional	"	77	"	"	"	"	B	A	H	"	H	A	B	"	"	В	"	"
10 - 20 0	test		78	"	"	"		B	В	1	"	L	В	B	"	"	A	"	
	3/		79	"	"	"		A	"	H		H	"	A	"		A	"	
	0,		80	"	А	"		B		Ĺ	"	Ľ		B	"	"	B	"	
			81	"	"	"	А	"		Н	"	Н		"	Α	"	В	"	"
			82	"	"	"	В		"	L	"	L	"	"	В	"	A	"	
			83	"	"	A	В	"		Н	"	Н	-	"	В	Α	A	"	"
8	Same te	ests, termina				bgroup 7,	except T _C	= +125°C											
9	t _{PLH1}	3003	84	0.0 V	0.0 V				IN	OUT	GND						0.0 V		5.0 V
$T_C = 25^{\circ}C$		Fig. 4	85	"	0.0 V			IN		-							2.7 V		
			86	"	2.7 V		IN			-							0.0 V		
			87	"	2.7 V	IN					"						2.7 V		
			88		0.0 V							OUT	IN				0.0 V	0.0 V	
			89		0.0 V									IN			2.7 V		<u> </u>
			90		2.7 V										IN		0.0 V		
	+		91	0.0.1/	2.7 V				INI	OUT						IN	2.7 V 0.0 V		
	t _{PHL1}		92 93	0.0 V	0.0 V 0.0 V			IN	IN	OUT							0.0 V 2.7 V		
			93		0.0 V 2.7 V		IN	IIN								<u> </u>	0.0 V		
			94		2.7 V 2.7 V	IN	IIN									+	0.0 V 2.7 V		
			95		0.0 V	IIN						OUT	IN				0.0 V	0.0 V	
			97		0.0 V							"		IN			2.7 V	0.0 V	
			98		2.7 V										IN		0.0 V	"	
			99		2.7 V						"					IN	2.7 V	"	
			33		2.1 V												2.1 V		<u> </u>

TABLE III. Group A inspection for device type 08 - Continued. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).

3 9 10 11 12 13 14 15 16 Cases E, F 2 4 5 8 6 7 MIL-STD-883 method Subgroup Symbol Case 2 2 3 4 5 7 8 9 10 12 13 14 15 17 18 19 20 1/ Test no. S1 l3a l2a l1a l0a Za GND Zb l0b l1b l2b I3b **S**0 V_{CC} OE a OE b OUT 0.0 V 0.0 V 2.7 V GND 9 3003 100 0.0 V 0.0 V IN 5.0 V t_{PLH3} OUT 0.0 V 27V 0.0 V T_C = 25°C Fig. 4 101 IN 2.7 V OUT ... 102 0.0 V IN 0.0 V 0.0 V . 103 IN OUT 0.0 V 2.7 V 0.0 V 0.0 V 104 0.0 V OUT t_{PHL3} 0.0 V 0.0 V 2.7 V IN " ... 105 0.0 V OUT 2.7 V 0.0 V IN 0.0 V 106 0.0 V IN 0.0 V 2.7 V OUT 0.0 V OUT 2.7 V 0.0 V 0.0 V 107 108 IN 2.7 V 0.0 V 2.7 V IN 2.7 V OUT t_{PZH5} . 109 2.7 V OUT 2.7 V 2.7 V IN 110 IN 0.0 V 0.0 V OUT 0.0 V t_{PZL5} 0.0 V 0.0 V 111 OUT 0.0 V IN 112 IN 2.7 V 2.7 V OUT 2.7 V t_{PHZ5} 113 2.7 V OUT 2.7 V 2.7 V IN 0.0 V 0.0 V 114 0.0 V OUT t_{PLZ5} IN IN 115 0.0 V OUT 0.0 V 0.0 V 10 $t_{PHZ5} = 2.0 \text{ to } 6.5 \text{ ns}$ t_{PLZ5} = 2.0 to 8.0 ns 11 Same tests, terminal conditions and limits as for subgroup 10, except $T_c = -55^{\circ}C$.

TABLE III. Group A inspection for device type 08 - Continued. Terminal conditions (pins not designated may be high \ge 2.0 V; low \le 0.8 V; or open).

1/ For case 2 pins not referenced are N/C.

 $\overline{2}$ / I_{IL} limits shall be as follows:

	Mir	n/Max limits i	n mA for circu	uit
Test	А	В	С	D
I _{IL}	25/60	03/60	03/60	0.0/-0.30

 $\underline{3}/~A$ = 2.5 V, B = 0.5 V. $~H \ge 1.5$ V, L ≤ 1.5 V. $\underline{4}/~$ Perform function sequence at V_{CC} = 4.5 V and repeat at V_{CC} = 5.5 V.

						Te	erminal	conditio	ns (pins	s not des	signated	d may b	e high ≥	2.0 V; lo	$8.0 \ge wc$	V; or op	en).		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	Ēa	S1	l3a	l2a	l1a	l0a	Za	GND	Ζb	l0b	l1b	l2b	l3b	S0	Ēb	V _{CC}
1	V _{OH}	3006	1	2.0 V						-1 mA	GND	2.5							4.5 V
Tc = 25°C			2	0.8 V	0.8 V				0.8 V	"							0.8 V		
10 = 25 0			3	"	0.8 V			0.8 V	0.0 V	"							2.0 V		
		"	4	"	2.0 V		0.8 V	0.0 1		"	"						0.8 V		
		"	5	"	2.0 V	0.8 V				"							2.0 V		"
		"	6									-1 mA						2.0 V	
		"	7		0.8 V						-	"	0.8 V				0.8 V	0.8 V	"
		"	8		0.8 V							"		0.8 V			2.0 V	"	
			9		2.0 V										0.8 V		0.8 V	"	
	V		10	0.0.1/	2.0 V				2.0.1/	20 4		"				0.8 V	2.0 V		
	V _{OL}	3007	11	0.8 V	0.8 V				2.0 V	20 mA							0.8 V		
		"	12	"	0.8 V			2.0 V		"							2.0 V		
			13		2.0 V	201/	2.0 V										0.8 V		
			14 15		2.0 V 0.8 V	2.0 V				-		20 mA	2.0 V				2.0 V 0.8 V	0.8 V	
												201114	2.0 V					0.0 V	
			16		0.8 V						-			2.0 V	0.01/		2.0 V		
			17 18		2.0 V 2.0 V										2.0 V	2.0 V	0.8 V 2.0 V		
	VIC		10	-18 mA	2.0 V	1	1	1			"					2.0 V	2.0 V		
	.10				40														
			20 21		-18 mA	-18 mA	-	-						-					
			22			-10 11/4	-18 mA	1			"								
			23					-18 mA											"
			24						-18 mA										
			25										-18 mA						
			26 27											-18 mA	-18 mA				
			28			1	1	1			"				-10111A	-18 mA			
			29														-18 mA		"
			30															-18 mA	"
	I _{IH1}	3010	31	2.7 V															5.5 V
			32		2.7 V														"
		"	33	4.5 V	0.0 V	2.7 V				1						1	0.0 V		"
		"	34	"	0.0 V		2.7 V										4.5 V		
			35		4.5 V	<u> </u>	<u> </u>	2.7 V	071								0.0 V		
			36 37						2.7 V				2.7 V				4.5 V 4.5 V	4.5 V	
			37		"								2.1 V	2.7 V			4.5 V 0.0 V	4.3 V "	
		"	39		0.0 V						"				2.7 V		4.5 V	"	"
		"	40		0.0 V						-					2.7 V	0.0 V	"	"
			41														2.7 V		
	L		42	7.011														2.7 V	
	I _{IH2}		43	7.0 V	7.011														
			44 45	4.5 V	7.0 V 0.0 V	7.0 V											0.0 V		
			45	4.3 V	0.0 V 0.0 V	7.0 V	7.0 V			-						1	0.0 V 4.5 V		
1	1		40	"	4.5 V	<u> </u>		7.0 V		1		1		1		1	0.0 V		
			47		4.3 V			7.0 V									0.0 V		

TABLE III. Group A inspection for device type 09.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).2345678910111213141516

See footnotes at end of table.

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		MIL-STD-	E, F																
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	Ēa	S1	l3a	l2a	l1a	l0a	Za	GND	Ζb	l0b	l1b	l2b	l3b	S0	Ēb	V _{cc}
1	I _{IH2}	3010	49		4.5 V						GND		7.0 V				4.5 V	4.5 V	5.5 V
Tc = 25°C	11.12		50		4.5 V						"			7.0 V			0.0 V		
10 = 25 0			51		0.0 V									1.0 V	7.0 V		4.5 V		
			52		0.0 V										7.0 V	7.0 V	0.0 V		
					0.0 V											7.0 V	7.0 V		
			53														7.0 V	7.0.1/	
			54															7.0 V	
	I _{IL1}	3009	55	0.5 V															
			56		0.5 V														
			57	0.0 V	4.5 V	0.5 V											4.5 V		
			58		4.5 V		0.5 V										0.0 V	1	
			59		0.0 V			0.5 V									4.5 V		
			60						0.5 V								0.0 V		
			61						0.0 1				0.5 V				0.0 V	0.0 V	
1	1		62										0.0 v	0.5 V			4.5 V	0.0 v	
1	1		63		4.5 V									0.3 V	0.5 V		4.5 V 0.0 V		
1	1		64		4.5 V 4.5 V										0.3 V	0.5 V	0.0 V 4.5 V		
					4.5 V											0.5 V			
			65														0.5 V	0.5.1/	-
			66															0.5 V	
	Ios	3011	67	0.0 V	0.0 V				0.0 V	0.0 V							0.0 V		
		3011	68		0.0 V							0.0 V	0.0 V				0.0 V	0.0 V	"
	I _{OD}		69	0.0 V	0.0 V				5.5 V	2.5 V							0.0 V		4.5 V
			70		0.0 V							2.5 V	5.5 V				0.0 V	0.0 V	4.5 V
	I _{CCH}	3005	71	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	-			0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	5.5 V
	ICCL	3005	72	0.0 V	0.0 V	4.5 V	4.5 V	4.5 V	4.5 V				4.5 V	4.5 V	4.5 V	4.5 V	0.0 V	0.0 V	5.5 V
2	Same te	ests, termina	al conditions	s, and limits	s as subg	oup 1, exc	cept T _C = +	-125°C an	d Vic tests	are omitte	ed.								
3		ests, termina																	
7	Func-	3014	73	A	A	A	A	A	A	Н	GND	Н	A	Α	Α	Α	A	А	4/
Tc = 25°C	tional		74	В	В	"	"	A	В	н	"	H	В	A	"	"	B	В	
10 = 25 0	test		75	"	"			A	A	1		L	A	A		"	B	=	
			75					B	А "	H		H	- A 	B		"	A		
	<u>3</u> /		76					A				L	"			"	A		
							В	A		L			"	A "	P				
			78		A					H.		H			B		B		
			79				A			L		L			A		В		
1		-	80			B	A			H.		H			A	B	A		<u> </u>
			81			A	A			L		L			A	A	A		<u> </u>
1			82	A	В	В	В	В	В	Н		Н	В	В	В	В	В	A	
1			83	В	"		"		В	H	-	Н	В			"	В	В	"
1	1		84					"	A	L		L	A			"	В		
1			85			"	"	"	В	Н		Н	В			"	A		
1			86	"		"	-	А	-	L	-	L	В	Α	-	"	A	"	"
1			87		A	"	"	В		Н		Н	"	В		"	В	"	
1			88	"			Α			L	"	L	"		Α	"	В	"	"
1	1		89	"	"	"	В	"	"	Н	"	н	"	"	В	"	A	"	"
1			90			Α	B	"		L		L	"		B	Α	A		"
8	Same to	ests, termina		and limite	s as for e			= +125°€	and T_{α} –	-55°C							<u> </u>		
9	t _{PLH2}	3003	91	0.0 V	2.7 V	IN		1 120 C		OUT	GND						2.7 V		5.0 V
T _C = 25°C		Fig. 3	92		2.7 V		IN										0.0 V		"
		" "	93		0.0 V			IN									2.7 V		
																		J	
1																			
		" tes at en	94		0.0 V				IN		"						0.0 V		

TABLE III. Group A inspection for device type 09- Continued.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

15

16

Cases E, F

MIL-STD-

2

1

		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup S	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	Ēa	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	I3b	S0	Ēb	V _{CC}
9	t _{PLH2}	3003	95		0.0 V							OUT	IN				0.0 V	0.0 V	5.0 V
_C = 25°C		Fig. 4	96		0.0 V							"		IN			2.7 V	"	"
			97		2.7 V										IN		0.0 V	"	"
			98		2.7 V							"				IN	2.7 V	"	"
	t _{PHL2}		99	0.0 V	2.7 V	IN				OUT							2.7 V		"
			100		2.7 V		IN										0.0 V		"
			101		0.0 V			IN									2.7 V		"
			102						IN								0.0 V		"
			103									OUT	IN				0.0 V	0.0 V	"
			104											IN			2.7 V	"	"
			105		2.7 V							"			IN		0.0 V	"	"
			106		2.7 V							"				IN	2.7 V	"	"
Ē	t _{PLH4}		107	0.0 V	2.7 V	2.7 V	0.0 V			OUT							IN		"
			108		2.7 V							OUT			0.0 V	2.7 V	IN	0.0 V	"
			109	0.0 V	IN	0.0 V		2.7 V		OUT							2.7 V		"
			110		IN							OUT		2.7 V		0.0 V	2.7 V	0.0 V	"
	t _{PHL4}		111	0.0 V	0.0 V			2.7 V	0.0 V	OUT							IN		"
			112		0.0 V							OUT	0.0 V	2.7 V			IN	0.0 V	"
			113	0.0 V	IN		2.7 V		0.0 V	OUT							0.0 V		"
			114		IN							OUT	0.0 V		2.7 V		0.0 V	0.0 V	"
	t _{PLH6}		115	IN	0.0 V				2.7 V	OUT							0.0 V		"
			116		"							OUT	2.7 V					IN	"
	t _{PHL6}		117	IN					2.7 V	OUT									"
			118		"							OUT	2.7 V					IN	

TABLE III. <u>Group A inspection for device type 09</u> - Continued. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Min/Max	limits in mA	for circuit
Test	А	В	С
I	25/60	03/60	03/60

 $\underline{3}/~$ A = 2.5 V, B = 0.5 V. ~ H \geq 1.5 V, L \leq 1.5 V. $\underline{4}/~$ Perform function sequence at V_{CC} = 4.5 V and repeat at V_{CC} = 5.5 V.

						Te	erminal	conditio	ns (pins	s not des	signated	d may b	e high ≥	2.0 V; lo	$0.0 \ge wc$	V; or op	en).		
		MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	OE a	S1	l3a	l2a	l1a	l0a	Za	GND	Z b	l0b	l1b	l2b	l3b	S0	OE b	V _{cc}
1	V _{OH}	3006	1	0.8 V	0.8 V				0.8 V	-3 mA	GND						0.8 V		4.5 V
Tc = 25°C			2	"	0.8 V			0.8 V									2.0 V		"
			3	"	2.0 V		0.8 V			"							0.8 V		"
			4	"	2.0 V	0.8 V											2.0 V		
			5		0.8 V							-3 mA	0.8 V				0.8 V	0.8 V	"
			6		0.8 V						"	"		0.8 V			2.0 V	"	"
			7		2.0 V										0.8 V		0.8 V	"	"
			8		2.0 V											0.8 V	2.0 V	"	
	V _{OL}	3007	9	0.8 V	0.8 V				2.0 V	20 mA							0.8 V		"
			10		0.8 V			2.0 V									2.0 V		
			10	"	2.0 V		2.0 V	2.0 V									0.8 V		
			12	"	2.0 V	2.0 V	2.0 V										2.0 V		
			13		0.8 V	2.0 V						20 mA	2.0 V				0.8 V	0.8 V	"
			14		0.8 V									2.0 V			2.0 V	"	
			14		2.0 V									2.0 V	2.0 V		2.0 V 0.8 V		
			16		2.0 V										2.0 V	2.0 V	2.0 V	"	
	VIC		17	-18 mA	2.0 1											2.0 1	2.0 V		
			18		-18 mA														
			18		-18 MA	-18 mA													
			20			-10 IIIA	-18 mA												
			20				-1011/4	-18 mA											
			22					-101114	-18 mA										
			23						10 1101				-18 mA						
			24										10 110 1	-18 mA					
			25												-18 mA				
			26													-18 mA			"
			27														-18 mA		
			28															-18 mA	
	I _{IH1}	3010	29	2.7 V															5.5 V
			30		2.7 V														
1			30	4.5 V	0.0 V	2.7 V	1			-						-	0.0 V		
1			32	4.5 V	0.0 V	2.1 V	2.7 V	t		1						1	4.5 V		
		"	33	"	4.5 V			2.7 V									0.0 V		
		"	34	"	"	1	1	1	2.7 V	1		1				1	4.5 V		"
1		"	35		"	1	1			Ì			2.7 V			Ì	4.5 V	4.5 V	"
		"	36		"									2.7 V			0.0 V	"	
		"	37		0.0 V										2.7 V		4.5 V	"	
1		"	38		0.0 V											2.7 V	0.0 V	-	
1			39														2.7 V		
		"	40															2.7 V	
	I _{IH2}	"	41	7.0 V							"								"
		"	42		7.0 V														
1		"	43	4.5 V	0.0 V	7.0 V		1									0.0 V		"
1		"	44	"	0.0 V		7.0 V	1		1		1				İ	4.5 V		"
	1			"		I		7.0 V		1				1		I	0.0 V		
			45 46		4.5 V 4.5 V			7.0 V	7.0 V								4.5 V		

TABLE III. Group A inspection for device type 10.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

			,																
Subgroup	Symbol	883 method	Case 2 <u>1</u> /	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
			Test no.	OE a	S1	l3a	l2a	l1a	l0a	Z a	GND	Z b	l0b	l1b	l2b	l3b	S0	OE b	V _{cc}
1	I _{IH2}	3010	47		4.5 V						GND		7.0 V				4.5 V	4.5 V	5.5 V
Tc = 25°C			48		4.5 V						"			7.0 V			0.0 V		"
			49		0.0 V						"				7.0 V		4.5 V		"
			50		0.0 V						"					7.0 V	0.0 V		
			51								"						7.0 V		"
			52								"							7.0 V	"
	IIL	3009	53	0.5 V							"								"
			54		0.5 V						"								
			55	0.0 V	4.5 V	0.5 V											4.5 V		
			56	"	4.5 V	0.0 V	0.5 V				"						0.0 V		
			57		0.0 V		0.0 1	0.5 V									4.5 V		
			58		"			0.0 V	0.5 V								0.0 V		
			59						0.5 V				0.5 V				0.0 V	0.0 V	
			60										0.0 v	0.5 V			4.5 V	0.0 V	
			61		4.5 V					-				0.5 V	0.5 V		4.5 V 0.0 V		
			62		4.5 V										0.5 V	0.5 V	4.5 V		
			63		7.0 V											0.0 V	4.5 V		
			64								"						0.0 V	0.5 V	"
	I _{OZH}		65	2.0 V	0.0 V				2.0 V	2.7 V	"						0.0 V		"
			66		"						"	2.7 V	2.0 V				"	2.0 V	"
	I _{OZL}		67	2.0 V	"				0.8 V	0.5 V	"								
			68		-						"	0.5 V	0.8 V				"	2.0 V	"
	I _{os}		69	0.0 V	0.0 V				0.0 V	0.0 V	"								
			70		0.0 V						"	0.0 V	0.0 V					0.0 V	
1	I _{OD}		71	0.0 V	0.0 V				5.5 V	2.5 V	"						"		4.5 V
			72		0.0 V						"	2.5 V	5.5 V				"	0.0 V	4.5 V
	I _{CCH}		73	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V		"		0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	5.5 V
	ICCL		74	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	4.5 V				4.5 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	
	I _{CCZ}		75	4.5 V	0.0 V	0.0 V	0.0 V	0.0 V	0.0 V				0.0 V	0.0 V	0.0 V	0.0 V	0.0 V	4.5 V	
2			al conditions																
3			al conditions																
7	Func-	3014	76	В	В	В	В	В	В	Н	GND	Н	В	В	В	В	В	В	<u>4</u> /
Tc = 25°C	tional		77					В	A	L		L	A	В	-	"	В	"	
	test		78					В	В	Н		Н	В	В		"	Α		
	<u>3</u> /		79					А		L		L		А	-	"	Α		
			80		А			В		Н	"	Н		В		"	В	"	
			81				Α			L		L			A	"	В		
			82	-			В	-		Н	-	Н			В	-	Α		
			83			А	В		"	L		L			В	Α	Α	"	
			84		В		Α	A	"	Н	"	Н	-	A	А	В	В	"	
			85		-	-	-	А	А	L	"	L	А	A		"	В	"	
			86		-	-	-	В	"	Н	"	Н	-	В		"	Α	"	
			87	"	"	"	"	A	"	L	"	L	"	A	"	"	Α	"	"
			88	"	А		В	"	"	Н	"	Н	"	"	В	"	В	"	
			89	"			Α	"		L		L			A	"	В	"	
			90	"		В	Α	"	"	Н	"	Н	"	"	А	В	А	"	
8	Somet	"	91	"	"	A A	A avaant T	- 140500		L	"	L	"		A	A	A	"	"
0	Same te	sis, iermin	al conditions	, and iimit	s as ioi su	ngroup 7,	except Ic	; = +125°C	anu i _c =	-05-0.									

TABLE III. Group A inspection for device type 10- Continued.Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.8 V; or open).4567891011121314

4

See footnotes at end of table.

MIL-STD- Cases E, F

MLST Lase 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Sugrov N Mass Gase 2 2 3 4 5 7 8 9 10 12 13 14 15 17 8 9 10 12 13 14 15 17 23 14 15 17 18 19 20 Tor< 700 900 900 900 27 10<				0		0	0	4	-	0	-	0	<u> </u>	40	44	40	40	4.4	45	40
nethed $\frac{1}{10}$ $ -$ <th< td=""><td></td><td></td><td></td><td>Cases E, F</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></th<>				Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
9 100 92 0.00 2.7V IN IN 000 0.00	Subgroup	Symbol			2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20
TG = 25°C Fig. 4 93 - 27V IN				Test no.	OE a	S1	l3a	l2a	l1a	l0a	Za	GND	Zb	l0b	l1b	l2b	I3b	S0	OE b	V _{CC}
Image: base in the second se	9	t _{PLH2}	3003	92	0.0 V	2.7 V	IN				OUT	GND						2.7 V		5.0 V
Image: Problem 95 *	$T_{\rm C} = 25^{\circ}{\rm C}$		Fig. 4	93		2.7 V		IN			"							0.0 V		"
Image: base of the sector of the se				94		0.0 V			IN		"							2.7 V		"
Image: Problem of the second				95						IN	"							0.0 V		"
Image: Problem 98 2.7V Image: Problem 1m Image: Problem Image: Pr				96									OUT	IN				0.0 V	0.0 V	"
Image 99 2.7V Image Image <thimage< th=""> <thimage< th=""> Image</thimage<></thimage<>				97									"		IN			2.7 V		"
Image: book of the second se				98		2.7 V							"			IN		0.0 V		"
$ \left \begin{array}{c c c c c c c c c c c c c c c c c c c $				99		2.7 V							"				IN	2.7 V		"
Image: head of the second se		t _{PHL2}	"	100	0.0 V	2.7 V	IN				OUT							2.7 V		"
Image: Normal relation Image: Normal relation<				101		2.7 V		IN										0.0 V		"
Image: Normal base in the image: Normal based: Normal base in the image: Normal base in the image:				102		0.0 V			IN		"							2.7 V		"
Image: Problem of the state of the				103						IN								0.0 V		"
Image: Normal system 106 2.7 V Image: Normal system Ima				104									OUT	IN				0.0 V	0.0 V	"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				105									"		IN			2.7 V		"
tplh4 108 0.0 V 2.7 V 2.7 V 0.0 V 0				106		2.7 V							"			IN		0.0 V		"
Image: Normal state Image: Normal state				107		2.7 V							"				IN	2.7 V		"
Image: Normal system Image: No		t _{PLH4}		108	0.0 V	2.7 V	2.7 V	0.0 V			OUT							IN		"
Image: Normal and the state of the				109		2.7 V							OUT			0.0 V	2.7 V	IN	0.0 V	"
tend 111 IN IN <thin< th=""> IN I</thin<>				110	0.0 V	IN	0.0 V		2.7 V		OUT							2.7 V		"
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				111									OUT		2.7 V		0.0 V	2.7 V	0.0 V	"
Image: Normal system Image: No		t _{PHL4}		112	0.0 V	0.0 V			2.7 V	0.0 V	OUT							IN		"
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				113		0.0 V						"	OUT	0.0 V	2.7 V			IN	0.0 V	"
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $					0.0 V			2.7 V		0.0 V	OUT	"						0.0 V		"
" 117 " " OUT 2.7 V " IN " IpHZ6 " 118 IN " 0.0 V OUT " I				115		IN						"	OUT	0.0 V		2.7 V		"	0.0 V	"
tpHZ6 * 118 IN * 0.0 V OUT *		t _{PLZ6}		116	IN	0.0 V				2.7 V	OUT							"		"
				117		"						"	OUT	2.7 V				"	IN	
" 119 " IN "		t _{PHZ6}	"	118	IN	"				0.0 V	OUT	"						"		"
			"	119		"						"	OUT	0.0 V				"	IN	"

TABLE III. <u>Group A inspection for device type 10</u> - Continued. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.8 V; or open).

 $\label{eq:table_transform} \begin{array}{l} \mbox{TABLE III.} & \underline{\mbox{Group A inspection for device type 10}} \mbox{-} \mbox{Continued.} \\ \mbox{Terminal conditions (pins not designated may be high} \geq 2.0 \ \mbox{V; low} \leq 0.8 \ \mbox{V; or open).} \end{array}$

	۱ I	MIL-STD-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Subgroup	Symbol	l 883 method	Case 2 <u>1/</u>	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		
	!		Test no.	OE a	S1	l3a	l2a	l1a	l0a	Za	GND	Z b	l0b	l1b	l2b	l3b	S0	OE b	V _{CC}		
9	t _{PZL6}	3003	120	IN	0.0 V			ι – I	2.7 V	OUT	GND	Τī	<u> </u>	ι – I	ر	Π,	0.0 V	т <u> </u>	5.0 V		
$T_{C} = 25^{\circ}C$	۱ I	Fig. 4	121	۱	"	†	t	ι <u> </u>	†	۱	<u>"</u>	OUT	2.7 V	ι <u> </u>	ا 	†	"	IN	"		
	t _{PZH6}	"	122	IN	† "	†i	ا ا	ا ا	0.0 V	OUT	† "	† i	t	ا ا	ا ا	†,	"	<u>ا</u> ــــــــــــــــــــــــــــــــــــ	"		
	!		123	<u>ا</u> ا	<u>ا " ا</u>	†ι	ا ا	ا ا	†ι	<u>ا</u> ا	ا " ا	OUT	0.0 V	ا ا	۱ <u> </u>	†,	"	IN	"		
10	Same tests and terminal conditions as subgroup 9, except $T_c = +125^{\circ}C$ and for the following limits. $t_{PLH2} = 1.5$ to 9.0 ns $t_{PHL2} = 1.5$ to 7.5 ns $t_{PL26} = 2.0$ to 8.5 ns $t_{P2L6} = 3.5$ to 15.5 ns $t_{PLH4} = 4.0$ to 16.0 ns $t_{PHL4} = 4.0$ to 14.0 ns $t_{PH26} = 2.0$ to 6.5 ns $t_{P2H6} = 3.0$ to 11.0 ns																				
11 5	Same tes	sts, terminal	I conditions	and limits	as for sub	group 10, u	except T _C	= -55°C.			Same tests, terminal conditions and limits as for subgroup 10, except T_{c} = -55°C.										

 $\underline{1}/$ For case 2 pins not referenced are N/C. $\underline{2}/$ I_{IL} limits shall be as follows:

	Min/Max	limits in mA	for circuit
Test	А	В	С
١ _{١L}	25/60	03/60	03/60

 $\underline{3}/~$ A = 2.5 V, B = 0.5 V. ~ H \geq 1.5 V, L \leq 1.5 V. $\underline{4}/~$ Perform function sequence at V_{CC} = 4.5 V and repeat at V_{CC} = 5.5 V.

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5. PACKAGING

5.1 <u>Packaging requirements.</u> For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Service or Defense Agency, or within the military service's system command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

6.1 <u>Intended use.</u> Microcircuits conforming to this specification are intended for original equipment design applications and logistic support of existing equipment.

- 6.2 <u>Acquisition requirements.</u> Acquisition documents should specify the following:
 - a. Title, number, and date of the specification.
 - b. PIN and compliance identifier, if applicable (see 1.2).
 - c. Requirements for delivery of one copy of the conformance inspection data pertinent to the device inspection lot to be supplied with each shipment by the device manufacturer, if applicable.
 - d. Requirements for certificate of compliance, if applicable.
 - e. Requirements for notification of change of product or process to contracting activity in addition to notification to the qualifying activity, if applicable.
 - f. Requirements for failure analysis (including required test condition of method 5003 of MIL-STD-883), corrective action, and reporting of results, if applicable.
 - g. Requirements for product assurance options.
 - Requirements for special carriers, lead lengths, or lead forming, if applicable. These requirements should not affect the part number. Unless otherwise specified, these requirements will not apply to direct purchase by or direct shipment to the Government.
 - i. Requirements for "JAN" marking.
 - j. Packaging requirements (see 5.1).

6.3 <u>Superseding information</u>. The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.

6.4 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DLA Land and Maritime-VQ, P.O. Box, Columbus, Ohio 43218-3990.

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6.5 <u>Abbreviations, symbols, and definitions.</u> The abbreviations, symbols, and definitions used herein are defined in MIL-PRF-38535, MIL-HDBK-1331, and as follows:

GND	Ground zero voltage potential
I _{IN}	Current flowing into an input terminal
V _{IN}	Voltage level at an input terminal

6.6 <u>Logistic support</u>. Lead materials and finishes (see 3.4) are interchangeable. Unless otherwise specified, microcircuits acquired for Government logistic support will be acquired to device class B (see 1.2.2), lead material and finish A (see 3.4). Longer length leads and lead forming should not affect the part number.

6.7 <u>Substitutability.</u> The cross-reference information below is presented for the convenience of users. Microcircuits covered by this specification will functionally replace the listed generic-industry type. Generic-industry microcircuit types may not have equivalent operational performance characteristics across military temperature ranges or reliability factors equivalent to MIL-M-35810 device types and may have slight physical variations in relation to case size. The presence of this information should not be deemed as permitting substitution of generic-industry types for MIL-M-38510 types or as a waiver of any of the provisions of MIL-PRF-38535.

Military device type	Generic-industry type		
01	54F151A		
02	54F153		
03	54F157A		
04	54F158A		
05	54F251A		
06	54F257A		
07	54F258A		
08	54F253		
09	54F352		
10	54F353		

6.8 <u>Manufacturers' designation</u>. Manufacturers' circuits which form a part of this specification are designated with an "X" as shown in table IV herein.

	Circuits				
Device	A	В	С	D	
type	National Semiconductor/	Motorola Inc.	Signetics	Texas	
	Fairchild Semiconductor		Corp.	Instruments	
01	Х	Х			
02	Х	Х		Х	
03	Х			Х	
04	Х				
05	Х	Х			
06	Х			Х	
07	Х				
08	Х	Х		Х	
09		Х			
10		Х			

TABLE IV. Manufacturers' designations.

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6.9 <u>Changes from previous issue</u>. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

CONCLUDING MATERIAL

Preparing activity: DLA Land and Maritime- CC

(Project 5962-2011-001)

Custodians: Army - CR Navy - EC Air Force - 85 DLA - CC

Review activities: Army - MI, SM Navy - AS, CG, MC, SH, TD Air Force - 03, 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <u>https://assist.daps.dla.mil</u>.

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