

INCH-POUND

MIL-M-38510/655A
22 July 2005

SUPERSEDING
MIL-M-38510/655
30 September 1986

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, HIGH-SPEED CMOS, BUS TRANSCEIVERS WITH THREE-STATE OUTPUTS, MONOLITHIC SILICON

Reactivated after 22 July. 2005 and may be used for new and existing designs and acquisitions.

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 Scope. This specification covers the detail requirements for monolithic silicon, high speed CMOS, logic microcircuits. Two product assurance classes and a choice of case outlines and lead finishes are provided and are reflected in the complete Part or Identifying Number (PIN). For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535 (see 6.3).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 Device types. The device types are as follows:

<u>Device type</u>	<u>Circuit</u>
01	Quadruple inverting bus transceiver with three-state outputs
02	Quadruple non-inverting bus transceiver with three-state outputs
03	Octal non-inverting bus transceiver with three-state outputs
04, 05	To be included later
06	Octal inverting bus transceiver with three-state outputs
07	Octal non-inverting or inverting bus transceiver with three-state outputs
08	Octal non-inverting bus transceiver with three-state outputs
09	Octal inverting bus transceiver with three-state outputs
53	Octal non-inverting bus transceiver with three-state outputs and TTL-input voltage compatibility

1.2.2 Device class. 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:

<u>Outline letter</u>	<u>Descriptive designator</u>	<u>Terminals</u>	<u>Package style</u>
C	GDIP1-T14 or CDIP2-T14	14	Dual-in-line
D	GDFP1-F14 or CDFP2-F14	14	Flat pack
K	GDFP2-F24 or CDFP3-F24	24	Flat pack
L	GDIP3-T24 or CDIP4-T24	24	Dual-in-line
R	GDIP1-T20 or CDIP2-T20	20	Dual-in-line
S	GDFP2-F20 or CDFP3-F20	20	Flat pack
2	CQCC1-N20	20	Square leadless chip carrier
3	CQCC1-N28	28	Square leadless chip carrier

Comments, suggestions, or questions on this document should be addressed to: Commander, Defense Supply Center Columbus, ATTN: DSCC-VAS, P.O. Box 3990, Columbus, OH 43218-3990, or email to CMOS@dsccl.dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil/>.

1.3 Absolute maximum ratings.

Supply voltage range (V_{CC})	-0.5 V dc to +7.0 V dc
DC input voltage range (V_{IN})	-0.5 V dc to $V_{CC} + 0.5$ V dc
DC output voltage range (V_{OUT})	-0.5 V dc to $V_{CC} + 0.5$ V dc
Clamp diode current (I_{IK}, I_{OK})	± 20 mA
DC output current per pin (I_{OUT})	± 35 mA
DC V_{CC} or GND current per pin (I_{OC})	± 70 mA
Storage temperature range (T_{STG})	-65° to +150°C
Maximum power dissipation (P_D)	300 mW
Lead temperature (soldering, 10 seconds)	+300°C
Thermal resistance, junction to case (θ_{JC})	See MIL-STD-1835
Junction temperature (T_J)	175°C

1.4 Recommended operating conditions.Device types 01, 02, 03, 06, 07, 08, 09:

Maximum input low voltage (V_{IL})	0.3 V at $V_{CC} = 2.0$ V 0.9 V at $V_{CC} = 4.5$ V 1.2 V at $V_{CC} = 6.0$ V
Minimum input high voltage (V_{IH})	1.5 V at $V_{CC} = 2.0$ V 3.15 V at $V_{CC} = 4.5$ V 4.2 V at $V_{CC} = 6.0$ V
Operating temperature range (T_A)	-55°C to +125°C
Width of clock pulse (t_{CLK}):	
Device types 08 and 09	27 ns minimum
Setup time before clock (t_{SETUP}):	
Device types 08 and 09	30 ns minimum
Hold time (t_{HOLD}):	
Device types 08 and 09	8 ns minimum
Supply voltage (V_{CC})	2.0 V dc to 6.0 V dc
Output voltage (V_{OUT})	0.0 V to V_{CC}
Input rise and fall times (t_r, t_f) maximum:	
$V_{CC} = 2.0$ V	1000 ns
$V_{CC} = 4.5$ V	500 ns
$V_{CC} = 6.0$ V	400 ns

Device type 53:

Maximum input low voltage (V_{IL})	0.8 V at $V_{CC} = 4.5$ V and 5.5 V
Minimum input high voltage (V_{IH})	2.0 V at $V_{CC} = 4.5$ V and 5.5 V
Supply voltage (V_{CC})	4.5 V dc to 5.5 V dc
Output voltage (V_{OUT})	0.0 V to V_{CC}
Operating temperature range (T_A)	-55°C to +125°C
Input rise and fall times (t_r, t_f) maximum:	
$V_{CC} = 4.5$ V	500 ns

2. APPLICABLE DOCUMENTS

2.1 General. 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 Specifications and Standards. 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 SPECIFICATION

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

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883 - Test Method Standard Microcircuits.
MIL-STD-1835 - Interface Standard Electronic Component Case Outlines.

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

2.3 Order of precedence. In the event of a conflict between the text of this document 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 Qualification. 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 Item requirements. 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 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.

3.3.1 Logic diagrams and terminal connections. The logic diagrams and terminal connections shall be as specified on figure 1.

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

3.3.3 Switching time test circuit and waveforms. The switching time test circuit and waveforms shall be as specified on figure 3.

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

3.3.5 Case outlines. The case outlines shall be as specified in 1.2.3 and MIL-STD-1835.

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

3.5 Electrical performance characteristics. Unless otherwise specified, the electrical performance characteristics are as specified in table I, and apply over the full recommended ambient operating temperature range.

3.6 Electrical test requirements. 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 Microcircuit group assignment. The devices covered by this specification shall be in microcircuit group number 37 (see MIL-PRF-38535, appendix A).

4. VERIFICATION

4.1 Sampling and inspection. 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 affect the form, fit, or function as described herein.

4.2 Screening. Screening shall be in accordance with MIL-PRF-38535 and shall be conducted on all devices prior to qualification and 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 method 1015 of MIL-STD-883.
- b. Delete the sequence specified as interim (pre-burn-in) electrical parameters through interim (post-burn-in) electrical parameters of table IA of MIL-PRF-38535 and substitute lines 1 through 7 of table II herein.
- c. Burn-in (method 1015 of MIL-STD-883).
 - (1) Unless otherwise specified in the manufacturers QM plan for static tests (test condition A), ambient temperature (T_A) shall be +125°C minimum. Test duration for each static test shall be 24 hours minimum for class S devices and in accordance with table I of method 1015 for class B devices.
 - i. For static burn-in I, all inputs shall be connected to GND. Outputs shall be open or connected to $V_{CC}/2$. Resistors are optional on outputs if open. Resistors are required on inputs and required on outputs connected to $V_{CC}/2$. $R = 470\Omega$ to 47 k Ω .
 - ii. For static burn-in II, all inputs shall be connected through the resistors to V_{CC} . Output shall be open or connected to $V_{CC}/2$. Resistors are optional on outputs if open. Resistors are required on inputs and required on outputs connected to $V_{CC}/2$. $R = 470\Omega$ to 47 k Ω .
 - (2) Unless otherwise specified in the manufacturers QM plan for dynamic test (test condition D), ambient temperature shall be +125°C minimum. Test duration shall be in accordance with table I of method 1015.
 - i. For dynamic burn-in, all inputs shall be connected through the resistors in parallel to a common CP. Outputs shall be connected to $V_{CC}/2 \pm 0.5$ V through the resistors. $R = 680\Omega \pm 5\%$ for outputs. $R = 470\Omega$ to 47 k Ω for inputs.
 - ii. CP = 25 kHz to 1 MHz square wave; duty cycle = 50% $\pm$ 15%; $V_{IH} = 4.5$ V to V_{CC} ; $V_{IL} = 0.0$ V $\pm$ 0.5 V; transition time ≤ 0.5 μ s.
 - iii. $V_{CC} = 6.0$ V +0.0 V, -0.5 V. $V_{CC} = 5.5$ V +0.0 V, -0.5 V for device type 53.
- d. Interim and final electrical test parameters shall be as specified in table II.
- e. For class S devices, post dynamic burn-in, or class B devices, post static burn-in, electrical parameter measurements may, at the manufacturer's option, be performed separately or included in the final electrical parameter requirements.

4.2.1 Percent defective allowable (PDA).

- a. The PDA for class S devices shall be 5 percent for static burn-in and 5 percent for dynamic burn-in, based on the exact number of devices submitted to each separate burn-in.
- b. Static burn-in I and II failure shall be cumulative for determining the PDA.
- c. The PDA for class B devices shall be in accordance with MIL-PRF-38535 for static burn-in. Dynamic burn-in is not required.
- d. Those devices whose measured characteristics, after burn-in, exceed the specified delta (Δ) limits or electrical parameter limits specified in table III, subgroup 1, are defective and shall be removed from the lot. The verified failures divided by the total number of devices in the lot initially submitted to burn-in shall be used to determine the percent defective for the lot and the lot shall be accepted or rejected based on the specified PDA.

4.3 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-38535.

4.4 Technology Conformance inspection (TCI). 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 Group A inspection. Group A inspection shall be in accordance with table III of MIL-PRF-38535 and as follows:

- a. Tests shall be performed in accordance with table II herein.
- b. Subgroups 5 and 6 shall be omitted.
- c. Subgroup 4 (C_{IN} and C_{IO} measurements) shall be measured only for initial qualification and after process or design changes that may affect input capacitance. Capacitance shall be measured between the designated terminal and V_{SS} at a frequency of 1 MHz.
- d. Subgroups 9 and 11 shall be measured only for initial qualification and after process or design changes which may affect dynamic performance.

4.4.2 Group B inspection. Group B inspection shall be in accordance with table II of MIL-PRF-38535.

4.4.3 Group C inspection. 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. Delta limits shall apply only to subgroup 1 of group C inspection and shall consist of tests specified in table IV 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 method 1005 of MIL-STD-883.

4.4.4 Group D inspection. 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.

TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions 1/ $T_C = +125^\circ\text{C}$ unless otherwise specified	Device type	V_{CC}	Limits		Unit
					Min	Max	
High-level output voltage	V_{OH1} <u>2/</u>	$V_{IH} = 1.5\text{ V}$ $V_{IL} = 0.3\text{ V}$ $I_{OH} = -20\text{ }\mu\text{A}$	01-09	2.0V	1.95		V
	V_{OH2} <u>2/</u>	$V_{IH} = 3.15\text{ V}$ $V_{IL} = 0.9\text{ V}$ $I_{OH} = -20\text{ }\mu\text{A}$	01-09	4.5V	4.44		V
	V_{OH3}	$V_{IH} = 4.2\text{ V}$ $V_{IL} = 1.2\text{ V}$ $I_{OH} = -20\text{ }\mu\text{A}$	01-09	6.0V	5.95		V
	V_{OH4} <u>2/</u>	$V_{IH} = 3.15\text{ V}$ $V_{IL} = 0.9\text{ V}$ $I_{OH} = -6.0\text{ mA}$	01-09	4.5V	3.7		V
	V_{OH5}	$V_{IH} = 4.2\text{ V}$ $V_{IL} = 1.2\text{ V}$ $I_{OH} = -7.8\text{ mA}$	01-09	6.0V	5.2		V
	V_{OH6}	$V_{IH} = 2.0\text{ V}$ $V_{IL} = 0.8\text{ V}$ $I_{OH} = -20\text{ }\mu\text{A}$	53	4.5V	4.4		V
	V_{OH7}	$V_{IH} = 2.0\text{ V}$ $V_{IL} = 0.8\text{ V}$ $I_{OH} = -6.0\text{ mA}$	53	5.5V	3.7		V
Low-level output voltage	V_{OL1} <u>2/</u>	$V_{IL} = 0.8\text{ V}$ $V_{IH} = 1.5\text{ V}$ $I_{OL} = +20\text{ }\mu\text{A}$	01-09	2.0V		0.05	V
	V_{OL2} <u>2/</u>	$V_{IL} = 0.9\text{ V}$ $V_{IH} = 3.15\text{ V}$ $I_{OL} = +20\text{ }\mu\text{A}$	01-09	4.5V		0.05	V
	V_{OL3}	$V_{IL} = 1.2\text{ V}$ $V_{IH} = 4.2\text{ V}$ $I_{OL} = +20\text{ }\mu\text{A}$	01-09	6.0V		0.05	V
	V_{OL4} <u>2/</u>	$V_{IL} = 0.9\text{ V}$ $V_{IH} = 3.15\text{ V}$ $I_{OL} = +6.0\text{ mA}$	01-09	4.5V		0.4	V
	V_{OL5}	$V_{IL} = 1.2\text{ V}$ $V_{IH} = 4.2\text{ V}$ $I_{OL} = +7.8\text{ mA}$	01-09	6.0V		0.4	V
	V_{OL6}	$V_{IH} = 2.0\text{ V}$ $V_{IL} = 0.8\text{ V}$ $I_{OL} = +20\text{ }\mu\text{A}$	53	4.5V		0.05	V
	V_{OL7}	$V_{IH} = 2.0\text{ V}$ $V_{IL} = 0.8\text{ V}$ $I_{OL} = +6.0\text{ mA}$	53	5.5V		0.4	V
Positive input clamp voltage	V_{IC+}	$I_{IN} = +1\text{ mA}$ $T_C = +25^\circ\text{C}$	All	GND	<u>3/</u>	+1.5	V
Negative input clamp voltage	V_{IC-}	$I_{IN} = -1\text{ mA}$ $T_C = +25^\circ\text{C}$	All	Open		-1.5	V

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ $T_C = +125^\circ\text{C}$ unless otherwise specified	Device type	V_{CC}	Limits		Unit
					Min	Max	
Control input current low	I_{IL}	$V_{IN} = \text{GND}$	01-09	6.0V		-0.1	μA
			53	5.5V		-0.1	μA
Control input current high	I_{IH}	$V_{IN} = V_{CC}$	01-09	6.0V		0.1	μA
			53	5.5V		0.1	μA
Input/output current, low-level, outputs disabled	I_{IL}/I_{OZL} <u>4/</u>	V_{IN} control = 4.2 V or 1.2 V $V_{OUT} = \text{GND}$	01-09	6.0V		-2.0	μA
		V_{IN} control = 2.0 V or 0.8 V $V_{OUT} = \text{GND}$	53	5.5V		-2.0	μA
Input/output current, high-level, outputs disabled	I_{IH}/I_{OZH} <u>4/</u>	V_{IN} control = 4.2 V or 1.2 V $V_{OUT} = 6 \text{ V}$	01-09	6.0V		2.0	μA
		V_{IN} control = 2.0 V or 0.8 V $V_{OUT} = 5.5 \text{ V}$	53	5.5V		2.0	μA
Short circuit output current	I_{OS1} <u>2/</u>	$T_C = -55^\circ\text{C}$ to $+125^\circ\text{C}$ $V_{OUT} = \text{GND}$ $V_{IN} = \text{GND}$ or V_{CC}	01-09	2.0V	-2	-60	mA
	I_{OS2} <u>2/</u>		All	4.5V	-15	-165	
	I_{OS3} <u>2/</u>		01-09	6.0V	-25	-210	
	I_{OS4}		All	4.0V	-10	-135	
	I_{OS5} <u>2/</u>		53	5.5V	-25	-210	
Supply current quiescent	I_{CC}	$V_{IN} = 6.0 \text{ V}$	01,02, 03,06,07, 08,09	6.0V		20	μA
			53	5.5V		20	μA
	I_{CCZ}	$V_{IN} = 6.0 \text{ V}$	01,02, 03,06,07, 08,09	6.0V		10	μA
			53	5.5V		10	μA
Additional supply current quiescent per input pin (one unit load)	$I_{CC\Delta}$ <u>5/</u>	$V_{IL} = 0.4 \text{ V}$ $V_{IH} = 2.4 \text{ V}$ Test pin at $V_{IN} = 2.4 \text{ V}$ Control pins at $V_{IN} = 0.4 \text{ V}$ Other pins at V_{CC} or GND $I_O = 0 \text{ V}$ (see table III)	53	5.5V		3.0	mA
Maximum clock frequency	f_{MAX}	$V_{IN} = 0-V_{CC}$, 50% DC $C_L = 50 \text{ pF} \pm 10\%$ <u>5/</u>	08,09	4.5V	23		MHz
Control capacitance	C_C	$T_C = +25^\circ\text{C}$	All			15	pF
Input/output capacitance	C_{IO}	$T_C = +25^\circ\text{C}$	All			20	pF
Power dissipation capacitance	C_{PD} <u>2/ 6/</u>	$T_C = +25^\circ\text{C}$	01,02 03,53			70	pF
			04,05			40	
			06,07			120	
			08,09			55	

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ T _C = +125°C unless otherwise specified	Device type	V _{CC}	Limits		Unit
					Min	Max	
Transition delay times	t _{THL} , t _{TLH} 7/ 8/	C _L = 50 pF ±10%	All	4.5V	2	16	ns
Propagation delay time, clock to bus	t _{PLH1} , t _{PHL1}		08	4.5V	8	51	ns
			09	4.5V	8	56	ns
Propagation delay time, bus to bus	t _{PLH2} , t _{PHL2}		01	4.5V	3	23	ns
			02	4.5V	4	23	ns
			03,53	4.5V	4	33	ns
			06,07	4.5V	4	26	ns
			08,09	4.5V	5	40	ns
			08,09	4.5V	10	51	ns
Propagation delay time, select (with bus input high) to bus	t _{PLH3} , t _{PHL3}						
Propagation delay time, select (with bus input low) to bus	t _{PLH4} , t _{PHL4}	C _L = 50 pF ±10%	08,09	4.5V	10	51	ns
Propagation delay time, disabled-to-high level output	t _{PZH1}	C _L = 50 pF ±10% R _L = 1 kΩ ±5% 7/ 8/	01	4.5V	4	35	ns
			02	4.5V	4	36	ns
			03	4.5V	9	59	ns
			53	4.5V	6	54	ns
Propagation delay time, disabled-to-high level output, enable to bus	t _{PZH2}		06,07	4.5V	9	59	ns
			08,09	4.5V	6	57	ns
Propagation delay time, disabled-to-high level output, direction to bus	t _{PZH3}		08,09	4.5V	6	57	ns
Propagation delay time, disabled-to-low level output	t _{PZL1}		01	4.5V	4	35	ns
			02	4.5V	4	36	ns
			03	4.5V	9	59	ns
			53	4.5V	6	54	ns
Propagation delay time, disabled-to-low level output, enable to bus	t _{PZL2}		06,07	4.5V	9	59	ns
			08,09	4.5V	6	57	ns
Propagation delay time, disabled-to-low level, direction to bus	t _{PZL3}		08,09	4.5V	6	57	ns
Propagation delay time, high-level to disabled output	t _{PHZ1}		01	4.5V	4	40	ns
			02	4.5V	4	42	ns
		03	4.5V	8	54	ns	
		53	4.5V	6	54	ns	

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ T _C = +125°C unless otherwise specified	Device type	V _{CC}	Limits		Unit
					Min	Max	
Propagation delay time, high-level-to- disabled output, enable to bus	t _{PHZ2}	C _L = 50 pF ±10% R _L = 1 kΩ ±5% 7/ 8/	06,07	4.5V	8	53	ns
			08,09	4.5V	6	57	ns
08,09	4.5V		6	57	ns		
Propagation delay time, low-level-to- disabled output	t _{PLZ1}		01	4.5V	4	40	ns
			02	4.5V	4	42	ns
			03	4.5V	8	54	ns
			53	4.5V	6	54	ns
Propagation delay time, low-level-to- disabled output, enable to bus	t _{PLZ2}		06,07	4.5V	8	53	ns
			08,09	4.5V	6	57	ns
Propagation delay time, low-level-to- disabled output, direction to bus	t _{PLZ3}		08,09	4.5V	6	57	ns

1/ Complete terminal conditions shall be as specified in table III.

2/ Guaranteed but not tested.

3/ A minimum limit of 0.4 V applies only when test equipment limitations do not allow the GND pin to be open during testing.

4/ I_{OZL} = output set to high state. Three state output conditions are required.
I_{OZH} = output set to low state. Three state output conditions are required.

5/ Total supply current = I_{CC} + I_{CCΔ}.

6/ Power dissipation capacitance (C_{PD}) typically per transceiver.

7/ Tested at V_{CC} = 4.5 V at +125°C for sample testing and V_{CC} = 4.5 V at +25°C for screening. Guaranteed at other V_{CC} voltages and temperatures. See table IA and exception in 4.4.1d.

8/ For propagation and transition delay times at V_{CC} = 2.0 V, increase limit by a factor of 5.
For propagation and transition delay times at V_{CC} = 6.0 V, decrease limit by a factor of 5.

TABLE IA. Calculated dynamic values at -55°C / $+25^{\circ}\text{C}$ ambient temperature.

V_{CC}	$T_A = (^{\circ}\text{C})$	
	+125	-55/+25
2.0 V	5X	5Y
4.5 V	$X = 1$	$0.75X = Y$
6.0 V	0.85X	0.85Y

Normalized numbers
(+125°C equals 1)

NOTE: The 2.0 V and 6.0 V numbers are derived from their 4.5 V integer value.
Rounding off according 5/4.

TABLE IB. Calculated formula for f_{MAX} at -55°C / $+25^{\circ}\text{C}$ ambient temperature.

V_{CC}	$T_A = (^{\circ}\text{C})$	
	+125	-55/+25
2.0 V	0.2X	0.2Y
4.5 V	$X = 1$	$1.33X = Y$
6.0 V	1.18X	1.18Y

Normalized numbers
(+125°C equals 1)

NOTE: The 2.0 V and 6.0 V numbers are derived from their 4.5 V integer value.
Rounding off according 5/4.

TABLE II. Burn-in and electrical test requirements.

Line no.	MIL-PRF-38535 test requirements	Class S device <u>1/</u>			Class B device <u>1/</u>		
		Ref. par.	Table III subgroups <u>2/</u>	Table IV delta limits <u>3/</u>	Ref. par.	Table III subgroups <u>2/</u>	Table IV delta limits <u>3/</u>
1	Interim electrical parameters		1			1	
2	Static burn-in I (method 1015)	4.2c 4.5.2	Req'd			Not req'd	
3	Same as line 1		1*	Δ			
4	Static burn-in II (method 1015)	4.2c 4.5.2	Req'd		4.2c 4.5.2	<u>4/</u> req'd	
5	Same as line 1	4.2e	1*	Δ	4.2e	1*	Δ
6	Dynamic burn-in (method 1015)	4.2c 4.5.2	Req'd			Not req'd	
7	Same as line 1	4.2e	1	Δ			
8	Final electrical parameters (method 5004)		* 1, 2, 3, 7, 8, 9			1*, 2, 7, 9 <u>4/</u>	
9	Group A test requirements	4.4.1	1, 2, 3, 4, 7, 8, 9, 10, 11		4.4.1	1, 2, 3, 4, 7, 8, 9, 10, 11	
10	Group B test when using method 5005 QCI option	4.4.2	1, 2, 3, 9, 10, 11	Δ			
11	Group C end-point electrical parameters	4.4.2	1, 2, 3, 9, 10, 11	Δ	4.4.3	1, 2	Δ
12	Group D end-point electrical parameters	4.4.4	1, 2, 3		4.4.4	1, 2	

1/ Blank spaces indicate tests are not applicable.

2/ * indicates PDA applies to subgroup 1 (see 4.2.1).

3/ Δ indicates delta limits shall be required only on table III subgroup 1, where specified, and the delta values shall be computed with reference to the previous interim electrical parameters.

4/ The device manufacturer may, at his option, either complete subgroup 1 electrical parameter measurements, including delta measurements, within 96 hours after burn-in completion (removal of bias); or may complete subgroup 1 electrical measurements without delta measurements within 24 hours after burn-in completion (removal of bias).

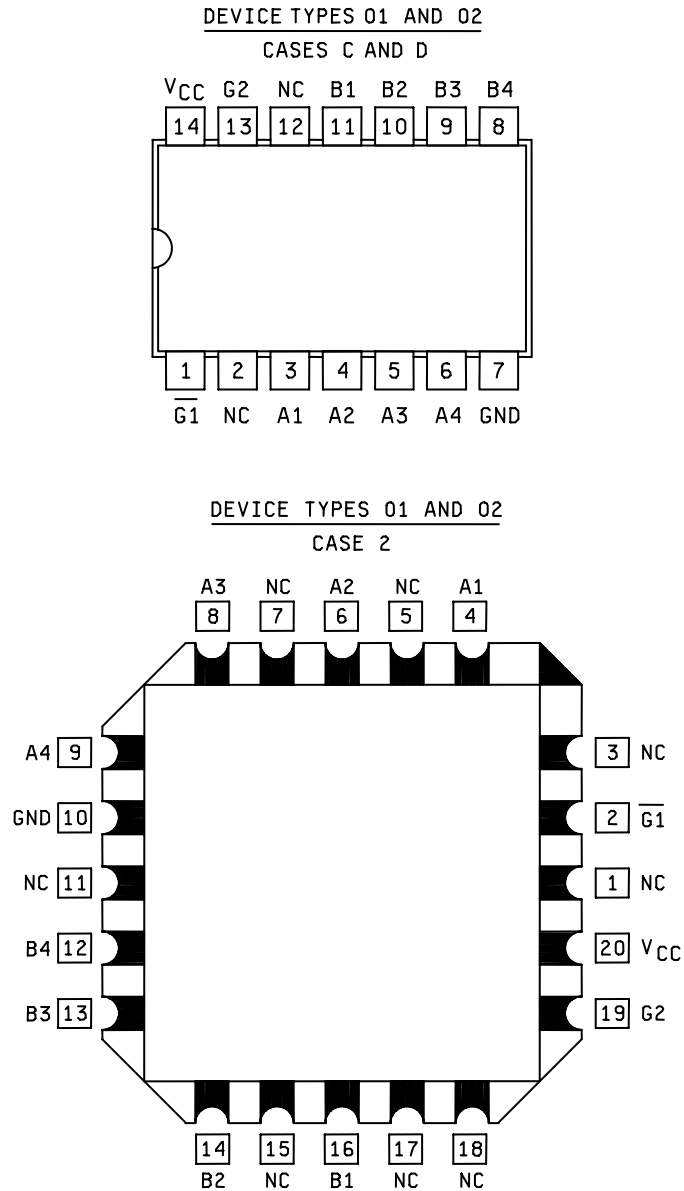
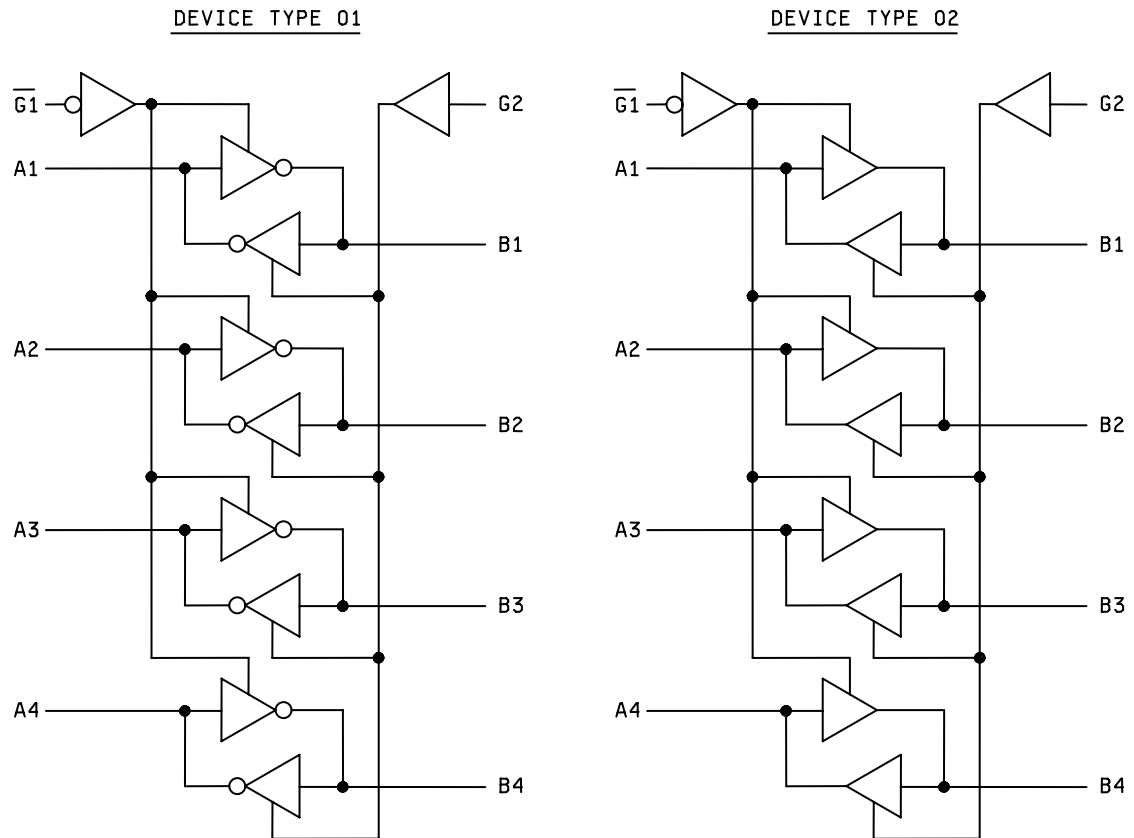
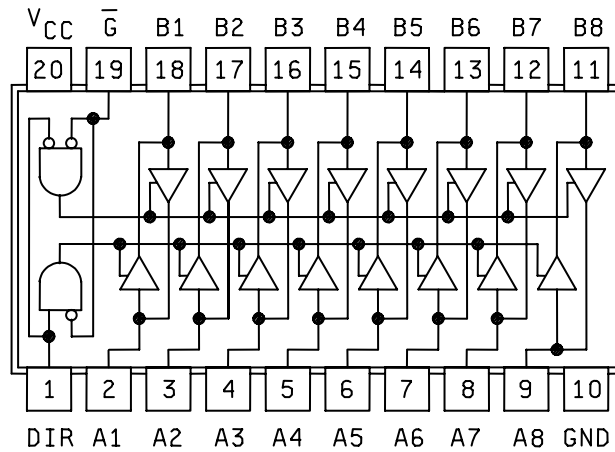


FIGURE 1. Logic diagrams and terminal connections.

FIGURE 1. Logic diagrams and terminal connections – Continued.

DEVICE TYPES 03 AND 53

CASES R AND S



DEVICE TYPES 03 AND 53

CASE 2

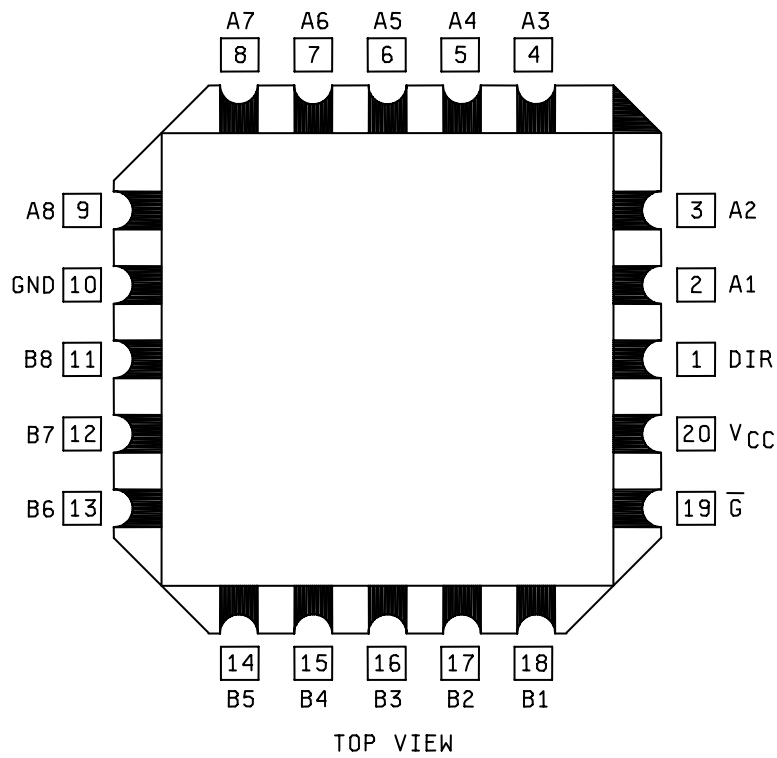
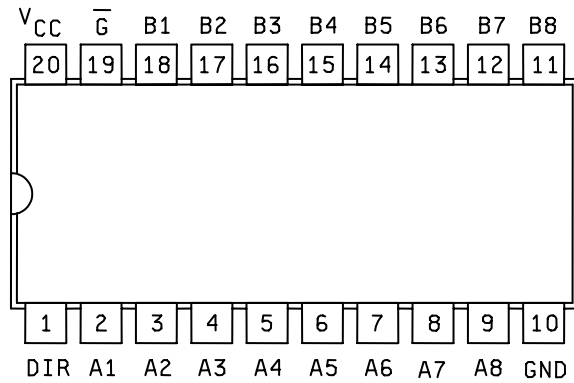


FIGURE 1. Logic diagrams and terminal connections – Continued.

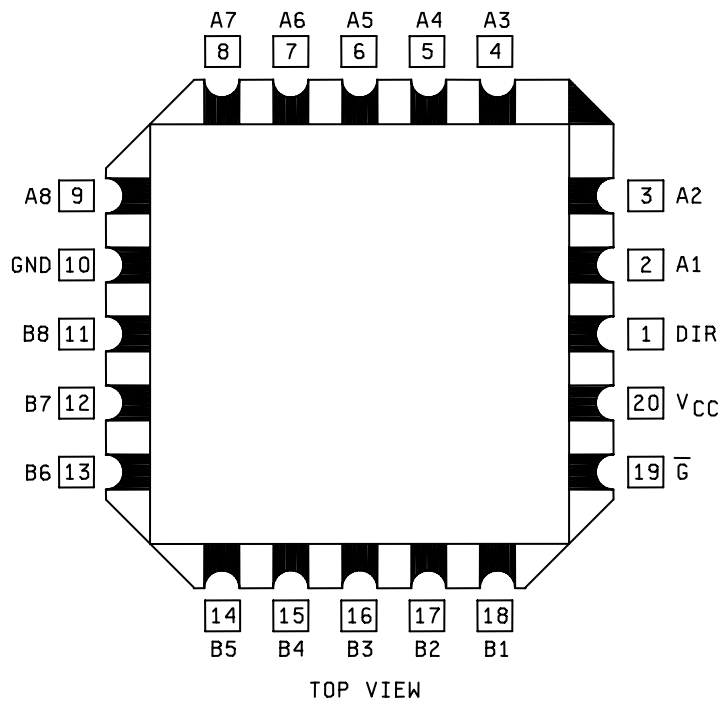
DEVICE TYPES 06 AND 07

CASES R AND S



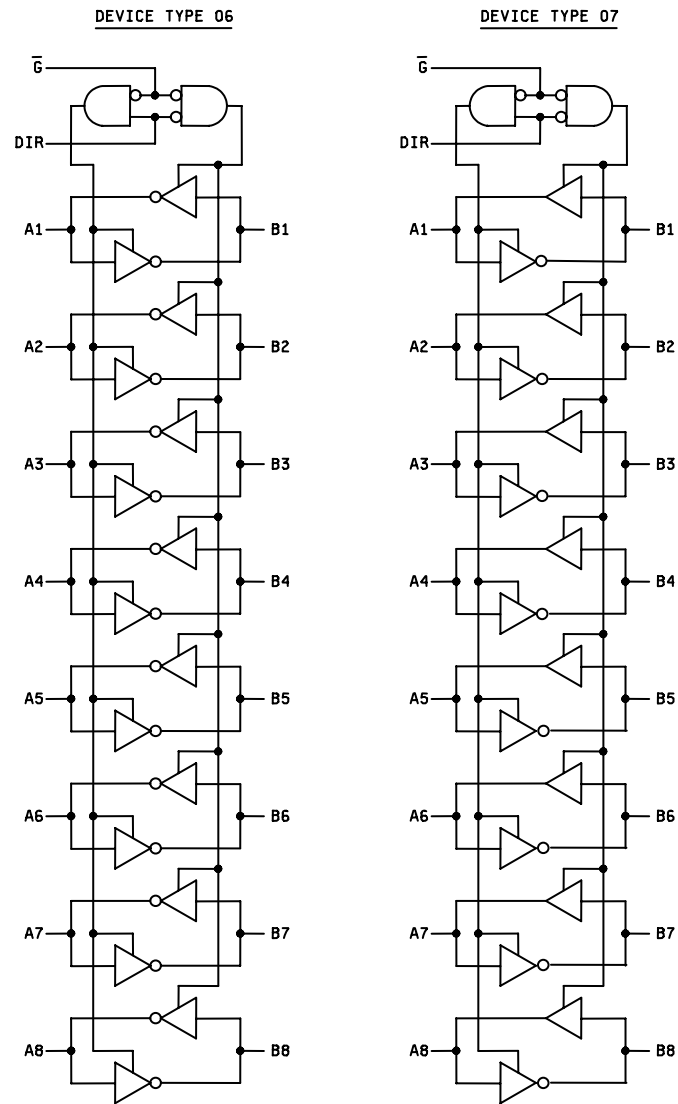
DEVICE TYPES 06 AND 07

CASE 2



TOP VIEW

FIGURE 1. Logic diagrams and terminal connections – Continued.

FIGURE 1. Logic diagrams and terminal connections – Continued.

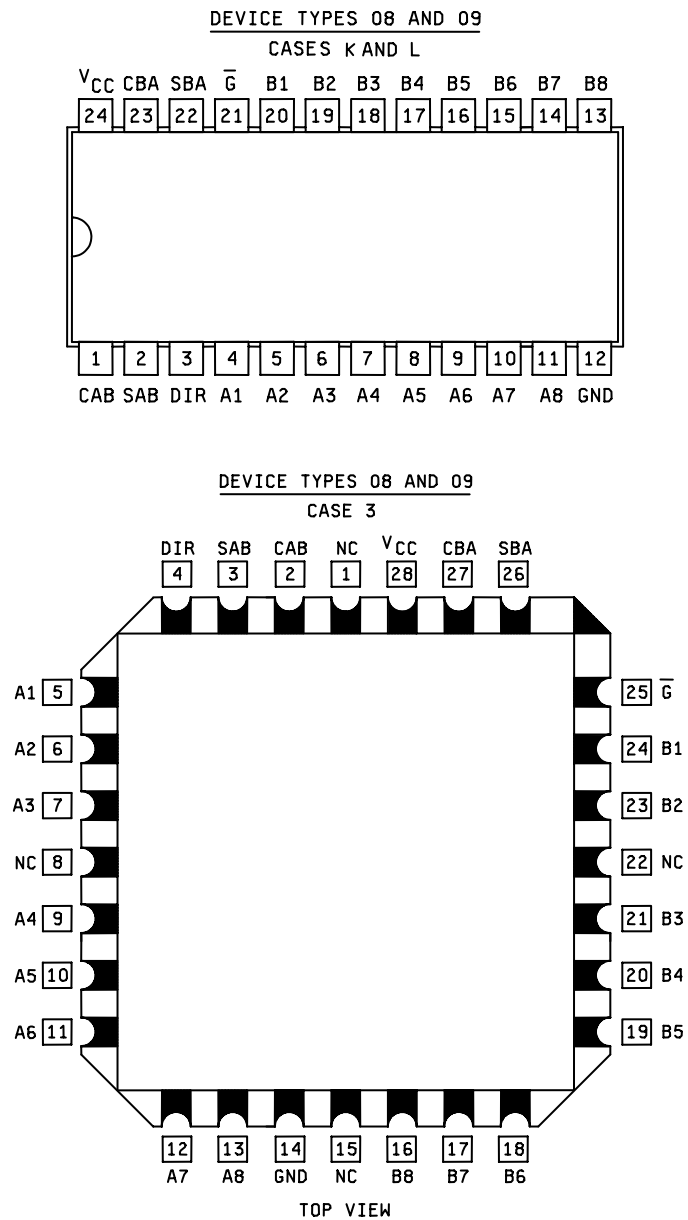


FIGURE 1. Logic diagrams and terminal connections – Continued.

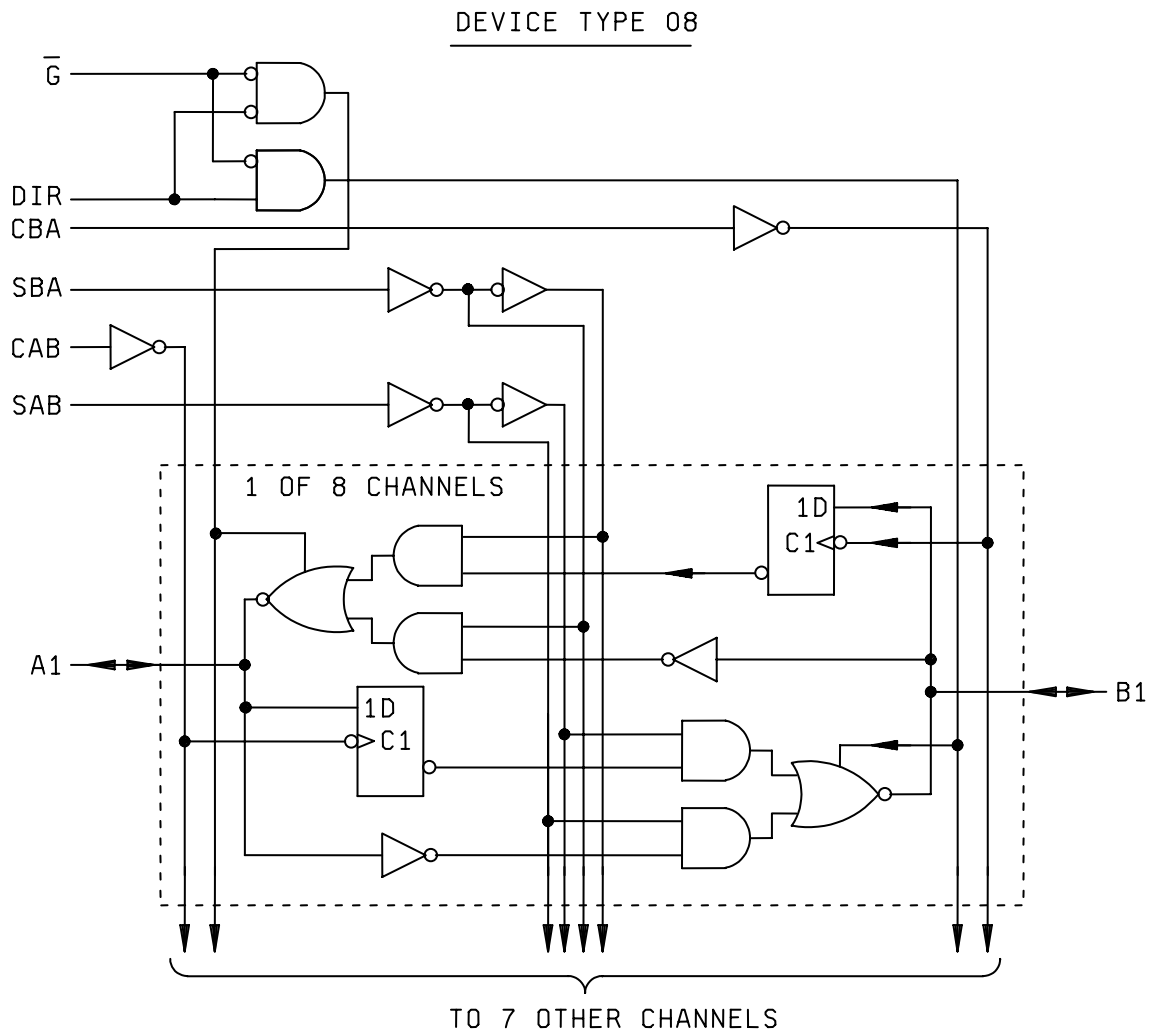
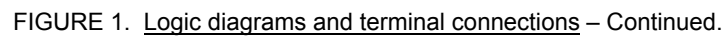


FIGURE 1. Logic diagrams and terminal connections – Continued.



Device type 01

Inputs		Operation
$\overline{G1}$	G2	
L	L	$\overline{A}$ to B
H	H	$\overline{B}$ to A
H	L	Isolation
L	H	Isolation

H = High level voltage
L = Low level voltage

Device type 02

Inputs		Operation
$\overline{G1}$	G2	
L	L	A to B
H	H	B to A
H	L	Isolation
L	H	Isolation

H = High level voltage
L = Low level voltage

Device types 03 and 53

Enable $\overline{G}$	Direction control DIR	Operation
L	L	B data to A bus
L	H	A data to B bus
H	X	Isolation

H = High level voltage
L = Low level voltage
X = Irrelevant

Device type 06

Enable $\overline{G}$	Direction control DIR	Operation
L	L	$\overline{B}$ data to A bus
L	H	$\overline{A}$ data to B bus
H	X	Isolation

H = High level voltage
L = Low level voltage
X = Irrelevant

FIGURE 2. Truth tables.

Device type 07

Enable $\overline{G}$	Direction control DIR	Operation
L	L	B data to A bus
L	H	$\overline{A}$ data to B bus
H	X	Isolation

H = High level voltage

L = Low level voltage

X = Irrelevant

Device type 08

Inputs						Data I/O *		Operation or function
$\overline{G}$	DIR	CAB	CBA	SAB	SBA	A1 thru A8	B1 thru B8	
H	X	H or L	H or L	X	X	Input	Input	Isolation
H	X	↑	↑	X	X			Store A and B data
L	L	X	X	X	L	Output	Input	Real time B data to A bus
L	L	X	H or L	X	H			Store B data to A bus
L	H	X	X	L	X	Input	Output	Real time A data to B bus
L	H	H or L	X	H	X			Store A data to B bus
X	X	↑	X	X	X	Input	Not specified	Store A, B undefined
X	X	X	↑	X	X	Not specified	Input	Store B, A undefined

H = High level L = Low level X = Irrelevant ↑ = Low-to-high level transition

* = The data output functions may be enabled or disabled by various signals at the $\overline{G}$ and DIR inputs. Data input function are always enabled, i.e., data at the bus pins will be stored on every low-to-high transition on the clock inputs.

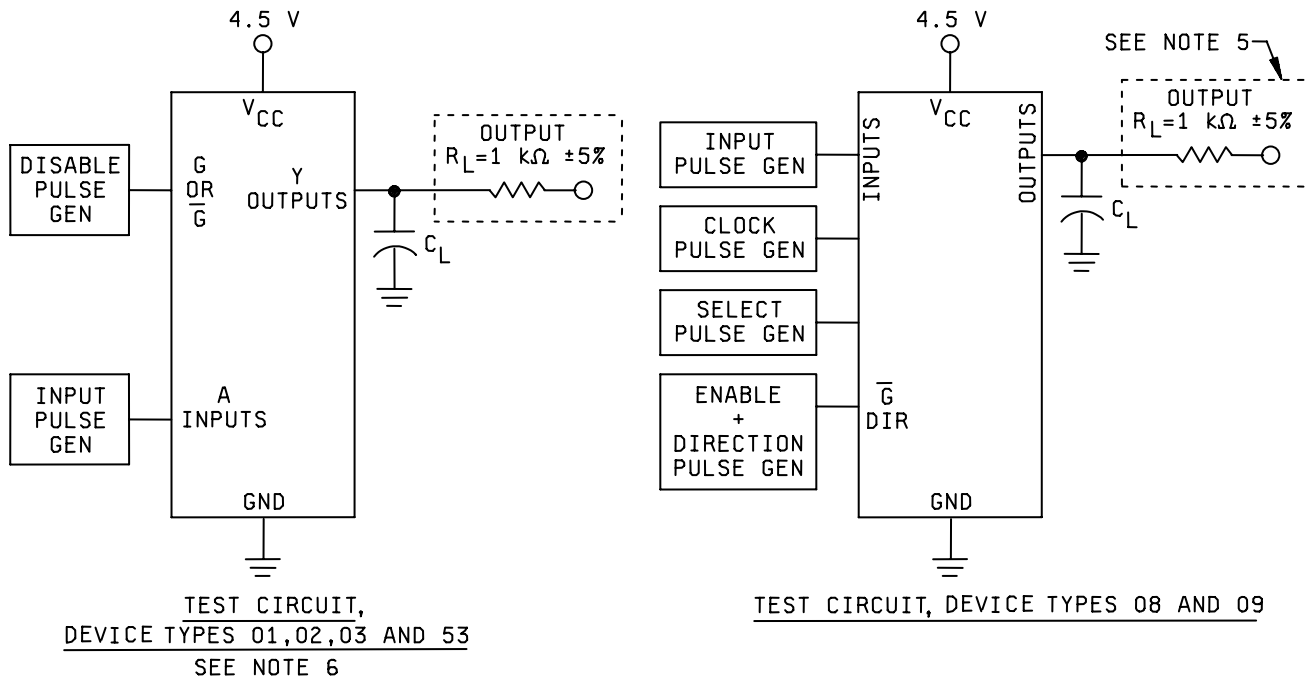
Device type 09

Inputs						Data I/O *		Operation or function
$\overline{G}$	DIR	CAB	CBA	SAB	SBA	A1 thru A8	B1 thru B8	
H	X	H or L	H or L	X	X	Input	Input	Isolation
H	X	↑	↑	X	X			Store A and B data
L	L	X	X	X	L	Output	Input	Real time B data to A bus
L	L	X	H or L	X	H			Store B data to A bus
L	H	X	X	L	X	Input	Output	Real time A data to B bus
L	H	H or L	X	H	X			Store A and B bus
X	X	↑	X	X	X	Input	Not specified	Store A, B undefined
X	X	X	↑	X	X	Not specified	Input	Store B, A undefined

H = High level L = Low level X = Irrelevant ↑ = Low-to-high level transition

* = The data output functions may be enabled or disabled by various signals at the $\overline{G}$ and DIR inputs. Data input function are always enabled, i.e., data at the bus pins will be stored on every low-to-high transition on the clock inputs.

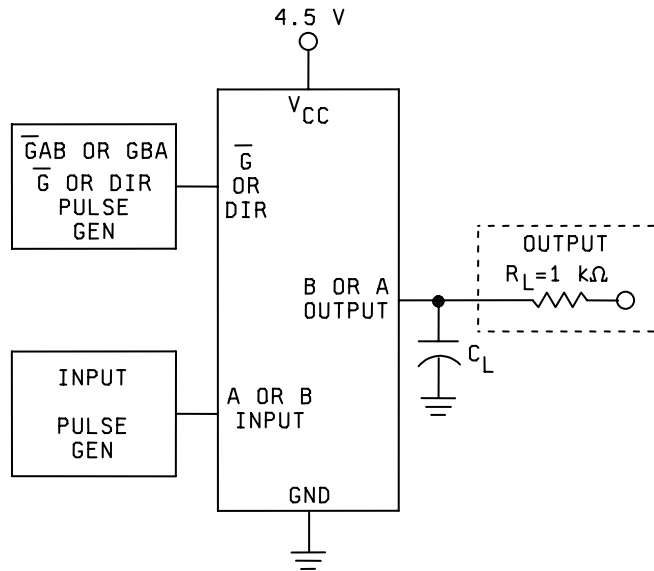
FIGURE 2. Truth tables – Continued.



NOTES:

1. $R_L = 1\text{ k}\Omega \pm 5\%$.
2. $C_L = 50\text{ pF} \pm 10\%$ including probe and jig capacitance.
3. The pulse generators have the following characteristics:
 $V_{GEN} = 4.5\text{ V}$, $PRR \leq 1\text{ MHz}$, $t_r \leq 6\text{ ns}$, $t_f \leq 6\text{ ns}$, $Z_{OUT} = 50\Omega$.
4. Clock pulse characteristics: $t_p(\text{CLK}) = 18\text{ ns}$, $t_{SETUP} = 20\text{ ns}$, $t_{HOLD} = 5\text{ ns}$.
5. Output connected to V_{CC} for t_{PLZ} and t_{PZL} and to GND for t_{PHZ} and t_{PZH} .
6. The input signal for the device type 53 (HCT) will be 0-3 volts; however, the 50% V_{CC} measure point is 1.3 volts for input and output signals. The 10% V_{CC} and 90% V_{CC} points are 0.3 V and 2.7 V, respectively.

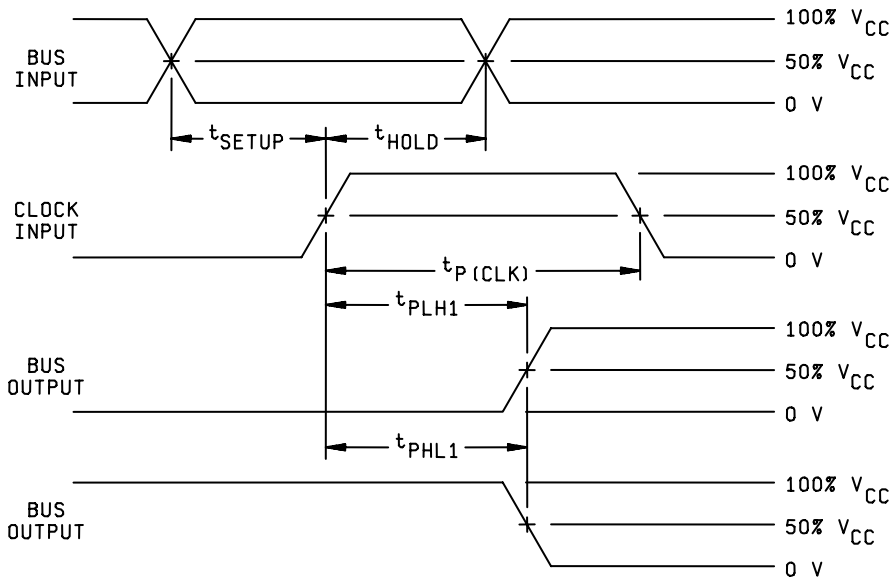
FIGURE 3. Switching time test circuit and waveforms.

DEVICE TYPES 06 AND 07

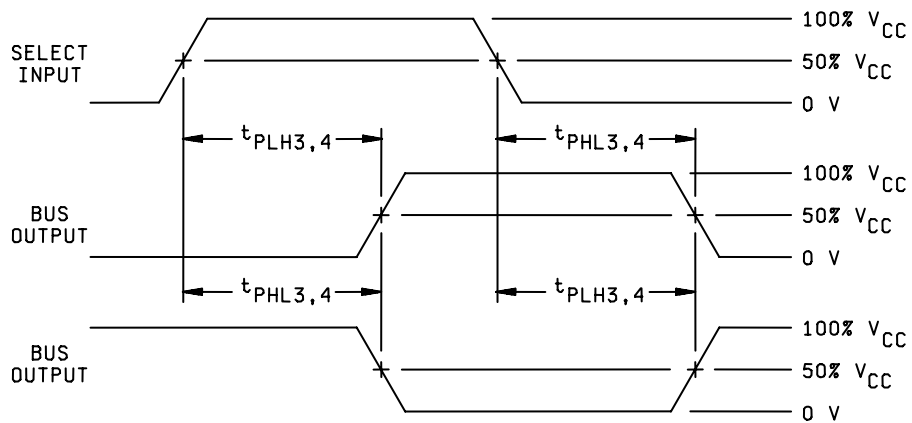
NOTES:

1. The pulse generators have the following characteristics:
 $t_f = t_r \leq 6\text{ }\mu\text{s}$, $V_{GEN} = 4.5\text{ V}$.
2. $R_L = 1\text{ k}\Omega \pm 5\%$.
3. $C_L = 50\text{ pF} \pm 10\%$, including scope probe, wiring, and stray capacitance without package in test fixture.
4. Voltage measurements are to be made with respect to network ground terminal.
5. Output connected to V_{CC} for t_{PLZ} and t_{PZL} and to GND for t_{PHZ} and t_{PZH} .

FIGURE 3. Switching time test circuit and waveforms – Continued.



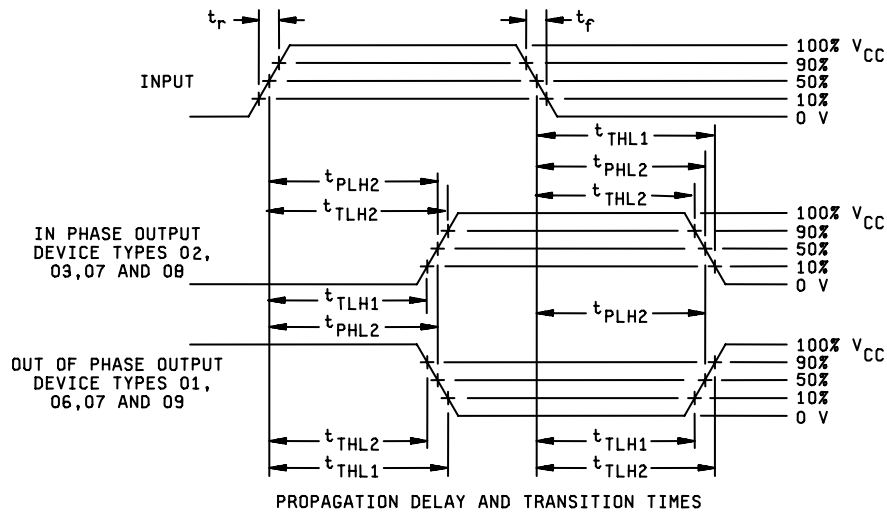
CLOCK TO OUTPUT (DEVICE TYPES 08 AND 09)



SELECT TO OUTPUTS (DEVICE TYPES 08 AND 09)

NOTE: $t_{HOLD} \leq 5$ ns, $t_{SETUP} \leq 30$ ns, and $t_p (\text{clock}) \leq 30$ ns.

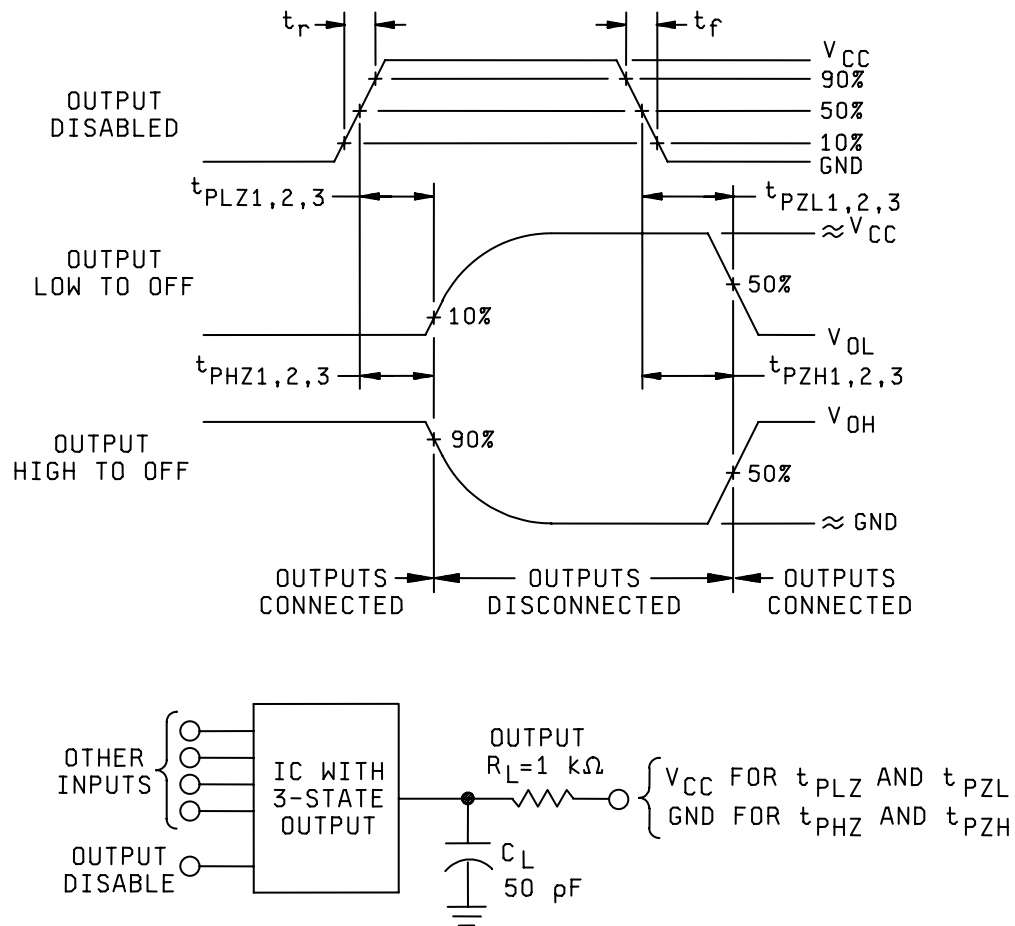
FIGURE 3. Switching time test circuit and waveforms – Continued.



NOTES:

1. Input pulse shall have the following characteristics: $t_r = t_f \leq 6$ ns, PRR ≤ 1 MHz, duty cycle = 50%.
2. For unused pin conditions, see table III, footnote 1/.
3. $t_{THL1} - t_{THL2} = t_{THL}$, $t_{TLH2} - t_{TLH1} = t_{TLH}$.

FIGURE 3. Switching time test circuit and waveforms – Continued.



Enable and disable times, three-state outputs, all device types.

NOTE:
 $t_r = t_f \leq 6 \text{ ns}$.

FIGURE 3. Switching time test circuit and waveforms – Continued.

TABLE III. Group A inspection for device type 01.

Symbol	MIL-STD-883 method	Case 2 Cases C,D Test no.	Terminal conditions 1/														Measured terminal	Test limits						Unit	
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max		
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}									
V _{IC} (pos)		1 2	1mA						1/ 1/							1mA	GND GND	G1 G2	1/ 0.4 0.4	1.5 1.5					V
V _{IC} (neg)		3 4	-1mA						GND							-1mA	1/ 1/	G1 G2		-1.5 -1.5					"
I _{CC}	3005	5 6 7 8	GND GND 6V 6V		6V 6V	GND 6V	6V 6V	GND 6V	"		GND 6V	6V 6V	GND 6V	6V 6V		GND GND 6V 6V	6V " "	V _{CC} " "		0.2 " "		20 " "			μA
I _{CCZ}	3005	9	6V						"							GND	"	"		"		10			"
V _{OH3}	3006	10 11 12 13 14 15 16 17	4.2V " " " " 1.2V " " " "		-20μA " " 1.2V	-20μA " " 1.2V	-20μA " " 1.2V	-20μA " " 1.2V	"	1.2V " " -20μA	1.2V " " -20μA	1.2V " " -20μA	1.2V " " -20μA		4.2V " " 1.2V	" "	A1 A2 A3 A4 B1 B2 B3 B4	5.95 " " " " 1.2V " " " "		5.95 " " " " " " " " " "		5.95 " " " " " " " " " "			V
V _{OH5}	3006	18 19 20 21 22 23 24 25	4.2V " " " " 1.2V " " " "		-7.8mA " " 1.2V	-7.8mA " " 1.2V	-7.8mA " " 1.2V	-7.8mA " " 1.2V	"	1.2V " " -7.8mA	1.2V " " -7.8mA	1.2V " " -7.8mA	1.2V " " -7.8mA		4.2V " " 1.2V	" "	A1 A2 A3 A4 B1 B2 B3 B4	5.48 " " " " 1.2V " " " "		5.2 " " " " " " " " " "		5.48 " " " " " " " " " "			"
V _{OL3}	3007	26 27 28 29 30 31 32 33	4.2V " " " " 1.2V " " " "		20μA " " 4.2V	20μA " " 4.2V	20μA " " 4.2V	20μA " " 4.2V	"	4.2V " " 20μA	4.2V " " 20μA	4.2V " " 20μA	4.2V " " 20μA		4.2V " " 1.2V	6V " "	A1 A2 A3 A4 B1 B2 B3 B4		.05 " " " " " " " " " "		.05 " " " " " " " " " "		.05 " " " " " " " " " "	"	
V _{OL5}	3007	34 35 36 37 38 39 40 41	4.2V " " " " 1.2V " " " "		7.8mA " " 4.2V	7.8mA " " 4.2V	7.8mA " " 4.2V	7.8mA " " 4.2V	"	4.2V " " 7.8mA	4.2V " " 7.8mA	4.2V " " 7.8mA	4.2V " " 7.8mA		4.2V " " 1.2V	" "	A1 A2 A3 A4 B1 B2 B3 B4		0.26 " " " " " " " " " "		0.4 " " " " " " " " " "		0.26 " " " " " " " " " "	"	
I _{OS4}	3011	42 43 44 45 46 47 48 49	4V " " " " GND " " " "		GND " " GND	GND " " GND	GND " " GND	GND " " GND	"	GND " " GND	GND " " GND	GND " " GND	GND " " GND		4V " " GND	4V " "	A1 A2 A3 A4 B1 B2 B3 B4	-10 " " " " " " " " " "	-135 " " " " " " " " " "	-10 " " " " " " " " " "	-135 " " " " " " " " " "	-10 " " " " " " " " " "	-135 " " " " " " " " " "	mA	

See footnotes at end of table.

MIL-M-38510/655A

TABLE III. Group A inspection for device type 01 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C,D Test no.	Terminal conditions 1/																Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20	Subgroup 1 T _C = +25°C			Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	Min	Max		Min	Max	Min	Max			
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}	A1	A2		A3	A4	B1	B2	B3	B4	
I _{IH} /I _{OZH}		50 51 52 53 54 55 56 57	2/ " " " 1.2V " " "	NC	6V 2/ <																					

See footnotes at end of table.

TABLE III. Group A inspection for device type 01 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C,D Test no.	Terminal conditions 1/														Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}								
Truth table tests 5/	3014	80	B		A	A	A	A	GND	L	L	L	L		B	4.5V	6/							
		81	B		B	B	B	B	"	H	H	H	H		B	"	"							
		82	A		L	L	L	L	L	"	A	A	A	A		A	"	"						
		83	A		H	H	H	H	H	"	B	B	B	B		A	"	"						
		84	A		Z	Z	Z	Z	Z	"	Z	Z	Z	Z		B	"	7/						
85	B		Z	Z	Z	Z	Z	"	Z	Z	Z	Z		A	"	7/								
																		Subgroup 9 T _C = +25°C 4/	Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/		Unit	
																		Min	Max	Min	Max	Min	Max	
t _{THL}	3004 (Fig. 3)	86	4.5V		OUT				GND			IN	IN		4.5V	4.5V	A1	2	12	2	16	2	12	ns
		87	"				OUT		"			IN	IN		"	"	A2	"	"	"	"	"	"	"
		88	"					OUT	"		IN	IN	IN		"	"	A3	"	"	"	"	"	"	"
		89	"						"		IN	IN	IN		"	"	A4	"	"	"	"	"	"	"
		90	GND		IN			OUT	"			OUT	OUT		GND	"	B1	"	"	"	"	"	"	"
		91	"			IN		IN	"			OUT	OUT		"	"	B2	"	"	"	"	"	"	"
		92	"				IN	IN	"	OUT	OUT	OUT	OUT		"	"	B3	"	"	"	"	"	"	"
93	"						IN	"	OUT	OUT	OUT		"	"	B4	"	"	"	"	"	"	"		
t _{TLH}	3004 (Fig. 3)	94 to 101	Same tests, terminal conditions, and limits as specified above for t _{THL} .														2	"	2	"	2	"	"	
t _{PHL2}	3003 (Fig. 3)	102	GND		IN	IN	IN	IN	GND		OUT	OUT	OUT		GND	4.5V	A1 to B1	3	17	3	23	3	17	"
		103	"					"	"		OUT	OUT	OUT		"	"	A2 to B2	"	"	"	"	"	"	"
		104	"					"	"						"	"	A3 to B3	"	"	"	"	"	"	"
		105	"						"	OUT	OUT	OUT	OUT		"	"	A4 to B4	"	"	"	"	"	"	"
		106	4.5V		OUT	OUT	OUT	OUT	"			IN	IN		4.5V	"	B1 to A1	"	"	"	"	"	"	"
		107	"				OUT	OUT	"			IN	IN		"	"	B2 to A2	"	"	"	"	"	"	"
		108	"					OUT	OUT	"	IN	IN	IN		"	"	B3 to A3	"	"	"	"	"	"	"
109	"					OUT	"	IN					"	"	B4 to A4	"	"	"	"	"	"	"		
t _{PLH2}	3003 (Fig. 3)	110 to 117	Same terminal conditions and measured terminals as specified above for t _{PHL2} .														3	"	3	"	3	"	"	
t _{PZH1}	3003 (Fig. 3)	118	IN		GND	GND	GND	GND	GND		OUT	OUT	OUT		GND	4.5V	G1 to B1	4	26	4	35	4	26	"
		119	"					"	"						"	"	G1 to B2	"	"	"	"	"	"	"
		120	"					"	"		OUT	OUT	OUT		"	"	G1 to B3	"	"	"	"	"	"	"
		121	"					"	"						"	"	G1 to B4	"	"	"	"	"	"	"
		122	4.5V		OUT	OUT	OUT	OUT	"			GND	GND		IN	"	G2 to A1	"	"	"	"	"	"	"
		123	"					"	"						"	"	G2 to A2	"	"	"	"	"	"	"
		124	"			OUT	OUT	OUT	"		GND	GND	GND		"	"	G2 to A3	"	"	"	"	"	"	"
		125	"					OUT	"	GND					"	"	G2 to A4	"	"	"	"	"	"	"
t _{PZL1}	3003 (Fig. 3)	126	IN		4.5V	4.5V	4.5V	4.5V	"		OUT	OUT	OUT		GND	"	G1 to B1	"	"	"	"	"	"	"
		127	"					"	"						"	"	G1 to B2	"	"	"	"	"	"	"
		128	"					"	"						"	"	G1 to B3	"	"	"	"	"	"	"
		129	"					"	"		OUT	OUT	OUT		"	"	G1 to B4	"	"	"	"	"	"	"
		130	4.5V		OUT	OUT	OUT	OUT	"			4.5V	4.5V		IN	"	G2 to A1	"	"	"	"	"	"	"
		131	"					"	"						"	"	G2 to A2	"	"	"	"	"	"	"
		132	"			OUT	OUT	OUT	"	4.5V	4.5V	4.5V	4.5V		"	"	G2 to A3	"	"	"	"	"	"	"
		133	"					OUT	"						"	"	G2 to A4	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 01 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C,D Test no	Terminal conditions 1/														Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 9 T _C = +25°C 4/		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
			G ₁	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}								
t _{PHZ1}	3003 (Fig. 3)	134	IN		GND				GND						GND	4.5V	G ₁ to B1	4	30	4	40	4	30	ns
		135	"			GND			"			OUT			"	"	G ₁ to B2	"	"	"	"	"	"	"
		136	"				GND		"		OUT				"	"	G ₁ to B3	"	"	"	"	"	"	"
		137	"					GND	"						"	"	G ₁ to B4	"	"	"	"	"	"	"
		138	4.5V		OUT		OUT		"			GND			IN	"	G2 to A1	"	"	"	"	"	"	"
		139	"			OUT		OUT		"			GND			"	G2 to A2	"	"	"	"	"	"	"
		140	"				OUT		"		GND				"	"	G2 to A3	"	"	"	"	"	"	"
		141	"					OUT		GND					"	"	G2 to A4	"	"	"	"	"	"	"
t _{PLZ1}	3003 (Fig. 3)	142	IN		4.5V				"						GND	4.5V	G ₁ to B1	"	"	"	"	"	"	"
		143	"			4.5V			"			OUT			"	"	G ₁ to B2	"	"	"	"	"	"	"
		144	"				4.5V		"		OUT				"	"	G ₁ to B3	"	"	"	"	"	"	"
		145	"					4.5V	"		OUT				"	"	G ₁ to B4	"	"	"	"	"	"	"
		146	4.5V		OUT				"				4.5V		IN	"	G2 to A1	"	"	"	"	"	"	"
		147	"			OUT		OUT		"					"	"	G2 to A2	"	"	"	"	"	"	"
		148	"				OUT		"		4.5V				"	"	G2 to A3	"	"	"	"	"	"	"
		149	"					OUT	"	4.5V					"	"	G2 to A4	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 02.

Symbol	MIL-STD-883 method	Case 2 Cases C, D Test no.	Terminal conditions 1/														Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}								
V _{IC} (pos)		1 2	1mA					1/ 1/							1mA	GND GND	G1 G2	1/ 0.4 0.4	1.5 1.5					V
V _{IC} (neg)		3 4	-1mA					GND							-1mA	1/ 1/	G1 G2		-1.5					"
I _{CC}	3005	5 6 7 8	GND GND 6V 6V		6V 6V	GND 6V	6V 6V	GND 6V	"		GND 6V	6V 6V	GND 6V	6V 6V	GND 6V 6V	6V	V _{CC}		.2		20.0			μA
I _{CCZ}	3005	9	6V					"							GND	"	"		"		10.0			"
V _{OH3}	3006	10 11 12 13 14 15 16 17	4.2V " " 1.2V " "	-20μA " 4.2V	-20μA " 4.2V	-20μA " 4.2V	-20μA " 4.2V	" " " " " "	4.2V " 4.2V -20μA	4.2V " -20μA	4.2V " -20μA	4.2V " -20μA	4.2V " -20μA	4.2V " -20μA	4.2V " 1.2V " " " " "	A1 A2 A3 A4 B1 B2 B3 B4	5.95 " " " " " " " "		5.95 " " " " " "		5.95 " " " " " "		V	
V _{OH5}	3006	18 19 20 21 22 23 24 25	4.2V " " " 1.2V " " "	-7.8mA " " 4.2V	-7.8mA " 4.2V	-7.8mA " 4.2V	-7.8mA " 4.2V	" " " " " " "	4.2V " 4.2V -7.8mA	4.2V " -7.8mA	4.2V " -7.8mA	4.2V " -7.8mA	4.2V " -7.8mA	4.2V " -7.8mA	4.2V " 1.2V " " " " "	A1 A2 A3 A4 B1 B2 B3 B4	5.48 " " " " " " "		5.2 " " " " " "		5.48 " " " " " "		"	
V _{OL3}	3007	26 27 28 29 30 31 32 33	4.2V " " 1.2V " " "	20μA " 1.2V	20μA " 1.2V	20μA " 1.2V	20μA " 1.2V	" " " " " "	1.2V " 20μA	1.2V " 20μA	1.2V " 20μA	1.2V " 20μA	1.2V " 20μA	1.2V " 20μA	4.2V " 1.2V " " " " "	A1 A2 A3 A4 B1 B2 B3 B4		.05 " " " " " "		.05 " " " " " "		.05 " " " " " "	"	
V _{OL5}	3007	34 35 36 37 38 39 40 41	4.2V " " " 1.2V " "	7.8mA " 1.2V	7.8mA " 1.2V	7.8mA " 1.2V	7.8mA " 1.2V	" " " " " "	1.2V " 7.8mA	1.2V " 7.8mA	1.2V " 7.8mA	1.2V " 7.8mA	1.2V " 7.8mA	1.2V " 7.8mA	4.2V " 1.2V " " " " "	A1 A2 A3 A4 B1 B2 B3 B4		0.26 " " " " " "		0.4 " " " " " "		0.26 " " " " " "	"	
I _{OS4}	3011	42 43 44 45 46 47 48 49	4V " " GND " " "	GND " 4V	GND " 4V	GND " 4V	GND " 4V	" " " " " "	4V " 4V GND	4V " GND	4V " GND	4V " GND	4V " GND	4V " GND	4V " GND	A1 A2 A3 A4 B1 B2 B3 B4	-10 " " " " " "	-135 " " " " " "	-10 " " " " " "	-135 " " " " " "	-10 " " " " " "	-135 " " " " " "	mA	

See footnotes at end of table.

TABLE III. Group A inspection for device type 02 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C, D Test no.	Terminal conditions 1/																Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20	Subgroup 1 T _C = +25°C			Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	Min	Max		Min	Max	Min	Max			
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}										
I _{IH} /I _{OZH}		50	2/		6V				GND				2/		4.2V	6V	A1			.1		2.0			μA	
		51	"			6V			"			2/		2/		"	A2			"		"			"	
		52	"				6V		"						"	"	A3			"		"			"	
		53	"					6V	"		2/				"	"	A4			"		"			"	
		54	1.2V		2/		2/		"			6V	6V		2/	"	B1			"		"			"	
		55	"			2/		2/	"						"	"	B2			"		"			"	
		56	"				2/		"			6V			"	"	B3			"		"			"	
		57	"					2/	"		6V				"	"	B4			"		"			"	
I _{IL} /I _{OZL}		58	2/		GND				"				2/		4.2V	"	A1			-.1		-.2			"	
		59	"			GND			"			2/		2/		"	A2			"		"			"	
		60	"				GND		"						"	"	A3			"		"			"	
		61	"					GND	"		2/				"	"	A4			"		"			"	
		62	1.2V		2/		2/		"				GND	GND	2/	"	B1			"		"			"	
		63	"			2/		2/	"						"	"	B2			"		"			"	
		64	"				2/		"			GND			"	"	B3			"		"			"	
		65	"					2/	"		GND				"	"	B4			"		"			"	
I _{IH}	3010	66	6V					"							"	G1			.05		.1			"		
		67						"						6V	"	G2			"		"			"		
I _{IL}	3009	68	GND					"								G1			-.05		-.1			"		
		69						"							GND	"	G2			"		"			"	
																	Subgroup 4 T _C = +25°C						Unit			
																	Min	Max								
C _{I/O}		70	6V		3/				"						GND	6V	A1			20					pF	
		71	"			3/			"						"	"	A2			"		"			"	
		72	"				3/		"						"	"	A3			"		"			"	
		73	"					3/	"						"	"	A4			"		"			"	
		74	GND						"			3/	3/		6V	"	B1			"		"			"	
		75	"						"						"	"	B2			"		"			"	
		76	"						"		3/	3/			"	"	B3			"		"			"	
		77	"						"	3/					"	"	B4			"		"			"	
C _C		78	3/						"							GND	G1			10					"	
		79							"						3/	GND	G2			10					"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 02 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C, D Test no.	Terminal conditions 1/														Measured terminal	Test limits						Unit		
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max			
			G1	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}		Min	Max	Min	Max	Min	Max			
Truth table tests 5/	3014	80	B		A	A	A	A	GND	H	H	H	H		B	4.5V	6/									
		81	B		B	B	B	B	"	L	L	L	L		B	"	"									
		82	A		L	L	L	L	"	A	A	A	A		A	"	"									
		83	A		H	H	H	H	"	B	B	B	B		A	"	"									
		84	A		Z	Z	Z	Z	"	Z	Z	Z	Z		B	"	7/									
		85	B		Z	Z	Z	Z	"	Z	Z	Z	Z		A	"	7/									
																	Subgroup 9 T _C = +25°C 4/		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/					
t _{THL}	3004 (Fig. 3)	86	4.5V		OUT				"			IN	IN		4.5V	4.5V	A1	2	12	2	16	2	12	ns		
		87	"			OUT			"			IN			"	"	A2	"	"	"	"	"	"	"		
		88	"				OUT		"		IN				"	"	A3	"	"	"	"	"	"	"		
		89	"					OUT	"		IN				"	"	A4	"	"	"	"	"	"	"		
		90	GND		IN				"			OUT	OUT		GND	"	B1	"	"	"	"	"	"	"		
		91	"			IN			"		OUT				"	"	B2	"	"	"	"	"	"	"		
t _{TLH}	3004 (Fig. 3)	92	"			IN			"		OUT				"	"	B3	"	"	"	"	"	"	"		
		93	"				IN		"	OUT				"	"	B4	"	"	"	"	"	"	"			
		94 to 101	Same tests, terminal conditions, and limits as specified above for t _{THL} .															2	"	2	"	2	"	"		
		t _{PHL2}	3003 (Fig. 3)	102	GND		IN				GND			OUT	OUT		GND	4.5V	A1 to B1	4	17	4	23	4	17	"
				103	"			IN			"						"	"	A2 to B2	"	"	"	"	"	"	"
				104	"				IN		"		OUT				"	"	A3 to B3	"	"	"	"	"	"	"
105	"							IN	"		OUT				"	"	A4 to B4	"	"	"	"	"	"	"		
106	4.5V				OUT				"			IN	IN		4.5V	"	B1 to A1	"	"	"	"	"	"	"		
107	"					OUT			"			IN			"	"	B2 to A2	"	"	"	"	"	"	"		
t _{PLH2}	3003 (Fig. 3)	108	"				OUT		"		IN				"	"	B3 to A3	"	"	"	"	"	"	"		
		109	"					OUT	"						"	"	B4 to A4	"	"	"	"	"	"	"		
		110 to 117	Same terminal conditions and measured terminals as specified above for t _{PHL2} .															4	"	4	"	4	"	"		
		t _{PZH1}	3003 (Fig. 3)	118	IN		4.5V				GND			OUT	OUT		GND	4.5V	G1 to B1	4	"	4	"	4	"	"
				119	"			4.5V			"						"	"	G1 to B2	"	"	"	"	"	"	"
				120	"						"		OUT				"	"	G1 to B3	"	"	"	"	"	"	"
121	"						4.5V		"			OUT			"	"	G1 to B4	"	"	"	"	"	"	"		
122	4.5V				OUT				"				4.5V		IN	"	G2 to A1	"	"	"	"	"	"	"		
123	"					OUT			"			4.5V			"	"	G2 to A2	"	"	"	"	"	"	"		
t _{PZL1}	3003 (Fig. 3)	124	"				OUT		"						"	"	G2 to A3	"	"	"	"	"	"	"		
		125	"					OUT	"						"	"	G2 to A4	"	"	"	"	"	"	"		
		126	IN		GND				"			OUT	OUT		GND	"	G1 to B1	"	27	"	36	"	27	"		
		127	"			GND			"						"	"	G1 to B2	"	"	"	"	"	"	"		
		128	"				GND		"		OUT				"	"	G1 to B3	"	"	"	"	"	"	"		
		129	"						"			OUT			"	"	G1 to B4	"	"	"	"	"	"	"		
t _{PZH1}	3003 (Fig. 3)	130	4.5V		OUT				"			GND	GND		IN	"	G2 to A1	"	"	"	"	"	"	"		
		131	"						"						"	"	G2 to A2	"	"	"	"	"	"	"		
		132	"			OUT			"						"	"	G2 to A3	"	"	"	"	"	"	"		
		133	"				OUT		"		GND	GND			"	"	G2 to A4	"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 02 – Continued.

Symbol	MIL-STD-883 method	Case 2 Cases C, D Test no.	Terminal conditions 1/														Measured terminal	Test limits						Unit
			2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		4/				4/		
			G ₁	NC	A1	A2	A3	A4	GND	B4	B3	B2	B1	NC	G2	V _{CC}		Min	Max	Min	Max	Min	Max	
t _{PHZ1}	3003 (Fig. 3)	134	IN		4.5V				GND						GND	4.5V	G ₁ to B1	4	32	4	42	4	32	ns
		135	"			4.5V			"			OUT	OUT		"	"	G ₁ to B2	"	"	"	"	"	"	"
		136	"						"						"	"	G ₁ to B3	"	"	"	"	"	"	"
		137	"						"			OUT			"	"	G ₁ to B4	"	"	"	"	"	"	"
		138	4.5V		OUT			4.5V	"	OUT			4.5V		IN	"	G2 to A1	"	"	"	"	"	"	"
		139	"			OUT			"			4.5V			"	"	G2 to A2	"	"	"	"	"	"	"
		140	"				OUT		"		4.5V				"	"	G2 to A3	"	"	"	"	"	"	"
		141	"					OUT	"	4.5V					"	"	G2 to A4	"	"	"	"	"	"	"
t _{PLZ1}	3003 (Fig. 3)	142	IN		GND				"					GND	"	G ₁ to B1	"	"	"	"	"	"	"	
		143	"			GND			"					"	"	G ₁ to B2	"	"	"	"	"	"	"	
		144	"				GND		"		OUT	OUT		"	"	G ₁ to B3	"	"	"	"	"	"	"	
		145	"					GND	"	OUT				"	"	G ₁ to B4	"	"	"	"	"	"	"	
		146	4.5V		OUT				"			GND		IN	"	G2 to A1	"	"	"	"	"	"	"	
		147	"			OUT			"					"	"	G2 to A2	"	"	"	"	"	"	"	
		148	"				OUT		"		GND			"	"	G2 to A3	"	"	"	"	"	"	"	
		149	"					OUT	"	GND				"	"	G2 to A4	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 03.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																			Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1		$\overline{G}$	V _{CC}	Min	Max	Min	Max		Min
V _{IC} (pos)		1	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1/										GND	DIR	1/	1.5				V	
	2											"										"	A1	"	"				"	
	3											"										"	A2	"	"				"	
	4											"										"	A3	"	"				"	
	5											"										"	A4	"	"				"	
	6											"										"	A5	"	"				"	
	7											"										"	A6	"	"				"	
	8											"										"	A7	"	"				"	
	9											"										"	A8	"	"				"	
	10											"	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	"	B8	"	"				"	
	11											"		1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	"	B7	"	"				"	
	12											"			1mA	1mA	1mA	1mA	1mA	1mA	1mA	"	B6	"	"				"	
	13											"				1mA	1mA	1mA	1mA	1mA	1mA	"	B5	"	"				"	
	14											"					1mA	1mA	1mA	1mA	1mA	"	B4	"	"				"	
	15											"						1mA	1mA	1mA	1mA	"	B3	"	"				"	
	16											"							1mA	1mA	1mA	"	B2	"	"				"	
	17											"								1mA	1mA	"	B1	"	"				"	
	18											"								1mA	1mA	"	G	"	"				"	
V _{IC} (neg)		19	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND											1/	DIR		-1.5				"	
	20										"											"	A1	"	"				"	
	21										"											"	A2	"	"				"	
	22										"											"	A3	"	"				"	
	23										"											"	A4	"	"				"	
	24										"											"	A5	"	"				"	
	25										"											"	A6	"	"				"	
	26										"											"	A7	"	"				"	
	27										"											"	A8	"	"				"	
	28										"	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	"	B8	"	"				"	
	29										"		-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	"	B7	"	"				"	
	30										"			-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	"	B6	"	"				"	
	31										"				-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	"	B5	"	"				"	
	32										"					-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	"	B4	"	"				"	
	33										"						-1mA	-1mA	-1mA	-1mA	-1mA	"	B3	"	"				"	
	34										"							-1mA	-1mA	-1mA	-1mA	"	B2	"	"				"	
	35										"								-1mA	-1mA	-1mA	"	B1	"	"				"	
	36										"									-1mA	-1mA	"	G	"	"				"	
I _{CC}	3005	37	GND									GND	GND	6V	GND	6V	GND	6V	GND	6V	GND	6V	V _{CC}		0.2		20			μA
		38	GND									"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		39	6V	GND	6V	GND	6V	GND	6V	GND	6V	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		40	6V	6V	6V	6V	6V	6V	6V	6V	6V	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
I _{CCZ}	3005	41	GND	6V	6V	6V	6V	6V	6V	6V	6V	"	6V	6V	6V	6V	6V	6V	6V	6V	6V	"	"		0.1		10			"
		42	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	GND	GND	GND	GND	GND	GND	GND	GND	6V	"	"		0.1		10			"

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																			Measured terminal	Test limits						Unit			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C				
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1		$\overline{G}$	V _{CC}	Min	Max	Min	Max		Min	Max	
V _{OH3}	3006	43	1.2V	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	GND							4.2V	4.2V	4.2V	1.2V	6V	A1	5.95		5.95		5.95	V		
		44	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A2	"		"		"	"		
		45	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A3	"		"		"	"		
		46	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A4	"		"		"	"		
		47	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A5	"		"		"	"		
		48	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A6	"		"		"	"		
		49	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A7	"		"		"	"		
		50	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A8	"		"		"	"		
		51	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	"	B1	"		"		"	"	
		52	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B2	"		"		"	"		
		53	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B3	"		"		"	"		
		54	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B4	"		"		"	"		
		55	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B5	"		"		"	"		
		56	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B6	"		"		"	"		
		57	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B7	"		"		"	"		
		58	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B8	"		"		"	"		
V _{OH5}	3006	59	1.2V	-7.8mA	-7.8mA	-7.8mA	-7.8mA	-7.8mA	-7.8mA	-7.8mA	-7.8mA	"							4.2V	4.2V	4.2V	"	"	A1	5.48		5.2		5.48	"		
		60	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A2	"		"		"	"		
		61	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A3	"		"		"	"		
		62	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A4	"		"		"	"		
		63	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A5	"		"		"	"		
		64	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A6	"		"		"	"		
		65	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A7	"		"		"	"		
		66	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	A8	"		"		"	"		
		67	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	"	B1	"		"		"	"	
		68	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B2	"		"		"	"		
		69	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B3	"		"		"	"		
		70	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B4	"		"		"	"		
		71	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B5	"		"		"	"		
		72	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B6	"		"		"	"		
		73	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B7	"		"		"	"		
		74	"	"	"	"	"	"	"	"	"	"							4.2V	4.2V	4.2V	"	"	B8	"		"		"	"		
V _{OL3}	3007	75	1.2V	20μA	20μA	20μA	20μA	20μA	20μA	20μA	20μA	"							1.2V	1.2V	1.2V	"	"	A1		0.05		0.05		0.05	"	
		76	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A2		"		"		"	"	
		77	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A3		"		"		"	"	
		78	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A4		"		"		"	"	
		79	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A5		"		"		"	"	
		80	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A6		"		"		"	"	
		81	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A7		"		"		"	"	
		82	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	A8		"		"		"	"	
		83	4.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	"	"	B1		"		"		"	"
		84	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B2		"		"		"	"	
		85	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B3		"		"		"	"	
		86	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B4		"		"		"	"	
		87	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B5		"		"		"	"	
		88	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B6		"		"		"	"	
		89	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B7		"		"		"	"	
		90	"	"	"	"	"	"	"	"	"	"							1.2V	1.2V	1.2V	"	"	B8		"		"		"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

Symbol	MIL-STD-883 method	Cases 2.R.S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min	
V _{OL5}	3007	91	1.2V	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	GND								1.2V	1.2V	6V	A1		0.26		0.4		0.26	V
		92	"									"									"	"	A2							"
		93	"									"									"	"	A3							"
		94	"									"									"	"	A4							"
		95	"									"									"	"	A5							"
		96	"									"									"	"	A6							"
		97	"									"									"	"	A7							"
		98	"									"									"	"	A8							"
		99	4.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	"	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	7.8mA	"	B1							"
		100	"									"									"	"	B2							"
		101	"									"									"	"	B3							"
		102	"									"									"	"	B4							"
		103	"									"									"	"	B5							"
		104	"									"									"	"	B6							"
		105	"									"									"	"	B7							"
		106	"									"	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	"	"	B8							"
I _{OS4}	3011	107	GND	GND	GND	GND	GND	GND	GND	GND	GND	"								4V	4V	4V	A1	-10	-135	-10	-135	-10	-135	mA
		108	"									"								"	"	A2							"	
		109	"									"								"	"	A3							"	
		110	"									"								"	"	A4							"	
		111	"									"								"	"	A5							"	
		112	"									"								"	"	A6							"	
		113	"									"								"	"	A7							"	
		114	"									"								"	"	A8							"	
		115	4V	4V	4V	4V	4V	4V	4V	4V	4V	"	4V	4V	4V	4V	4V	4V	4V	4V	GND	"	B1							"
		116	"									"									"	"	B2							"
		117	"									"									"	"	B3							"
		118	"									"									"	"	B4							"
		119	"									"									"	"	B5							"
		120	"									"									"	"	B6							"
		121	"									"									"	"	B7							"
		122	"									"	GND	GND	GND	GND	GND	GND	GND	GND	"	"	B8							"
I _{IH} /I _{OZH}		123	1.2V	6V	6V	6V	6V	6V	6V	6V	6V	"								2/	2/	6V	A1		.2		2.0			μA
		124	"									"								"	"	A2							"	
		125	"									"								"	"	A3							"	
		126	"									"								"	"	A4							"	
		127	"									"								"	"	A5							"	
		128	"									"								"	"	A6							"	
		129	"									"								"	"	A7							"	
		130	"									"								"	"	A8							"	
		131	4.2V	2/	2/	2/	2/	2/	2/	2/	2/	"	2/	2/	2/	2/	2/	2/	2/	2/	6V	"	B1							"
		132	"									"									"	"	B2							"
		133	"									"									"	"	B3							"
		134	"									"									"	"	B4							"
		135	"									"									"	"	B5							"
		136	"									"									"	"	B6							"
		137	"									"									"	"	B7							"
		138	"									"	6V	6V	6V	6V	6V	6V	6V	6V	"	"	B8							"

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit																		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C																				
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G		V _{CC}	Min	Max	Min	Max	Min		Max																	
I _{IL} /I _{OZL}		139	1.2V	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	6V	A1		-2		-2.0			μA																		
		140	"	2/																			2/								2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	A2
		141	"																																													A3
		142	"																																													A4
		143	"		A5																																											
		144	"		A6																																											
		145	"		A7																																											
		146	"		A8																																											
		147	4.2V		B1																																											
		148	"		B2																																											
		149	"		B3																																											
		150	"		B4																																											
		151	"		B5																																											
		152	"		B6																																											
		153	"		B7																																											
		154	"		B8																																											
I _{IH}	3010	155	6V																			DIR		.05		.1			"																			
		156																				6V	G	.05		.1			"																			
I _{IL}	3009	157	GND																			DIR		-.05		-.1			"																			
		158																				GND	G	-.05		-.1			"																			
C _{IO}		159	GND	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	6V	A1		20					pF																		
		160	"	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/								3/	3/	3/	3/	3/	3/	A2											
		161	"																																		A3											
		162	"																																		A4											
		163	"																																		A5											
		164	"																																		A6											
		165	"																																		A7											
		166	"																																		A8											
		167	6V																																		B8											
		168	"																																		B7											
		169	"																																		B6											
		170	"																																		B5											
		171	"																																		B4											
		172	"																																		B3											
		173	"																																		B2											
		174	"																																		B1											
C _C		175	3/																			DIR		15					"																			
		176																				3/	GND	G	15					"																		
																						6/	Test limits						Unit																			
																								Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C																				
																								Min	Max	Min	Max	Min		Max																		
Truth table tests 5/	3014	177	A	A	A	A	A	A	A	A	A	"	H	H	H	H	H	H	H	H	B	4.5V																										
		178	A	B	B	B	B	B	B	B	B	"	"	L	L	L	L	L	L	L	B	"																										
		179	B	H	H	H	H	H	H	H	H	"	"	A	A	A	A	A	A	A	B	"																										
		180	B	L	L	L	L	L	L	L	L	"	"	B	B	B	B	B	B	B	B	A	"																									
		181	B	Z	Z	Z	Z	Z	Z	Z	"	"	Z	Z	Z	Z	Z	Z	Z	Z	A	7/																										

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min	
t _{THL}	3004 (Fig. 3)	182	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND								IN	IN	GND	4.5V	A1	2	12	2	16	2	12	ns
		183	"								"										"	"	"	"	"	"	"	"	"	
		184	"								"										"	"	"	"	"	"	"	"	"	
		185	"								"										"	"	"	"	"	"	"	"	"	
		186	"								"										"	"	"	"	"	"	"	"	"	
		187	"								"										"	"	"	"	"	"	"	"	"	
		188	"								"										"	"	"	"	"	"	"	"	"	
		189	"								"										"	"	"	"	"	"	"	"	"	
		190	4.5V	IN							OUT		IN								OUT		"	"	"	"	"	"	"	"
		191	"			IN															OUT		"	"	"	"	"	"	"	"
		192	"				IN															"	"	"	"	"	"	"	"	"
		193	"					IN														"	"	"	"	"	"	"	"	"
		194	"						IN													"	"	"	"	"	"	"	"	"
		195	"							IN		IN										"	"	"	"	"	"	"	"	"
		196	"								IN			OUT								"	"	"	"	"	"	"	"	"
		197	"									IN		OUT								"	"	"	"	"	"	"	"	"
t _{TLH}	3004 (Fig. 3)	198 to 213	Same tests, terminal conditions, and limits as specified above for t _{THL} .																				2	12	2	16	2	12	ns	
t _{PHL2}	3003 (Fig. 3)	214	4.5V	IN		IN					GND								OUT	OUT	GND	4.5V	A1 to B1	4	25	4	33	4	25	ns
		215	"								"										"	"	"	"	"	"	"	"	"	"
		216	"								"										"	"	"	"	"	"	"	"	"	"
		217	"								"										"	"	"	"	"	"	"	"	"	"
		218	"								"										"	"	"	"	"	"	"	"	"	"
		219	"								"										"	"	"	"	"	"	"	"	"	"
		220	"								"										"	"	"	"	"	"	"	"	"	"
		221	"								"										"	"	"	"	"	"	"	"	"	"
		222	GND	OUT		OUT						"	OUT	OUT	OUT	OUT					IN		"	"	"	"	"	"	"	"
		223	"								"										"	"	"	"	"	"	"	"	"	"
		224	"								"										"	"	"	"	"	"	"	"	"	"
		225	"								"										"	"	"	"	"	"	"	"	"	"
		226	"								"										"	"	"	"	"	"	"	"	"	"
		227	"								"										"	"	"	"	"	"	"	"	"	"
		228	"								"										"	"	"	"	"	"	"	"	"	"
		229	"								OUT		IN								"	"	"	"	"	"	"	"	"	"
t _{PLH2}	3003 (Fig. 3)	230 to 245	Same terminal conditions and measured terminals as specified above for t _{PHL2} .																				4	25	4	33	4	25	ns	

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	4/		Min	Max	Min	
t _{PZH1}	3003 (Fig. 3)	246	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	4.5V	4.5V	IN	4.5V	G to A1	9	44	9	59	9	44	ns
		247	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A2	"	"	"	"	"	"	"
		248	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A3	"	"	"	"	"	"	"
		249	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A4	"	"	"	"	"	"	"
		250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A5	"	"	"	"	"	"	"
		251	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A6	"	"	"	"	"	"	"
		252	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A7	"	"	"	"	"	"	"
		253	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A8	"	"	"	"	"	"	"
		254	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	G to B1	"	"	"	"	"	"	"
		255	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B2	"	"	"	"	"	"	"
		256	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B3	"	"	"	"	"	"	"
		257	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B4	"	"	"	"	"	"	"
		258	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B5	"	"	"	"	"	"	"
		259	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B6	"	"	"	"	"	"	"
		260	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B7	"	"	"	"	"	"	"
		261	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B8	"	"	"	"	"	"	"
t _{PZH1}	3003 (Fig. 3)	262 to 277	Same terminal conditions and measured terminals as specified above for t _{PZH1} .																				8	41	8	54	8	41	"	
t _{PZL1}	3003 (Fig. 3)	278	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	IN	4.5V	G to A1	9	44	9	59	9	44	"
		279	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A2	"	"	"	"	"	"	"
		280	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A3	"	"	"	"	"	"	"
		281	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A4	"	"	"	"	"	"	"
		282	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A5	"	"	"	"	"	"	"
		283	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A6	"	"	"	"	"	"	"
		284	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A7	"	"	"	"	"	"	"
		285	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to A8	"	"	"	"	"	"	"
		286	4.5V	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	G to B1	"	"	"	"	"	"	"
		287	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B2	"	"	"	"	"	"	"
		288	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B3	"	"	"	"	"	"	"
		289	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B4	"	"	"	"	"	"	"
		290	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B5	"	"	"	"	"	"	"
		291	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B6	"	"	"	"	"	"	"
		292	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B7	"	"	"	"	"	"	"
		293	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	G to B8	"	"	"	"	"	"	"
t _{PZL1}	3003 (Fig. 3)	294 to 309	Same terminal conditions and measured terminals as specified above for t _{PZL1} .																				8	41	8	54	8	41	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 06.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max
V _{IC} (pos)		1		1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1/										GND	A1	1/0.4	1.5					V	
		2										"										"	A2	"	"					"	
		3										"										"	A3	"	"					"	
		4										"										"	A4	"	"					"	
		5										"										"	A5	"	"					"	
		6										"										"	A6	"	"					"	
		7										"										"	A7	"	"					"	
		8										"										"	A8	"	"					"	
		9										"		1mA	1mA							"	B8	"	"					"	
		10										"			1mA							"	B7	"	"					"	
		11										"				1mA						"	B6	"	"					"	
		12										"					1mA					"	B5	"	"					"	
		13										"						1mA				"	B4	"	"					"	
		14										"							1mA			"	B3	"	"					"	
		15										"								1mA		"	B2	"	"					"	
		16										"									1mA	"	B1	"	"					"	
V _{IC} (neg)		17		-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND											1/	A1		-1.5					"	
		18									"											"	A2		"					"	
		19									"											"	A3		"					"	
		20									"											"	A4		"					"	
		21									"											"	A5		"					"	
		22									"											"	A6		"					"	
		23									"											"	A7		"					"	
		24									"											"	A8		"					"	
		25									"											"	B8		"					"	
		26									"											"	B7		"					"	
		27									"											"	B6		"					"	
		28									"											"	B5		"					"	
		29									"											"	B4		"					"	
		30									"											"	B3		"					"	
		31									"											"	B2		"					"	
		32									"											"	B1		"					"	
I _{CC}	3005	33	6V	6V	GND	6V	GND	6V	GND	6V	GND	"										GND	6V	V _{CC}		.2		20			μA
		34	"	6V	6V							"		GND	6V	GND	6V	GND	6V	GND	6V	"	"	"	"	"	"	"	"	"	
		35	"									"										"	"	"	"	"	"	"	"	"	
		36	"									"										"	"	"	"	"	"	"	"	"	
I _{CCZ}	3005	37	"								"										6V	"	"		"	10			"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$		V _{CC}	Min	Max	Min	Max	Min	
V _{OH3}	3006	38	1.2V	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	GND								1.2V	1.2V	6V	A1	5.95		5.95		5.95		V
		39	"									"								1.2V	"	"	A2	"		"		"		"
		40	"									"								"	"	"	A3	"		"		"		"
		41	"									"								"	"	"	A4	"		"		"		"
		42	"									"								"	"	"	A5	"		"		"		"
		43	"									"								"	"	"	A6	"		"		"		"
		44	"									"								"	"	"	A7	"		"		"		"
		45	"									"								"	"	"	A8	"		"		"		"
		46	4.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	"	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	-20μA	"	B1	"		"		"		"
		47	"									"								-20μA	"	"	B2	"		"		"		"
		48	"									"								-20μA	"	"	B3	"		"		"		"
		49	"									"								-20μA	"	"	B4	"		"		"		"
		50	"									"								-20μA	"	"	B5	"		"		"		"
		51	"									"								-20μA	"	"	B6	"		"		"		"
		52	"									"								-20μA	"	"	B7	"		"		"		"
		53	"									"	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	"	"	"	B8	"		"		"		"
V _{OH5}	3006	54 to 69	Same tests and terminal conditions as for V _{OH3} except I _{OH} = -7.8 mA.																				5.48		5.2		5.48		"	
V _{OL3}	3007	70	1.2V	20μA	20μA	20μA	20μA	20μA	20μA	20μA	20μA	"							4.2V	4.2V	"	A1		.05		.05		.05	"	
		71	"									"							4.2V	"	"	A2		"		"		"	"	
		72	"									"							4.2V	"	"	A3		"		"		"	"	
		73	"									"							4.2V	"	"	A4		"		"		"	"	
		74	"									"							4.2V	"	"	A5		"		"		"	"	
		75	"									"							4.2V	"	"	A6		"		"		"	"	
		76	"									"							4.2V	"	"	A7		"		"		"	"	
		77	"									"							4.2V	"	"	A8		"		"		"	"	
		78	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	20μA	"	B1		"		"		"	"	
		79	"									"							20μA	"	"	B2		"		"		"	"	
		80	"									"							20μA	"	"	B3		"		"		"	"	
		81	"									"							20μA	"	"	B4		"		"		"	"	
		82	"									"							20μA	"	"	B5		"		"		"	"	
		83	"									"							20μA	"	"	B6		"		"		"	"	
		84	"									"							20μA	"	"	B7		"		"		"	"	
		85	"									"	20μA	20μA	20μA	20μA	20μA	20μA	"	"	"	B8		"		"		"	"	
V _{OL5}	3007	86 to 101	Same tests and terminal conditions as for V _{OL3} except I _{OL} = 7.8 mA.																					0.26		0.4		0.26	"	
I _{OS4}	3011	102	GND	GND	GND	GND	GND	GND	GND	GND	GND	"							GND	GND	4V	A1	-10	-135	-10	-135	-10	-135	mA	
		103	"									"							GND	"	"	A2	"	"	"	"	"	"	"	
		104	"									"							GND	"	"	A3	"	"	"	"	"	"	"	
		105	"									"							GND	"	"	A4	"	"	"	"	"	"	"	
		106	"									"							GND	"	"	A5	"	"	"	"	"	"	"	
		107	"									"							GND	"	"	A6	"	"	"	"	"	"	"	
		108	"									"							GND	"	"	A7	"	"	"	"	"	"	"	
		109	"									"							GND	"	"	A8	"	"	"	"	"	"	"	
		110	4V	GND	GND	GND	GND	GND	GND	GND	GND	"	GND	GND	GND	GND	GND	GND	GND	"	"	B1	"	"	"	"	"	"	"	
		111	"									"							GND	"	"	B2	"	"	"	"	"	"	"	
		112	"									"							GND	"	"	B3	"	"	"	"	"	"	"	
		113	"									"							GND	"	"	B4	"	"	"	"	"	"	"	
		114	"									"							GND	"	"	B5	"	"	"	"	"	"	"	
		115	"									"							GND	"	"	B6	"	"	"	"	"	"	"	
		116	"									"							GND	"	"	B7	"	"	"	"	"	"	"	
		117	"									"	GND	GND	GND	GND	GND	GND	GND	"	"	B8	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C					
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max		
I _{IH} /I _{OZH}	3010	118	1.2V	6V								GND										2/	2/	6V	A1		.1		2.0			μA	
		119	"		6V							"										2/	"	"	A2		"		"			"	
		120	"			6V						"										"	"	"	A3		"		"			"	
		121	"				6V					"										"	"	"	A4		"		"			"	
		122	"					6V				"										"	"	"	A5		"		"			"	
		123	"						6V				"									"	"	"	A6		"		"			"	
		124	"							6V			"									"	"	"	A7		"		"			"	
		125	"								6V		"	2/	2/							"	"	"	A8		"		"			"	
		126	4.2V									2/	2/	6V								"	"	"	B8		"		"			"	
		127	"										"		6V							"	"	"	B7		"		"			"	
		128	"								2/	2/	"			6V						"	"	"	B6		"		"			"	
		129	"										"				6V					"	"	"	B5		"		"			"	
		130	"										"					6V				"	"	"	B4		"		"			"	
		131	"				2/	2/					"						6V			"	"	"	B3		"		"			"	
		132	"			2/							"							6V			"	"	"	B2		"		"			"
		133	"	2/									"								6V	"	"	"	B1		"		"			"	
I _{IH}		134	6V									"											"	DIR			.05		0.1			"	
		135										"										6V	"	G			.05		0.1			"	
I _{IL} /I _{OZL}	3010	136	1.2V	GND								"										2/	2/	6V	A1		-.1		-2.0			"	
		137	"		GND							"										2/	"	"	A2		"		"			"	
		138	"			GND						"										"	"	"	A3		"		"			"	
		139	"				GND					"										"	"	"	A4		"		"			"	
		140	"					GND				"										"	"	"	A5		"		"			"	
		141	"						GND			"										"	"	"	A6		"		"			"	
		142	"							GND			"		2/							"	"	"	A7		"		"			"	
		143	"								GND		"	2/								"	"	"	A8		"		"			"	
		144	4.2V									2/	GND	2/		GND						"	"	"	B8		"		"			"	
		145	"										"									"	"	"	B7		"		"			"	
		146	"										"									"	"	"	B6		"		"			"	
		147	"										"									"	"	"	B5		"		"			"	
		148	"										"									"	"	"	B4		"		"			"	
		149	"										"									"	"	"	B3		"		"			"	
		150	"										"									"	"	"	B2		"		"			"	
		151	"	2/									"									"	"	"	B1		"		"			"	
I _{IL}		152	GND									"											"	DIR			-.05		-0.1			"	
		153										"										GND	"	G			-.05		-0.1			"	
																								Subgroup 4 T _C = +25°C						Unit			
																									Min	Max							
C _{I/O}		154	GND	3/								GND											6V	6V	A1							pF	
		155	"		3/							"										"	"	"	A2							"	
		156	"			3/						"										"	"	"	A3							"	
		157	"				3/					"										"	"	"	A4							"	
		158	"					3/				"										"	"	"	A5							"	
		159	"						3/				"									"	"	"	A6							"	
		160	"							3/			"									"	"	"	A7							"	
		161	"								3/		"									"	"	"	A8							"	
		162											"	3/								"	"	"	B8							"	
		163	6V										"		3/							"	"	"	B7							"	
		164	"										"			3/						"	"	"	B6							"	
		165	"										"				3/					"	"	"	B5							"	
		166	"										"					3/				"	"	"	B4							"	
		167	"										"						3/			"	"	"	B3							"	
		168	"										"							3/			"	"	"	B2							"
		169	"										"								3/		"	"	B1							"	
C _C		170	3/									"												DIR							"		
		171										"										3/	GND	G							"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$		V _{CC}	Min	Max	Min	Max	Min	
Truth table tests 5/	3014	172 173 174 175	A A B B	A B L H	A B L H	A B L H	A B L H	A B L H	A B L H	A B L H	GND " " "	L H A B	L H A B	L H A B	L H A B	L H A B	L H A B	L H A B	L H A B	L H A B	B " " "	4.5V " " "	6/							
																							Subgroup 9 T _C = +25°C 4/		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/		Unit	
																							Min	Max	Min	Max	Min	Max		
t _{THL}	3004 (Fig. 3)	176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191	GND " " " " " " " 4.5V " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	A1 A2 A3 A4 A5 A6 A7 A8 B1 B2 B3 B4 B5 B6 B7 B8	2 " " " " " " " " " " " " " " "	12 " " " " " " " " " " " " " "	2 " " " " " " " " " " " " " "	16 " " " " " " " " " " " " " "	2 " " " " " " " " " " " " " "	12 " " " " " " " " " " " " " "	ns " " " " " " " " " " " " " "
t _{TLH}	3004 (Fig. 3)	192 to 207	Same tests, terminal conditions, and limits as specified above for t _{THL} .																											
t _{PHL2}	3003 (Fig. 3)	208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223	GND " " " " " " " 4.5V " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	OUT " " " " " " " IN " " " " " " "	B1 to A1 B2 to A2 B3 to A3 B4 to A4 B5 to A5 B6 to A6 B7 to A7 B8 to A8 A1 to B1 A2 to B2 A3 to B3 A4 to B4 A5 to B5 A6 to B6 A7 to B7 A8 to B8	4 " " " " " " " " " " " " " "	20 " " " " " " " " " " " " " "	4 " " " " " " " " " " " " "	26 " " " " " " " " " " " " "	4 " " " " " " " " " " " " "	20 " " " " " " " " " " " " "	ns " " " " " " " " " " " " "
t _{PLH2}	3003 (Fig. 3)	224 to 239	Same tests and terminal conditions as specified above for t _{PHL2} .																											

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max	
t _{PHZ2}	3003 (Fig. 3)	240	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND								GND	GND	IN	4.5V	G to A1	8	40	8	53	8	40	ns		
		241	"								"									"	"	"	G to A2	"	"	"	"	"	"	"		
		242	"								"									"	"	"	G to A3	"	"	"	"	"	"	"		
		243	"								"									"	"	"	G to A4	"	"	"	"	"	"	"		
		244	"								"									"	"	"	G to A5	"	"	"	"	"	"	"		
		245	"								"									"	"	"	G to A6	"	"	"	"	"	"	"		
		246	"								"									"	"	"	G to A7	"	"	"	"	"	"	"		
		247	"								"									"	"	"	G to A8	"	"	"	"	"	"	"		
		248	4.5V	GND							OUT	"	GND							OUT	OUT	"	"	G to B1	"	"	"	"	"	"	"	
		249	"								"	"								OUT	OUT	"	"	G to B2	"	"	"	"	"	"	"	
		250	"								"	"								OUT	OUT	"	"	G to B3	"	"	"	"	"	"	"	
		251	"								"	"								OUT	OUT	"	"	G to B4	"	"	"	"	"	"	"	
		252	"								"	"								OUT	OUT	"	"	G to B5	"	"	"	"	"	"	"	
		253	"								"	"								OUT	OUT	"	"	G to B6	"	"	"	"	"	"	"	
		254	"								"	"								OUT	OUT	"	"	G to B7	"	"	"	"	"	"	"	
		255	"								GND	"	OUT								"	"	"	G to B8	"	"	"	"	"	"	"	
t _{PHZ2}	3003 (Fig. 3)	256 to 271	Same tests and terminal conditions as specified above for t _{PHZ2} .																				9	44	9	59	9	44	"			
t _{PLZ2}	3003 (Fig. 3)	272	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"								4.5V	4.5V	4.5V	IN	"	G to A1	8	40	8	53	8	40	"	
		273	"								"											"	"	G to A2	"	"	"	"	"	"	"	
		274	"								"											"	"	G to A3	"	"	"	"	"	"	"	
		275	"								"											"	"	G to A4	"	"	"	"	"	"	"	
		276	"								"											"	"	G to A5	"	"	"	"	"	"	"	
		277	"								"											"	"	G to A6	"	"	"	"	"	"	"	
		278	"								"											"	"	G to A7	"	"	"	"	"	"	"	
		279	"								"		4.5V									"	"	G to A8	"	"	"	"	"	"	"	
		280	4.5V	4.5V							OUT	"									OUT	OUT	"	"	G to B1	"	"	"	"	"	"	"
		281	"								"										OUT	OUT	"	"	G to B2	"	"	"	"	"	"	"
		282	"								"										OUT	OUT	"	"	G to B3	"	"	"	"	"	"	"
		283	"								"										OUT	OUT	"	"	G to B4	"	"	"	"	"	"	"
		284	"								"										OUT	OUT	"	"	G to B5	"	"	"	"	"	"	"
		285	"								"										OUT	OUT	"	"	G to B6	"	"	"	"	"	"	"
		286	"								"										OUT	OUT	"	"	G to B7	"	"	"	"	"	"	"
		287	"								4.5V	"	OUT									"	"	G to B8	"	"	"	"	"	"	"	
t _{PLZ2}	3003 (Fig. 3)	288 to 303	Same tests and terminal conditions as specified above for t _{PLZ2} .																				9	44	9	59	9	44	"			

See footnotes at end of table.

TABLE III. Group A inspection for device type 07.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G		V _{CC}	Min	Max	Min	Max	Min	
V _{IC} (pos)		1		1mA	1mA	1mA	1mA	1mA	1mA	1mA	1/											GND	A1	0.4	1/	1.5				V
		2									"											"	A2	"	"					"
		3									"											"	A3	"	"					"
		4									"											"	A4	"	"					"
		5									"											"	A5	"	"					"
		6									"											"	A6	"	"					"
		7									"											"	A7	"	"					"
		8									"											"	A8	"	"					"
		9									"	1mA										"	B8	"	"					"
		10									"		1mA									"	B7	"	"					"
		11									"			1mA								"	B6	"	"					"
		12									"				1mA							"	B5	"	"					"
		13									"					1mA						"	B4	"	"					"
		14									"						1mA					"	B3	"	"					"
		15									"							1mA				"	B2	"	"					"
		16									"								1mA			"	B1	"	"					"
V _{IC} (neg)		17		-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND											1/	A1		-1.5					"
		18									"											"	A2		"					"
		19									"											"	A3		"					"
		20									"											"	A4		"					"
		21									"											"	A5		"					"
		22									"											"	A6		"					"
		23									"											"	A7		"					"
		24									"											"	A8		"					"
		25									"		-1mA									"	B8		"					"
		26									"			-1mA								"	B7		"					"
		27									"				-1mA							"	B6		"					"
		28									"					-1mA						"	B5		"					"
		29									"						-1mA					"	B4		"					"
		30									"							-1mA				"	B3		"					"
		31									"								-1mA			"	B2		"					"
		32									"									-1mA		"	B1		"					"
I _{CC}	3005	33	6V																				V _{CC}							μA
		34	"																			"	"							"
		35	"	6V									GND	6V								"	"							"
		36	"	6V	GND								6V		GND	6V						"	"							"
I _{CCZ}	3005	37	"																		6V	"	"				10			"

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$		V _{CC}	Min	Max	Min	Max	Min		Max
V _{OH3}	3006	38	1.2V	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	GND							4.2V	4.2V	4.2V	4.2V	1.2V	6V	A1	5.95		5.95		5.95	V
		39	"									"											"	"	A2	"		"		"	"
		40	"									"											"	"	A3	"		"		"	"
		41	"									"											"	"	A4	"		"		"	"
		42	"									"											"	"	A5	"		"		"	"
		43	"									"											"	"	A6	"		"		"	"
		44	"									"											"	"	A7	"		"		"	"
		45	"									"											"	"	A8	"		"		"	"
		46	4.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	"	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	"	B1	"		"		"	"
		47	"									"											"	"	B2	"		"		"	"
		48	"									"											"	"	B3	"		"		"	"
		49	"									"											"	"	B4	"		"		"	"
		50	"									"											"	"	B5	"		"		"	"
		51	"									"											"	"	B6	"		"		"	"
		52	"									"											"	"	B7	"		"		"	"
		53	"									"	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	-20μA	"	"	B8	"		"		"	"
V _{OH5}	3006	54 to 69	Same tests and terminal conditions as for V _{OH3} except I _{OH} = -7.8 mA.																					5.48		5.2		5.48		"	
V _{OL3}	3007	70	1.2V	20μA	20μA	20μA	20μA	20μA	20μA	20μA	20μA	"							1.2V	1.2V	1.2V	1.2V	1.2V	6V	A1		.05		.05	"	
		71	"									"											"	"	A2						"
		72	"									"											"	"	A3						"
		73	"									"											"	"	A4						"
		74	"									"											"	"	A5						"
		75	"									"											"	"	A6						"
		76	"									"											"	"	A7						"
		77	"									"											"	"	A8						"
		78	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	"	"	B1						"
		79	"									"											"	"	B2						"
		80	"									"											"	"	B3						"
		81	"									"											"	"	B4						"
		82	"									"											"	"	B5						"
		83	"									"											"	"	B6						"
		84	"									"	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	"	B7						"
		85	"									"	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	"	"	B8						"
V _{OL5}	3007	86 to 101	Same tests and terminal conditions as for V _{OL3} except I _{OL} = 7.8 mA.																						.26		0.4		.26		
I _{OS4}	3011	102	GND	GND	GND	GND	GND	GND	GND	GND	GND	"							4V	4V	GND	4V	A1	-10	-135	-10	-135	-10	-135	mA	
		103	"									"										"	"	"	"	"	"	"	"	"	"
		104	"									"										"	"	"	"	"	"	"	"	"	"
		105	"									"										"	"	"	"	"	"	"	"	"	"
		106	"									"										"	"	"	"	"	"	"	"	"	"
		107	"									"										"	"	"	"	"	"	"	"	"	"
		108	"									"										"	"	"	"	"	"	"	"	"	"
		109	"									"										"	"	"	"	"	"	"	"	"	"
		110	4V	GND	GND	GND	GND	GND	GND	GND	GND	"	4V	4V	4V	4V	4V	4V	4V	4V	GND	GND	"	"	"	"	"	"	"	"	"
		111	"									"										"	"	"	"	"	"	"	"	"	"
		112	"									"										"	"	"	"	"	"	"	"	"	"
		113	"									"										"	"	"	"	"	"	"	"	"	"
		114	"									"										"	"	"	"	"	"	"	"	"	"
		115	"									"										"	"	"	"	"	"	"	"	"	"
		116	"									"										"	"	"	"	"	"	"	"	"	"
		117	"									"	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	"	"	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																		Measured terminal	Test limits						Unit			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		19	20	Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C			Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2		B1	$\overline{G}$	V _{CC}	Min	Max	Min		Max	Min	Max
I _{IH} /I _{OZH}	3010	118	1.2V	6V	6V	6V	6V	6V	6V	6V	6V	6V	GND							2/	2/	2/	6V	A1		.1		2.0			μA
		119	"										"							2/			"	A2							
		120	"										"							2/			"	A3							
		121	"										"							2/			"	A4							
		122	"										"							2/			"	A5							
		123	"										"							2/			"	A6							
		124	"										"							2/			"	A7							
		125	"										"							2/			"	A8							
		126	4.2V									6V	2/		2/	6V							"	B8							
		127	"										"		6V								"	B7							
		128	"								2/		"										"	B6							
		129	"								2/		"			6V							"	B5							
		130	"										"				6V						"	B4							
		131	"										"										"	B3							
		132	"										"										"	B2							
		133	"		2/		2/						"									6V		"	B1						
I _{IH}		134	6V									"										6V	DIR		.05		.1				"
		135										"										6V	G		.05		.1				"
I _{IL} /I _{OZL}	3010	136	1.2V	GND	GND	GND	GND	GND	GND	GND	GND	GND	"							2/	2/	2/	6V	A1		.1		-2.0			"
		137	"										"							2/			"	A2							"
		138	"										"							2/			"	A3							"
		139	"										"							2/			"	A4							"
		140	"										"							2/			"	A5							"
		141	"										"							2/			"	A6							"
		142	"										"							2/			"	A7							"
		143	"										"							2/			"	A8							"
		144	4.2V										GND	2/		GND							"	B8							"
		145	"											"									"	B7							"
		146	"											"									"	B6							"
		147	"											"									"	B5							"
		148	"											"									"	B4							"
		149	"											"									"	B3							"
		150	"											"									"	B2							"
		151	"		2/		2/						"										"	B1							"
I _{IL}		152	GND									"										"	DIR		-.05		-.1				"
		153										"										"	G		-.05		-.1				"
																							Subgroup 4 T _C = +25°C						Unit		
																								Min	Max						
C _{I/O}		154	GND	3/	3/	3/	3/	3/	3/	3/	3/	GND										6V	6V	A1		20					pF
		155	"									"										"	"	A2							
		156	"									"										"	"	A3							
		157	"									"										"	"	A4							
		158	"									"										"	"	A5							
		159	"									"										"	"	A6							
		160	"									"										"	"	A7							
		161	"									"										"	"	A8							
		162	6V										"		3/	3/	3/	3/	3/	3/	3/	"	"	B8							
		163	"										"									"	"	B7							
		164	"										"									"	"	B6							
		165	"										"									"	"	B5							
		166	"										"									"	"	B4							
		167	"										"									"	"	B3							
		168	"										"									"	"	B2							
		169	"										"									"	"	B1							
C _C		170	3/									"											3/	GND	DIR						
		171										"										"	GND	G							

See footnotes at end of table.

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$		V _{CC}	4/		4/		4/																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
t _{PHZ2}	3003 (Fig. 3)	240	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT

See footnotes at end of table.

TABLE III. Group A inspection for device type 08.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1	Subgroup 2			Subgroup 3						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T _C = +25°C		T _C = +125°C		T _C = -55°C						
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}	Min	Max	Min		Max	Min	Max				
V _{IC} (pos)		1	1mA										1/													GND	CAB	0.4	1/	1.5				V			
	2		1mA										"													"	SAB	"	"	"	"	"	"				
	3			1mA									"													"	DIR	"	"	"	"	"	"	"			
	4				1mA								"													"	A1	"	"	"	"	"	"	"			
	5					1mA							"													"	A2	"	"	"	"	"	"	"			
	6						1mA						"													"	A3	"	"	"	"	"	"	"			
	7							1mA					"													"	A4	"	"	"	"	"	"	"			
	8								1mA				"													"	A5	"	"	"	"	"	"	"			
	9									1mA			"													"	A6	"	"	"	"	"	"	"			
	10										1mA		"													"	A7	"	"	"	"	"	"	"			
	11											1mA	"													"	A8	"	"	"	"	"	"	"			
	12												"	1mA												"	B8	"	"	"	"	"	"	"			
	13												"		1mA											"	B7	"	"	"	"	"	"	"			
	14												"			1mA										"	B6	"	"	"	"	"	"	"			
	15												"				1mA									"	B5	"	"	"	"	"	"	"			
	16												"					1mA								"	B4	"	"	"	"	"	"	"			
	17												"						1mA							"	B3	"	"	"	"	"	"	"			
	18												"							1mA						"	B2	"	"	"	"	"	"	"			
	19												"								1mA					"	B1	"	"	"	"	"	"	"			
	20												"									1mA				"	G	"	"	"	"	"	"	"			
	21												"										1mA			"	SBA	"	"	"	"	"	"	"			
	22												"											1mA		"	CBA	"	"	"	"	"	"	"			
V _{IC} (neg)		23	-1mA										GND													1/	CAB		-1.5				"				
	24		-1mA										"													"	SAB		"	"	"	"	"	"			
	25			-1mA									"													"	DIR		"	"	"	"	"	"			
	26				-1mA								"													"	A1		"	"	"	"	"	"			
	27					-1mA							"													"	A2		"	"	"	"	"	"			
	28						-1mA						"													"	A3		"	"	"	"	"	"			
	29							-1mA					"													"	A4		"	"	"	"	"	"			
	30								-1mA				"													"	A5		"	"	"	"	"	"			
	31									-1mA			"													"	A6		"	"	"	"	"	"			
	32										-1mA		"													"	A7		"	"	"	"	"	"			
	33											-1mA	"													"	A8		"	"	"	"	"	"			
	34												"	-1mA												"	B8		"	"	"	"	"	"			
	35												"		-1mA											"	B7		"	"	"	"	"	"			
	36												"			-1mA										"	B6		"	"	"	"	"	"			
	37												"				-1mA									"	B5		"	"	"	"	"	"			
	38												"					-1mA								"	B4		"	"	"	"	"	"			
	39												"						-1mA							"	B3		"	"	"	"	"	"			
	40												"							-1mA						"	B2		"	"	"	"	"	"			
	41												"								-1mA					"	B1		"	"	"	"	"	"			
	42												"									-1mA				"	G		"	"	"	"	"	"			
	43												"										-1mA			"	SBA		"	"	"	"	"	"			
	44												"											-1mA		"	CBA		"	"	"	"	"	"			

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1 T _C = +25°C Min Max	Subgroup 2 T _C = +125°C Min Max			Subgroup 3 T _C = -55°C Min Max						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		T _C = +25°C Min Max	T _C = +125°C Min Max		T _C = -55°C Min Max						
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$	SBA	CBA	V _{CC}											
I _{CC}	3005	45 46 47 48	GND " " "	GND " " "	6V 6V GND GND	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND "	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND "	GND "	GND "	6V "	V _{CC} " " "	 " " "	.2 " " "	 " " "	20 " " "	 " " "	 " " "	μA		
I _{CC2}	3005	49 50	GND GND	GND GND	GND GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	"	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	6V 6V	GND GND	GND GND	6V 6V	"	 0.2 0.2	 "	10 10	 "	 "	"			
V _{OH3}	3006	51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	1.2V " " " " " " "	1.2V " " " " " " "	1.2V " " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	-20μA " " " " " 4.2V	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A1 A2 A3 A4 A5 A6 A7 A8 B1 B2 B3 B4 B5 B6 B7 B8	5.95 " " " " " " " " " " " " " "	 " " " " " " " " " " " " " "	5.95 " " " " " " " " " " " " " "	 " " " " " " " " " " " " "	 " " " " " " " " " " " "	V			
V _{OH5}	3006	67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82	1.2V " " " " " " "	1.2V " " " " " " 4.2V	1.2V " " " " 4.2V	-7.8mA " " " " 4.2V	-7.8mA " " " " 4.2V	-7.8mA " " " " 4.2V	-7.8mA " " " " 4.2V	-7.8mA " " " " 4.2V	-7.8mA " " " " 4.2V	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A1 A2 A3 A4 A5 A6 A7 A8 B1 B2 B3 B4 B5 B6 B7 B8	5.48 " " " " " " " " " " " " " "	 " " " " " " " " " " " " "	5.2 " " " " " " " " " " " " "	 " " " " " " " " " " " "	5.48 " " " " " " " " " " "	 " " " " " " " " "	"		
V _{OL3}	3007	83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98	1.2V " " " " " " "	1.2V " " " " " " 4.2V	1.2V " " " " 1.2V	20μA " " " " 1.2V	20μA " " " " 1.2V	20μA " " " " 1.2V	20μA " " " " 1.2V	20μA " " " " 1.2V	20μA " " " " 1.2V	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A1 A2 A3 A4 A5 A6 A7 A8 B1 B2 B3 B4 B5 B6 B7 B8	 " " " " " " " " " " " " " "	.05 " " " " " " " " " " " "	 " " " " " " " " " " " "	.05 " " " " " " " " " " "	 " " " " " " " " "	.05 " " " " " " " "	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1		Subgroup 2		Subgroup 3						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T _C = +25°C		T _C = +125°C		T _C = -55°C						
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}	Min	Max	Min		Max	Min	Max				
V _{OL5}	3007	99	1.2V	1.2V	1.2V	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	7.8mA	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}	A1		.26		0.4		.26	V				
		100	"	"	"								"	"	"	"	"	"	"	1.2V	1.2V	1.2V	1.2V	6V	A2		"		"		"	"					
		101	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A3		"		"		"	"				
		102	"	"	"								"	"	"	"	"	"	"			"	"	"	"	"	A4		"		"		"	"			
		103	"	"	"								"	"	"	"	"	"	"			"	"	"	"	"	A5		"		"		"	"			
		104	"	"	"								"	"	"	"	"	"	"			"	"	"	"	"	A6		"		"		"	"			
		105	"	"	"								"	"	"	"	"	"	"			"	"	"	"	"	A7		"		"		"	"			
		106	"	"	"								"	"	"	"	"	"	"			"	"	"	"	"	A8		"		"		"	"			
		107	"	"	4.2V	1.2V							"	"	"	"	"	"	"			7.8mA	7.8mA	"	"	"	B1		"		"		"	"			
		108	"	"	"		1.2V						"	"	"	"	"	"	"			"	"	"	"	"	B2		"		"		"	"			
		109	"	"	"			1.2V					"	"	"	"	"	"	"			"	"	"	"	"	B3		"		"		"	"			
		110	"	"	"				1.2V				"	"	"	"	"	"	"			"	"	"	"	"	B4		"		"		"	"			
		111	"	"	"					1.2V			"	"	"	"	"	"	"			"	"	"	"	"	B5		"		"		"	"			
		112	"	"	"						1.2V		"	"	"	"	"	"	"			"	"	"	"	"	B6		"		"		"	"			
		113	"	"	"							1.2V		"	"	"	"	"	"			"	"	"	"	"	B7		"		"		"	"			
		114	"	"	"								1.2V	"	7.8mA	7.8mA						"	"	"	"	"	B8		"		"		"	"			
I _{OS4}	3011	115	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	"	"	"	"	"	"	"	4V	4V	GND	GND	GND	4V	A1	-10	-135	-10	-135	-10	-135	mA			
		116	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A2		"		"		"	"				
		117	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A3		"		"		"	"				
		118	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A4		"		"		"	"				
		119	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A5		"		"		"	"				
		120	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A6		"		"		"	"				
		121	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A7		"		"		"	"				
		122	"	"	"								"	"	"	"	"	"	"			"	"	"	"	A8		"		"		"	"				
		123	"	"	4V	4V							"	"	"	"	"	"	"			"	"	"	"	"	B1		"		"		"	"			
		124	"	"	"		4V						"	"	"	"	"	"	"			"	"	"	"	"	B2		"		"		"	"			
		125	"	"	"			4V					"	"	"	"	"	"	"			"	"	"	"	"	B3		"		"		"	"			
		126	"	"	"				4V				"	"	"	"	"	"	"			"	"	"	"	"	B4		"		"		"	"			
		127	"	"	"					4V			"	"	"	"	"	"	"			"	"	"	"	"	B5		"		"		"	"			
		128	"	"	"						4V		"	"	"	"	"	"	"			"	"	"	"	"	B6		"		"		"	"			
		129	"	"	"							4V	"	"	"	"	"	"	"			"	"	"	"	"	B7		"		"		"	"			
		130	"	"	"								4V	"	GND	GND	"	"	"			"	"	"	"	"	B8		"		"		"	"			
I _{IH} /I _{OZH}		131			1.2V	6V	6V	6V	6V	6V	6V	6V	"	"	"	"	"	"	"	"	2/	2/	GND	2/	6V	A1		.1		2.0			μA				
		132			"								"	"	"	"	"	"	"			"	"	"	"	A2		"		"		"	"				
		133			"								"	"	"	"	"	"	"			"	"	"	"	A3		"		"		"	"				
		134			"								"	"	"	"	"	"	"			"	"	"	"	A4		"		"		"	"				
		135			"								"	"	"	"	"	"	"			"	"	"	"	A5		"		"		"	"				
		136			"								"	"	"	"	"	"	"			"	"	"	"	A6		"		"		"	"				
		137			"								"	"	"	"	"	"	"			"	"	"	"	A7		"		"		"	"				
		138			"								"	"	"	"	"	"	"			"	"	"	"	A8		"		"		"	"				
		139	2/	GND	4.2V	2/	2/	2/	2/	2/	2/	2/	"	2/	2/	2/	2/	2/	2/	2/	6V	"	"	"	"	B1		"		"		"	"				
		140	"	"	"		2/	2/	2/	2/	2/	2/	"	"	"	"	"	"	"			"	"	"	"	B2		"		"		"	"				
		141	"	"	"			2/	2/	2/	2/	2/	"	"	"	"	"	"	"			"	"	"	"	B3		"		"		"	"				
		142	"	"	"				2/	2/	2/	2/	"	"	"	"	"	"	"			"	"	"	"	B4		"		"		"	"				
		143	"	"	"					2/	2/	2/	"	"	"	"	"	"	"			"	"	"	"	B5		"		"		"	"				
		144	"	"	"						2/	2/	"	"	"	"	"	"	"			"	"	"	"	B6		"		"		"	"				
		145	"	"	"							2/	"	"	"	"	"	"	"			"	"	"	"	B7		"		"		"	"				
		146	"	"	"								2/	"	6V	6V	6V	6V	6V	6V	6V	"	"	"	"	B8		"		"		"	"				

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1		Subgroup 2		Subgroup 3						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T _C = +25°C		T _C = +125°C		T _C = -55°C						
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	SBA	CBA	V _{CC}	Min	Max	Min		Max	Min	Max				
I _{IL} /I _{OZL}		147			1.2V	GND								GND													A1						μA				
		148			"		GND							"													A2						"				
		149			"			GND						"													A3						"				
		150			"									"													A4						"				
		151			"									"													A5						"				
		152			"						GND			"													A6						"				
		153			"							GND		"													A7						"				
		154			"								GND		"												A8						"				
		155	2/	GND	4.2V	2/	2/								2/	2/											B1						"				
		156	"	"	"		2/							"	"												B2						"				
		157	"	"	"			2/						"	"												B3						"				
		158	"	"	"				2/					"	"												B4						"				
		159	"	"	"					2/				"	"												B5						"				
		160	"	"	"						2/			"	"												B6						"				
		161	"	"	"							2/		"		GND											B7						"				
		162	"	"	"								2/	"	GND												B8						"				
I _{IH}	3010	163	6V											"													CAB		.05	0.1			"				
		164		6V										"													SAB						"				
		165			6V									"													DIR						"				
		166												"													G						"				
		167												"													SBA						"				
		168												"													CBA						"				
		168												"																			"				
I _{IL}	3009	169	GND											"													CAB		-0.5	-.1			"				
		170		GND										"													SAB						"				
		171			GND									"													DIR						"				
		172												"													G						"				
		173												"													SBA						"				
		174												"													CBA						"				
		174												"																			"				
C _{IO}		175	GND	GND	GND	3/	3/							"													A1		20				pF				
		176	"	"	"									"													A2						"				
		177	"	"	"									"													A3						"				
		178	"	"	"									"													A4						"				
		179	"	"	"									"													A5						"				
		180	"	"	"									"													A6						"				
		181	"	"	"									"													A7						"				
		182	"	"	"									"													A8						"				
		183	"	"	6V									"													B1						"				
		184	"	"	"									"	3/	3/											B2						"				
		185	"	"	"									"			3/										B3						"				
		186	"	"	"									"				3/									B4						"				
		187	"	"	"									"					3/								B5						"				
		188	"	"	"									"						3/							B6						"				
		189	"	"	"									"							3/						B7						"				
		190	"	"	"									"								3/					B8						"				
C _C		191	3/											"													GND	CAB		10			"				
		192		3/										"													SAB						"				
		193			3/									"													DIR						"				
		194												"													G						"				
		195												"													SBA						"				
		196												"													CBA						"				

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit																					
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 7		Subgroup 8		Subgroup 8																											
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T _C = +25°C		T _C = +125°C		T _C = -55°C																											
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}	Min	Max	Min		Max	Min	Max																									
Truth table tests 5/	3014	197	B	B	A	A	A	A	A	A	A	A	A	GND	H	H	H	H	H	H	H	H	B	B	B	4.5V	6/																															
		198	"	"	A	B	B	B	B	B	B	B	B	"	L	L	L	L	L	L	L	"	"	"	"																																	
		199	"	"	B	H	H	H	H	H	H	H	H	"	A	A	A	A	A	A	A	"	"	"	"																																	
		200	"	"	B	L	L	L	L	L	L	L	L	"	B	B	B	B	B	B	B	"	"	"	"																																	
		201	"	A	A	A	A	A	A	A	A	A	A	"	L	L	L	L	L	L	L	"	"	"	"																																	
		202	A	"	"	A	A	A	A	A	A	A	A	"	H	H	H	H	H	H	H	"	"	"	"																																	
		203	A	"	"	"	B	B	B	B	B	B	B	"	H	H	H	H	H	H	H	"	"	"	"																																	
		204	A	"	"	"	B	B	B	B	B	B	B	"	L	L	L	L	L	L	L	"	"	"	"																																	
		205	B	B	B	L	L	L	L	L	L	L	L	"	"	"	"	"	"	"	"	"	"	A	"	"																																
		206	"	"	"	"	H	H	H	H	H	H	H	"	"	"	"	"	"	"	"	"	"	"	A	"																																
		207	"	"	"	"	H	H	H	H	H	H	H	"	"	"	"	"	"	"	"	"	"	"	A	"																																
		208	"	"	"	"	L	L	L	L	L	L	L	"	"	"	"	"	"	"	"	"	"	"	A	"																																
		209	"	"	"	"	L	L	L	L	L	L	L	"	"	"	"	"	"	"	"	"	"	"	A	"																																
f _{MAX} 8/		210	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND									GND	GND	GND	4.5V	A1	30		23		30		MHz																									
		211	"	"	"								"									"	"	"	"	A2	"		"		"		"																									
		212	"	"	"								"									"	"	"	"	A3	"		"		"		"																									
		213	"	"	"								"									"	"	"	"	A4	"		"		"		"																									
		214	"	"	"								"									"	"	"	"	A5	"		"		"		"																									
		215	"	"	"								"									"	"	"	"	A6	"		"		"		"																									
		216	"	"	"								"									"	"	"	"	A7	"		"		"		"																									
		217	"	"	"								"									"	"	"	"	A8	"		"		"		"																									
		218	"	"	4.5V	IN	IN	IN	IN	IN	IN	IN	IN	"	IN	IN	IN	IN	IN	IN	IN		"	"	"	"	B1	"		"		"		"																								
		219	"	"	"								"									"	"	"	"	B2	"		"		"		"																									
		220	"	"	"								"									"	"	"	"	B3	"		"		"		"																									
		221	"	"	"								"									"	"	"	"	B4	"		"		"		"																									
		222	"	"	"								"									"	"	"	"	B5	"		"		"		"																									
		223	"	"	"								"									"	"	"	"	B6	"		"		"		"																									
		224	"	"	"								"									"	"	"	"	B7	"		"		"		"																									
		225	"	"	"								"									"	"	"	"	B8	"		"		"		"																									
t _{THL}	3004 (Fig. 3)	226	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	"	"	A1	2	12	2	16	2	12	ns																									
		227	"	"	"								"									"	"	"	"	A2	"		"		"		"																									
		228	"	"	"								"									"	"	"	"	A3	"		"		"		"																									
		229	"	"	"								"									"	"	"	"	A4	"		"		"		"																									
		230	"	"	"								"									"	"	"	"	A5	"		"		"		"																									
		231	"	"	"								"									"	"	"	"	A6	"		"		"		"																									
		232	"	"	"								"									"	"	"	"	A7	"		"		"		"																									
		233	"	"	"								"									"	"	"	"	A8	"		"		"		"																									
		234	"	"	4.5V	IN	IN	IN	IN	IN	IN	IN	IN	"	IN	IN	IN	IN	IN	IN	IN		"	"	"	"	B1	"		"		"		"																								
		235	"	"	"								"									"	"	"	"	B2	"		"		"		"																									
		236	"	"	"								"									"	"	"	"	B3	"		"		"		"																									
		237	"	"	"								"									"	"	"	"	B4	"		"		"		"																									
		238	"	"	"								"									"	"	"	"	B5	"		"		"		"																									
		239	"	"	"								"									"	"	"	"	B6	"		"		"		"																									
		240	"	"	"								"									"	"	"	"	B7	"		"		"		"																									
		241	"	"	"								"									"	"	"	"	B8	"		"		"		"																									
t _{TLH}	3004 (Fig. 3)	242 to 257	Same tests, terminal conditions, and limits as specified above for t _{THL} .																																																							

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																										Measured terminal	Test limits						Unit																
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 9		Subgroup 10		Subgroup 11																				
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T _C = +25°C 4/		T _C = +125°C		T _C = -55°C 4/																				
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	SBA	CBA	V _{CC}	Min		Max	Min	Max	Min	Max																		
t _{PHL1}	3003 (Fig. 3)	258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	IN	IN	IN	IN	IN	IN	IN	IN	GND	4.5V	IN	4.5V	CBA to A1 CBA to A2 CBA to A3 CBA to A4 CBA to A5 CBA to A6 CBA to A7 CBA to A8 CAB to B1 CAB to B2 CAB to B3 CAB to B4 CAB to B5 CAB to B6 CAB to B7 CAB to B8	8	38	8	51	8	38	ns																	
t _{PLH1}	3003 (Fig. 3)	274 to 289	Same terminal conditions and measured terminals as specified above for t _{PHL1} .																																																
t _{PHL2}	3003 (Fig. 3)	290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	IN	IN	IN	IN	IN	IN	IN	IN	GND	GND	GND	4.5V	B1 to A1 B2 to A2 B3 to A3 B4 to A4 B5 to A5 B6 to A6 B7 to A7 B8 to A8 A1 to B1 A2 to B2 A3 to B3 A4 to B4 A5 to B5 A6 to B6 A7 to B7 A8 to B8	5	30	5	40	5	30	ns																	
t _{PLH2}	3003 (Fig. 3)	306 to 321	Same terminal conditions and measured terminals as specified above for t _{PHL2} .																																																
t _{PHL3}	3003 (Fig. 3)	322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	IN	GND	4.5V	SBA to A1 SBA to A2 SBA to A3 SBA to A4 SBA to A5 SBA to A6 SBA to A7 SBA to A8 SAB to B1 SAB to B2 SAB to B3 SAB to B4 SAB to B5 SAB to B6 SAB to B7 SAB to B8	10	38	10	51	10	38	"																	
t _{PLH3}	3003 (Fig. 3)	338 to 353	Same terminal conditions and measured terminals as specified above for t _{PHL3} .																																																

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 9 T _C = +25°C 4/		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Min		Max		Min		Max				
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	SBA	CBA	V _{CC}											
t _{PHL4}	3003 (Fig. 3)	354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND												4.5V	SBA to A1 SBA to A2 SBA to A3 SBA to A4 SBA to A5 SBA to A6 SBA to A7 SBA to A8 SAB to B1 SAB to B2 SAB to B3 SAB to B4 SAB to B5 SAB to B6 SAB to B7 SAB to B8	10	38	10	51	10	38	ns			
t _{PLH4}	3003 (Fig. 3)	370 to 385	Same terminal conditions and measured terminals as specified above for t _{PHL4} .																									10	38	10	51	10	38	ns			
t _{PZH2}	3003 (Fig. 3)	386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401		GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND													4.5V	G to A1 G to A2 G to A3 G to A4 G to A5 G to A6 G to A7 G to A8 G to B1 G to B2 G to B3 G to B4 G to B5 G to B6 G to B7 G to B8	6	43	6	57	6	43	ns			
t _{PZL2}	3003 (Fig. 3)	402 to 417	Same terminal conditions (except GND replaces 4.5 V) and measured terminals as specified above for t _{PZH2} .																																		
t _{PHZ2}	3003 (Fig. 3)	418 to 433	Same terminal conditions and measured terminals as specified above for t _{PZH2} .																																		
t _{PLZ2}	3003 (Fig. 3)	434 to 449	Same terminal conditions and measured terminals as specified above for t _{PZL2} .																																		

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																										Measured terminal	Test limits						Unit	
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C					
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	4/		4/		4/					
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$	SBA	CBA	V _{CC}	Min		Max	Min	Max	Min	Max			
t _{PZH3} 10/	3003 (Fig. 3)	450		GND	IN	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND								4.5V	4.5V	4.5V	IN	GND		4.5V	DIR to A1	6	43	6	57	6	43	ns	
		451		"	"			OUT					"								4.5V	4.5V	"	"	"	"	"	DIR to A2	"	"	"	"	"	"	"	
		452		"	"								"									"	"	"	"	"	"	DIR to A3	"	"	"	"	"	"	"	
		453		"	"								"									"	"	"	"	"	"	DIR to A4	"	"	"	"	"	"	"	
		454		"	"					OUT			"									"	"	"	"	"	"	DIR to A5	"	"	"	"	"	"	"	
		455		"	"						OUT		"									"	"	"	"	"	"	DIR to A6	"	"	"	"	"	"	"	
		456		"	"						OUT		"									"	"	"	"	"	"	DIR to A7	"	"	"	"	"	"	"	
		457		"	"							OUT	"									"	"	"	"	"	"	DIR to A8	"	"	"	"	"	"	"	
		458		"	"	4.5V	4.5V						OUT		4.5V	4.5V					OUT	OUT	"	"	"	"	"	DIR to B1	"	"	"	"	"	"	"	
		459		"	"		4.5V	4.5V					"								OUT	OUT	"	"	"	"	"	DIR to B2	"	"	"	"	"	"	"	
		460		"	"			4.5V	4.5V	4.5V			"									"	"	"	"	"	"	DIR to B3	"	"	"	"	"	"	"	
		461		"	"				4.5V	4.5V	4.5V		"								OUT		"	"	"	"	"	DIR to B4	"	"	"	"	"	"	"	
		462		"	"						4.5V	4.5V	"									"	"	"	"	"	"	DIR to B5	"	"	"	"	"	"	"	
		463		"	"							4.5V	"			OUT	OUT					"	"	"	"	"	"	DIR to B6	"	"	"	"	"	"	"	
		464		"	"							4.5V	"			OUT						"	"	"	"	"	"	DIR to B7	"	"	"	"	"	"	"	
		465		"	"							4.5V	"		OUT							"	"	"	"	"	"	DIR to B8	"	"	"	"	"	"	"	
t _{PZL3} 9/	3003 (Fig. 3)	466 to 481	Same terminal conditions (except GND replaces 4.5 V) and measured terminals as specified above for t _{PZH3} .																																	
t _{PHZ3} 10/	3003 (Fig. 3)	482 to 497	Same terminal conditions and measured terminals as specified above for t _{PZH3} .																																	
t _{PLZ3} 8/	3003 (Fig. 3)	498 to 513	Same terminal conditions and measured terminals as specified above for t _{PZL3} .																																	

See footnotes at end of table.

TABLE III. Group A inspection for device type 09.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1 T _C = +25°C	Subgroup 2 T _C = +125°C			Subgroup 3 T _C = -55°C						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		Min	Max		Min	Max	Min	Max			
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$	SBA	CBA	V _{CC}											
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1/												GND	CAB SAB DIR A1 A2 A3 A4 A5 A6 A7 A8 B8 B7 B6 B5 B4 B3 B2 B1 $\overline{G}$ SBA CBA	0.4 1/	1.5					V			
V _{IC} (neg)		23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND													1/	CAB SAB DIR A1 A2 A3 A4 A5 A6 A7 A8 B8 B7 B6 B5 B4 B3 B2 B1 $\overline{G}$ SBA CBA		-1.5								

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit																																									
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1	Subgroup 2			Subgroup 3																																															
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		T _C = +25°C			T _C = +125°C		T _C = -55°C																																													
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}		Min	Max		Min	Max	Min	Max																																												
I _{CC}	3005	45 46 47 48	GND " " " " " "	GND " " " " " "	6V 6V GND GND	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND " "	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND 6V	6V 6V	GND " "	GND " "	GND " "	6V " "	V _{CC}		.2		20				μA																																										
I _{CC2}	3005	49 50	GND GND	GND GND	GND GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	" "	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	GND 6V	6V 6V	GND GND	GND GND	" "	" "		0.2		10				" "																																											
V _{OH3}	3006	51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	1.2V "	1.2V "	1.2V " " " " " " " " " " " " " " 4.2V " " " " " " " " " " " "	-20μA " " " " " " " " " " " " " " 1.2V " " " " " " " " " " " "	-20μA " " " " " " " " " " " " " " " " 1.2V " " " " " " " " " " " "	-20μA " " " " " " " " " " " " " " " " " " 1.2V " " " " " " " " " " " "	-20μA " 1.2V " " " " " " " " " " " "	-20μA " 1.2V " " " " " " " " " " " "	-20μA " 1.2V " " " " " " " " " " " "	" "	" "	-20μA "	-20μA "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V "	1.2V " "

See footnotes at end of table.

MIL-M-38510/655A

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Units
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Min	Max	Min		Max	Min	Max				
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	SBA	CBA	V _{CC}											
I _{IL} /I _{OL}		147			1.2V	GND							GND								2/		2/	GND	2/	6V	A1					μA					
		148			"								"													A2		-1									
		149			"								"													A3											
		150			"								"													A4											
		151			"								"													A5											
		152			"								"													A6											
		153			"								"													A7											
		154			"								"													A8											
		155	2/	GND	4.2V	2/									2/		2/									B1											
		156	"	"	"		2/						"													B2											
		157	"	"	"			2/					"													B3											
		158	"	"	"				2/				"													B4											
		159	"	"	"					2/			"													B5											
		160	"	"	"						2/		"													B6											
		161	"	"	"							2/	"													B7											
		162	"	"	"								2/	"	GND											B8											
I _{IH}	3010	163	6V																						CAB			.05									
		164		6V																					SAB				0.1								
		165			6V																				DIR												
		166																					6V			G											
		167																						6V		SBA											
		168																							6V		CBA										
I _{IL}	3009	169	GND																						CAB			-0.5									
		170																							SAB												
		171		GND																					DIR												
		172			GND																				G												
		173																							SBA												
		174																								CBA											
C _{I/O}		175	GND	GND	GND	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	3/	6V	GND	GND	A1			20			pF					
		176	"	"	"								"												A2												
		177	"	"	"								"												A3												
		178	"	"	"								"												A4												
		179	"	"	"								"												A5												
		180	"	"	"								"												A6												
		181	"	"	"								"												A7												
		182	"	"	"								"												A8												
		183	"	"	6V								"		3/	3/	3/	3/	3/	3/	3/	3/				B1											
		184	"	"									"												B2												
		185	"	"									"												B3												
		186	"	"									"												B4												
		187	"	"									"												B5												
		188	"	"									"												B6												
		189	"	"									"												B7												
		190	"	"									"												B8												
C _C		191	3/	3/	3/																				CAB			10									
		192																							SAB												
		193																							DIR												
		194																							G												
		195																							SBA												
		196																								CBA											

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C						
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Min		Max		Min		Max				
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$	SBA	CBA	V _{CC}	Min		Max		Min		Max				
Truth table tests 5/	3014	197	B	B	A	B	B	B	B	B	B	B	B	GND	H	H	H	H	H	H	H	H	B	B	B	4.5V	6/										
		198	"	"	A	A	A	A	A	A	A	A	A	"	L	L	L	L	L	L	L	"	"	"	"												
		199	"	"	B	H	H	H	H	H	H	H	H	"	B	B	B	B	B	B	B	"	"	"	"												
		200	"	"	B	L	L	L	L	L	L	L	L	"	A	A	A	A	A	A	A	"	"	"	"												
		201	"	A	A	B	B	B	B	B	B	B	B	"	L	L	L	L	L	L	L	"	"	"	"												
		202	A	"	"	B	B	B	B	B	B	B	B	"	H	H	H	H	H	H	H	"	"	"	"												
		203	B	"	"	A	A	A	A	A	A	A	A	"	H	H	H	H	H	H	H	"	"	"	"												
		204	A	"	"	A	A	A	A	A	A	A	A	"	L	L	L	L	L	L	L	"	"	"	"												
		205	B	B	B	L	L	L	L	L	L	L	L	"	B	B	B	B	B	B	B	"	A	"	"												
		206	"	"	"	H	H	H	H	H	H	H	H	"	B	B	B	B	B	B	B	"	"	A	"												
		207	"	"	"	H	H	H	H	H	H	H	H	"	A	A	A	A	A	A	A	"	"	B	"												
		208	"	"	"	L	L	L	L	L	L	L	L	"	A	A	A	A	A	A	A	"	"	A	"												
		209	"	"	"	L	L	L	L	L	L	L	L	"	A	A	A	A	A	A	A	"	"	A	"												
																										6/	Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C		MHz				
																											4/		4/		4/						
																											Min	Max	Min	Max	Min	Max					
f _{MAX} 8/		210	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	"	"	"	"	"	"	"	"	GND	GND	GND	4.5V	A1	30		23		30						
		211	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A2	"		"		"						
		212	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A3	"		"		"						
		213	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A4	"		"		"						
		214	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A5	"		"		"						
		215	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A6	"		"		"						
		216	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A7	"		"		"						
		217	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A8	"		"		"						
		218	"	"	4.5V	IN	IN	IN	IN	IN	IN	OUT	IN	IN	IN	IN	IN	IN	IN	OUT	OUT	"	"	"	"	B1	"		"		"						
		219	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	B2	"		"		"						
		220	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B3	"		"		"						
		221	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B4	"		"		"						
		222	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B5	"		"		"						
		223	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B6	"		"		"						
		224	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B7	"		"		"						
		225	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B8	"		"		"						
t _{THL}	3004 (Fig. 3)	226	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	"	"	A1	2	12	2	16	2	12	ns					
		227	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A2	"		"		"							
		228	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A3	"		"		"							
		229	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A4	"		"		"							
		230	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A5	"		"		"							
		231	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A6	"		"		"							
		232	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A7	"		"		"							
		233	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A8	"		"		"							
		234	"	"	4.5V	IN	IN	IN	IN	IN	IN	OUT	IN	IN	IN	IN	IN	IN	OUT	OUT	"	"	"	"	B1	"		"		"							
		235	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B2	"		"		"						
		236	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B3	"		"		"						
		237	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B4	"		"		"						
		238	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B5	"		"		"						
		239	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B6	"		"		"						
		240	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B7	"		"		"						
		241	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	"	"	B8	"		"		"						
t _{TLH}	3004 (Fig. 3)	242 to 257	Same tests, terminal conditions, and limits as specified above for t _{THL} .																																		

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit							
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 9 T _C = +25°C 4/		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C 4/													
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Min	Max	Min		Max	Min	Max											
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SBA	CBA	V _{CC}																		
t _{PHL1}	3003 (Fig. 3)	258	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	CBA to A1	8	42	8	56	8	42	ns										
		259	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A2	"	"	"	"	"	"	"										
		260	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A3	"	"	"	"	"	"	"										
		261	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A4	"	"	"	"	"	"	"										
		262	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A5	"	"	"	"	"	"	"										
		263	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A6	"	"	"	"	"	"	"										
		264	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A7	"	"	"	"	"	"	"										
		265	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A8	"	"	"	"	"	"	"										
		266	IN	4.5V	4.5V	IN	IN	IN	IN	IN	IN	IN	IN	OUT	IN	IN	IN	IN	IN	OUT	OUT	OUT	OUT	GND	GND	"	CAB to B1	"	"	"	"	"	"	"										
		267	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B2	"	"	"	"	"	"	"										
		268	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B3	"	"	"	"	"	"	"										
		269	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B4	"	"	"	"	"	"	"										
		270	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B5	"	"	"	"	"	"	"										
		271	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B6	"	"	"	"	"	"	"										
		272	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CAB to B7	"	"	"	"	"	"	"										
		273	"	"	"	"	"	"	"	"	"	"	"	"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	"	"	CAB to B8	"	"	"	"	"	"	"										
t _{PLH1}	3003 (Fig. 3)	274 to 289	Same terminal conditions and measured terminals as specified above for t _{PHL1} .																																									
t _{PHL2}	3003 (Fig. 3)	290	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	B1 to A1	5	30	5	40	5	30	ns											
		291	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B2 to A2	"	"	"	"	"	"	"											
		292	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B3 to A3	"	"	"	"	"	"	"										
		293	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B4 to A4	"	"	"	"	"	"	"										
		294	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B5 to A5	"	"	"	"	"	"	"										
		295	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B6 to A6	"	"	"	"	"	"	"										
		296	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B7 to A7	"	"	"	"	"	"	"										
		297	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	B8 to A8	"	"	"	"	"	"	"										
		298	"	"	4.5V	IN	IN	IN	IN	IN	IN	IN	IN	OUT	IN	IN	IN	IN	IN	OUT	OUT	OUT	OUT	"	"	"	A1 to B1	"	"	"	"	"	"	"										
		299	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A2 to B2	"	"	"	"	"	"	"										
		300	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A3 to B3	"	"	"	"	"	"	"										
		301	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A4 to B4	"	"	"	"	"	"	"										
		302	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	A5 to B5	"	"	"	"	"	"	"										
		303	"	"	"	"	"	"	"	"	"	"	"	"																														

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

[illegible]

See footnotes at end of table.

TABLE III. Group A inspection for device type 09 – Continued.

Symbol	MIL-STD-883 method	Terminal conditions 1/																												Measured terminal	Test limits						Unit
		Case 3	2	3	4	5	6	7	9	10	11	12	13	14	16	17	18	19	20	21	23	24	25	26	27	28	Subgroup 9 T _C = +25°C 4/	Subgroup 10 T _C = +125°C	Subgroup 11 T _C = -55°C 4/								
		Cases L, K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Min	Max	Min		Max	Min	Max				
		Test no.	CAB	SAB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	SBA	CBA	V _{CC}											
t _{PZH3} 10/	3003 (Fig. 3)	450		GND	IN	OUT		OUT					GND								GND	GND	GND		4.5V	DIR to A1	6	43	6	57	6	43	ns				
		451		"	"			OUT					"								"	"	"		"	DIR to A2	"	"	"	"	"	"	"				
		452		"	"								"								"	"	"		"	DIR to A3	"	"	"	"	"	"	"				
		453		"	"				OUT				"								"	"	"		"	DIR to A4	"	"	"	"	"	"	"				
		454		"	"					OUT			"								"	"	"		"	DIR to A5	"	"	"	"	"	"	"				
		455		"	"						OUT		"								"	"	"		"	DIR to A6	"	"	"	"	"	"	"				
		456		"	"							OUT		"							"	"	"		"	DIR to A7	"	"	"	"	"	"	"				
		457		"	"								OUT		"						"	"	"		"	DIR to A8	"	"	"	"	"	"	"				
		458		"	"	GND								"	GND						"	"	"		"	DIR to B1	"	"	"	"	"	"	"				
		459		"	"		GND							"							"	"	"		"	DIR to B2	"	"	"	"	"	"	"				
		460		"	"			GND						"							"	"	"		"	DIR to B3	"	"	"	"	"	"	"				
		461		"	"				GND					"							"	"	"		"	DIR to B4	"	"	"	"	"	"	"				
		462		"	"					GND				"					OUT		"	"	"		"	DIR to B5	"	"	"	"	"	"	"				
		463		"	"						GND			"						OUT		"	"	"		"	DIR to B6	"	"	"	"	"	"	"			
		464		"	"							GND		"							OUT		"	"		"	DIR to B7	"	"	"	"	"	"	"			
		465		"	"								GND	"	OUT							"	"	"		"	DIR to B8	"	"	"	"	"	"	"			
t _{PZL3} 9/	3003 (Fig. 3)	466 to 481	Same terminal conditions (except 4.5 V replaces GND) and measured terminals as specified above for t _{PZH3} .																										"	"	"	"	"	"	"	"	
t _{PHZ3} 10/	3003 (Fig. 3)	482 to 497	Same terminal conditions and measured terminals as specified above for t _{PZH3} .																										"	"	"	"	"	"	"	ns	
t _{PLZ3} 8/	3003 (Fig. 3)	498 to 513	Same terminal conditions and measured terminals as specified above for t _{PZL3} .																										"	"	"	"	"	"	"	ns	

See footnotes at end of table.

TABLE III. Group A inspection for device type 53.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																			Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1		$\overline{G}$	V _{CC}	Min	Max	Min	Max		Min
V _{IC} (pos)		1	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1/										GND	DIR	0.4	1/	1.5				V
		2										"										"	A1	"	"	"	"	"	"	"
		3										"										"	A2	"	"	"	"	"	"	"
		4										"										"	A3	"	"	"	"	"	"	"
		5										"										"	A4	"	"	"	"	"	"	"
		6										"										"	A5	"	"	"	"	"	"	"
		7										"										"	A6	"	"	"	"	"	"	"
		8										"										"	A7	"	"	"	"	"	"	"
		9										"										"	A8	"	"	"	"	"	"	"
		10										"	1mA	1mA								"	B8	"	"	"	"	"	"	"
		11										"			1mA							"	B7	"	"	"	"	"	"	"
		12										"				1mA						"	B6	"	"	"	"	"	"	"
		13										"					1mA					"	B5	"	"	"	"	"	"	"
		14										"						1mA				"	B4	"	"	"	"	"	"	"
		15										"							1mA			"	B3	"	"	"	"	"	"	"
		16										"								1mA		"	B2	"	"	"	"	"	"	"
		17										"									1mA	"	B1	"	"	"	"	"	"	"
		18										"										1mA	$\overline{G}$	"	"	"	"	"	"	"
V _{IC} (neg)		19	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND										1/	DIR		-1.5				"	
		20										"										"	A1		"	"	"	"	"	"
		21										"										"	A2		"	"	"	"	"	"
		22										"										"	A3		"	"	"	"	"	"
		23										"										"	A4		"	"	"	"	"	"
		24										"										"	A5		"	"	"	"	"	"
		25										"										"	A6		"	"	"	"	"	"
		26										"										"	A7		"	"	"	"	"	"
		27										"										"	A8		"	"	"	"	"	"
		28										"	-1mA	-1mA								"	B8		"	"	"	"	"	"
		29										"			-1mA							"	B7		"	"	"	"	"	"
		30										"				-1mA						"	B6		"	"	"	"	"	"
		31										"					-1mA					"	B5		"	"	"	"	"	"
		32										"						-1mA				"	B4		"	"	"	"	"	"
		33										"							-1mA			"	B3		"	"	"	"	"	"
		34										"								-1mA		"	B2		"	"	"	"	"	"
		35										"									-1mA	"	B1		"	"	"	"	"	"
		36										"										-1mA	$\overline{G}$		"	"	"	"	"	"
I _{CC}	3005	37	GND									GND	GND	5.5V	GND	5.5V	GND	5.5V	GND	5.5V	GND	5.5V	V _{CC}		0.2		20		μA	
		38	GND									"	5.5V									"	"	"	"	"	"	"	"	
		39	5.5V	GND	5.5V	GND	5.5V	GND	5.5V	GND	5.5V	"										"	"	"	"	"	"	"	"	
		40	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"										"	"	"	"	"	"	"	"	
I _{CCZ}	3005	41	GND	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"		0.1		10		"	
		42	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	GND	GND	GND	GND	GND	GND	GND	GND	GND	5.5V	5.5V	"		0.1	10		"	
I _{CCA}		43	GND									"										2.4V	"		3.0		3.0		mA	
		44	GND									"	2.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	"	"	"	"	"	"	"		
		45	2.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	"										"	"	"	"	"	"	"		
		46	5.5V	2.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	"										"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 53 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R,S	Terminal conditions 1/																				Measured terminal	Test limits						Unit		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C				
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max	
V _{OH6}	3006	47	0.8V	-20μA	-20μA							GND								2.0V	2.0V	2.0V	0.8V	4.5V	A1	4.4		4.4		4.4	V	
		48	"			-20μA						"								2.0V			"	"	A2	"		"		"	"	
		49	"				-20μA					"								2.0V			"	"	A3	"		"		"	"	
		50	"					-20μA				"								2.0V			"	"	A4	"		"		"	"	
		51	"						-20μA			"								2.0V			"	"	A5	"		"		"	"	
		52	"							-20μA			"							2.0V			"	"	A6	"		"		"	"	
		53	"								-20μA									2.0V			"	"	A7	"		"		"	"	
		54		2.0V	2.0V							-20μA		2.0V	2.0V								"	"	A8	"		"		"	"	
		55											"								-20μA	-20μA	"	"	B1	"		"		"	"	
		56											"										"	"	B2	"		"		"	"	
		57											"										"	"	B3	"		"		"	"	
		58											"										"	"	B4	"		"		"	"	
		59											"										"	"	B5	"		"		"	"	
		60											"										"	"	B6	"		"		"	"	
		61											"										"	"	B7	"		"		"	"	
		62											2.0V	-20μA									"	"	B8	"		"		"	"	
V _{OH7}	3006	63	0.8V	-6.0mA								"								2.0V	2.0V		"	5.5V	A1	3.98					"	
		64	"		-6.0mA							"											"	"	A2	"					"	
		65	"			-6.0mA						"											"	"	A3	"					"	
		66	"				-6.0mA					"											"	"	A4	"					"	
		67	"					-6.0mA				"											"	"	A5	"					"	
		68	"						-6.0mA			"											"	"	A6	"					"	
		69	"							-6.0mA		"											"	"	A7	"					"	
		70									-6.0mA		2.0V	2.0V									"	"	A8	"					"	
		71	2.0V	2.0V								-6.0mA											"	"	B1	"					"	
		72	"										"										"	"	B2	"					"	
		73	"										"										"	"	B3	"					"	
		74	"										"										"	"	B4	"					"	
		75	"										"										"	"	B5	"					"	
		76	"										"										"	"	B6	"					"	
		77	"										"										"	"	B7	"					"	
		78	"										2.0V		-6.0mA	-6.0mA							"	"	B8	"					"	
V _{OL6}	3007	79	0.8V	20μA								"									0.8V	0.8V	"	4.5V	A1		0.1		0.1		0.1	"
		80	"									"											"	"	A2						"	
		81	"									"											"	"	A3						"	
		82	"									"											"	"	A4						"	
		83	"									"											"	"	A5						"	
		84	"									"											"	"	A6						"	
		85	"									"											"	"	A7						"	
		86											"										"	"	A8						"	
		87	2.0V	0.8V								20μA		0.8V									"	"	B1						"	
		88	"										"										"	"	B2						"	
		89	"										"										"	"	B3						"	
		90	"										"										"	"	B4						"	
		91	"										"										"	"	B5						"	
		92	"										"										"	"	B6						"	
		93	"										"										"	"	B7						"	
		94	"										0.8V										"	"	B8						"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 53 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R	Terminal conditions 1/																				Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max
V _{OL7}	3007	95	0.8V	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	GND						0.8V	0.8V	0.8V	0.8V	0.8V	5.5V	A1		.26		0.4		.26	V
		96	"									"											"	A2							"
		97	"									"											"	A3							"
		98	"									"											"	A4							"
		99	"									"											"	A5							"
		100	"									"											"	A6							"
		101	"									"											"	A7							"
		102	"									"											"	A8							"
		103	2.0V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	6.0mA	B1							"
		104	"									"											"	B2							"
		105	"									"											"	B3							"
		106	"									"											"	B4							"
		107	"									"											"	B5							"
		108	"									"											"	B6							"
		109	"									"											"	B7							"
		110	"									0.8V		6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	B8							"
I _{OS4}	3011	111	GND	GND	GND	GND	GND	GND	GND	GND	GND	"						4V	4V	4V	4V	GND	4V	A1	-10	-135	-10	-135	-10	-135	mA
		112	"									"										"	"	A2							"
		113	"									"										"	"	A3							"
		114	"									"										"	"	A4							"
		115	"									"										"	"	A5							"
		116	"									"										"	"	A6							"
		117	"									"										"	"	A7							"
		118	"									"										"	"	A8							"
		119	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	GND	GND	B1							"
		120	"									"										"	"	B2							"
		121	"									"										"	"	B3							"
		122	"									"										"	"	B4							"
		123	"									"										"	"	B5							"
		124	"									"										"	"	B6							"
		125	"									"										"	"	B7							"
		126	"									4V		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	B8							"
I _{IH} /I _{OZH}		127	.8V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"						2/	2/	2/	2/	2/	5.5V	A1		0.2		2.0			μA
		128	"									"										"	"	A2							"
		129	"									"										"	"	A3							"
		130	"									"										"	"	A4							"
		131	"									"										"	"	A5							"
		132	"									"										"	"	A6							"
		133	"									"										"	"	A7							"
		134	"									"										"	"	A8							"
		135	2.0V	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	5.5V	5.5V	B1							"
		136	"									"										"	"	B2							"
		137	"									"										"	"	B3							"
		138	"									"										"	"	B4							"
		139	"									"										"	"	B5							"
		140	"									"										"	"	B6							"
		141	"									2/		2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	B7							"
		142	"									2/		5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	B8							"

See footnotes at end of table.

TABLE III. Group A inspection for device type 53 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R	Terminal conditions 1/																				Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max
I _{IL} /I _{OZL}			143	.8V	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	5.5V	A1		-0.2		-2.0			μA
			144	"																				A2							
			145	"																				A3							
			146	"																				A4							
			147	"																				A5							
			148	"																				A6							
			149	"																				A7							
			150	"																				A8							
			151	2.0V	2/																			B1							
			152	"		2/																		B2							
			153	"			2/																	B3							
			154	"				2/																B4							
			155	"					2/															B5							
			156	"						2/														B6							
			157	"							2/													B7							
			158	"								2/												B8							
I _{IH}	3010	159	5.5V																			DIR		.05		.1					
		160																				$\overline{G}$		.05		.1					
I _{IL}	3009	161	GND																			DIR		-.05		-.1					
		162																				$\overline{G}$		-.05		-.1					
C _{VO}			163	GND	3/																	5.5V	A1		20					pF	
			164	"																			A2								
			165	"																			A3								
			166	"																			A4								
			167	"																			A5								
			168	"																			A6								
			169	"																			A7								
			170	"																			A8								
			171	5.5V																			B8								
			172	"																			B7								
			173	"																			B6								
			174	"																			B5								
			175	"																			B4								
			176	"																			B3								
			177	"																			B2								
			178	"																			B1								
C _C		179	3/																		3/	GND	DIR		15						
		180																				$\overline{G}$	$\overline{G}$		15						
																								Test limits						Unit	
																									Subgroup 7 T _C = + 25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C		
																									Min	Max	Min	Max	Min	Max	
Truth table tests 5/	3014	181	A	A	A	A	A	A	A	A	A	A	"	H	H	H	H	H	H	H	H	B	4.5V	6/							
		182	A	B	B	B	B	B	B	B	B	B	"	L	L	L	L	L	L	L	L	B	"	"							
		183	B	H	H	H	H	H	H	H	H	H	"	A	A	A	A	A	A	A	A	B	"	"							
		184	B	L	L	L	L	L	L	L	L	L	"	B	B	B	B	B	B	B	B	B	"	"							
185	B	H	H	H	H	H	H	H	H	H	"	H	H	H	H	H	H	H	H	H	A	"	"								

See footnotes at end of table.

TABLE III. Group A inspection for device type 53 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R	Terminal conditions 1/																				Measured terminal	Test limits						Unit	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max
t _{THL}	3004 (Fig. 3)	186	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND											A1	2	12	2	16	2	12	ns	
		187	"									"										"	"	"	"	"	"	"	"		
		188	"									"										"	"	"	"	"	"	"	"		
		189	"									"										"	"	"	"	"	"	"	"		
		190	"									"										"	"	"	"	"	"	"	"		
		191	"									"										"	"	"	"	"	"	"	"		
		192	"									"										"	"	"	"	"	"	"	"		
		193	"									"										"	"	"	"	"	"	"	"		
		194	4.5V	IN								"	IN									"	"	"	"	"	"	"	"		
		195	"									"										"	"	"	"	"	"	"	"		
		196	"									"										"	"	"	"	"	"	"	"		
		197	"									"										"	"	"	"	"	"	"	"		
		198	"									"										"	"	"	"	"	"	"	"		
		199	"									"										"	"	"	"	"	"	"	"		
		200	"									"										"	"	"	"	"	"	"	"		
		201	"									"	OUT									"	"	"	"	"	"	"	"		
t _{TLH}	3004 (Fig. 3)	202 to 217	Same tests, terminal conditions, and limits as specified above for t _{THL} .																												
t _{PHL2}	3003 (Fig. 3)	218	4.5V	IN	IN	IN	IN	IN	IN	IN	GND											A1 to B1	4	23	4	33	4	23	ns		
		219	"								"										"	"	"	"	"	"	"	"			
		220	"								"										"	"	"	"	"	"	"	"			
		221	"								"										"	"	"	"	"	"	"	"			
		222	"								"										"	"	"	"	"	"	"	"			
		223	"								"										"	"	"	"	"	"	"	"			
		224	"								"										"	"	"	"	"	"	"	"			
		225	"								"										"	"	"	"	"	"	"	"			
		226	OUT	OUT							"	OUT									"	"	"	"	"	"	"	"			
		227	"								"										"	"	"	"	"	"	"	"			
		228	"								"										"	"	"	"	"	"	"	"			
		229	"								"										"	"	"	"	"	"	"	"			
		230	"								"										"	"	"	"	"	"	"	"			
		231	"								"										"	"	"	"	"	"	"	"			
		232	"								"										"	"	"	"	"	"	"	"			
		233	"								"	IN									"	"	"	"	"	"	"	"			
t _{PLH2}	3003 (Fig. 3)	224 to 249	Same terminal conditions and measured terminals as specified above for t _{PHL2} .																												
t _{PZH1}	3003 (Fig. 3)	250	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND											$\overline{G}$ to A1	6	41	6	54	6	41	ns		
		251	"								"										"	"	"	"	"	"	"	"			
		252	"								"										"	"	"	"	"	"	"	"			
		253	"								"										"	"	"	"	"	"	"	"			
		254	"								"										"	"	"	"	"	"	"	"			
		255	"								"										"	"	"	"	"	"	"	"			
		256	"								"										"	"	"	"	"	"	"	"			
		257	"								"										"	"	"	"	"	"	"	"			
		258	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	"	$\overline{G}$ to B1	"	"	"	"	"	"	"	
		259	"								"										"	"	"	"	"	"	"	"			
		260	"								"										"	"	"	"	"	"	"	"			
		261	"								"										"	"	"	"	"	"	"	"			
		262	"								"										"	"	"	"	"	"	"	"			
		263	"								"										"	"	"	"	"	"	"	"			
		264	"								"										"	"	"	"	"	"	"	"			
		265	"								"	OUT									"	"	"	"	"	"	"	"			
t _{PHZ1}	3003 (Fig. 3)	266 to 281	Same terminal conditions and measured terminals as specified above for t _{PZH1} .																												

See footnotes at end of table.

TABLE III. Group A inspection for device type 53 – Continued.

Symbol	MIL-STD-883 method	Cases 2,R	Terminal conditions 1/																				Measured terminal	Test limits						Unit																																																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C																																																						
			Test no.	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{G}$		V _{CC}	Min	Max	Min	Max	Min		Max																																																			
t _{PZL1}	3003 (Fig. 3)	282	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	GND	GND	GND	GND	GND	GND	GND	GND	IN	4.5V	$\overline{G}$ to A1	6	41	6	54	6	41	ns																																																				
		283	"	GND																			GND	GND	GND	GND	GND	GND	GND		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																				
		284	"																																												GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND														
		285	"																																																																		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
		286	"		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																																												
		287	"	GND																			GND	GND	GND	GND	GND	GND	GND		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																				
		288	"																																												GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND														
		289	"																																																																		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
		290	4.5V		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																																												
		291	"	GND																			GND	GND	GND	GND	GND	GND	GND		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																				
		292	"																																												GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND														
		293	"																																																																		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
		294	"		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																																												
		295	"	GND																			GND	GND	GND	GND	GND	GND	GND		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND																																				
		296	"																																												GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND														
		297	"																																																																		GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
t _{PLZ1}	3003 (Fig. 3)	298 to 313	Same terminal conditions and measured terminals as specified above for t _{PZL1} .																																																																															

1/ Pins not designated may be "High" level logic, "Low" level logic, or open. Exceptions are as follows:

- V_{IC}(pos) tests, the GND terminal shall be open. A minimum limit of 0.4 V applies to tests being performed on equipment not capable of opening the GND pin during testing.
- V_{IC}(neg) tests, the V_{CC} terminal shall be open.
- I_{CC} tests, the output terminal shall be open.

2/ Three-state output conditions are required. For I_{OZL}, set output to high state. For I_{OZH}, set output to low state. Set input pins to V_{IL} = V_{IL}(max) or to V_{IH} = V_{IH}(min), as required for each test.

3/ See 4.4.1c.

4/ See 4.4.1d.

5/ Tests shall be performed in sequence, attributes data only.

6/ H > 1.5V; L < 1.5V; A = 0.7V; B = 0.4V; for the device type 53 A = 2.4V; B = 0.4V.

7/ Three-state output conditions are required.

8/ f_{MAX} minimum limit specified is the frequency of the input pulse. The output frequency shall be one-half of the input frequency. The f_{MAX} requirement is considered met if proper output state changes occur with the pulse repetition period set to that given in the limits columns.

9/ Add 1 kΩ minimum resistor between V_{CC} and output to pull output to high state.

10/ Add 1 kΩ minimum resistor between GND and output to pull output to low state.

4.5 Methods of inspection. Methods of inspection shall be specified and as follows:

4.5.1 Voltage and current. Unless otherwise specified, all voltages given are referenced to the microcircuit GND terminal. Currents given are conventional current and positive when flowing into the referenced terminal.

4.5.2 Burn-in and life test cool down procedures. When the burn-in and life tests are completed and prior to removal of bias voltages, the devices under test (DUT) shall be cooled to within 10°C of their power stable condition at room temperature; then, electrical parameter end-point measurements shall be performed.

TABLE IV. Delta limits at 25°C.

Parameter ^{1/}	Device types	
	All	
I _{CC}		±30 nA

^{1/} The above parameters shall be recorded before and after the required burn-in and life tests to determine deltas (Δ).

4.5.3 Quiescent supply current (I_{CC} test). When performing quiescent supply current measurements (I_{CC}), the meter shall be placed so that all currents flow through the meter.

5. PACKAGING

5.1 Packaging requirements. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When 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 commands. 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:

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

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

6.2 Acquisition requirements. Acquisition documents must 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 quality 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.
- h. 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 Superseding information. 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 contractors parts lists.

6.4 Qualification. 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 DSCC-VQ, P.O. Box 3990, Columbus, Ohio 43218-3990.

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

T _C	Case temperature.
C _{IN}	Input terminal-to-GND capacitance.
GND	Ground zero voltage potential
I _{CC}	Quiescent supply current.
T _A	Free air temperature.
V _{CC}	Positive supply voltage.
C _{PD}	Power dissipation capacitance.

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6.6 Logistic support. Lead materials and finishes (see 3.4) are interchangeable. Unless otherwise specified, microcircuits acquired for Government logistic support will be acquired to device class S for National Aeronautics and Space Administration or class B for Department of Defense (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 Data reporting. When specified in the purchase order or contract, a copy of the following data, as applicable, will be supplied.

- a. Attributes data for all screening tests (see 4.2) and variables data for all static burn-in, dynamic burn-in, and steady-state life tests (see 3.6).
- b. A copy of each radiograph.
- c. The technology conformance inspection (TCI) data (see 4.4).
- d. Parameter distribution data on parameters evaluated during burn-in (see 3.6).
- e. Final electrical parameters data (see 4.2d).

6.8 Substitutability. 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	54HC242
02	54HC243
03	54HC245
04 1/	54HC620
05 1/	54HC623
06	54HC640
07	54HC643
08	54HC646
09	54HC648
53	54HCT245

1/ These devices to be included in a later revision of this specification.

6.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
 Army - CR
 Navy - EC
 Air Force - 11
 DLA - CC

Preparing activity:
 DLA - CC
 (Project 5962-2115)

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 ASSIST Online database at <http://assist.daps.dla.mil>.