

INCH-POUND

MIL-M-38510/657A
19 May 2006

SUPERSEDING
MIL-M-38510/657
30 September 1986

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, HIGH-SPEED CMOS, BUFFER GATES, MONOLITHIC SILICON

Reactivated after 19 May 2006 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 For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535 (see 6.3).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>
01/51	Hex inverter
02/52	Hex inverter Schmitt trigger
03/53	Inverting octal three-state buffer
04/54	Octal three-state buffer
05/55	Octal three-state buffer
06	Hex bus driver, gated enable inputs for X-Y coincident bus control with three-state outputs
07	Hex inverter bus driver, gated enable inputs for X-Y coincident bus control with three-state outputs
08	Hex bus driver, 4-line and 2-line enable inputs with three-state outputs
09	Hex inverter bus driver, 4-line and 2-line enable inputs with three-state outputs
10/60	Octal inverter bus driver with three-state outputs
11/61	Octal non-inverting bus driver with three-state outputs

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
E	GDIP1-T16 or CDIP2-T16	16	Dual-in-line
D	GDFP1-F14 or CDFP2-F14	14	Flat pack
F	GDFP2-F16 or CDFP3-F16	16	Flat pack
R	GDIP1-T20 or CDIP2-T20	20	Dual-in-line
S	GDFP2-F20 or CDFP3-F20	20	Flat pack
X	See figure 4	20	Flat pack
2	CQCC1-N20	20	Square leadless chip carrier

Comments, suggestions, or questions on this document should be addressed to: Commander, Defense Supply Center Columbus, ATTN: DSCC-VAC, 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}):	
Device types 01, 51, 02, 52	± 25 mA
Device types 03, 04, 05, 06, 07, 08, 09, 10, 11	± 35 mA
DC V_{CC} or GND current per pin (I_{OC}):	
Device types 01, 51, 02, 52	± 50 mA
Device types 53, 54, 55, 60, 61	± 70 mA
Storage temperature range (T_{STG})	-65°C 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, 03, 04, 05, 06, 07, 08, 09, 10, 11:

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

Device type 02:

Maximum input low voltage (V_{IL})	1.0 V at $V_{CC} = 2.0$ V 2.45 V at $V_{CC} = 4.5$ V 3.2 V at $V_{CC} = 6.0$ V
Minimum input high voltage (V_{IH})	0.7 V at $V_{CC} = 2.0$ V 1.55 V at $V_{CC} = 4.5$ V 2.1 V at $V_{CC} = 6.0$ V

Device types 51, 53, 54, 55, 60, 61:

Maximum input low voltage (V_{IL})	0.8 V at $V_{CC} = 4.5$ V to 5.5 V
Minimum input high voltage (V_{IH})	2.0 V at $V_{CC} = 4.5$ V to 5.5 V

Device type 52:

Maximum input low voltage (V_{IL})	0.6 V at $V_{CC} = 5.5$ V
Minimum input high voltage (V_{IH})	1.9 V at $V_{CC} = 4.5$ V

Device types 01 through 11:

Supply voltage range (V_{CC})	2.0 V dc to 6.0 V dc
Output voltage range (V_{OUT})	0.0 V to V_{CC}
Operating temperature range (T_C)	-55°C to +125°C
Maximum input rise and fall times (t_r, t_f) (except device type 02):	
$V_{CC} = 2.0$ V	1000 ns
$V_{CC} = 4.5$ V	500 ns
$V_{CC} = 6.0$ V	400 ns

Device types 51, 52, 53, 54, 55, 60, 61:

Supply voltage range (V_{CC})	4.5 V dc to 5.5 V dc
Output voltage range (V_{OUT})	0.0 V to V_{CC}
Operating temperature range (T_C)	-55°C to +125°C
Maximum input rise and fall times (t_r, t_f) (except device type 52):	
$V_{CC} = 4.5$ V to 5.5 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, figure 4, 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 case 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 $V_{CC}/2$. $R = 680\Omega$ to 47 k Ω .
 - ii. For static burn-in II, all inputs shall be connected through the resistors to V_{CC} . 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 $V_{CC}/2$. $R = 680\Omega$ to 47 k Ω .
 - iii. $V_{CC} = 6.0\text{ V} \pm 0.5\text{ V}$ for device types 01-11.
 $V_{CC} = 5.5\text{ V} \pm 0.5\text{ V}$ for device types 51, 52, 53, 54, 55, 60, and 61.
 - (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. The output enable control pins shall be connected through the resistors in parallel to V_{CC} or GND, as applicable, to enable the outputs. All other inputs shall be connected through the resistors in parallel to a clock pulse CPI. (Exception: For device types 03, 04, 05, 53, 54, and 55, input pins 2, 4, 6, and 8 shall be connected through the resistors in parallel to a clock pulse CPI.) Outputs shall be connected through the resistors to $V_{CC}/2$.
 - ii. Input resistors = 680 Ω to 47 k Ω $\pm 20\%$.
 - iii. Output resistors = 1 k Ω $\pm 5\%$ for device types 01, 02, 51, 52 and 680 Ω $\pm 5\%$ for device types 03, 04-11, 53-55, 60, and 61.
 - iv. $V_{CC} = 6.0\text{ V} \pm 0.5\text{ V}$ for device types 01-11; $V_{CC} = 5.5\text{ V}$ for device types 51-55, 60, and 61.
 - v. $V_{CC} = V_{CC} \pm 0.5\text{ V}$.
 - vi. $CPI/\overline{CPI} = 25\text{ kHz}$ to 1 MHz square wave; duty cycle = 50% $\pm 15\%$; $V_{IH} = 4.5\text{ V}$ min to V_{CC} maximum; $V_{IL} = 0.0\text{ V} \pm 0.5\text{ V}$; t_{THL} , $t_{TLH} \leq 500\text{ }\mu\text{s}$.
- 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_O measurements) shall be measured only for initial qualification and after process or design changes that may affect 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.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions 1/ -55°C ≤ T _C ≤ +125°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 V, V _{IL} = 0.3 V I _{OH} = -20 μA	01-11	2.0V	1.95		V
	V _{OH2} <u>2/</u>	V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OH} = -20 μA	01-11	4.5V	4.45		V
	V _{OH3}	V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OH} = -20 μA	01-11	6.0V	5.95		V
	V _{OH4} <u>2/</u>	V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OH} = -4.0 mA	01, 02	4.5V	3.7		V
		V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OH} = -6.0 mA	03-11				
	V _{OH5}	V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OH} = -5.2 mA	01, 02	6.0V	5.2		V
		V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OH} = -7.8 mA	03-11				
	V _{OH6}	V _{IH} = 2.0 V, V _{IL} = 0.8 V I _{OH} = -20 μA	51,53- 55,60 61	4.5V	4.40		V
	V _{OH7}	V _{IH} = 2.0 V, V _{IL} = 0.8 V I _{OH} = -4.0 mA	51	5.5V	3.7		V
		V _{IH} = 2.0 V, V _{IL} = 0.8 V I _{OH} = -6.0 mA	53-55, 60,61				
	V _{OH8}	V _{IH} = 1.9 V, V _{IL} = 0.5 V I _{OH} = -20 μA	52	4.5V	4.40		V
	V _{OH9}	V _{IH} = 2.1 V, V _{IL} = 0.6 V I _{OH} = -4.0 mA	52	5.5V	3.7		V
Low-level output voltage	V _{OL1} <u>2/</u>	V _{IH} = 1.5 V, V _{IL} = 0.3 V I _{OL} = 20 μA	01-11	2.0V		0.05	V
	V _{OL2} <u>2/</u>	V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OL} = 20 μA	01-11	4.5V		0.05	V
	V _{OL3}	V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OL} = 20 μA	01-11	6.0V		0.05	V
	V _{OL4} <u>2/</u>	V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OL} = 4.0 mA	01, 02	4.5V		0.4	V
		V _{IH} = 3.15 V, V _{IL} = 0.9 V I _{OL} = 6.0 mA	03-11				
	V _{OL5}	V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OL} = 5.2 mA	01,02	6.0V		0.4	V
		V _{IH} = 4.2 V, V _{IL} = 1.2 V I _{OL} = 7.8 mA	03-11				
	V _{OL6}	V _{IH} = 2.0 V V _{IL} = 0.8 V I _{OL} = 20 μA	51, 53-55, 60,61	4.5V		0.1	V
	V _{OL7}	V _{IH} = 2.0 V V _{IL} = 0.8 V I _{OL} = 4.0 mA	51	5.5V		0.4	V
		V _{IH} = 2.0 V V _{IL} = 0.8 V I _{OL} = 6.0 mA	53-55, 60,61				
	V _{OL8}	V _{IH} = 1.9 V V _{IL} = 0.5 V I _{OL} = 20 μA	52	4.5V		0.1	V
	V _{OL9}	V _{IH} = 2.1 V V _{IL} = 0.6 V I _{OL} = 4.0 mA	52	5.5V		0.4	V

See footnotes at the end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ -55°C ≤ T _C ≤ +125°C unless otherwise specified	Device type	V _{CC}	Limits		Unit
					Min	Max	
Positive going threshold voltage	V _{T+}		02	2.0V <u>2/</u>	0.7	1.5	V
				4.5V <u>2/</u>	1.55	3.15	V
				6.0V	2.10	4.2	V
	V _{T+1}		52	4.5V	1.2	1.9	V
	V _{T+2}		52	5.5V	1.4	2.1	V
Negative going threshold voltage	V _{T-}		02	2.0V <u>2/</u>	0.3	1.0	V
				4.5V <u>2/</u>	0.9	2.45	V
				6.0V	1.2	3.2	V
	V _{T-1}		52	4.5V	0.5	1.2	V
	V _{T-2}		52	5.5V	0.6	1.4	V
Hysteresis voltage	V _H		02	2.0V <u>2/</u>	0.2	1.2	V
				4.5V <u>2/</u>	0.4	2.1	V
				6.0V	0.5	2.5	V
	V _{H1}		52	4.5V	0.4	1.4	V
	V _{H2}		52	5.5V	0.4	1.5	V
Positive input clamp voltage	V _{IC+}	I _{IN} = 1 mA T _C = +25°C	01-11 51-55, 60,61	GND	<u>1/</u>	1.5	V
Negative input clamp voltage	V _{IC-}	I _{IN} = -1 mA T _C = +25°C	01-11 51-55, 60,61	OPEN	<u>1/</u>	-1.5	V
Input current low	I _{IL}	V _{IN} = GND	01-11	6.0V		-0.1	μA
			51-55 60,61	5.5V		-0.1	
Input current high	I _{IH}	V _{IN} = V _{CC}	01-11	6.0V		0.1	μA
			51-55 60,61	5.5V		0.1	
Short circuit output current	I _{OS1} <u>2/</u>	V _O = GND V _I = GND or V _{CC}	01,02	2.0V	-2	-50	mA
			03-11			-2	
	I _{OS2} <u>2/</u>		01,02	4.5V	-15	-150	mA
			03-11			-15	
			51,52	4.5V	-15	-150	mA
			53-55 60,61		4.5V	-15	
	I _{OS3} <u>2/</u>		01,02	6.0V	-25	-180	
			03-11			-25	
	I _{OS4}		01,02	4.0V	-10	-120	
			03-11			-10	
			51,52	4.0V	-10	-120	
			53-55, 60, 61			-10	
	I _{OS5} <u>2/</u>		51,52	5.5V	-25	-180	
			53-55 60,61			-25	

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions <u>1/</u> -55°C ≤ T _C ≤ +125°C unless otherwise specified	Device type	V _{CC}	Limits		Unit
					Min	Max	
Supply current quiescent	I _{CC}	V _I = 6.0 V V _I = GND	01,02	5.5V		10	μA
			03-11			20	μA
		V _I = 5.5 V V _I = GND	51,52	5.5V		10	μA
			53-55 60,61			20	μA
Three-state current quiescent	I _{CCZ}	V _I = 6.0 V or GND	03-11	6.0V		10	μA
		V _I = 5.5 V or GND	53-55, 60,61	5.5V		10	μA
Three-state output leakage current low	I _{OZL}	V _{OUT} = GND OC = V _{IH} or V _{IL} <u>3/</u>	03-11	6.0V		-2.0	μA
			53-55, 60,61	5.5V		-2.0	μA
Three-state output leakage current high	I _{OZH}	V _{OUT} = V _{CC} OC = V _{IH} or V _{IL} <u>3/</u>	03-11	6.0V		+2.0	μA
			53-55, 60,61	5.5V		+2.0	μA
Additional supply current quiescent per input pin (one unit load)	I _{CCΔ} <u>4/</u>	For all inputs, V _{IL} = 0.4 V and V _{IH} = 2.4 V Test pin at V _{IN} = 2.4 V When not tested, control pins are at V _{IH} = V _{CC} and V _{IL} = GND I _O = 0 μA	52,54	5.5V		1.5	mA
			51,53,55 60,61			3.0	
Input capacitance	C _{IN}	T _C = 25°C	All			10	pF
Three-state output capacitance	C _O	T _C = 25°C	03-11, 53-55, 60,61			20	pF
Power dissipation capacitance	C _{PD} <u>2/</u> <u>5/</u>	T _C = +25°C	01			21	pF
			02			27	
			03-05 10, 11			50	
			06-09 53-55			45	
			51			24	
			52			20	
			60, 61			55	

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ -55°C ≤ T _C ≤ +125°C unless otherwise specified	Device type	V _{CC}	Limits		Unit		
					Min	Max			
Propagation delay time	t _{PHL} t _{PLH} <u>6/</u> , <u>7/</u>	C _L = 50 pF ± 10%	01	4.5V	4	22	ns		
			02	4.5V	8	33	ns		
			03	4.5V	5	23	ns		
			04	4.5V	5	27	ns		
			05	4.5V	5	27	ns		
			06	4.5V	5	28	ns		
			07	4.5V	5	29	ns		
			08	4.5V	5	28	ns		
			09	4.5V	5	29	ns		
			10	4.5V	8	29	ns		
			11	4.5V	8	29	ns		
			51	4.5V	4	23	ns		
			52	4.5V	10	44	ns		
			53	4.5V	8	29	ns		
			54	4.5V	8	30	ns		
			55	4.5V	8	33	ns		
			60	4.5V	10	35	ns		
			61	4.5V	10	35	ns		
Output enable time	t _{PZH} , t _{PZL} <u>6/</u> , <u>7/</u>	C _L = 50 pF ± 10% R _L = 1kΩ ± 10%	03, 04, 05	4.5V	5	35	ns		
			10, 11	4.5V	8	41	ns		
			53, 55	4.5V	8	41	ns		
			54	4.5V	8	44	ns		
	t _{PZH} <u>6/</u> , <u>7/</u>		06, 07	4.5V	5	51	ns		
			08, 09	4.5V	5	44	ns		
	t _{PZL} <u>6/</u> , <u>7/</u>		60, 61	4.5V	7	53	ns		
			06, 07	4.5V	5	51	ns		
			08, 09	4.5V	5	44	ns		
			60, 61	4.5V	10	53	ns		
	Output disable time		t _{PHZ} , t _{PLZ} <u>6/</u> , <u>7/</u>	C _L = 50 pF ± 10% R _L = 1kΩ ± 10%	03, 04, 05	4.5V	5	35	ns
					10, 11	4.5V	8	41	ns
53, 55		4.5V			8	41	ns		
54		4.5V			8	44	ns		
06, 07		4.5V			5	51	ns		
08, 09		4.5V			5	41	ns		
60, 61		4.5V			10	41	ns		
Transition time		t _{THL} , t _{TLH} <u>6/</u> , <u>7/</u>			C _L = 50 pF ± 10%	01, 02	4.5V	3	20
	03, 04, 06-11		4.5V	2		16	ns		
	05		4.5V	1		16	ns		
	51, 52		4.5V	3		20	ns		
	53-55		4.5V	2		16	ns		
	60, 61		4.5V	2		16	ns		

See footnotes on next sheet.

TABLE I. Electrical performance characteristics – Continued.

- 1/ Complete terminal conditions and limits shall be as specified in table III.
- 2/ Guaranteed but not tested.
- 3/ I_{OZL} set buffer output to high state. I_{OZH} set buffer output to low state.
- 4/ Total supply current $I_{CC} + I_{CC\Delta}$.
- 5/ Power dissipation capacitance (C_{PD}) typically per inverter (device types 01, 02, 51, 52) or per buffer (device types 03-11, 53-55, 60, 61).
- 6/ Tested at $V_{CC} = 4.5$ V at $+125^{\circ}\text{C}$ for sample testing and $V_{CC} = 4.5$ V at $+25^{\circ}\text{C}$ for screening. Guaranteed at other V_{CC} voltages and temperatures. See table IA and exception in 4.4.1d.
- 7/ 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 0.85.

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

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

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 ^{1/}			Class B device ^{1/}		
		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	req'd <u>4/</u>	
5	Same as line 1	4.2e	1*	Δ	4.2e	1* <u>4/</u>	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		1*, 2, 3, 7, 8, 9 <u>5/</u>			1*, 2, 7, 9 <u>4/ 5/</u>	
9	Group A test requirements	4.4.1	1, 2, 3, 4, 7, 8, 9, 10, 11 <u>5/</u>		4.4.1	1, 2, 3, 4, 7, 8, 9, 10, 11 <u>5/</u>	
10	Group B test when using method 5005 QCI option	4.4.2	1, 2, 3, 7, 8, 9, 10, 11 <u>5/</u>	Δ			
11	Group C end-point electrical parameters	4.4.2	1, 2, 3, 7, 8, 9, 10, 11 <u>5/</u>	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.

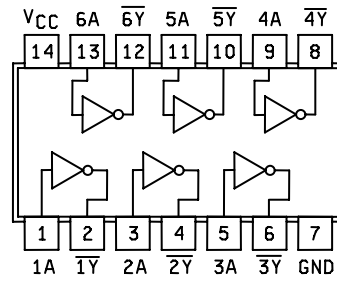
^{4/} The device manufacturer may, at his option, either complete subgroup 1 electrical parameter measurements, including delta measurements, within 96 hours after burn-in completion (removal of bias); or may complete subgroup 1 electrical measurements without delta measurements within 24 hours after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

^{5/} Subgroups 7 and 8 do not apply to device types 01, 02, 51, and 52.

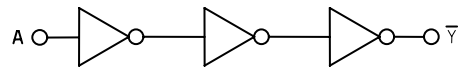
MIL-M-38510/657A

DEVICE TYPES 01 AND 51

CASES C AND D



1 OF 6 INVERTERS



DEVICE TYPES 01,02,51 AND 52

CASES 2

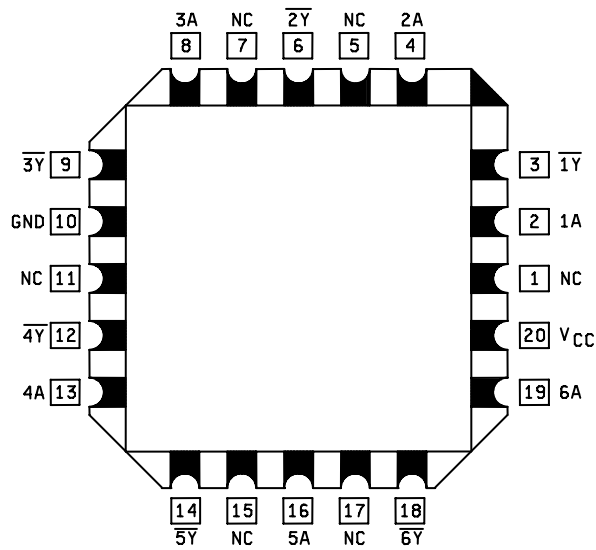


FIGURE 1. Logic diagrams and terminal connections (top view).

DEVICE TYPES 02 AND 52
CASES C AND D

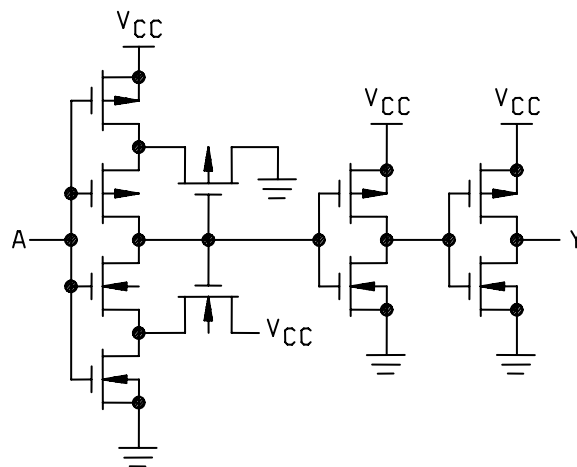
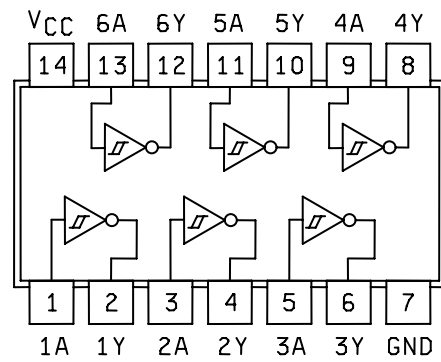


FIGURE 1. Logic diagrams and terminal connections (top view) – Continued.

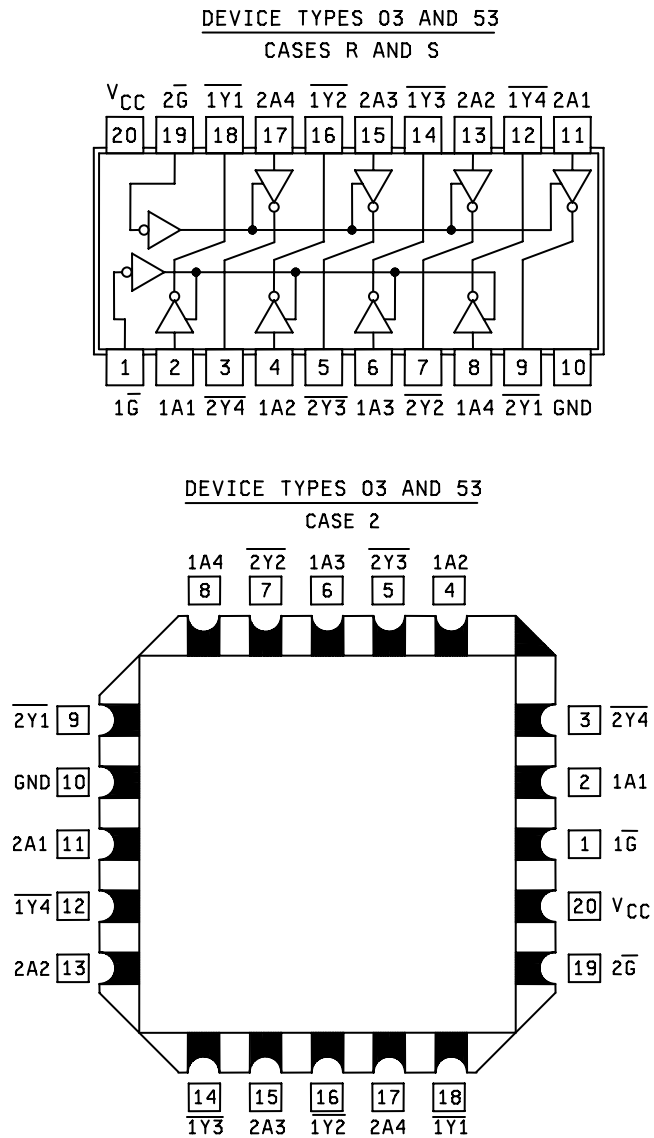
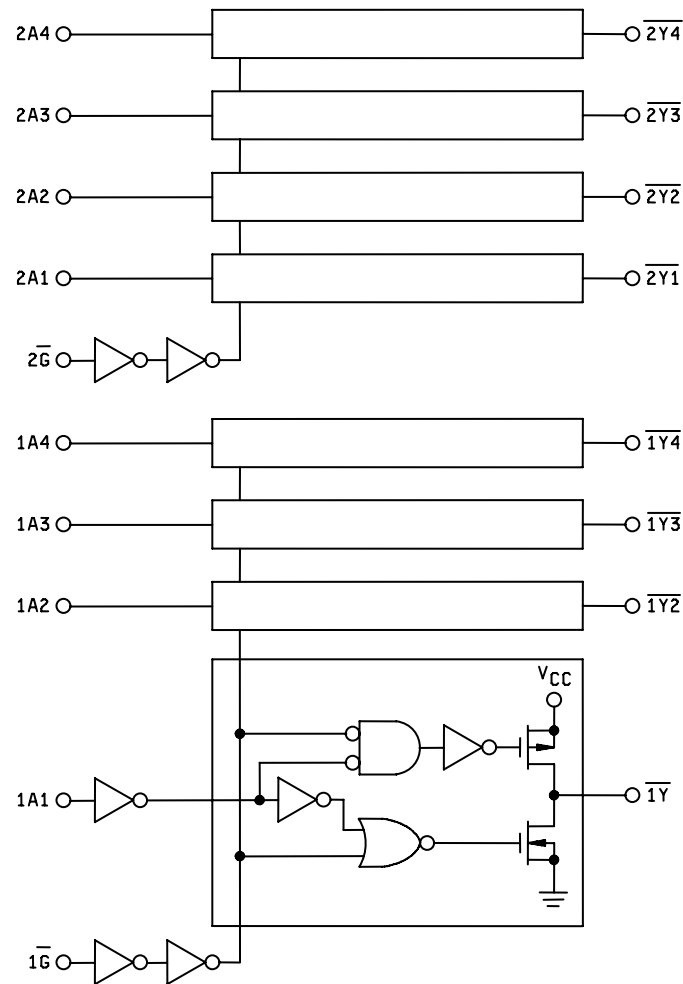


FIGURE 1. Logic diagrams and terminal connections – Continued.

Device types 03 and 53

FIGURE 1. Logic diagrams and terminal connections – Continued.

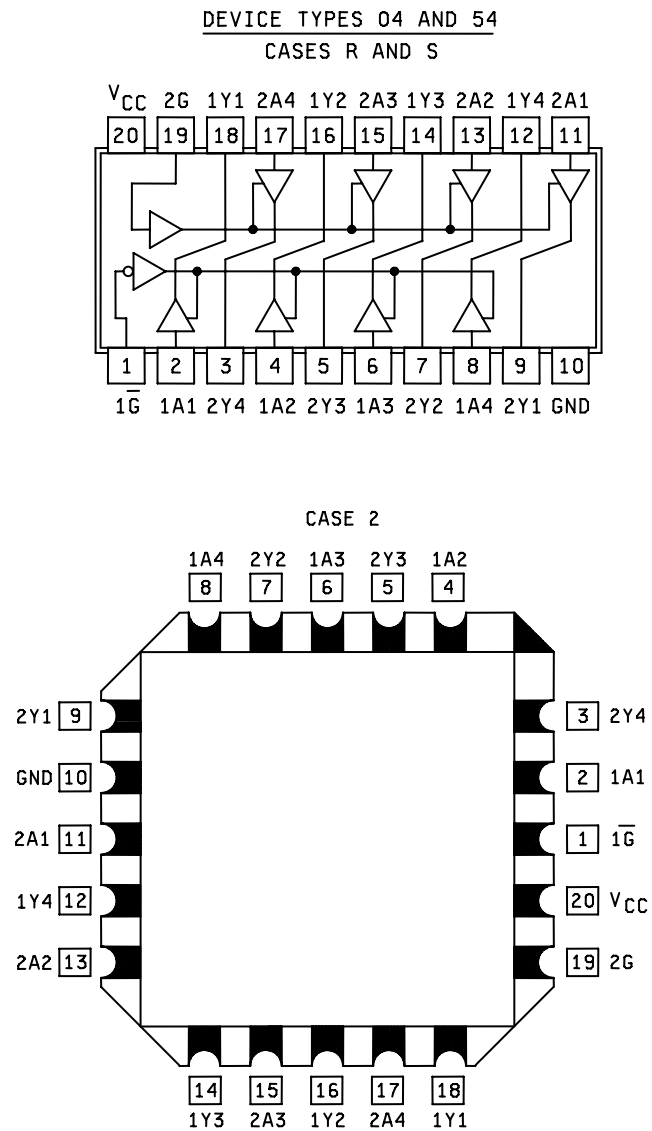


FIGURE 1. Logic diagrams and terminal connections – Continued.

Device types 04 and 54

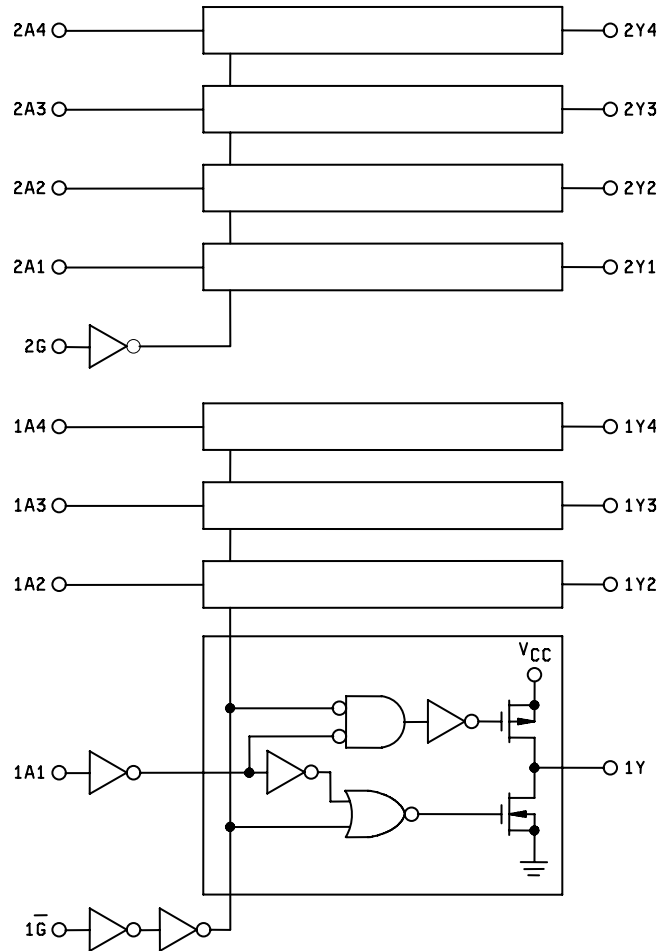


FIGURE 1. Logic diagrams and terminal connections – Continued.

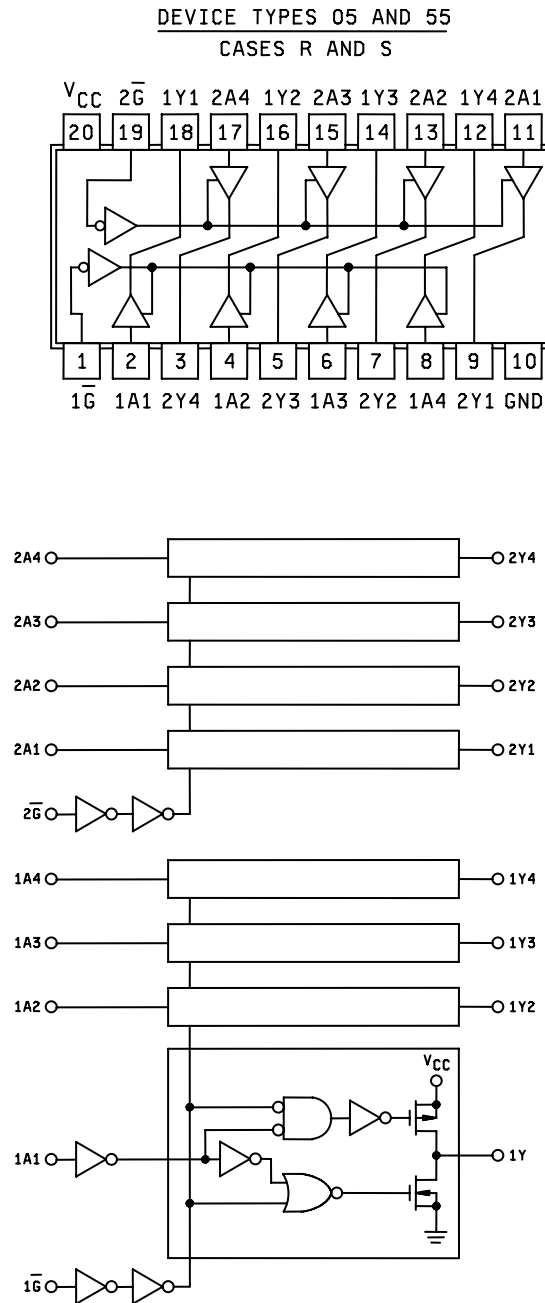


FIGURE 1. Logic diagrams and terminal connections – Continued.

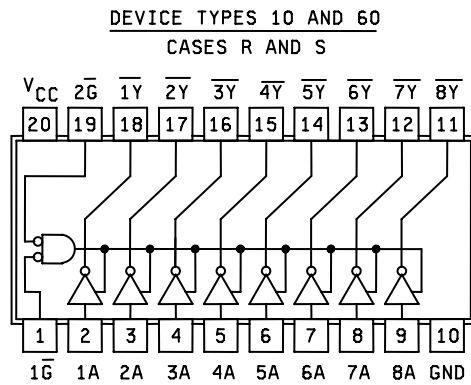
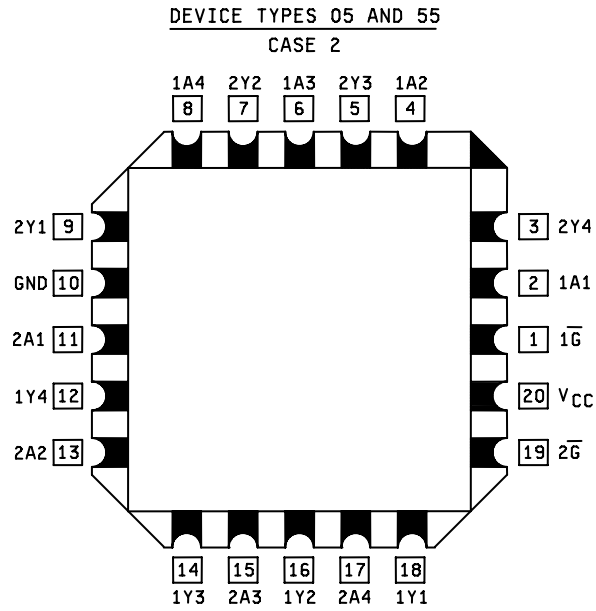
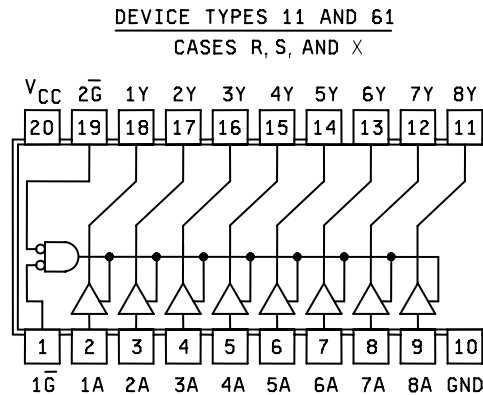
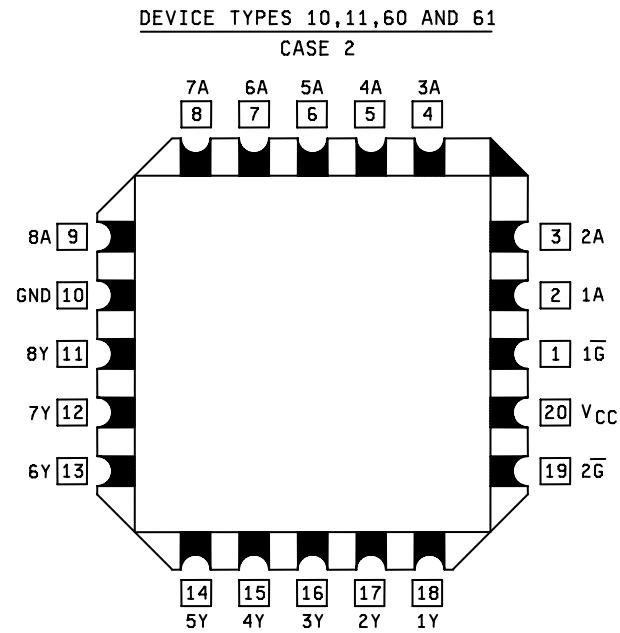


FIGURE 1. Logic diagrams and terminal connections – Continued.



NOTE: Bars are added to the output symbols for device types 10 and 60 above.

FIGURE 1. Logic diagrams and terminal connections – Continued.

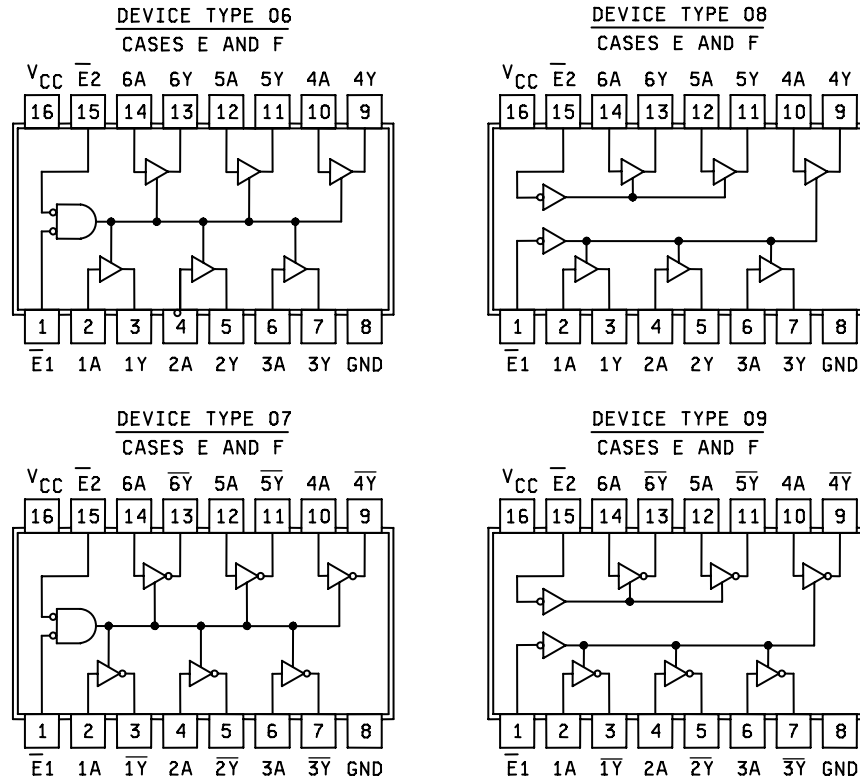
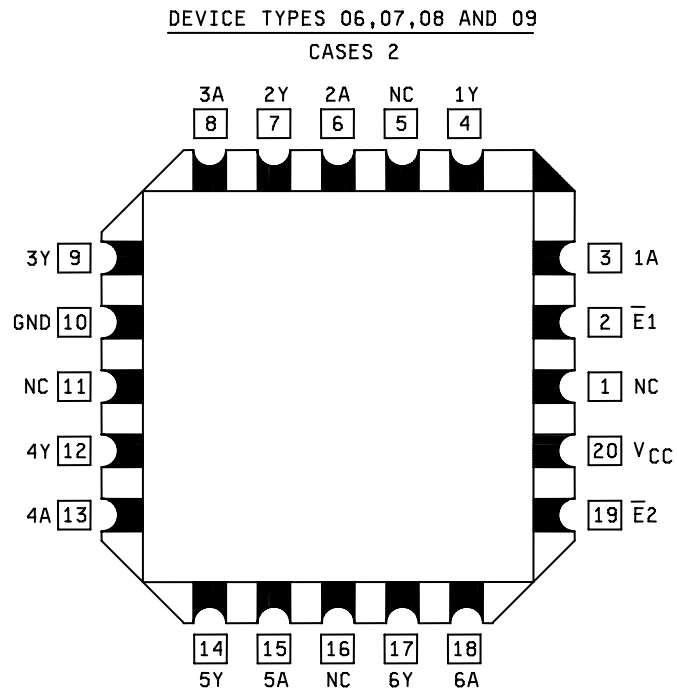


FIGURE 1. Logic diagrams and terminal connections – Continued.



NOTE: Bars are added to the output symbols for case outline 2 of devices types 07 and 09.

FIGURE 1. Logic diagrams and terminal connections – Continued.

MIL-M-38510/657A

Device types 01, 02, 51, and 52

Each gate	
Input	Output
A	$\overline{Y}$
L	H
H	L

Positive logic $\overline{Y} = A$

Device types 03 and 53

Each gate		
Inputs		Output
$\overline{G}$	A	$\overline{Y}$
L	H	L
L	L	H
H	X	Z

Device types 04 and 54

Each gate					
Inputs		Output	Inputs		Output
1G	1A	1Y	2G	2A	2Y
L	L	L	L	L	Z
L	H	H	L	H	Z
H	L	Z	H	L	L
H	H	Z	H	H	H

Device types 05 and 55

Each gate					
Inputs		Output	Inputs		Output
$\overline{1G}$	1A	1Y	$\overline{2G}$	2A	2Y
L	L	L	L	L	L
L	H	H	L	H	H
H	L	Z	H	L	Z
H	H	Z	H	H	Z

H = High level voltage

L = Low level voltage

Z = high impedance

X = Irrelevant

FIGURE 2. Truth tables.

MIL-M-38510/657A

Device types 10 and 60

Each buffer			
Inputs			Output
$\overline{1G}$	$\overline{2G}$	A	$\overline{Y}$
L	L	H	L
L	L	L	H
X	H	X	Z
H	X	X	Z

Device types 11 and 61

Each buffer			
Inputs			Output
$\overline{1G}$	$\overline{2G}$	A	Y
L	L	L	L
L	L	H	H
X	H	X	Z
H	X	X	Z

Device type 06

Each buffer			
Inputs			Output
$\overline{E1}$	$\overline{E2}$	A	Y
H	X	X	Z
X	H	X	Z
L	L	H	H
L	L	L	L

H = High level voltage
 L = Low level voltage
 Z = high impedance
 X = Irrelevant

FIGURE 2. Truth tables – Continued.

Device type 07

Each buffer			
Inputs			Output
$\overline{E1}$	$\overline{E2}$	A	$\overline{Y}$
H	X	X	Z
X	H	X	Z
L	L	H	L
L	L	L	H

Device type 08

Each buffer		
Inputs		Output
$\overline{E}$	A	Y
H	X	Z
L	H	H
L	L	L

Device type 09

Each buffer		
Inputs		Output
$\overline{E}$	A	$\overline{Y}$
H	X	Z
L	H	L
L	L	H

H = High level voltage
 L = Low level voltage
 Z = high impedance
 X = Irrelevant

FIGURE 2. Truth tables – Continued.

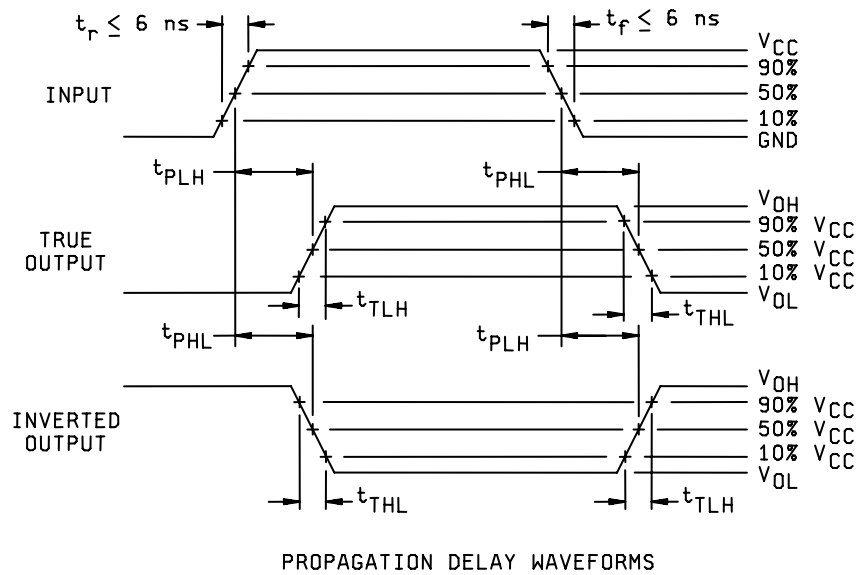
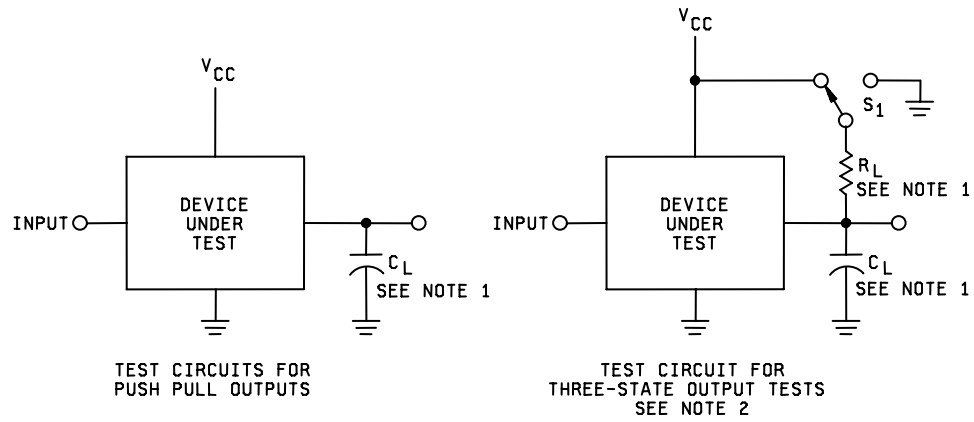
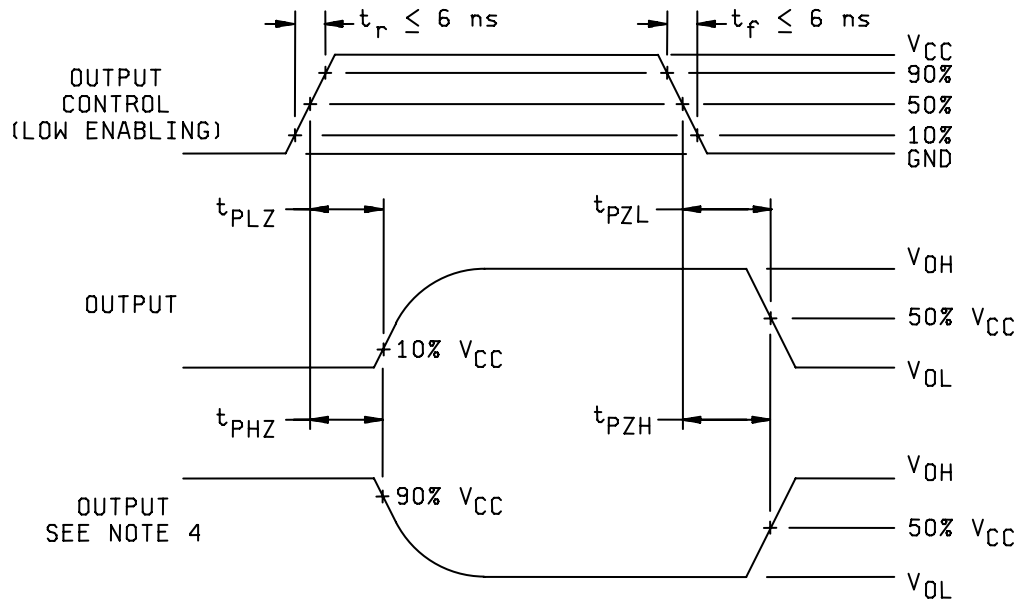


FIGURE 3. Switching time test circuit and waveforms.

Device types 03-11, 53-55, 60 and 61



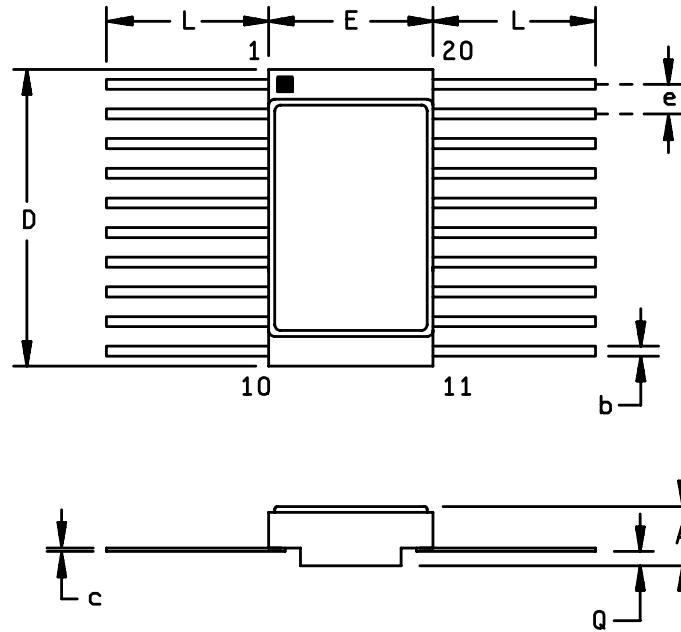
THREE-STATE OUTPUT ENABLE AND DISABLE WAVEFORMS

NOTES:

1. C_L includes load and test jig capacitance. See table I for values of C_L and R_L .
2. $S1 = V_{CC}$ for t_{PZL} and t_{PLZ} measurements. $S1 = GND$ for t_{PZH} and t_{PHZ} measurements.
3. Waveform for negative edge sensitive circuits will be inverted.
4. This waveform is applicable to three-state switching time measurements.
5. The input signal for HCT device types (51-55, 60, 61) 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 0.3V and 2.7V, respectively.

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

Device type 11



Case outline X				
Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	.045	.085	1.14	2.16
b	.015	.019	0.38	0.48
c	.003	.006	0.076	0.152
D	.505	.515	12.83	13.08
E	.275	.285	6.99	7.24
e	.045	.055	1.14	1.40
L	.250	.370	6.35	9.39
Q	.010		0.25	
N	20		20	

FIGURE 4. Case outline X.

TABLE III. Group A inspection for device type 01.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit			
		2	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					
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14											
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max				
V _{IC} (pos)		1 2 3 4 5 6	1mA		1mA		1mA		OPEN " " " " "		1mA		1mA		1mA		GND " " " " "	1A 2A 3A 4A 5A 6A	1/ " " " " "	1.5 " " " " "						V " " " " "	
V _{IC} (neg)		7 8 9 10 11 12	-1mA		-1mA		-1mA		GND " " " " "		-1mA		-1mA		-1mA		OPEN " " " " "	1A 2A 3A 4A 5A 6A		-1.5 " " " " "						" " " " "	
I _{CC}	3005	13	GND		GND		GND		"		GND		GND		GND	6V	V _{CC}		0.1		10					μA	
I _{CC}	3005	14	6V		6V		6V		"		6V		6V		6V	"	V _{CC}		0.1		10					μA	
V _{OH3}	3006	15 16 17 18 19 20	1.2V	-20μA	1.2V	-20μA	1.2V	-20μA	"	-20μA	1.2V	-20μA	1.2V	-20μA	1.2V	-20μA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	5.95 " " " " "		5.95 " " " " "		5.95 " " " " "			V " " " " "	
V _{OH5}	3006	21 22 23 24 25 26	1.2V	-5.2mA	1.2V	-5.2mA	1.2V	-5.2mA	"	-5.2mA	1.2V	-5.2mA	1.2V	-5.2mA	1.2V	-5.2mA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	5.48 " " " " "		5.2 " " " " "		5.48 " " " " "			" " " " "	
V _{OL3}	3007	27 28 29 30 31 32	4.2V	20μA	4.2V	20μA	4.2V	20μA	"	20μA	4.2V	20μA	4.2V	20μA	4.2V	20μA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.05 " " " " "		0.05 " " " " "		0.05 " " " " "			" " " " "
V _{OL5}	3007	33 34 35 36 37 38	4.2V	5.2mA	4.2V	5.2mA	4.2V	5.2mA	"	5.2mA	4.2V	5.2mA	4.2V	5.2mA	4.2V	5.2mA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.26 " " " " "		0.4 " " " " "		0.26 " " " " "			" " " " "
I _{OS4}	3011	39 40 41 42 43 44	GND " " " " "	GND	GND " " " " "	GND	GND " " " " "	GND	"	GND " " " " "	GND	GND " " " " "	GND	GND " " " " "	GND	GND " " " " "	4V	1Y 2Y 3Y 4Y 5Y 6Y	-10 " " " " "	-120 " " " " "	-10 " " " " "	-120 " " " " "	-10 " " " " "	-120 " " " " "			mA " " " " "
I _{IH}	3010	45 46 47 48 49 50	6V GND " " " "		6V GND " " " "		6V GND " " " "		"		6V GND GND		6V GND GND		6V	6V	1A 2A 3A 4A 5A 6A		.05 " " " " "		0.1 " " " " "					μA " " " " "	

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	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		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}								
I _{IL}	3009	51 52 53 54 55 56	GND 6V " " " "		6V GND 6V " "		6V 6V GND 6V "		GND " " " "		6V " " GND 6V 6V		6V " " " GND 6V		6V " " " GND	V _{CC} " " " " "	1A 2A 3A 4A 5A 6A		-0.05 " " " " "		-0.1 " " " " "			μA " " " " "
																	Subgroup 4 T _C = +25°C							
																	Min	Max						
C _i	3012	57 58 59 60 61 62	2/ " " " " "		2/ " " " " "		2/ " " " " "		GND " " " "							GND " " " "	1A 2A 3A 4A 5A 6A		10 " " " " "					pF " " " " "
																	Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
																	Min	Max	Min	Max	Min	Max		
t _{PHL}	3003 (Fig. 3)	63 64 65 66 67 68	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	GND " " " " "		OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	4.5V " " " " "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y	4 " " " " "	17 " " " " "	4 " " " " "	22 " " " " "	4 " " " " "	17 " " " " "	ns " " " " "
t _{PLH}	3003 (Fig. 3)	69 70 71 72 73 74	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "		OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "
t _{THL}	3004 (Fig. 3)	75 76 77 78 79 80	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "		OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "	1Y 2Y 3Y 4Y 5Y 6Y	3 " " " "	15 " " " "	3 " " " "	20 " " " "	3 " " " "	15 " " " "	" " " " "
t _{TLH}	3004 (Fig. 3)	81 82 83 84 85 86	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "		OUT " " " " "	IN " " " " "	OUT " " " " "	IN " " " " "	OUT " " " " "	" " " " "	1Y 2Y 3Y 4Y 5Y 6Y	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "	" " " " "

See footnotes at end of table.

TABLE III. Group A inspection for device type 02.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	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		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}								
V _{IC} (pos)		1 2 3 4 5 6	1mA		1mA		1mA		OPEN		1mA		1mA		1mA	GND	1A 2A 3A 4A 5A 6A	1/ "	1.5 "					V "
V _{IC} (neg)		7 8 9 10 11 12	-1mA		-1mA		-1mA		GND		-1mA		-1mA		-1mA	OPEN	1A 2A 3A 4A 5A 6A		"					V "
I _{CC}	3005	13	GND		GND		GND		"		GND		GND		GND	6V	V _{CC}		0.1		10			μA
I _{CC}	3005	14	6V		6V		6V		"		6V		6V		6V	"	V _{CC}		0.1		10			μA
V _{OH3}	3006	15 16 17 18 19 20	1.2V	-20μA	1.2V	-20μA	1.2V	-20μA	"		-20μA	1.2V	-20μA	1.2V	-20μA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	5.95 " " " " "		5.95 " " " " "		5.95 " " " " "	V "	
V _{OH5}	3006	21 22 23 24 25 26	1.2V	-5.2mA	1.2V	-5.2mA	1.2V	-5.2mA	"		-5.2mA	1.2V	-5.2mA	1.2V	-5.2mA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	5.48 " " " " "		5.2 " " " " "		5.48 " " " " "	" "	
V _{T-}	3006	27 28 29 30 31 32	3/ "	OUT	3/ "	OUT	3/ "	OUT	"		OUT	3/ "	OUT	3/ "	OUT	3/ "	1Y 2Y 3Y 4Y 5Y 6Y	1.2 " " " " "	3.2 " " " " "	1.2 " " " " "	3.2 " " " " "	1.2 " " " " "	3.2 " " " " "	" "
V _{OL3}	3007	33 34 35 36 37 38	4.2V	20μA	4.2V	20μA	4.2V	20μA	"		20μA	4.2V	20μA	4.2V	20μA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.05 " " " " "		0.05 " " " " "		0.05 " " " " "	" "
V _{OL5}	3007	39 40 41 42 43 44	4.2V	5.2mA	4.2V	5.2mA	4.2V	5.2mA	"		5.2mA	4.2V	5.2mA	4.2V	5.2mA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.26 " " " " "		0.4 " " " " "		0.26 " " " " "	" "
V _{T+}	3006	45 46 47 48 49 50	4/ "	OUT	4/ "	OUT	4/ "	OUT	"		OUT	4/ "	OUT	4/ "	OUT	4/ "	1Y 2Y 3Y 4Y 5Y 6Y	2.1 " " " " "	4.2 " " " " "	2.1 " " " " "	4.2 " " " " "	2.1 " " " " "	4.2 " " " " "	" "

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 1		Subgroup 2		Subgroup 3		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		T _C = +25°C		T _C = +125°C		T _C = -55°C		
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max	
V _H		51	5/		5/				GND							6V	1Y	0.5	2.5	0.5	2.5	0.5	2.5	V
		52															2Y							
		53															3Y							
		54															4Y							
		55															5Y							
		56											5/		5/		6Y							
I _{OS4}	3011	57	GND	GND	GND	GND	GND			GND		GND		GND	4V	1Y	-10	-120	-10	-120	-10	-120	mA	
		58														2Y								
		59														3Y								
		60														4Y								
		61														5Y								
		62														6Y								
I _{IH}	3010	63	6V												6V	1A		.05		0.1			μA	
		64	GND												2A									
		65													3A									
		66													4A									
		67													5A									
		68													6A									
I _{IL}	3009	69			6V		6V		GND		6V		6V			6V	1A		-.05		-0.1			μA
		70	6V		GND		6V								2A									
		71			6V		GND								3A									
		72					6V								4A									
		73													5A									
		74													6A									
																	Subgroup 4 T _C = +25°C							
C _i	3012	75	2/		2/				GND							1A		10					pF	
		76													2A									
		77													3A									
		78													4A									
		79													5A									
		80													6A									
																	Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
t _{PHL}	3003 (Fig. 3)	81	IN	OUT					GND							4.5V	1A to 1Y	8	25	8	33	8	25	ns
		82															2A to 2Y							
		83			IN	OUT											3A to 3Y							
		84									OUT	IN	OUT	IN			4A to 4Y							
		85															5A to 5Y							
		86															6A to 6Y							
t _{PHL}	3003 (Fig. 3)	87	IN	OUT													1A to 1Y							
		88															2A to 2Y							
		89			IN	OUT											3A to 3Y							
		90									OUT	IN	OUT	IN			4A to 4Y							
		91															5A to 5Y							
		92															6A to 6Y							

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 9		Subgroup 10		Subgroup 11		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		T _C = +25°C		T _C = +125°C		T _C = -55°C		
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max	
t _{THL}	3004 (Fig. 3)	93	IN	OUT					GND							4.5V	1Y	3	15	3	20	3	15	ns
		94			IN	OUT			"							"	2Y	"	"	"	"	"	"	
		95							"							"	3Y	"	"	"	"	"	"	
		96					IN	OUT	"	OUT	IN					"	4Y	"	"	"	"	"	"	
		97							"			OUT	IN			"	5Y	"	"	"	"	"	"	
		98							"					OUT	IN	"	6Y	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	99	IN	OUT					"							"	1Y	"	"	"	"	"	"	
		100			IN	OUT			"							"	2Y	"	"	"	"	"	"	
		101					IN	OUT	"							"	3Y	"	"	"	"	"	"	
		102							"	OUT	IN					"	4Y	"	"	"	"	"	"	
		103							"			OUT	IN			"	5Y	"	"	"	"	"	"	
		104							"					OUT	IN	"	6Y	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 03.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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	
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max
V _{IC} (pos)		1	1mA	1mA		1mA		1mA		1mA		OPEN										GND	1G	1/	1.5				V	
		2										"										"	1A1	"	"				"	
		3										"										"	1A2	"	"				"	
		4										"										"	1A3	"	"				"	
		5										"										"	1A4	"	"				"	
		6										"										"	2A1	"	"				"	
		7										"										"	2A2	"	"				"	
		8										"										"	2A3	"	"				"	
		9										"										"	2A4	"	"				"	
		10										"										"	2G	"	"				"	
V _{IC} (neg)		11	-1mA	-1mA		-1mA		-1mA		-1mA		GND										OPEN	1G		-1.5				"	
		12										"										"	1A1		"				"	
		13										"										"	1A2		"				"	
		14										"										"	1A3		"				"	
		15										"										"	1A4		"				"	
		16										"										"	2A1		"				"	
		17										"										"	2A2		"				"	
		18										"										"	2A3		"				"	
		19										"										"	2A4		"				"	
		20										"										"	2G		"				"	
I _{CC}	3005	21	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		GND	6V	V _{CC}		0.2		20			μA
I _{CC}	3005	22	GND	6V		6V		6V		6V		"	6V		6V		6V		6V		"	"	"		0.2		20			"
I _{CCZ}		23	6V	6V		6V		6V		6V		"	GND		GND		GND		GND		"	"	"		0.1		10			"
		24	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		6V	"	"		0.1		10			"
V _{OH3}	3006	25	1.2V	1.2V		1.2V		1.2V		1.2V		"										6V	1Y1	5.95		5.95		5.95		V
		26	"	"		"		"		"		"										"	1Y2	"	"	"	"	"	"	
		27	"	"		"		"		"		"										"	1Y3	"	"	"	"	"	"	
		28	"	"		"		"		"		"										"	1Y4	"	"	"	"	"	"	
		29										"										"	2Y1	"	"	"	"	"	"	
		30										"										"	2Y2	"	"	"	"	"	"	
		31										"										"	2Y3	"	"	"	"	"	"	
		32			-20μA		-20μA		-20μA		-20μA		"									"	2Y4	"	"	"	"	"	"	
V _{OH5}	3006	33	1.2V	1.2V		1.2V		1.2V		1.2V		"										"	1Y1	5.48		5.2		5.48		"
		34	"	"		"		"		"		"										"	1Y2	"	"	"	"	"	"	
		35	"	"		"		"		"		"										"	1Y3	"	"	"	"	"	"	
		36	"	"		"		"		"		"										"	1Y4	"	"	"	"	"	"	
		37										"										"	2Y1	"	"	"	"	"	"	
		38										"										"	2Y2	"	"	"	"	"	"	
		39										"										"	2Y3	"	"	"	"	"	"	
		40			-7.8mA		-7.8mA		-7.8mA		-7.8mA		"									"	2Y4	"	"	"	"	"	"	
V _{OL3}	3007	41	1.2V	4.2V		4.2V		4.2V		4.2V		"										"	1Y1		0.05		0.05		0.05	
		42	"	"		"		"		"		"										"	1Y2		"	"	"	"	"	
		43	"	"		"		"		"		"										"	1Y3		"	"	"	"	"	
		44	"	"		"		"		"		"										"	1Y4		"	"	"	"	"	
		45										"										"	2Y1		"	"	"	"	"	
		46										"										"	2Y2		"	"	"	"	"	
		47										"										"	2Y3		"	"	"	"	"	
		48			20μA		20μA		20μA		20μA		"									"	2Y4		"	"	"	"	"	

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4		1Y1	2G	V _{CC}	Min	Max	Min		Max	Min
V _{OL5}	3006	49	1.2V	4.2V		4.2V		4.2V		4.2V		GND				7.8mA		7.8mA		7.8mA		6V	1Y1		0.26		0.4		0.26	V
		50	"									"										"		"		"		"	"	
		51	"									"										"		"		"		"	"	
		52	"									"										"		"		"		"	"	
		53	"									"	4.2V	7.8mA	4.2V						1.2V	2Y1		"		"		"	"	
		54	"									"									"	2Y2		"		"		"	"	
		55	"									"									"	2Y3		"		"		"	"	
I _{OZH}		56			7.8mA		7.8mA		7.8mA			"					4.2V		4.2V		"	2Y4		"		"		"	"	
		57	9/	9/		9/		9/		9/		"						6V		6V		"	1Y1		0.2		2.0			μA
		58	"									"									"	1Y2		"		"		"	"	
		59	"									"									"	1Y3		"		"		"	"	
		60	"									"									"	1Y4		"		"		"	"	
		61	"									"									9/	2Y1		"		"		"	"	
		62	"									"									"	2Y2		"		"		"	"	
I _{OZL}		63			6V		6V		6V			"					9/		9/		"	2Y3		"		"		"	"	
		64										"									"	2Y4		"		"		"	"	
		65	9/	9/		9/		9/		9/		"									GND	1Y1		-0.2		-2.0			"	
		66	"									"									GND	1Y2		"		"		"	"	
		67	"									"									GND	1Y3		"		"		"	"	
		68	"									"										9/	1Y4		"		"		"	"
		69	"									"	9/								"	2Y1		"		"		"	"	
I _{IH}	3010	70										"									"	2Y2		"		"		"	"	
		71										"									"	2Y3		"		"		"	"	
		72			GND		GND					"						9/		9/		"	2Y4		"		"		"	"
		73	6V	GND		GND		GND		GND		"	GND		GND		GND		GND		GND	"	1G		.05		0.1			"
		74	GND	GND		GND						"									"	1A1		"		"		"	"	
		75	"	6V								"									"	1A2		"		"		"	"	
		76	"	GND				6V				"									"	1A3		"		"		"	"	
I _{IL}	3009	77	"					GND		6V		"									"	1A4		"		"		"	"	
		78	"									"									"	2A1		"		"		"	"	
		79	"									"	6V								"	2A2		"		"		"	"	
		80	"									"									"	2A3		"		"		"	"	
		81	"									"									"	2A4		"		"		"	"	
		82	"									"									"	2G		"		"		"	"	
		83	"	6V		6V		6V		6V		"	6V		6V		6V		6V		6V	"	1G		-0.05		-0.1			"
I _{OS4}	3011	84	6V	GND		6V					"										"	1A1		"		"		"	"	
		85	"	6V		6V					"										"	1A2		"		"		"	"	
		86	"	GND		GND		GND				"									"	1A3		"		"		"	"	
		87	"									"									"	1A4		"		"		"	"	
		88	"									"									"	2A1		"		"		"	"	
		89	"									"									"	2A2		"		"		"	"	
		90	"									"									"	2A3		"		"		"	"	
		91	"								"										"	2A4		"		"		"	"	
		92	"								"										"	2G		"		"		"	"	
		93	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		4V	1Y1		-10		-135		-10	-135	mA
		94	"									"									"	1Y2		"		"		"	"	
		95	"								"										"	1Y3		"		"		"	"	
		96	"									"									"	1Y4		"		"		"	"	
		97	"									"									"	2Y1		"		"		"	"	
		98	"									"									"	2Y2		"		"		"	"	
		99	"								"									"	2Y3		"		"		"	"		
		100	"									"									"	2Y4		"		"		"	"	

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2	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 4 T _C = +25°C						
			Test no.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max				
C _i	3012	101	2/								GND											GND	1G	10					pF	
		102		2/								"										"	1A1	"					"	
		103				2/						"										"	1A2	"					"	
		104						2/				"										"	1A3	"					"	
		105									2/		"									"	1A4	"					"	
		106										"	2/									"	2A1	"					"	
		107										"			2/							"	2A2	"					"	
		108										"				2/						"	2A3	"					"	
C _O		109									"					2/				2/	"	2A4	"					"		
		110										"									2/	"	2G	"					"	
																							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	3014 g/	113	B B	B A	H L	B A	H L	B A	H L	B A	H L	GND GND	B A	H L	B A	H L	B A	H L	B A	H L	B B	4.5V 4.5V	Z/ Z/							
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
																							Min	Max	Min	Max	Min	Max		
t _{PHL}	3003 (Fig. 3)	115	GND	IN		IN		IN		IN		GND										4.5V	1A1 to 1Y1	5	18	5	23	5	18	ns
		116	"									"										"	1A2 to 1Y2	"	"	"	"	"	"	
		117	"					IN				"										"	1A3 to 1Y3	"	"	"	"	"	"	
		118	"							IN		"		OUT								"	1A4 to 1Y4	"	"	"	"	"	"	
		119										"	IN									GND	2A1 to 2Y1	"	"	"	"	"	"	
		120								OUT		"				IN						"	2A2 to 2Y2	"	"	"	"	"	"	
		121										"										"	2A3 to 2Y3	"	"	"	"	"	"	
		122			OUT		OUT					"							IN			"	2A4 to 2Y4	"	"	"	"	"	"	
t _{PLH}	3003 (Fig. 3)	123	GND	IN		IN		IN				"										"	1A1 to 1Y1	"	"	"	"	"	"	
		124	"									"										"	1A2 to 1Y2	"	"	"	"	"	"	
		125	"									"										"	1A3 to 1Y3	"	"	"	"	"	"	
		126	"					IN				"			OUT							"	1A4 to 1Y4	"	"	"	"	"	"	
		127										"	IN									GND	2A1 to 2Y1	"	"	"	"	"	"	
		128								OUT		"										"	2A2 to 2Y2	"	"	"	"	"	"	
		129										"				IN						"	2A3 to 2Y3	"	"	"	"	"	"	
		130			OUT							"							IN			"	2A4 to 2Y4	"	"	"	"	"	"	
t _{PZL}	3003 (Fig. 3)	131	IN	4.5V		4.5V						"										"	1G to 1Y1	"	25	"	35	"	25	"
		132	"									"										"	1G to 1Y2	"	"	"	"	"	"	
		133	"									"										"	1G to 1Y3	"	"	"	"	"	"	
		134	"									"										"	1G to 1Y4	"	"	"	"	"	"	
		135										"	4.5V									IN	2G to 2Y1	"	"	"	"	"	"	
		136										"										"	2G to 2Y2	"	"	"	"	"	"	
		137										"										"	2G to 2Y3	"	"	"	"	"	"	
		138			OUT							"										"	2G to 2Y4	"	"	"	"	"	"	

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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	
			$\overline{1G}$	1A1	$\overline{2Y4}$	1A2	$\overline{2Y3}$	1A3	$\overline{2Y2}$	1A4	$\overline{2Y1}$	GND	2A1	$\overline{1Y4}$	2A2	$\overline{1Y3}$	2A3	$\overline{1Y2}$	2A4	$\overline{1Y1}$		$\overline{2G}$	V _{CC}	Min	Max	Min	Max		Min	Max
t _{pZH}	3003 (Fig. 3)	139	IN	GND		GND					GND								OUT		4.5V	$\overline{1G}$ to $\overline{1Y1}$	5	25	5	35	5	25	ns	
		140	"								"										"	"	"	"	"	"	"	"		
		141	"					GND			"										"	"	"	"	"	"	"	"		
		142	"								"										"	"	"	"	"	"	"	"		
		143	"								"		GND								IN	"	"	"	"	"	"	"		
		144	"							OUT		"									"	"	"	"	"	"	"	"		
		145	"				OUT				"				GND						"	"	"	"	"	"	"	"		
t _{PLZ}	3003 (Fig. 3)	146	"		OUT					"								GND		"	"	"	"	"	"	"	"			
		147	IN	4.5V		4.5V					"								OUT		"	"	"	"	"	"	"	"		
		148	"					4.5V			"										"	"	"	"	"	"	"	"		
		149	"							4.5V		"				OUT						"	"	"	"	"	"	"	"	
		150	"								"		4.5V								IN	"	"	"	"	"	"	"		
		151	"								"										"	"	"	"	"	"	"	"		
		152	"						OUT		"										"	"	"	"	"	"	"	"		
t _{PHZ}	3003 (Fig. 3)	153	"			OUT				"				4.5V							"	"	"	"	"	"	"	"		
		154	"							"								4.5V			"	"	"	"	"	"	"	"		
		155	IN	GND		GND					GND								OUT		4.5V	$\overline{1G}$ to $\overline{1Y1}$	5	25	5	35	5	25	ns	
		156	"								"										"	"	"	"	"	"	"	"		
		157	"								"										"	"	"	"	"	"	"	"		
		158	"								"											"	"	"	"	"	"	"	"	
		159	"								"		GND								IN	"	"	"	"	"	"	"		
t _{THL}	3004 (Fig. 3)	160	"							"											"	"	"	"	"	"	"	"		
		161	"								"										"	"	"	"	"	"	"	"		
		162	"								"										"	"	"	"	"	"	"	"		
		163	GND	IN		IN					"									OUT		"	"	12	2	16	2	12	ns	
		164	"					IN			"											"	"	"	"	"	"	"	"	
		165	"							IN	"											"	"	"	"	"	"	"	"	
		166	"								"										GND	"	"	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	167	"							"											"	"	"	"	"	"	"	"		
		168	"								"										"	"	"	"	"	"	"	"		
		169	"								"										"	"	"	"	"	"	"	"		
		170	"			OUT					"								IN		"	"	"	"	"	"	"	"		
		171	GND	IN		IN					"											"	"	"	"	"	"	"	"	
		172	"								"											"	"	"	"	"	"	"	"	
		173	"					IN			"											"	"	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	174	"							IN											"	"	"	"	"	"	"	"		
		175	"								"										GND	"	"	"	"	"	"	"		
		176	"								"										"	"	"	"	"	"	"	"		
		177	"								"										"	"	"	"	"	"	"	"		
		178	"			OUT					"								IN		"	"	"	"	"	"	"	"		
		179	"								"										"	"	"	"	"	"	"	"		
		180	"								"										"	"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 04.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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			
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G	V _{CC}		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA		1mA		1mA		1mA		OPEN										GND	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G	1/ 1.5						V	
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA		-1mA		-1mA		-1mA		GND										OPEN	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		-1.5						
I _{CC} H	3005	21	GND	6V		6V		6V		6V		"	6V		6V		6V		6V		-1mA	6V	V _{CC}		0.2		20				μA
I _{CC} L	3005	22	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		"	"	"		0.2		20				"
I _{CC} Z		23 24	6V GND	6V GND		6V GND		6V GND		6V GND		"	GND 6V		GND 6V		GND 6V		GND 6V		GND	"	"	"	0.1 0.1		10 10				"
V _{OH} 3	3006	25 26 27 28 29 30 31 32	1.2V " "	4.2V		4.2V		4.2V		4.2V		"		-20μA		-20μA		-20μA		-20μA		4.2V	"	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	5.95 " " " " " " "		5.95		5.95		V
V _{OH} 5	3006	33 34 35 36 37 38 39 40	1.2V " " "	4.2V		4.2V		4.2V		4.2V		"		-7.8mA		-7.8mA		-7.8mA		-7.8mA		4.2V	"	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	5.48 " " " " " " "		5.2		5.48		"
V _{OL} 3	3007	41 42 43 44 45 46 47 48	1.2V " "	1.2V		1.2V		1.2V		1.2V		"		20μA		20μA		20μA		20μA		4.2V	"	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.05		0.05		0.05	

See footnotes at end of table.

TABLE III. Group A inspection for device type 04 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max	
V _{OL5}	3007	49	1.2V	1.2V		1.2V			1.2V			GND						7.8mA		7.8mA		7.8mA		6V	1Y1		0.26		0.4		0.26	V
		50	"									"										"	1Y2		"		"		"	"		
		51	"									"										"	1Y3		"		"		"	"		
		52	"									"										"	1Y4		"		"		"	"		
		53	"									"										"	2Y1		"		"		"	"		
		54	"									"										"	2Y2		"		"		"	"		
		55	"									"										"	2Y3		"		"		"	"		
56	"			7.8mA		7.8mA		7.8mA		7.8mA	"						1.2V		1.2V		"	2Y4		"		"		"	"			
I _{OZH}		57	9/	9/		9/			9/			"									6V	"	1Y1		0.2		2.0				μA	
		58	"									"									"	1Y2		"		"		"	"			
		59	"									"									"	1Y3		"		"		"	"			
		60	"									"									"	1Y4		"		"		"	"			
		61	"									"									9/	"	2Y1		"		"		"	"		
		62	"									"									"	"	2Y2		"		"		"	"		
		63	"									"									"	"	2Y3		"		"		"	"		
64	"			6V		6V		6V		6V	"						9/		9/	"	"	2Y4		"		"		"	"			
I _{OZL}		65	9/	9/		9/			9/			GND									GND	"	1Y1		-0.2		-2.0				μA	
		66	"									"									"	1Y2		"		"		"	"			
		67	"									"									"	1Y3		"		"		"	"			
		68	"									"									"	1Y4		"		"		"	"			
		69	"									"									9/	"	2Y1		"		"		"	"		
		70	"									"									"	"	2Y2		"		"		"	"		
		71	"									"									"	"	2Y3		"		"		"	"		
72	"			GND		GND		GND		GND	"						9/		9/	"	"	2Y4		"		"		"	"			
I _{IH}	3010	73	6V	GND		GND		GND		GND		"	GND		GND		GND			GND		GND	"	1G		.05		0.1			"	
		74	GND									"										"	1A1		"		"		"	"		
		75	GND									"										"	1A2		"		"		"	"		
		76	"									"										"	1A3		"		"		"	"		
		77	"									"										"	1A4		"		"		"	"		
		78	"									"										"	2A1		"		"		"	"		
		79	"									"										"	2A2		"		"		"	"		
		80	"									"										"	2A3		"		"		"	"		
		81	"									"										"	2A4		"		"		"	"		
		82	"									"										"	2G		"		"		"	"		
												"										"								"		
I _{IL}	3009	83	"			6V		6V		6V		"	6V		6V		6V			6V		6V	"	1G		-0.05		-0.1			"	
		84	6V									"										"	1A1		"		"		"	"		
		85	"		6V							"										"	1A2		"		"		"	"		
		86	"									"										"	1A3		"		"		"	"		
		87	"									"										"	1A4		"		"		"	"		
		88	"									"										"	2A1		"		"		"	"		
		89	"									"										"	2A2		"		"		"	"		
		90	"									"										"	2A3		"		"		"	"		
		91	"									"										"	2A4		"		"		"	"		
		92	"									"										"	2G		"		"		"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 04 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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			
			$\overline{1G}$	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G	V _{CC}		Min	Max	Min	Max	Min	Max		
I _{OS4}	3011	93	GND	4V		4V		4V		4V		GND	4V		4V		GND	4V	GND	4V	GND		4V	1Y1	-10	-135	-10	-135	-10	-135	mA
		94	"	"		"		"		"		"	"		"		GND	"	"	"	"		"	1Y2	"	"	"	"	"	"	"
		95	"	"		"		"		"		"	"		"		GND	"	"	"	"		"	1Y3	"	"	"	"	"	"	"
		96	"	"		"		"		"		"	"		"		GND	"	"	"	"		"	1Y4	"	"	"	"	"	"	"
		97	"	"		"		"		"		"	"		"		GND	"	"	"	"		"	2Y1	"	"	"	"	"	"	"
		98	"	"		"		"		"		"	"		"		GND	"	"	"	"	4V	"	"	"	"	"	"	"	"	"
		99	"	"		"		"		"		"	"		"		GND	"	"	"	"	"	"	2Y2	"	"	"	"	"	"	"
		100	"	"	GND	"		GND	"	"		GND	"	"		"		GND	"	"	"	"	"	2Y3	"	"	"	"	"	"	"
																								2Y4							
																									Subgroup 4 T _C = +25°C						
C _i	3012	101	2/	2/		2/		2/		2/		GND										GND	1G		10					pF	
		102										"										"	1A1	"	"					"	
		103				2/					"											"	1A2	"	"					"	
		104							2/		"											"	1A3	"	"					"	
		105								2/		"										"	1A4	"	"					"	
		106									2/		"	2/								"	2A1	"	"					"	
		107										"										"	2A2	"	"					"	
		108										"			2/							"	2A3	"	"					"	
		109										"				2/						"	2A4	"	"					"	
		110										"								2/		2/	2G							"	
C _O	3012	111	6V											2/		2/		2/		2/	6V	6V	1Y's		20					"	
		112	GND		2/		2/		2/		2/	"									GND	6V	2Y's		20					"	
																							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	3014 6/	113 114	B B	B A	L H	B A	L H	B A	L H	B A	L H	"	B A	L H	B A	L H	B A	L H	B A	L H	A A	4.5V 4.5V	7/ 7/								
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
																							Min	Max	Min	Max	Min	Max			
t _{PHL}	3003 (Fig. 3)	115	GND	IN								GND										4.5V	1A1 to 1Y1	5	20	5	27	5	20	ns	
		116	"						IN			"										"	1A2 to 1Y2	"	"	"	"	"	"	"	
		117	"									"										"	1A3 to 1Y3	"	"	"	"	"	"	"	
		118	"									"										"	1A4 to 1Y4	"	"	"	"	"	"	"	
		119									IN	OUT	"	IN	OUT							4.5V	2A1 to 2Y1	"	"	"	"	"	"	"	
		120											"									"	2A2 to 2Y2	"	"	"	"	"	"	"	
		121											"									"	2A3 to 2Y3	"	"	"	"	"	"	"	
		122			OUT			OUT		OUT			"				IN		IN			"	2A4 to 2Y4	"	"	"	"	"	"	"	
t _{PLH}	3003 (Fig. 3)	123	GND	IN								"										"	1A1 to 1Y1	"	"	"	"	"	"	"	
		124	"									"										"	1A2 to 1Y2	"	"	"	"	"	"	"	
		125	"									"										"	1A3 to 1Y3	"	"	"	"	"	"	"	
		126	"									"										"	1A4 to 1Y4	"	"	"	"	"	"	"	
		127										"										"	2A1 to 2Y1	"	"	"	"	"	"	"	
		128									OUT		IN	OUT		IN	OUT		OUT			4.5V	2A2 to 2Y2	"	"	"	"	"	"	"	
		129											"									"	2A3 to 2Y3	"	"	"	"	"	"	"	
		130			OUT								"						IN		IN	"	2A4 to 2Y4	"	"	"	"	"	"	"	
													"									"								"	
													"									"								"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 04 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min	
t _{PZH}	3003 (Fig. 3)	131 132 133 134 135 136 137 138	IN " " "	4.5V	 OUT	4.5V OUT	 OUT	4.5V OUT	 OUT	4.5V OUT	GND " " " " " " "	2A1 4.5V	1Y4 OUT OUT	2A2 4.5V 4.5V	1Y3 OUT 4.5V	2A3 OUT 4.5V	1Y2 OUT 4.5V	2A4 OUT 4.5V	1Y1 IN "	2G " "	V _{CC} 4.5V " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	5 20 " " " " " "	20 " " " " " " "	5 35 " " " " " "	5 20 " " " " " "	ns " " " " " " "			
t _{PZL}	3003 (Fig. 3)	139 140 141 142 143 144 145 146	IN " " "	GND	 OUT	GND OUT	 OUT	GND OUT	 OUT	GND OUT	" " " " " " "	" " " " " " "	OUT OUT GND	OUT GND GND	OUT GND GND	OUT GND GND	OUT GND GND	OUT IN "	" " " " " " "	" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	5 26 " " " " " "	26 " " " " " " "	5 35 " " " " " "	5 26 " " " " " "	" " " " " " "				
t _{PHZ}	3003 (Fig. 3)	147 148 149 150 151 152 153 154	IN " " "	4.5V	 OUT	4.5V OUT	 OUT	4.5V OUT	 OUT	4.5V OUT	" " " " " " "	" " " " " " "	OUT OUT 4.5V	OUT OUT 4.5V	OUT OUT 4.5V	OUT OUT 4.5V	OUT OUT 4.5V	OUT OUT 4.5V	OUT IN "	" " " " " " "	" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "			
t _{PLZ}	3003 (Fig. 3)	155 156 157 158 159 160 161 162	IN " " "	GND	 OUT	GND OUT	 OUT	GND OUT	 OUT	GND OUT	" " " " " " "	" " " " " " "	OUT OUT GND	OUT OUT GND	OUT OUT GND	OUT OUT GND	OUT OUT GND	OUT OUT GND	OUT IN "	" " " " " " "	" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "			
t _{TLH}	3004 (Fig. 3)	163 164 165 166 167 168 169 170	GND " " "	IN	 OUT	IN OUT	 OUT	IN OUT	 OUT	IN OUT	" " " " " " "	" " " " " " "	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	4.5V " "	" " " " " " "	" " " " " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	2 12 " " " " " "	12 2 16 " " " "	2 16 2 12 " " " "	" " " " " " "	" " " " " " "			
t _{THL}	3004 (Fig. 3)	171 172 173 174 175 176 177 178	GND " " "	IN	 OUT	IN OUT	 OUT	IN OUT	 OUT	IN OUT	" " " " " " "	" " " " " " "	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	OUT OUT IN	4.5V " "	" " " " " " "	" " " " " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "			

See footnotes at end of table.

TABLE III. Group A inspection for device type 05.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min	
V _{IC} (pos)		1	1mA	1mA		1mA		1mA		1mA		OPEN										GND	1G	1/	1.5				V	
		2										"										"	1A1	"	"				"	
		3										"										"	1A2	"	"				"	
		4										"										"	1A3	"	"				"	
		5										"										"	1A4	"	"				"	
		6										"	1mA									"	2A1	"	"				"	
		7										"			1mA							"	2A2	"	"				"	
		8										"					1mA					"	2A3	"	"				"	
		9										"						1mA		1mA		"	2A4	"	"				"	
		10										"									1mA	"	2G	"	"				"	
V _{IC} (neg)		11	-1mA	-1mA		-1mA		-1mA		-1mA		GND										OPEN	1G		-1.5				"	
		12										"										"	1A1		"				"	
		13										"										"	1A2		"				"	
		14										"										"	1A3		"				"	
		15										"										"	1A4		"				"	
		16										"	-1mA									"	2A1		"				"	
		17										"			-1mA							"	2A2		"				"	
		18										"					-1mA		-1mA			"	2A3		"				"	
		19										"									-1mA	"	2A4		"				"	
		20										"										"	2G		"				"	
I _{CH}	3005	21	GND	6V		6V		6V		6V		"	6V		6V		6V		6V		GND	6V	V _{CC}		0.2		20		μA	
I _{CL}	3005	22	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		GND	"	"		0.2		20			
I _{CCZ}		23	6V	6V		6V		6V		6V		"	GND		GND		GND		GND		GND	"	"		.1		10			
		24	GND	GND		GND		GND		GND		"	6V		6V		6V		6V		6V	"	"		.1		10			
V _{OH3}	3006	25	1.2V	4.2V		4.2V		4.2V		4.2V		"										"	1Y1	5.95		5.95		5.95		V
		26	"									"										"	1Y2	"		"		"		"
		27	"									"										"	1Y3	"		"		"		"
		28	"									"										"	1Y4	"		"		"		"
		29										"										"	2Y1	"		"		"		"
		30										"										"	2Y2	"		"		"		"
		31										"										"	2Y3	"		"		"		"
		32										"										"	2Y4	"		"		"		"
												"										"								"

See footnotes at end of table.

TABLE III. Group A inspection for device type 05 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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		
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max	
V _{OH5}	3006	33	1.2V	4.2V		4.2V		4.2V		4.2V		GND		1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G	V _{CC}	1Y1	5.48		5.2		5.48		V	
		34	"								"											"	"				"		"		
		35	"								"											"	"				"		"		
		36	"								"											"	"				"		"		
		37	"								"											"	"				"		"		
		38	"								"											"	"				"		"		
		39	"								"											"	"				"		"		
		40	"		-7.8mA		-7.8mA		-7.8mA		-7.8mA	"							4.2V				"	"				"		"	
V _{OL3}	3007	41	1.2V	1.2V		1.2V		1.2V		20μA		20μA		1.2V	20μA	1.2V		1.2V		1.2V			1Y1		0.05		0.05		0.05		"
		42	"								"											"	"				"		"		
		43	"								"											"	"				"		"		
		44	"								"											"	"				"		"		
		45	"								"											"	"				"		"		
		46	"								"											"	"				"		"		
		47	"								"											"	"				"		"		
		48	"		20μA		20μA		20μA		20μA	"							1.2V				"	"				"		"	
V _{OL5}	3007	49	1.2V	1.2V		1.2V		1.2V		7.8mA		7.8mA		1.2V	7.8mA	1.2V		1.2V		7.8mA			1Y1		0.26		0.4		0.26		V
		50	"								"											"	"				"		"		
		51	"								"											"	"				"		"		
		52	"								"											"	"				"		"		
		53	"								"											"	"				"		"		
		54	"								"											"	"				"		"		
		55	"								"											"	"				"		"		
		56	"		7.8mA		7.8mA		7.8mA		7.8mA	"							1.2V				"	"				"		"	
I _{OZH}		57	9/	9/		9/		9/		9/		GND		6V		6V		6V		6V		6V	1Y1		0.2		2.0			μA	
		58	"								"											"	"				"		"		
		59	"								"											"	"				"		"		
		60	"								"											"	"				"		"		
		61	"								"											"	"				"		"		
		62	"								"											"	"				"		"		
		63	"								"											"	"				"		"		
		64	"		6V		6V		6V		6V	"							9/				"	"				"		"	
I _{OZL}		65	9/	9/		9/		9/		9/		"						GND		GND			1Y1		-0.2		-2.0			μA	
		66	"								"											"	"				"		"		
		67	"								"											"	"				"		"		
		68	"								"											"	"				"		"		
		69	"								"											"	"				"		"		
		70	"								"											"	"				"		"		
		71	"								"											"	"				"		"		
		72	"		GND		GND		GND		GND	"							9/				"	"				"		"	
I _{IH}	3010	73	6V	GND		GND		GND		GND		"	GND		GND		GND		GND		GND		1G		.05		0.1			"	
		74	GND	6V		GND		"		"		"										"	"				"		"		
		75	"	GND		GND		"		"		"										"	"				"		"		
		76	"	"		GND		6V		"		"										"	"				"		"		
		77	"	"		"		GND		6V		"										"	"				"		"		
		78	"	"		"		"		"		"										"	"				"		"		
		79	"	"		"		"		"		"										"	"				"		"		
		80	"	"		"		"		"		"										"	"				"		"		
		81	"	"		"		"		"		"										"	"				"		"		
		82	"	"		"		"		"		"										"	"				"		"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 05 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max	
I _{IL}	3009	83	"	6V		6V		6V		6V		GND	6V		6V		6V		6V		6V	6V	1G		-0.05		-0.1			μA		
		84	6V	6V		6V																	1A1									
		85	"	6V		6V																	1A2									
		86	"	"		"																	1A3									
		87	"	"		"		GND															1A4									
		88	"	"		"		"															2A1									
		89	"	"		"		"					GND										2A2									
		90	"	"		"		"					"										2A3									
		91	"	"		"		"					"										2A4									
		92	"	"		"		"					"								GND		2G									
		I _{OS4}	3011	93	GND	4V		4V		4V		4V		"	4V		4V		GND	4V		GND	4V	GND	1Y1	-10	-135	-10	-135	-10	-135	mA
				94	"	"		"		"		"		"	"		GND		"	"		"		"	1Y2							
95	"			"		"		"		"		"	"		"		"	"		"		"	1Y3									
96	"			"		"		"		"		"	"		"		"	"		"		"	1Y4									
97	"			"		"		"		"		"	"		"		"	"		"		GND	2Y1									
98	"			"		"		"		"		"	"		"		"	"		"		"	2Y2									
99	"			"		"		"		"		"	"		"		"	"		"		"	2Y3									
100	"			"	GND	"		"		"		"	"		"		"	"		"		"	2Y4									
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C					
																							Min	Max	Min	Max	Min	Max				
t _{PHL}	3003 (Fig. 3)			101	GND	IN		IN		IN		IN		"		OUT		OUT		OUT		OUT		4.5V	1A1 to 1Y1	5	20	5	27	5	20	ns
				102	"	"		"		"		"		"		"		"		"		"		"	1A2 to 1Y2	"	"	"	"	"	"	"
		103	"	"		"		"		"		"		"		"		"		"		"	1A3 to 1Y3	"	"	"	"	"	"	"		
		104	"	"		"		"		"		"		"		"		"		"		"	1A4 to 1Y4	"	"	"	"	"	"	"		
		105	"	"		"		"		"		"		"		"		"		"		"	2A1 to 2Y1	"	"	"	"	"	"	"		
		106	"	"		"		"		"		"		"		"		"		"		"	2A2 to 2Y2	"	"	"	"	"	"	"		
		107	"	"		"		"		"		"		"		"		"		"		"	2A3 to 2Y3	"	"	"	"	"	"	"		
		108	"	"	OUT	"		"		"		"		"		"		"		"		"	2A4 to 2Y4	"	"	"	"	"	"	"		
t _{PLH}	3003 (Fig. 3)	109	GND	IN		IN		IN		IN		"		OUT		OUT		OUT		OUT		"	1A1 to 1Y1	"	"	"	"	"	"	"		
		110	"	"		"		"		"		"		"		"		"		"		"	1A2 to 1Y2	"	"	"	"	"	"	"		
		111	"	"		"		"		"		"		"		"		"		"		"	1A3 to 1Y3	"	"	"	"	"	"	"		
		112	"	"		"		"		"		"		"		"		"		"		"	1A4 to 1Y4	"	"	"	"	"	"	"		
		113	"	"		"		"		"		"		"		"		"		"		"	2A1 to 2Y1	"	"	"	"	"	"	"		
		114	"	"		"		"		"		"		"		"		"		"		"	2A2 to 2Y2	"	"	"	"	"	"	"		
		115	"	"		"		"		"		"		"		"		"		"		"	2A3 to 2Y3	"	"	"	"	"	"	"		
		116	"	"	OUT	"		"		"		"		"		"		"		"		"	2A4 to 2Y4	"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 05 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min	Max
t _{pZL}	3003 (Fig. 3)	117	IN	GND		GND		GND			GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G	4.5V	1G to 1Y1	5	26	5	35	5	26	ns	
		118	"								"				OUT			OUT			"	1G to 1Y2	"	"	"	"	"	"	"	
		119	"								"										"	1G to 1Y3	"	"	"	"	"	"	"	
		120	"								"			OUT							"	1G to 1Y4	"	"	"	"	"	"	"	
		121									"	GND								IN	"	2G to 2Y1	"	"	"	"	"	"	"	
		122					OUT			OUT		"			GND					"	"	2G to 2Y2	"	"	"	"	"	"	"	
		123										"					GND			"	"	2G to 2Y3	"	"	"	"	"	"	"	
124			OUT							"							GND		"	2G to 2Y4	"	"	"	"	"	"	"			
t _{pZH}	3003 (Fig. 3)	125	IN	4.5V							"						OUT				"	1G to 1Y1	"	"	"	"	"	"	"	
		126	"			4.5V		4.5V			"				OUT			OUT			"	1G to 1Y2	"	"	"	"	"	"	"	
		127	"								"										"	1G to 1Y3	"	"	"	"	"	"	"	
		128	"					4.5V		4.5V			OUT								"	1G to 1Y4	"	"	"	"	"	"	"	
		129										4.5V		OUT			4.5V			IN	"	2G to 2Y1	"	"	"	"	"	"	"	
		130					OUT			OUT		"								"	"	2G to 2Y2	"	"	"	"	"	"	"	
		131										"					4.5V			"	"	2G to 2Y3	"	"	"	"	"	"	"	
132			OUT							"							4.5V		"	2G to 2Y4	"	"	"	"	"	"	"			
t _{pLZ}	3003 (Fig. 3)	133	IN	GND		GND		GND			"						OUT				"	1G to 1Y1	"	"	"	"	"	"	"	
		134	"								"							OUT			"	1G to 1Y2	"	"	"	"	"	"	"	
		135	"					GND		GND		"									"	1G to 1Y3	"	"	"	"	"	"	"	
		136	"								"			OUT				OUT			"	1G to 1Y4	"	"	"	"	"	"	"	
		137										"	GND							IN	"	2G to 2Y1	"	"	"	"	"	"	"	
		138					OUT			OUT		"			GND					"	"	2G to 2Y2	"	"	"	"	"	"	"	
		139										"					GND			"	"	2G to 2Y3	"	"	"	"	"	"	"	
140			OUT							"							GND		"	2G to 2Y4	"	"	"	"	"	"	"			
t _{pHZ}	3003 (Fig. 3)	141	IN	4.5V							"						OUT				"	1G to 1Y1	"	"	"	"	"	"	"	
		142	"			4.5V		4.5V			"							OUT			"	1G to 1Y2	"	"	"	"	"	"	"	
		143	"								"										"	1G to 1Y3	"	"	"	"	"	"	"	
		144	"					4.5V		4.5V		"		OUT							"	1G to 1Y4	"	"	"	"	"	"	"	
		145										"	4.5V							IN	"	2G to 2Y1	"	"	"	"	"	"	"	
		146					OUT			OUT		"					4.5V			"	"	2G to 2Y2	"	"	"	"	"	"	"	
		147										"								"	"	2G to 2Y3	"	"	"	"	"	"	"	
148			OUT							"							4.5V		"	2G to 2Y4	"	"	"	"	"	"	"			
t _{TLH}	3004 (Fig. 3)	149	GND	IN							"						OUT				"	1Y1	1	12	1	16	1	12	"	
		150	"					IN			"										"	1Y2	"	"	"	"	"	"	"	
		151	"								"			OUT				OUT			"	1Y3	"	"	"	"	"	"	"	
		152	"								"										"	1Y4	"	"	"	"	"	"	"	
		153	"								"		IN					IN			GND	2Y1	"	"	"	"	"	"	"	
		154	"						OUT			"								"	"	2Y2	"	"	"	"	"	"	"	
		155	"									"					IN			"	"	2Y3	"	"	"	"	"	"	"	
156	"		OUT							"							IN		"	2Y4	"	"	"	"	"	"	"			
t _{THL}	3004 (Fig. 3)	157	GND	IN							"						OUT				"	1Y1							"	
		158	"								"										"	1Y2							"	
		159	"								"										"	1Y3							"	
		160	"					IN			"			OUT					OUT			"	1Y4							"
		161									"											"	2Y1							"
		162					OUT			OUT		"						IN				"	2Y2							"
		163										"										"	2Y3							"
164			OUT							"							IN			"	2Y4							"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 06.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal							Unit
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 1		Subgroup 2		Subgroup 3		
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T _C = +25°C	T _C = +125°C	T _C = -55°C				
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max	
V _{IC} (pos)		1 2 3 4 5 6 7 8	1mA	1mA		1mA		1mA		OPEN								GND	E1 1A 2A 3A 4A 5A 6A E2	1/ "	1.5 "					V
V _{IC} (neg)		9 10 11 12 13 14 15 16	-1mA	-1mA		-1mA		-1mA		GND								OPEN	E1 1A 2A 3A 4A 5A 6A E2		-1.5 "					"
I _{CC}	3005	17	GND	GND		GND		GND		"		GND		GND		GND	GND	6V	V _{CC}		0.2		20			μA
I _{CC}	3005	18	GND	6V		6V		6V		"		6V		6V		6V	"	"	"		0.2		20			"
I _{CCZ}		19 20	6V GND	6V GND		6V GND		6V GND		"		GND 6V		GND 6V		GND 6V	6V	"	"		0.1 0.1		10 10			"
V _{OH3}	3006	21 22 23 24 25 26	1.2V " " " "	4.2V "	-20μA "	4.2V "	-20μA "	4.2V "	-20μA "	" "	-20μA "	4.2V "	-20μA "	4.2V "	-20μA "	4.2V "	" "	1.2V 6.0V	1Y 2Y 3Y 4Y 5Y 6Y	5.95 " " " "		5.95 "		5.95 "		V
V _{OH5}	3006	27 28 29 30 31 32	" " " " "	4.2V "	-7.8mA "	4.2V "	-7.8mA "	4.2V "	-7.8mA "	" "	-7.8mA "	4.2V "	-7.8mA "	4.2V "	-7.8mA "	4.2V "	" "	" "	1Y 2Y 3Y 4Y 5Y 6Y	5.48 " " " "		5.2 "		5.48 "		"
V _{OL3}	3007	33 34 35 36 37 38	" " " " "	1.2V "	20μA "	1.2V "	20μA "	1.2V "	20μA "	" "	20μA "	1.2V "	20μA "	1.2V "	20μA "	1.2V "	" "	" "	1Y 2Y 3Y 4Y 5Y 6Y		0.05 "		0.05 "		0.05 "	"
V _{OL5}	3007	39 40 41 42 43 44	" " " " "	1.2V "	7.8mA "	1.2V "	7.8mA "	1.2V "	7.8mA "	" "	7.8mA "	1.2V "	7.8mA "	1.2V "	7.8mA "	1.2V "	" "	" "	1Y 2Y 3Y 4Y 5Y 6Y		0.26 "		0.4 "		0.26 "	"
I _{OZH}		45 46 47 48 49 50	0.8V " " " "	9/ "	6V "	9/ "	6V "	9/ "	6V "	" "	6V "	9/ "	6V "	9/ "	6V "	9/ "	" "	" "	1Y 2Y 3Y 4Y 5Y 6Y		0.2 "		2.0 "			μA
I _{OZL}		51 52 53 54 55 56	9/ " " " "	9/ "	GND "	9/ "	GND "	9/ "	GND "	" "	GND "	9/ "	GND "	9/ "	GND "	9/ "	" "	0.8V "	1Y 2Y 3Y 4Y 5Y 6Y		-0.2 "		-2.0 "			"

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Subgroup 1 T _C = +25°C						Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		Unit
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		T _C = +25°C		T _C = +125°C		T _C = -55°C						
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T _C = +25°C		T _C = +125°C		T _C = -55°C						
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max					
I _{IH}	3010	57 58 59 60 61 62 63 64	6V GND " " " " "	GND 6V GND " "	" " " "	GND GND 6V GND "	" " " "	GND " 6V GND "	" " " "	GND " " "	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}	E1 1A 2A 3A 4A 5A 6A E2	" " " " " " "	.05 " " " " " "	" " " " " "	0.1 " " " " "	" " " " "	μA					
I _{IL}	3009	65 66 67 68 69 70 71 72	" 6V " " " " "	6V GND 6V " "	" " " "	6V 6V GND 6V "	" " " "	6V " GND 6V "	" " " "	" " " "	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}	E1 1A 2A 3A 4A 5A 6A E2	" " " " " "	-.05 " " " " "	" " " " "	-0.1 " " " "	" " " "	"					
I _{OS4}	3011	73 74 75 76 77 78	GND " " " "	4V " " "	GND " "	4V " "	GND " "	4V " "	GND " "	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}	1Y 2Y 3Y 4Y 5Y 6Y	-10 " " " "	-135 " " "	-10 " "	-135 " "	-10 " "	-135 "	mA					
																		Subgroup 4 T _C = +25°C												
																		Min	Max											
C _i	3012	79 80 81 82 83 84 85 86	2/ " " " " "	2/ " " "	" " 2/ "	" " 2/ "	" " 2/ "	" " " "	GND " " " "	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}	E1 1A 2A 3A 4A 5A 6A E2	" " " " " "	10 " " " "	" " " "	" " "	" "	pF						
C _o	3012	87 88	6V GND	"	2/ "	"	2/ "	"	2/ "	"	2/ "	"	2/ "	"	2/ "	GND 6V	6V 6V	Y's Y's	" 20 20	"	"	"	"	"	"	"				
																		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C								
																		Min	Max	Min	Max	Min	Max							
t _{PHL}	3003 (Fig. 3)	89 90 91 92 93 94	GND " " " "	IN " "	OUT " "	IN " "	OUT " "	IN " "	OUT " "	" " "	OUT " "	IN " "	OUT " "	IN " "	OUT " "	GND " "	4.5V " "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y	5 " " "	21 " "	5 "	28 "	5 "	21 "	ns					
t _{PLH}	3003 (Fig. 3)	95 96 97 98 99 100	" " " " "	IN " "	OUT " "	IN " "	OUT " "	IN " "	OUT " "	" " "	OUT " "	IN " "	OUT " "	IN " "	OUT " "	" " "	" "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y	" " " "	" "	" "	" "	" "	" "	"					
t _{PZH}	3003 (Fig. 3)	101 102 103 104 105 106	IN " " "	4.5V "	OUT "	4.5V "	OUT "	4.5V "	OUT "	" "	OUT "	4.5V "	OUT "	4.5V "	OUT "	4.5V "	" "	E1 to 1Y E1 to 2Y E1 to 3Y E1 to 4Y E1 to 5Y E1 to 6Y	" " " "	38 "	" "	51 "	" "	38 "	"					
		107 108 109 110 111 112	GND " " "	4.5V "	OUT "	4.5V "	OUT "	4.5V "	OUT "	" "	OUT "	4.5V "	OUT "	4.5V "	OUT "	4.5V "	IN "	E2 to 1Y E2 to 2Y E2 to 3Y E2 to 4Y E2 to 5Y E2 to 6Y	" " " "	" "	" "	" "	" "	" "	"					

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal							Unit
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 9		Subgroup 10		Subgroup 11		
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Min	Max	Min	Max	Min	Max	
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}								
t _{pZL}	3003 (Fig. 3)	113	IN	GND	OUT					GND							GND	4.5V	E1 to 1Y	5	38	5	51	5	38	ns
		114	"			GND	OUT			"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		115	"					GND	OUT	"							"	"	E1 to 3Y	"	"	"	"	"	"	"
		116	"							"	OUT	GND	OUT	GND			"	"	E1 to 4Y	"	"	"	"	"	"	"
		117	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		118	"							"					OUT	GND	"	"	E1 to 6Y	"	"	"	"	"	"	"
		119	GND	GND	OUT					"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		120	"			GND	OUT			"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		121	"					GND	OUT	"							"	"	E2 to 3Y	"	"	"	"	"	"	"
		122	"							"	OUT	GND	OUT	GND			"	"	E2 to 4Y	"	"	"	"	"	"	"
		123	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		124	"							"			OUT	GND	OUT	GND	"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{pLZ}	3003 (Fig. 3)	125	IN	GND	OUT					"							GND	"	E1 to 1Y	"	"	"	"	"	"	"
		126	"			GND	OUT			"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		127	"					GND	OUT	"							"	"	E1 to 3Y	"	"	"	"	"	"	"
		128	"							"	OUT	GND	OUT	GND			"	"	E1 to 4Y	"	"	"	"	"	"	"
		129	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		130	"							"					OUT	GND	"	"	E1 to 6Y	"	"	"	"	"	"	"
		131	GND	GND	OUT					"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		132	"			GND	OUT			"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		133	"					GND	OUT	"							"	"	E2 to 3Y	"	"	"	"	"	"	"
		134	"							"	OUT	GND	OUT	GND			"	"	E2 to 4Y	"	"	"	"	"	"	"
		135	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		136	"							"					OUT	GND	"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{pHZ}	3003 (Fig. 3)	137	IN	4.5V	OUT					"							GND	"	E1 to 1Y	"	"	"	"	"	"	"
		138	"			4.5V	OUT			"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		139	"					4.5V	OUT	"							"	"	E1 to 3Y	"	"	"	"	"	"	"
		140	"							"	OUT	4.5V					"	"	E1 to 4Y	"	"	"	"	"	"	"
		141	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		142	"							"					OUT	4.5V	"	"	E1 to 6Y	"	"	"	"	"	"	"
		143	GND	4.5V	OUT					"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		144	"			4.5V	OUT			"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		145	"					4.5V	OUT	"							"	"	E2 to 3Y	"	"	"	"	"	"	"
		146	"							"	OUT	4.5V	OUT	4.5V			"	"	E2 to 4Y	"	"	"	"	"	"	"
		147	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		148	"							"					OUT	4.5V	"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{TLH}	3004 (Fig. 3)	149	"	IN	OUT					"							GND	"	1Y	2	12	2	16	2	12	"
		150	"				IN	OUT			"						"	"	2Y	"	"	"	"	"	"	"
		151	"					IN	OUT	"							"	"	3Y	"	"	"	"	"	"	"
		152	"							"	OUT	IN	OUT	IN			"	"	4Y	"	"	"	"	"	"	"
		153	"							"							"	"	5Y	"	"	"	"	"	"	"
		154	"							"					OUT	IN	"	"	6Y	"	"	"	"	"	"	"
t _{THL}	3004 (Fig. 3)	155	"	IN	OUT					"							"	"	1Y	"	"	"	"	"	"	"
		156	"				IN	OUT			"						"	"	2Y	"	"	"	"	"	"	"
		157	"					IN	OUT	"							"	"	3Y	"	"	"	"	"	"	"
		158	"							"	OUT	IN	OUT	IN			"	"	4Y	"	"	"	"	"	"	"
		159	"							"							"	"	5Y	"	"	"	"	"	"	"
		160	"							"					OUT	IN	"	"	6Y	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 07.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal							Unit	
		2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20	Subgroup 1		Subgroup 2		Subgroup 3					
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T _C = +25°C		T _C = +125°C		T _C = -55°C			
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1 2 3 4 5 6 7 8	1mA	1mA		1mA		1mA		OPEN			1mA		1mA		1mA	1mA	GND	E1 1A 2A 3A 4A 5A 6A E2	1/ "	1.5 "					V "
V _{IC} (neg)		9 10 11 12 13 14 15 16	-1mA	-1mA		-1mA		-1mA		GND			-1mA		-1mA		-1mA	OPEN	E1 1A 2A 3A 4A 5A 6A E2		-1.5 "					" "	
I _{CC}	3005	17	GND	GND		GND		GND		"		GND		GND		GND	GND	6V	V _{CC}		0.2		20			μA	
I _{CC}	3005	18	GND	6V		6V		6V		"		6V		6V		6V	"	"	"		0.2		20			"	
I _{CCZ}		19 20	6V GND	6V GND		6V GND		6V GND		"		GND 6V		GND 6V		GND 6V	6V	"	"		0.1 0.1		10 10			"	
V _{OH3}	3006	21 22 23 24 25 26	1.2V "	1.2V	-20μA	1.2V	-20μA	1.2V	-20μA	"		-20μA	1.2V		-20μA	1.2V		1.2V	6V	1Y 2Y 3Y 4Y 5Y 6Y	5.95 "		5.95 "		5.95 "	V "	
V _{OH5}	3006	27 28 29 30 31 32	"	1.2V	-7.8mA	1.2V	-7.8mA	1.2V	-7.8mA	"		-7.8mA	1.2V		-7.8mA	1.2V		"	1Y 2Y 3Y 4Y 5Y 6Y	5.48 "		5.2 "		5.48 "	" "		
V _{OL3}	3007	33 34 35 36 37 38	"	4.2V	20μA	4.2V	20μA	4.2V	20μA	"		20μA	4.2V		20μA	4.2V		"	1Y 2Y 3Y 4Y 5Y 6Y		0.05 "		0.05 "		0.05 "	" "	
V _{OL5}	3007	39 40 41 42 43 44	"	4.2V	7.8mA	4.2V	7.8mA	4.2V	7.8mA	"		7.8mA	4.2V		7.8mA	4.2V		"	1Y 2Y 3Y 4Y 5Y 6Y		0.26 "		0.4 "		0.26 "	" "	
I _{OZH}		45 46 47 48 49 50	0.8V "	9/ "	6V	9/ "	6V	9/ "	6V	"		6V	9/ "		6V	9/ "		9/ "	1Y 2Y 3Y 4Y 5Y 6Y		0.2 "		2.0 "			μA "	
I _{OZL}		51 52 53 54 55 56	9/ "	9/ "	GND	9/ "	GND	9/ "	GND	"		GND	9/ "		GND	9/ "		0.8V "	1Y 2Y 3Y 4Y 5Y 6Y		-0.2 "		-2.0 "			" "	

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Subgroup 1						Subgroup 2		Subgroup 3		Unit
		2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20	T _C = +25°C		T _C = +125°C		T _C = -55°C								
		E and F Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Min	Max	Min	Max	Min	Max					
I _{IH}	3010	57	6V GND	GND 6V GND		GND GND 6V GND		GND		GND		GND		GND		GND	GND	6V	E1		.05		0.1			μA				
		58																	1A											
		59																	2A											
		60																	3A											
		61																	4A											
		62																	5A											
		63																	6A											
I _{IL}	3009	64																	E2											
		65																	1A		-.05		-0.1							
		66																	2A											
		67																	3A											
		68																	4A											
		69																	5A											
		70																	6A											
I _{OS4}	3011	71	GND	GND	GND	GND	GND	GND	GND									4V	E2		-10	-135	-10	-135	-10	-135	mA			
		72																	1Y											
		73																	2Y											
		74																	3Y											
		75																	4Y											
		76																	5Y											
		77																	6Y											
																		Subgroup 4 T _C = +25°C												
C _i	3012	78	2/	2/		2/		2/		GND								GND	E1		10					pF				
		79																	1A											
		80																	2A											
		81																	3A											
		82																	4A											
		83																	5A											
		84																	6A											
C _o	3012	85	6V GND		2/		2/		2/				2/				2/	GND	Y's		20									
		86																6V	Y's		20									
																		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C								
t _{PHL}	3003 (Fig. 3)	87	GND	IN	OUT	IN	OUT	IN	OUT								GND	4.5V	1A to 1Y	5	22	5	29	5	22	ns				
		88																	2A to 2Y											
		89																	3A to 3Y											
		90																	4A to 4Y											
		91																	5A to 5Y											
t _{PLH}	3003 (Fig. 3)	92		IN	OUT	IN	OUT	IN	OUT										6A to 6Y											
		93																	1A to 1Y											
		94																	2A to 2Y											
		95																	3A to 3Y											
		96																	4A to 4Y											
t _{PZH}	3003 (Fig. 3)	97																	5A to 5Y											
		98																	6A to 6Y											
		99																	1A to 1Y		38		51		38					
		100																	E1 to 2Y											
		101																	E1 to 3Y											
		102																	E1 to 4Y											
		103																	E1 to 5Y											
		104																	E1 to 6Y											
		105																	2A to 2Y											
		106																	3A to 3Y											
		107																	4A to 4Y											
		108																	5A to 5Y											
		109																	E2 to 6Y											
		110																	2A to 2Y											
		111																	3A to 3Y											
		112																	4A to 4Y											
		113																	5A to 5Y											
		114																	E2 to 6Y											
		115																	2A to 2Y											
		116																	3A to 3Y											
		117																	4A to 4Y											
		118																	5A to 5Y											
		119																	E2 to 6Y											
		120																	2A to 2Y											
		121																	3A to 3Y											
		122																	4A to 4Y											
		123																	5A to 5Y											
		124																	E2 to 6Y											
		125																	2A to 2Y											
		126																	3A to 3Y											
		127																	4A to 4Y											
		128																	5A to 5Y											
		129																	E2 to 6Y											
		130																	2A to 2Y											
		131																	3A to 3Y											
		132																	4A to 4Y											
		133																	5A to 5Y											
		134																	E2 to 6Y											
		135																	2A to 2Y											
		136																	3A to 3Y											
		137																	4A to 4Y											
		138																	5A to 5Y											
		139																	E2 to 6Y											
		140																	2A to 2Y											
		141																	3A to 3Y											
		142																	4A to 4Y											
		143																	5A to 5Y											
		144																	E2 to 6Y											
		145																	2A to 2Y											
		146																	3A to 3Y											
		147																	4A to 4Y											
		148																	5A to 5Y											
		149																	E2 to 6Y											
		150																	2A to 2Y											
		151																	3A to 3Y											
		152																	4A to 4Y											
		153																	5A to 5Y											
		154																	E2 to 6Y											
		155																	2A to 2Y											
		156																	3A to 3Y											
		157																	4A to 4Y											
		158																	5A to 5Y											
		159																												

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Unit						
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 9		Subgroup 10		Subgroup 11		
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T _C = +25°C		T _C = +125°C		T _C = -55°C		
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max	
t _{PZL}	3003 (Fig. 3)	113	IN	4.5V	OUT	4.5V	OUT	4.5V	OUT	GND							GND	4.5V	E1 to 1Y	5	38	5	51	5	38	ns
		114	"							"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		115	"					4.5V	OUT	"	OUT	4.5V					"	"	E1 to 3Y	"	"	"	"	"	"	"
		116	"							"							"	"	E1 to 4Y	"	"	"	"	"	"	"
		117	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		118	"							"							"	"	E1 to 6Y	"	"	"	"	"	"	"
		119	GND	4.5V	OUT	4.5V	OUT	4.5V	OUT	"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		120	"							"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		121	"					4.5V	OUT	"	OUT	4.5V					"	"	E2 to 3Y	"	"	"	"	"	"	"
		122	"							"							"	"	E2 to 4Y	"	"	"	"	"	"	"
		123	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		124	"							"							"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{PLZ}	3003 (Fig. 3)	125	IN	4.5V	OUT	4.5V	OUT	4.5V	OUT	"							GND	"	E1 to 1Y	"	"	"	"	"	"	"
		126	"							"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		127	"					4.5V	OUT	"	OUT	4.5V					"	"	E1 to 3Y	"	"	"	"	"	"	"
		128	"							"							"	"	E1 to 4Y	"	"	"	"	"	"	"
		129	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		130	"							"							"	"	E1 to 6Y	"	"	"	"	"	"	"
		131	GND	4.5V	OUT	4.5V	OUT	4.5V	OUT	"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		132	"							"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		133	"					4.5V	OUT	"	OUT	4.5V					"	"	E2 to 3Y	"	"	"	"	"	"	"
		134	"							"							"	"	E2 to 4Y	"	"	"	"	"	"	"
		135	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		136	"							"							"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{PHZ}	3003 (Fig. 3)	137	IN	GND	OUT	GND	OUT	GND	OUT	"							GND	"	E1 to 1Y	"	"	"	"	"	"	"
		138	"							"							"	"	E1 to 2Y	"	"	"	"	"	"	"
		139	"					GND	OUT	"	OUT	GND					"	"	E1 to 3Y	"	"	"	"	"	"	"
		140	"							"							"	"	E1 to 4Y	"	"	"	"	"	"	"
		141	"							"							"	"	E1 to 5Y	"	"	"	"	"	"	"
		142	"							"							"	"	E1 to 6Y	"	"	"	"	"	"	"
		143	GND	GND	OUT	GND	OUT	GND	OUT	"							IN	"	E2 to 1Y	"	"	"	"	"	"	"
		144	"							"							"	"	E2 to 2Y	"	"	"	"	"	"	"
		145	"					GND	OUT	"	OUT	GND					"	"	E2 to 3Y	"	"	"	"	"	"	"
		146	"							"							"	"	E2 to 4Y	"	"	"	"	"	"	"
		147	"							"							"	"	E2 to 5Y	"	"	"	"	"	"	"
		148	"							"							"	"	E2 to 6Y	"	"	"	"	"	"	"
t _{TLH}	3004 (Fig. 3)	149	"	IN	OUT	IN	OUT	IN	OUT	"							GND	"	1Y	2	12	2	16	2	12	"
		150	"							"							"	"	2Y	"	"	"	"	"	"	"
		151	"					IN	OUT	"	OUT	IN					"	"	3Y	"	"	"	"	"	"	"
		152	"							"							"	"	4Y	"	"	"	"	"	"	"
		153	"							"							"	"	5Y	"	"	"	"	"	"	"
		154	"							"							"	"	6Y	"	"	"	"	"	"	"
t _{THL}	3004 (Fig. 3)	155	"	IN	OUT	IN	OUT	IN	OUT	"							"	"	1Y	"	"	"	"	"	"	"
		156	"							"							"	"	2Y	"	"	"	"	"	"	"
		157	"					IN	OUT	"	OUT	IN					"	"	3Y	"	"	"	"	"	"	"
		158	"							"							"	"	4Y	"	"	"	"	"	"	"
		159	"							"							"	"	5Y	"	"	"	"	"	"	"
		160	"							"							"	"	6Y	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 08.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Measured						Unit
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Min	Max	Min	Max	Min	Max	
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}								
V _{IC} (pos)		1 2 3 4 5 6 7 8	1mA	1mA		1mA		1mA		OPEN								GND	E1 1A 2A 3A 4A 5A 6A E2	1/ 1.5						V
V _{IC} (neg)		9 10 11 12 13 14 15 16	-1mA	-1mA		-1mA		-1mA		GND								OPEN	E1 1A 2A 3A 4A 5A 6A E2		-1.5					
I _{CC}	3005	17	GND	GND		GND		GND		"		GND		GND		GND	GND	6V	V _{CC}		0.2		20			μA
I _{CC}	3005	18	GND	6V		6V		6V		"		6V		6V		6V	"	"	"		0.2		20			
I _{CCZ}		19 20	6V GND	6V GND		6V GND		6V GND		"		6V GND		GND 6V		GND 6V	6V	"	"		0.1 0.1		10 10			
V _{OH3}	3006	21 22 23 24 25 26	1.2V " " "	4.2V	-20μA	4.2V	-20μA	4.2V	-20μA	"	"	-20μA	4.2V	"	"	-20μA	4.2V	6V " 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y	5.95 " " " "		5.95 " " "	5.95 " "		V	
V _{OH5}	3006	27 28 29 30 31 32	1.2V " " "	4.2V	-7.8mA	4.2V	-7.8mA	4.2V	-7.8mA	"	"	-7.8mA	4.2V	"	"	-7.8mA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y	5.48 " " "		5.2 " "	5.48 " "			
V _{OL3}	3007	33 34 35 36 37 38	1.2V " " "	1.2V	20μA	1.2V	20μA	1.2V	20μA	"	"	20μA	1.2V	"	"	20μA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y		0.05 " " "		0.05 " "	0.05 "		
V _{OL5}	3007	39 40 41 42 43 44	1.2V " " "	1.2V	7.8mA	1.2V	7.8mA	1.2V	7.8mA	"	"	7.8mA	1.2V	"	"	7.8mA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y		0.26 " "		0.4 " "	0.26 "		
I _{OZH}		45 46 47 48 49 50	g " " "	g/ "	6V	g/ "	6V	g/ "	6V	"	"	6V	g/ "	"	"	6V	g/ "	1Y 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y		0.2 " "		2.0 " "			μA
I _{OZL}		51 52 53 54 55 56	g/ " "	g/ "	GND	g/ "	GND	g/ "	GND	"	"	GND	g/ "	"	"	GND	g/ "	1Y 2Y 3Y 4Y 5Y 6Y	1Y 2Y 3Y 4Y 5Y 6Y		-0.2 "		-2.0 "			

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal							Unit
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C		
		E and F	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Min		Max	Min	Max	Min	Max		
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max	
I _{IH}	3010	57 58 59 60 61 62 63 64	6V GND GND 6V GND			GND GND 6V GND		GND 6V GND		GND		GND 6V GND		GND 6V GND		GND 6V GND	GND 6V GND	6V	E1 1A 2A 3A 4A 5A 6A E2		.05		0.1			μA
I _{IL}	3009	65 66 67 68 69 70 71 72	6V 6V GND 6V			6V 6V GND 6V		6V GND 6V				6V GND 6V		6V GND 6V		6V GND 6V	GND		E1 1A 2A 3A 4A 5A 6A E2		-.05		-0.1			
I _{OS4}	3011	73 74 75 76 77 78	GND 4V	GND	4V	GND	4V	GND			GND	4V	GND	4V	GND	GND	4V	1Y 2Y 3Y 4Y 5Y 6Y	-10 -135	-135	-10	-135	-10	-135	mA	
																		Subgroup 4 T _C = +25°C								
C _i	3012	79 80 81 82 83 84 85 86	2/	2/		2/		2/		GND							GND	E1 1A 2A 3A 4A 5A 6A E2		10					pF	
C _o	3012	87 88	6V GND		2/		2/		2/	GND GND	2/		2/		2/		GND 6V	6V 6V	Y's Y's		20 20					pF pF
																		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
t _{PHL}	3003 (Fig. 3)	89 90 91 92 93 94	GND	IN	OUT	IN	OUT	IN	OUT		OUT	IN	OUT	IN	OUT	IN	GND GND	4.5V	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y	5	21	5	28	5	21	ns
t _{PLH}	3003 (Fig. 3)	95 96 97 98 99 100	GND	IN	OUT	IN	OUT	IN	OUT		OUT	IN	OUT	IN	OUT	IN	GND GND		1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y							
t _{PZL}	3003 (Fig. 3)	101 102 103 104 105 106	IN	GND	OUT	GND	OUT	GND	OUT		OUT	GND	OUT	GND	OUT	GND	IN IN		E1 to 1Y E1 to 2Y E1 to 3Y E1 to 4Y E2 to 5Y E2 to 6Y		33		44		33	
t _{PZH}	3003 (Fig. 3)	107 108 109 110 111 112	IN	4.5V	OUT	4.5V	OUT	4.5V	OUT		OUT	4.5V	OUT	4.5V	OUT	4.5V	IN IN		E1 to 1Y E1 to 2Y E1 to 3Y E1 to 4Y E2 to 5Y E2 to 6Y							

See footnotes at end of table

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal							Unit
		2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20	Subgroup 9		Subgroup 10		Subgroup 11				
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T _C = +25°C		T _C = +125°C		T _C = -55°C		
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max	
t _{PLZ}	3003 (Fig. 3)	113	IN	GND	OUT					GND								4.5V	E1 to 1Y	5	31	5	41	5	31	ns
		114	"			GND	OUT			"								"	E1 to 2Y	"	"	"	"	"	"	
		115	"					GND	OUT	"								"	E1 to 3Y	"	"	"	"	"	"	
		116	"							"	OUT	GND	OUT	GND				"	E1 to 4Y	"	"	"	"	"	"	
		117	"							"							IN	"	E2 to 5Y	"	"	"	"	"	"	
		118	"							"				OUT	GND	IN	"	"	E2 to 6Y	"	"	"	"	"	"	
t _{PHZ}	3003 (Fig. 3)	119	IN	4.5V	OUT	4.5V	OUT	4.5V	OUT	"								"	E1 to 1Y	"	"	"	"	"	"	
		120	"							"								"	E1 to 2Y	"	"	"	"	"	"	
		121	"					4.5V	OUT	"	OUT	4.5V						"	E1 to 3Y	"	"	"	"	"	"	
		122	"							"			OUT	4.5V				"	E1 to 4Y	"	"	"	"	"	"	
		123	"							"					OUT	4.5V	IN	"	E2 to 5Y	"	"	"	"	"	"	
		124	"							"				OUT	4.5V	OUT	4.5V	"	E2 to 6Y	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	125	GND	IN	OUT					"								"	1Y	2	12	2	16	2	12	"
		126	"				IN	OUT		"								"	2Y	"	"	"	"	"	"	
		127	"						IN	OUT	"							"	3Y	"	"	"	"	"	"	
		128	"								"	OUT	IN	OUT	IN			"	4Y	"	"	"	"	"	"	
		129	"								"						GND	"	5Y	"	"	"	"	"	"	
		130	"							"				OUT	IN	OUT	IN	GND	6Y	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	131	GND	IN	OUT	IN	OUT			"								"	1Y	"	"	"	"	"	"	"
		132	"						IN	OUT	"							"	2Y	"	"	"	"	"	"	
		133	"								"	OUT	IN	OUT	IN			"	3Y	"	"	"	"	"	"	
		134	"								"							"	4Y	"	"	"	"	"	"	
		135	"								"			OUT	IN			"	5Y	"	"	"	"	"	"	
		136	"								"					OUT	IN	GND	6Y	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 09.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Measured						Unit	
		2	2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20		Subgroup 1 T _C = +25°C		Subgroup 2 T _C = +125°C		Subgroup 3 T _C = -55°C			
		E and F Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1 2 3 4 5 6 7 8	1mA	1mA		1mA		1mA		OPEN				1mA				1mA	GND	E1 1A 2A 3A 4A 5A 6A E2	1/ 1.5						V
V _{IC} (neg)		9 10 11 12 13 14 15 16	-1mA	-1mA		-1mA		-1mA		GND			-1mA		-1mA		-1mA		OPEN	E1 1A 2A 3A 4A 5A 6A E2		-1.5					
I _{CC}	3005	17	GND	GND		GND		GND				GND		GND		GND		GND	6V	V _{CC}		0.2		20			μA
I _{CC}	3005	18	GND	6V		6V		6V				6V		6V		6V		GND				0.2		20			
I _{CCZ}		19 20	6V GND	6V GND		6V GND		6V GND				6V GND		GND 6V		GND 6V		GND 6V				0.1 0.1		10 10			
V _{OH3}	3006	21 22 23 24 25 26	1.2V " " " " "	1.2V	-20μA	1.2V	-20μA	1.2V	-20μA	" " " "	" " " "	-20μA	1.2V	" " " "	-20μA	1.2V	" " " "	-20μA	1.2V	6V " " " " " "	1Y 2Y 3Y 4Y 5Y 6Y	5.95 " " " " "		5.95 " " " "	5.95 " " "		V
V _{OH5}	3006	27 28 29 30 31 32	1.2V " " " " "	1.2V	-7.8mA	1.2V	-7.8mA	1.2V	-7.8mA	" " " "	" " " "	-7.8mA	1.2V	" " " "	-7.8mA	1.2V	" " " "	-7.8mA	1.2V	1Y 2Y 3Y 4Y 5Y 6Y	5.48 " " " " "		5.2 " " "	5.48 " " "			
V _{OL3}	3007	33 34 35 36 37 38	1.2V " " " " "	4.2V	20μA	4.2V	20μA	4.2V	20μA	" " " "	" " " "	20μA	4.2V	" " " "	20μA	4.2V	" " " "	20μA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.05 " " " "		0.05 " " "	0.05 " "		
V _{OL5}	3007	39 40 41 42 43 44	1.2V " " " " "	4.2V	7.8mA	4.2V	7.8mA	4.2V	7.8mA	" " " "	" " " "	7.8mA	4.2V	" " " "	7.8mA	4.2V	" " " "	7.8mA	4.2V	1Y 2Y 3Y 4Y 5Y 6Y		0.26 " " "		0.4 " "	0.26 " "		
I _{OZH}		45 46 47 48 49 50	9/ " " " "	9/ "	6V	9/ "	6V	9/ "	6V	" " " "	" " " "	6V	9/ "	" " " "	6V	9/ "	" " " "	9/ "	9/ "	1Y 2Y 3Y 4Y 5Y 6Y		0.2 " "		2.0 " "			μA
I _{OZL}		51 52 53 54 55 56	9/ " " " "	9/ "	GND	9/ "	GND	9/ "	GND	" " " "	" " " "	GND	9/ "	" " " "	GND	9/ "	" " " "	9/ "	9/ "	1Y 2Y 3Y 4Y 5Y 6Y		-0.2 " "		-2.0 " "			

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Subgroup 1						Subgroup 2		Subgroup 3		Unit
		2	1	2	3	4	5	8	9	10	12	13	14	15	17	18	19	20		T _C = +25°C		T _C = +125°C		T _C = -55°C						
		E and F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Min	Max	Min	Max	Min	Max					
		Test no.	E1	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	E2	V _{CC}												
I _{IH}	3010	57	6V	GND		GND		GND		GND		GND		GND		GND	GND	6V	E1		.05		0.1			μA				
		58	GND	6V		GND													1A											
		59		GND		6V													2A											
		60				GND													3A											
		61																	4A											
		62																	5A											
		63																	6A											
		64																	E2											
I _{IL}	3009	65		6V		6V		6V				6V		6V		6V			E1		-0.05		-0.1							
		66	6V	GND		6V													1A											
		67		6V		GND													2A											
		68				6V													3A											
		69																	4A											
		70																	5A											
		71																	6A											
		72																	E2											
I _{OS4}	3011	73	GND	GND	GND		GND	GND										4V	1Y	-10	-135	-10	-135	-10	-135	mA				
		74																	2Y											
		75																	3Y											
		76																	4Y											
		77																	5Y											
		78																	6Y											
		79																												
																		Subgroup 4 T _C = +25°C												
C _i	3012	80	2/	2/						GND								GND	E1	Min	Max					pF				
		81																	1A		10									
		82																	2A											
		83																	3A											
		84																	4A											
		85																	5A											
		86																	6A											
		87																	E2											
C _o	3012	88	6V		2/		2/		2/	GND	2/		2/		2/		GND	Y's		20					pF					
		89	GND							GND							6V	Y's		20					pF					
																		Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C								
t _{PHL}	3003 (Fig. 3)	90	GND	IN	OUT		IN	OUT				IN					4.5V	1A to 1Y	5	22	5	29	5	22	ns					
		91																2A to 2Y												
		92																3A to 3Y												
		93																	4A to 4Y											
		94																	5A to 5Y											
t _{PLH}	3003 (Fig. 3)	95																6A to 6Y												
		96	GND	IN	OUT		IN	OUT				IN						1A to 1Y												
		97																2A to 2Y												
		98																3A to 3Y												
		99																4A to 4Y												
t _{PZL}	3003 (Fig. 3)	100																5A to 5Y												
		101																6A to 6Y												
		102	IN	4.5V	OUT		4.5V	OUT				4.5V							E1 to 1Y		33		44		33					
		103																	E1 to 2Y											
		104																	E1 to 3Y											
t _{PZH}	3003 (Fig. 3)	105																	E1 to 4Y											
		106																	E2 to 5Y											
		107																	E2 to 6Y											
		108	IN	GND	OUT		GND	OUT				GND							E1 to 1Y											
		109																	E1 to 2Y											
		110																	E1 to 3Y											
		111																	E1 to 4Y											
		112																	E2 to 5Y											
		113																	E2 to 6Y											

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/																Measured terminal	Subgroup 9		Subgroup 10		Subgroup 11		Unit				
		2	3	4	5	7	8	9	10	12	13	14	15	17	18	19	20	T _C = +25°C		T _C = +125°C		T _C = -55°C								
		E and F	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16													
		Test no.	<u>E1</u>	1A	<u>1Y</u>	2A	<u>2Y</u>	3A	<u>3Y</u>	GND	<u>4Y</u>	4A	<u>5Y</u>	5A	<u>6Y</u>	6A	E2	V _{CC}		Min	Max	Min	Max	Min	Max					
t _{PLZ}	3003 (Fig. 3)	114	IN	4.5V	OUT		4.5V	OUT		4.5V	OUT	GND		4Y	4A	<u>5Y</u>	5A	<u>6Y</u>	6A	E2	V _{CC}	4.5V	E1 to 1Y	5	31	5	41	5	31	ns
		115	"									"											"	E1 to 2Y	"	"	"	"	"	"
		116	"									"		OUT	4.5V							"	E1 to 3Y	"	"	"	"	"	"	
		117	"									"				OUT	4.5V					IN	"	E1 to 4Y	"	"	"	"	"	"
		118	"									"						OUT	4.5V			IN	"	E2 to 5Y	"	"	"	"	"	"
t _{PHZ}	3003 (Fig. 3)	119	"								"											"	E2 to 6Y	"	"	"	"	"	"	"
		120	IN	GND	OUT		GND	OUT		GND	OUT	"										"	E1 to 1Y	"	"	"	"	"	"	"
		121	"									"										"	E1 to 2Y	"	"	"	"	"	"	"
		122	"									"		OUT	GND							"	E1 to 3Y	"	"	"	"	"	"	"
		123	"									"				OUT	GND					IN	"	E1 to 4Y	"	"	"	"	"	"
t _{TLH}	3004 (Fig. 3)	124	"								"											"	E2 to 5Y	"	"	"	"	"	"	"
		125	"								"											"	E2 to 6Y	"	"	"	"	"	"	"
		126	GND	IN	OUT		IN	OUT		IN	OUT	"										"	1Y	2	12	2	16	2	12	"
		127	"									"										"	2Y	"	"	"	"	"	"	"
		128	"									"										"	3Y	"	"	"	"	"	"	"
t _{THL}	3004 (Fig. 3)	129	"								"			OUT	IN							"	4Y	"	"	"	"	"	"	"
		130	"								"											"	5Y	"	"	"	"	"	"	"
		131	"								"											"	6Y	"	"	"	"	"	"	"
		132	GND	IN	OUT		IN	OUT		IN	OUT	"										"	1Y	"	"	"	"	"	"	"
		133	"									"										"	2Y	"	"	"	"	"	"	"
t _{THL}	3004 (Fig. 3)	134	"								"											"	3Y	"	"	"	"	"	"	"
		135	"									"										"	4Y	"	"	"	"	"	"	"
		136	"									"										"	5Y	"	"	"	"	"	"	"
		137	"									"				OUT	IN					"	6Y	"	"	"	"	"	"	"
												"										"		"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 10.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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					
			1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}		Min	Max	Min	Max	Min	Max				
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	OPEN										GND	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G	1/ 1.5							V		
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND										OPEN	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G		-1.5								
I _{CC}	3005	21	GND	GND	GND	GND	GND	GND	GND	GND	GND											GND	6V	V _{CC}		0.2		20				μA	
I _{CC}	3005	22	GND	6V	6V	6V	6V	6V	6V	6V	6V															0.2		20					
I _{CCZ}		23 24	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND	6V GND											6V	6V			0.1 0.1		10 10					
V _{OH3}	3006	25 26 27 28 29 30 31 32	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V											1.2V		1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	5.95		5.95		5.95			V	
V _{OH5}	3006	33 34 35 36 37 38 39 40		1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V													1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	5.48		5.2		5.48				
V _{OL3}	3007	41 42 43 44 45 46 47 48		4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V													1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y		0.05		0.05		0.05			
V _{OL5}	3007	49 50 51 52 53 54 55 56		4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V	4.2V													1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y		0.26		0.4		0.26			
I _{OZH}		57 58 59 60 61 62 63 64	0.8V	9/	9/	9/	9/	9/	9/	9/	9/													1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y		0.2		2.0				μA	

See footnotes at end of table.

TABLE III. Group A inspection for device type 10 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max																	
I _{OZL}		65 66 67 68 69 70 71 72	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	0.8V " " " " " "	6V " " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	" -0.2 " " " " " "	" " " " " " "	-2.0 " " " " " "	" " " " " " "	" " " " " " "	μA																			
I _{IH}	3010	73 74 75 76 77 78 79 80 81 82	6V GND " " " " " " "	GND 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	"																					
I _{IL}	3009	83 84 85 86 87 88 89 90 91 92	GND 6V " " " " " " "	6V GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	"																				
I _{OS4}	3011	93 94 95 96 97 98 99 100	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	" " " " " " " "	mA																			
																							Subgroup 4 T _C = +25°C																									
																							Min	Max																								
C _i	3012	101 102 103 104 105 106 107 108 109 110	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	2/ " " " " " " " "	GND " " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	pF																		
C _o	3012	111 112	GND 6V	"	"	"	"	"	"	"	"	"	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	6V GND	6V 6V	Y's Y's	" 20 20	"	20 20	"	"	"	"	"	"																
																							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 6/		113 114	B B	B A	B A	B A	B A	B A	B A	B A	B A	GND "	H L	H L	H L	H L	H L	H L	H L	H L	B B	4.5V 4.5V	Z/ Z/	"	"	"	"	"	"	"	"																	

See footnotes at end of table.

TABLE III. Group A inspection for device type 10 – Continued.

[illegible]

See footnotes at end of table.

TABLE III. Group A inspection for device type 10 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max
t _{PLZ}	3003 (Fig. 3)	163	IN	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	GND						OUT	OUT	OUT	GND	4.5V	1G to 1Y	8	31	8	41	8	31	ns	
		164	"																				1G to 2Y	"	"	"	"	"	"	"	
		165	"																				1G to 3Y	"	"	"	"	"	"	"	
		166	"					4.5V									OUT						1G to 4Y	"	"	"	"	"	"	"	
		167	"						4.5V							OUT							1G to 5Y	"	"	"	"	"	"	"	
		168	"							4.5V						OUT	OUT	OUT					1G to 6Y	"	"	"	"	"	"	"	
		169	"								4.5V												1G to 7Y	"	"	"	"	"	"	"	
		170	"										OUT	OUT									1G to 8Y	"	"	"	"	"	"	"	
		171	GND	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V						OUT	OUT	OUT	OUT	IN		2G to 1Y	"	"	"	"	"	"	"	
		172	"																				2G to 2Y	"	"	"	"	"	"	"	
		173	"																				2G to 3Y	"	"	"	"	"	"	"	
		174	"																				2G to 4Y	"	"	"	"	"	"	"	
		175	"																				2G to 5Y	"	"	"	"	"	"	"	
		176	"																				2G to 6Y	"	"	"	"	"	"	"	
		177	"																				2G to 7Y	"	"	"	"	"	"	"	
		178	"																				2G to 8Y	"	"	"	"	"	"	"	
t _{PHZ}	3003 (Fig. 3)	179	IN	GND	GND	GND	GND	GND	GND	GND	GND							OUT	OUT	OUT	GND		1G to 1Y	"	"	"	"	"	"	"	
		180	"																				1G to 2Y	"	"	"	"	"	"	"	
		181	"																				1G to 3Y	"	"	"	"	"	"	"	
		182	"																				1G to 4Y	"	"	"	"	"	"	"	
		183	"																				1G to 5Y	"	"	"	"	"	"	"	
		184	"																				1G to 6Y	"	"	"	"	"	"	"	
		185	"																				1G to 7Y	"	"	"	"	"	"	"	
		186	"																				1G to 8Y	"	"	"	"	"	"	"	
		187	GND	GND	GND	GND	GND	GND	GND	GND	GND												2G to 1Y	"	"	"	"	"	"	"	
		188	"																				2G to 2Y	"	"	"	"	"	"	"	
		189	"																				2G to 3Y	"	"	"	"	"	"	"	
		190	"																				2G to 4Y	"	"	"	"	"	"	"	
		191	"																				2G to 5Y	"	"	"	"	"	"	"	
		192	"																				2G to 6Y	"	"	"	"	"	"	"	
		193	"																				2G to 7Y	"	"	"	"	"	"	"	
		194	"																				2G to 8Y	"	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	195	"	IN	IN	IN	IN	IN	IN	IN	IN								OUT	OUT	OUT	GND		1Y	2	12	2	16	2	12	"
		196	"																				2Y	"	"	"	"	"	"	"	
		197	"																				3Y	"	"	"	"	"	"	"	
		198	"																				4Y	"	"	"	"	"	"	"	
		199	"																				5Y	"	"	"	"	"	"	"	
		200	"																				6Y	"	"	"	"	"	"	"	
		201	"																				7Y	"	"	"	"	"	"	"	
		202	"																				8Y	"	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	203	"	IN	IN	IN	IN	IN	IN	IN	IN									OUT	OUT			1Y	"	"	"	"	"	"	"
		204	"																				2Y	"	"	"	"	"	"	"	
		205	"																				3Y	"	"	"	"	"	"	"	
		206	"																				4Y	"	"	"	"	"	"	"	
		207	"																				5Y	"	"	"	"	"	"	"	
		208	"																				6Y	"	"	"	"	"	"	"	
		209	"																				7Y	"	"	"	"	"	"	"	
		210	"																				8Y	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 11.

Symbol	MIL-STD-883 method	Cases R, S, X, and 2 Test no.	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			
			1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	GND	1G	1/	1.5					V
		2																					1A	"	"					"	
		3																					2A	"	"					"	
		4																					3A	"	"					"	
		5																					4A	"	"					"	
		6																					5A	"	"					"	
		7																					6A	"	"					"	
		8																					7A	"	"					"	
		9																			1mA		"	"						"	
		10																					2G	"	"					"	
V _{IC} (neg)		11	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	OPEN	1G		1.5					"
		12																					1A		"					"	
		13																					2A		"					"	
		14																					3A		"					"	
		15																					4A		"					"	
		16																					5A		"					"	
		17																					6A		"					"	
		18																					7A		"					"	
		19																					8A		"					"	
		20																			-1mA		2G		"					"	
I _{COH}	3005	21	GND	6V	6V	6V	6V	6V	6V	6V	6V	"									GND	6V	V _{CC}		0.2		20			μA	
I _{CC1}	3005	22	GND	GND	GND	GND	GND	GND	GND	GND	GND	"									"	"	"		0.2		20			"	
I _{CC2}		23	6V	GND	GND	GND	GND	6V	6V	6V	6V	"									"	"	"		0.1		10			"	
		24	GND	6V	6V	6V	6V	GND	GND	GND	GND	"									6V	"	"		0.1		10			"	
V _{OH3}	3006	25	1.2V	4.2V								"										1.2V	"	1Y	5.95		5.95		5.95	V	
		26	"									"										"	"	2Y	"		"		"	"	
		27	"									"										"	"	3Y	"		"		"	"	
		28	"									"										"	"	4Y	"		"		"	"	
		29	"									"										"	"	5Y	"		"		"	"	
		30	"									"										"	"	6Y	"		"		"	"	
		31	"									"										"	"	7Y	"		"		"	"	
		32	"									"										"	"	8Y	"		"		"	"	
												"										"	"							"	
V _{OH5}	3006	33	"	4.2V								"										1.2V	"	1Y	5.48		5.2		5.48	"	
		34	"									"										"	"	2Y	"		"		"	"	
		35	"									"										"	"	3Y	"		"		"	"	
		36	"									"										"	"	4Y	"		"		"	"	
		37	"									"										"	"	5Y	"		"		"	"	
		38	"									"										"	"	6Y	"		"		"	"	
		39	"									"										"	"	7Y	"		"		"	"	
		40	"									"										"	"	8Y	"		"		"	"	
												"										"	"							"	
V _{OL3}	3007	41	"	1.2V								"										1.2V	"	1Y		0.05		0.05		0.05	"
		42	"									"										"	"	2Y	"		"		"	"	
		43	"									"										"	"	3Y	"		"		"	"	
		44	"									"										"	"	4Y	"		"		"	"	
		45	"									"										"	"	5Y	"		"		"	"	
		46	"									"										"	"	6Y	"		"		"	"	
		47	"									"										"	"	7Y	"		"		"	"	
		48	"									"										"	"	8Y	"		"		"	"	
												"										"	"							"	
V _{OL5}	3007	49	"	1.2V								"										"	"	1Y		0.26		0.4		0.26	"
		50	"									"										"	"	2Y	"		"		"	"	
		51	"									"										"	"	3Y	"		"		"	"	
		52	"									"										"	"	4Y	"		"		"	"	
		53	"									"										"	"	5Y	"		"		"	"	
		54	"									"										"	"	6Y	"		"		"	"	
		55	"									"										"	"	7Y	"		"		"	"	
		56	"									"										"	"	8Y	"		"		"	"	
												"										"	"							"	
I _{OZH}		57	0.8V	9/								"										9/	"	1Y		0.2		2.0			μA
		58	"									"										"	"	2Y	"		"		"	"	
		59	"									"										"	"	3Y	"		"		"	"	
		60	"									"										"	"	4Y	"		"		"	"	
		61	"									"										"	"	5Y	"		"		"	"	
		62	"									"										"	"	6Y	"		"		"	"	
		63	"									"										"	"	7Y	"		"		"	"	
		64	"									"										"	"	8Y	"		"		"	"	
												"										"	"							"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 11 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, X, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max
I _{OL}		65 66 67 68 69 70 71 72	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	9/ " " " " " "	GND " " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	" " " " " "	0.8V " " " " " "	6V " " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	" -0.2 " " " " " "	" " " " " " "	-2.0 " " " " " "	" " " " " " "	" " " " " " "	μA		
I _{IH}	3010	73 74 75 76 77 78 79 80 81 82	6V GND " " " " " " "	GND 6V GND 6V GND 6V GND 6V GND 6V GND	GND " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " " 6V GND 6V GND 6V GND 6V GND 6V GND	GND " " " 6V GND 6V GND 6V GND 6V GND	GND " " " " 6V GND 6V GND 6V GND	GND " " " " " 6V GND 6V GND 6V GND	GND " " " " " " 6V GND 6V GND 6V GND	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	" " " " " " " " " "	GND 6V " " " " " " " "	6V " " " " " " " " "	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G	" .05 " " " " " " " "	" " " " " " " " "	0.1 " " " " " " " "	" " " " " " " " "	" " " " " " " " "	"		
I _{IL}	3009	83 84 85 86 87 88 89 90 91 92	GND 6V " " " " " " "	6V GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " GND 6V GND 6V GND 6V GND 6V GND 6V GND	6V " " GND 6V GND 6V GND 6V GND 6V GND	6V " " " GND 6V GND 6V GND 6V GND	6V " " " " GND 6V GND 6V GND 6V GND	6V " " " " " GND 6V GND 6V GND 6V GND	6V " " " " " " GND 6V GND 6V GND 6V GND	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	" " " " " " " " "	GND " " " " " " " "	" " " " " " " " "	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G	" -0.05 " " " " " " " "	" " " " " " " " "	-0.1 " " " " " " " "	" " " " " " " " "	" " " " " " " " "	"	
I _{OS4}	3011	93 94 95 96 97 98 99 100	GND " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	4V " " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	GND 4V " " " " " "	4V " " " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	-10 " " " " " " "	-135 " " " " " " "	-10 " " " " " " "	-135 " " " " " " "	-10 " " " " " "	-135 " " " " " "	mA
																					Subgroup 4 T _C = +25°C						Unit				
																					Min	Max									
C _i	3012	101 102 103 104 105 106 107 108 109 110	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	2/ " " " " " " "	GND " " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	GND " " " " " "	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G	10 " " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	pF		
C _o	3012	111 112	GND 6V	"	"	"	"	"	"	"	"	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	2/ "	6V GND	6V 6V	Y's Y's	20 20	"	20 20	"	"	"	"	"
																					Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C		Unit				
																					Min	Max	Min	Max	Min	Max					
Truth table 6/		113 114	B B	A B	A B	A B	A B	A B	A B	A B	GND "	H L	H L	H L	H L	H L	H L	H L	H L	H L	B B	4.5V 4.5V	Z/ Z/	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 11 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, X, and 2	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.	TG	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	TG		V _{CC}	Min	Max	Min	Max	Min		Max	
t _{PHL}	3003 (Fig. 3)	115	GND	IN	IN	IN	IN	IN	IN	IN	GND									OUT	OUT	OUT	GND	4.5V	1A to 1Y	8	22	8	29	8	22	ns
		116	"								"											"	"	2A to 2Y	"	"	"	"	"	"	"	
		117	"								"											"	"	3A to 3Y	"	"	"	"	"	"	"	
		118	"								"											"	"	4A to 4Y	"	"	"	"	"	"	"	
		119	"								"											"	"	5A to 5Y	"	"	"	"	"	"	"	
		120	"								"											"	"	6A to 6Y	"	"	"	"	"	"	"	
		121	"								"											"	"	7A to 7Y	"	"	"	"	"	"	"	
122	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8A to 8Y	"	"	"	"	"	"	"			
t _{PLH}	3003 (Fig. 3)	123	"	IN	IN	IN	IN	IN	IN	IN	"									OUT	OUT	OUT	"	"	1A to 1Y	"	"	"	"	"	"	"
		124	"								"											"	"	2A to 2Y	"	"	"	"	"	"	"	
		125	"								"											"	"	3A to 3Y	"	"	"	"	"	"	"	
		126	"								"											"	"	4A to 4Y	"	"	"	"	"	"	"	
		127	"								"											"	"	5A to 5Y	"	"	"	"	"	"	"	
		128	"								"											"	"	6A to 6Y	"	"	"	"	"	"	"	
		129	"								"											"	"	7A to 7Y	"	"	"	"	"	"	"	
130	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8A to 8Y	"	"	"	"	"	"	"			
t _{PZH}	3003 (Fig. 3)	131	IN	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	GND									OUT	OUT	OUT	GND	4.5V	1G to 1Y	8	31	8	41	8	31	ns
		132	"								"											"	"	1G to 2Y	"	"	"	"	"	"	"	
		133	"								"											"	"	1G to 3Y	"	"	"	"	"	"	"	
		134	"								"											"	"	1G to 4Y	"	"	"	"	"	"	"	
		135	"								"											"	"	1G to 5Y	"	"	"	"	"	"	"	
		136	"								"											"	"	1G to 6Y	"	"	"	"	"	"	"	
		137	"								"											"	"	1G to 7Y	"	"	"	"	"	"	"	
		138	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	1G to 8Y	"	"	"	"	"	"	"	
		139	GND	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	"											IN	"	2G to 1Y	"	"	"	"	"	"	"	
		140	"								"											"	"	2G to 2Y	"	"	"	"	"	"	"	
141	"								"											"	"	2G to 3Y	"	"	"	"	"	"	"			
t _{PZL}	3003 (Fig. 3)	142	"							"											"	"	2G to 4Y	"	"	"	"	"	"	"	"	
		143	"								"										"	"	2G to 5Y	"	"	"	"	"	"	"		
		144	"								"										"	"	2G to 6Y	"	"	"	"	"	"	"		
		145	"								"										"	"	2G to 7Y	"	"	"	"	"	"	"		
		146	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"	
		147	IN	GND	GND	GND	GND	GND	GND	GND	GND	"										OUT	"	1G to 1Y	"	"	"	"	"	"	"	
		148	"								"											"	"	1G to 2Y	"	"	"	"	"	"	"	
		149	"								"											"	"	1G to 3Y	"	"	"	"	"	"	"	
		150	"								"											"	"	1G to 4Y	"	"	"	"	"	"	"	
		151	"								"											"	"	1G to 5Y	"	"	"	"	"	"	"	
152	"								"											"	"	1G to 6Y	"	"	"	"	"	"	"			
153	"								"											"	"	1G to 7Y	"	"	"	"	"	"	"			
154	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	1G to 8Y	"	"	"	"	"	"	"			
		155	GND	GND	GND	GND	GND	GND	GND	GND	"											IN	"	2G to 1Y	"	"	"	"	"	"	"	
		156	"								"											"	"	2G to 2Y	"	"	"	"	"	"	"	
		157	"								"											"	"	2G to 3Y	"	"	"	"	"	"	"	
		158	"								"											"	"	2G to 4Y	"	"	"	"	"	"	"	
		159	"								"											"	"	2G to 5Y	"	"	"	"	"	"	"	
		160	"								"											"	"	2G to 6Y	"	"	"	"	"	"	"	
		161	"								"											"	"	2G to 7Y	"	"	"	"	"	"	"	
		162	"								"		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 11 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, X, and 2	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.	T _G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y		T _G	V _{CC}	Min	Max	Min	Max		Min	Max	
t _{PLZ}	3003 (Fig. 3)	163	IN	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	4.5V	1G to 1Y	8	31	8	41	8	31	ns	
		164	"																				"	1G to 2Y	"	"	"	"	"	"	"	
		165	"																				"	1G to 3Y	"	"	"	"	"	"	"	
		166	"																				"	1G to 4Y	"	"	"	"	"	"	"	
		167	"																				"	1G to 5Y	"	"	"	"	"	"	"	
		168	"																				"	1G to 6Y	"	"	"	"	"	"	"	
		169	"																				"	1G to 7Y	"	"	"	"	"	"	"	
		170	"																				"	1G to 8Y	"	"	"	"	"	"	"	
		171	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	2G to 1Y	"	"	"	"	"	"	"	
		172	"																				2G to 2Y	"	"	"	"	"	"	"		
		173	"																				2G to 3Y	"	"	"	"	"	"	"		
		174	"																				2G to 4Y	"	"	"	"	"	"	"		
		175	"																				2G to 5Y	"	"	"	"	"	"	"		
		176	"																				2G to 6Y	"	"	"	"	"	"	"		
		177	"																				2G to 7Y	"	"	"	"	"	"	"		
		178	"																				2G to 8Y	"	"	"	"	"	"	"		
		t _{PHZ}	3003 (Fig. 3)	179	IN	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	1G to 1Y	"	"	"	"	"	"	"
				180	"																				1G to 2Y	"	"	"	"	"	"	"
181	"																						1G to 3Y	"	"	"	"	"	"	"		
182	"																						1G to 4Y	"	"	"	"	"	"	"		
183	"																						1G to 5Y	"	"	"	"	"	"	"		
184	"																						1G to 6Y	"	"	"	"	"	"	"		
185	"																						1G to 7Y	"	"	"	"	"	"	"		
186	"																						1G to 8Y	"	"	"	"	"	"	"		
187	GND			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	2G to 1Y	"	"	"	"	"	"	"		
188	"																						2G to 2Y	"	"	"	"	"	"	"		
189	"																						2G to 3Y	"	"	"	"	"	"	"		
190	"																						2G to 4Y	"	"	"	"	"	"	"		
t _{TLH}	3004 (Fig. 3)	195	"	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	1Y	2	12	2	16	2	12	"		
		196	"																				2Y	"	"	"	"	"	"	"		
		197	"																				3Y	"	"	"	"	"	"	"		
		198	"																				4Y	"	"	"	"	"	"	"		
		199	"																				5Y	"	"	"	"	"	"	"		
		200	"																				6Y	"	"	"	"	"	"	"		
		201	"																				7Y	"	"	"	"	"	"	"		
		202	"																				8Y	"	"	"	"	"	"	"		
t _{THL}	3004 (Fig. 3)	203	"	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	1Y	"	"	"	"	"	"	"		
		204	"																				2Y	"	"	"	"	"	"	"		
		205	"																				3Y	"	"	"	"	"	"	"		
		206	"																				4Y	"	"	"	"	"	"	"		
		207	"																				5Y	"	"	"	"	"	"	"		
		208	"																				6Y	"	"	"	"	"	"	"		
		209	"																				7Y	"	"	"	"	"	"	"		
		210	"																				8Y	"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 51.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit	
		2	2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 1		Subgroup 2		Subgroup 3			
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		T _C = +25°C		T _C = +125°C		T _C = -55°C			
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1 2 3 4 5 6	1mA		1mA		1mA		OPEN							GND	1A 2A 3A 4A 5A 6A	1/ ..	1.5					V	
V _{IC} (neg)		7 8 9 10 11 12	-1mA		-1mA		-1mA		GND							OPEN	1A 2A 3A 4A 5A 6A							V	
I _{CC}	3005	13	GND		GND		GND		..			GND		GND		GND	5.5V	V _{CC}		0.1		10			μA
I _{CC}	3005	14	5.5V		5.5V		5.5V		..			5.5V		5.5V		5.5V	5.5V	V _{CC}		0.1		10			μA
I _{CCΔ}	3005	215	2.4V		0.4V		0.4V		..			0.4V		0.4V		0.4V	5.5V	V _{CC}		3.0		3.0		3.0	mA
		216	0.4V		2.4V		..		..			..		..		..	..	..	..	..	..	..	..	..	
		217	..		0.4V		2.4V		..			..		..		..	..	..	..	..	..	..	..	..	
		218	..				0.4V		..			2.4V		..		..	..	..	..	..	..	..	..	..	
		219	..					..		..			0.4V		2.4V		..	..	..	..	..	..	..	..	
		220	..					..		..				0.4V		2.4V		..	..	..	..	..	..	..	
V _{OH6}	3006	16 17 18 19 20 21	0.8V	-20μA	0.8V	-20μA	0.8V	-20μA	..		-20μA	0.8V	-20μA	0.8V	-20μA	0.8V	4.5V	1Y 2Y 3Y 4Y 5Y 6Y	4.4		4.4		4.4		V
V _{OH7}	3006	22 23 24 25 26 27	0.8V	-4 mA	0.8V	-4 mA	0.8V	-4 mA	..		-4 mA	0.8V	-4 mA	0.8V	-4 mA	0.8V	5.5V	1Y 2Y 3Y 4Y 5Y 6Y	3.98		3.7		3.98		
V _{OL6}	3007	28 29 30 31 32 33	2.0V	20μA	2.0V	20μA	2.0V	20μA	..		20μA	2.0V	20μA	2.0V	20μA	2.0V	4.5V	1Y 2Y 3Y 4Y 5Y 6Y		0.1		0.1		0.1	
V _{OL7}	3007	34 35 36 37 38 39	2.0V	4.0mA	2.0V	4.0mA	2.0V	4.0mA	..		4.0mA	2.0V	4.0mA	2.0V	4.0mA	2.0V	5.5V	1Y 2Y 3Y 4Y 5Y 6Y		0.26		0.4		0.26	
I _{OS4}	3011	40 41 42 43 44 45	GND	GND	GND	GND	GND	GND	..		GND		GND		GND	4V	1Y 2Y 3Y 4Y 5Y 6Y	-10	-120	-10	-120	-10	-120	mA	
I _{IH}	3010	46 47 48 49 50 51	5.5V GND		GND 5.5V GND		GND 5.5V GND		..		..		..		..	5.5V GND	5.5V GND	1A 2A 3A 4A 5A 6A		.05		0.1			μA

See footnotes at end of table.

TABLE III. Group A inspection for device type 51 – Continued.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	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		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max	
I _{IL}	3009	52	GND		5.5V		5.5V		GND		5.5V		5.5V		5.5V	5.5V	1A		-0.05		-0.1			μA
		53	5.5V				GND		"		"		"		"	"	2A		"		"			"
		54	"				5.5V		"		"		"		"	"	3A		"		"			"
		55	"				"		"		GND		"		"	"	4A		"		"			"
		56	"				"		"		5.5V		GND		"	"	5A		"		"			"
		57	"				"		"		5.5V		5.5V		GND	6A		"		"			"	
																Subgroup 4 T _C = +25°C								
C _i	3012	58	2/		2/		2/		"						GND	1A		10					pF	
		59							"						"	2A		"					"	
		60							"						"	3A		"					"	
		61							"		2/		2/		"	4A		"					"	
		62							"				2/		"	5A		"					"	
		63						"					2/	"	6A		"					"		
																Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
t _{PHL}	3003 (Fig. 3)	64	IN	OUT	IN	OUT	IN	OUT	GND						4.5V	1A to 1Y	4	18	4	23	4	18	ns	
		65							"						"	2A to 2Y	"	"	"	"	"	"	"	
		66							"	OUT	IN	OUT	IN		"	3A to 3Y	"	"	"	"	"	"	"	
		67							"						"	4A to 4Y	"	"	"	"	"	"	"	
		68							"						"	5A to 5Y	"	"	"	"	"	"	"	
		69						"						"	6A to 6Y	"	"	"	"	"	"	"		
t _{PLH}	3003 (Fig. 3)	70	IN	OUT	IN	OUT	IN	OUT	"						"	1A to 1Y	"	"	"	"	"	"	"	
		71							"	OUT	IN	OUT	IN		"	2A to 2Y	"	"	"	"	"	"	"	
		72							"						"	3A to 3Y	"	"	"	"	"	"	"	
		73							"						"	4A to 4Y	"	"	"	"	"	"	"	
		74							"						"	5A to 5Y	"	"	"	"	"	"	"	
		75						"						"	6A to 6Y	"	"	"	"	"	"	"		
t _{THL}	3004 (Fig. 3)	76	IN	OUT	IN	OUT	IN	OUT	"						"	1Y	3	15	3	20	3	15	"	
		77							"						"	2Y	"	"	"	"	"	"	"	
		78							"	OUT	IN	OUT	IN		"	3Y	"	"	"	"	"	"	"	
		79							"						"	4Y	"	"	"	"	"	"	"	
		80							"						"	5Y	"	"	"	"	"	"	"	
		81						"						"	6Y	"	"	"	"	"	"	"		
t _{TLH}	3004 (Fig. 3)	82	IN	OUT	IN	OUT	IN	OUT	"						"	1Y	"	"	"	"	"	"	"	
		83							"						"	2Y	"	"	"	"	"	"	"	
		84							"	OUT	IN	OUT	IN		"	3Y	"	"	"	"	"	"	"	
		85							"						"	4Y	"	"	"	"	"	"	"	
		86							"						"	5Y	"	"	"	"	"	"	"	
		87						"						"	6Y	"	"	"	"	"	"	"		

See footnotes at end of table.

TABLE III. Group A inspection for device type 52.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit	
		2	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			
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14									
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max		
V _{IC} (pos)		1 2 3 4 5 6	1mA		1mA		1mA		OPEN " " " "			1mA		1mA		1mA	GND " " " "	1A 2A 3A 4A 5A 6A	1/ " " " "	1.5 " " " "					V
V _{IC} (neg)		7 8 9 10 11 12	-1mA		-1mA		-1mA		GND " " " "			-1mA		-1mA		-1mA	OPEN " " " "	1A 2A 3A 4A 5A 6A		-1.5 " " " "					V
I _{CC}	3005	13	GND		GND		GND		"			GND		GND		GND	5.5V	V _{CC}		0.1		10			μA
I _{CC}	3005	14	5.5V		5.5V		5.5V		"			5.5V		5.5V		5.5V	5.5V	V _{CC}		0.1		10			μA
I _{CCΔ}	3005	15	2.4V		0.8V		0.8V		"			0.8V		0.8V		0.8V	5.5V	V _{CC}		.490		1.50			mA
V _{OH8}	3006	16 17 18 19 20 21	0.5V	-20μA	0.5V	-20μA	0.5V	-20μA	" " " " "	-20μA	0.5V	-20μA	0.5V	-20μA	0.5V	4.5V	1Y 2Y 3Y 4Y 5Y 6Y	4.4 " " " "		4.4 " " " "		4.4 " " " "			V
V _{OH9}	3006	22 23 24 25 26 27	0.6V	-4.0mA	0.6V	-4.0mA	0.6V	-4.0mA	" " " " "	-4.0mA	0.6V	-4.0mA	0.6V	-4.0mA	0.6V	5.5V	1Y 2Y 3Y 4Y 5Y 6Y	3.98 " " " "		3.7 " " " "		3.98 " " " "			
V _{T-1}	3006	28 29 30 31 32 33	3/ "	OUT	3/ "	OUT	3/ "	OUT	" " " " "	OUT	3/ "	OUT	3/ "	OUT	3/ "	4.5V	1Y 2Y 3Y 4Y 5Y 6Y	0.5 " " " "	1.2 " " " "	0.5 " " " "	1.2 " " " "	0.5 " " " "	1.2 " " " "	"	
V _{T-2}	3006	34 35 36 37 38 39	3/ "	OUT	3/ "	OUT	3/ "	OUT	" " " " "	OUT	3/ "	OUT	3/ "	OUT	3/ "	5.5V	1Y 2Y 3Y 4Y 5Y 6Y	0.6 " " " "	1.4 " " " "	0.6 " " " "	1.4 " " " "	0.6 " " " "	1.4 " " " "	"	
V _{T+1}	3006	40 41 42 43 44 45	4/ "	OUT	4/ "	OUT	4/ "	OUT	" " " " "	OUT	4/ "	OUT	4/ "	OUT	4/ "	4.5V	1Y 2Y 3Y 4Y 5Y 6Y	1.2 " " " "	1.9 " " " "	1.2 " " " "	1.9 " " " "	1.2 " " " "	1.9 " " " "	"	
V _{T+2}	3006	46 47 48 49 50 51	4/ "	OUT	4/ "	OUT	4/ "	OUT	" " " " "	OUT	4/ "	OUT	4/ "	OUT	4/ "	5.5V	1Y 2Y 3Y 4Y 5Y 6Y	1.4 " " " "	2.1 " " " "	1.4 " " " "	2.1 " " " "	1.4 " " " "	2.1 " " " "	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 52 – Continued.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	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		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		Min	Max	Min	Max	Min	Max	
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}								
V _{H1}		52 53 54 55 56 57	5/ 	1Y 	5/ 	2Y 	3A 	3Y 	GND " " " "	4Y 	4A 	5Y 	5A 	6Y 	6A 	4.5V 1Y 2Y 3Y 4Y 5Y 6Y	0.4 " " " " " "	1.4 " " " " " "	0.4 " " " " " "	1.4 " " " " " "	0.4 " " " " " "	1.4 " " " " " "	V " " " " " "	
V _{H2}		58 59 60 61 62 63	5/ 	1Y 	5/ 	2Y 	3A 	3Y 	GND " " " "	4Y 	4A 	5Y 	5A 	6Y 	6A 	5.5V 1Y 2Y 3Y 4Y 5Y 6Y	" " " " " "	1.5 " " " " " "	1.5 " " " " " "	1.5 " " " " " "	1.5 " " " " " "	1.5 " " " " " "	" " " " " "	
V _{OL8}	3007	64 65 66 67 68 69	1.9V 	20μA 	1.9V 	20μA 	1.9V 	20μA 	" " " "	20μA 	1.9V 	20μA 	1.9V 	20μA 	1.9V 	4.5V 1Y 2Y 3Y 4Y 5Y 6Y	" " " " " "	0.1 " " " " " "	" " " " " "	0.1 " " " " " "	" " " " " "	0.1 " " " " " "	" " " " " "	
V _{OL9}	3007	70 71 72 73 74 75	2.1V 	4.0mA 	2.1V 	4.0mA 	2.1V 	4.0mA 	" " " "	4.0mA 	2.1V 	4.0mA 	2.1V 	4.0mA 	2.1V 	5.5V 1Y 2Y 3Y 4Y 5Y 6Y	" " " " " "	0.26 " " " " " "	" " " " " "	0.4 " " " " " "	" " " " " "	0.26 " " " " " "	" " " " " "	
I _{OS4}	3011	76 77 78 79 80 81	GND " " " " "	GND " " " " "	GND " " " " "	GND " " " " "	GND " " " " "	" " " "	GND " " " "	GND " " " "	" " " "	GND " " " "	4.0mA " " " "	GND " " " "	4V 1Y 2Y 3Y 4Y 5Y 6Y	-10 " " " " " "	-120 " " " " " "	-10 " " " " " "	-120 " " " " " "	-10 " " " " " "	-120 " " " " " "	mA " " " " " "		
I _{IH}	3010	82 83 84 85 86 87	5.5V GND " " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	" 5.5V GND " " "	5.5V 1A 2A 3A 4A 5A 6A	" " " " " "	.05 " " " " " "	" " " " " "	0.1 " " " " " "	" " " " " "	" " " " " "	μA " " " " " "		
I _{IL}	3009	88 89 90 91 92 93	" 5.5V " " " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	" 5.5V GND 5.5V " "	1A 2A 3A 4A 5A 6A	" " " " " "	-.05 " " " " " "	" " " " " "	-0.1 " " " " " "	" " " " " "	" " " " " "	" " " " " "		
																	Subgroup 4 T _C = +25°C							
																	Min	Max						
C _i	3012	94 95 96 97 98 99	2/ 	" 	2/ 	" 	2/ 	" 	GND " " " "	" 	" 	" 	2/ 	" 	2/ 	GND 1A 2A 3A 4A 5A 6A	" " " " " "	10 " " " " " "	" " " " " "	" " " " " "	" " " " " "	" " " " " "	pF " " " " " "	

See footnotes at end of table.

TABLE III. Group A inspection for device type 52 – Continued.

Symbol	MIL-STD-883 method	Case	Terminal conditions 1/														Measured terminal	Test limits						Unit
		2	2	3	4	6	8	9	10	12	13	14	16	18	19	20		Subgroup 9		Subgroup 10		Subgroup 11		
		C and D	1	2	3	4	5	6	7	8	9	10	11	12	13	14		T _c = +25°C		T _c = +125°C		T _c = -55°C		
		Test no.	1A	1Y	2A	2Y	3A	3Y	GND	4Y	4A	5Y	5A	6Y	6A	V _{CC}		Min	Max	Min	Max	Min	Max	
t _{PHL}	3003 (Fig. 3)	100	IN	OUT					GND							4.5V	1A to 1Y	10	33	10	44	10	33	ns
		101			IN	OUT			"							"	2A to 2Y	"	"	"	"	"	"	
		102					IN	OUT	"	OUT	IN					"	3A to 3Y	"	"	"	"	"	"	
		103							"			OUT	IN			"	4A to 4Y	"	"	"	"	"	"	
		104							"				OUT	IN		"	5A to 5Y	"	"	"	"	"	"	
		105							"					OUT	IN	"	6A to 6Y	"	"	"	"	"	"	
t _{PLH}	3003 (Fig. 3)	106	IN	OUT					"							"	1A to 1Y	"	"	"	"	"	"	
		107			IN	OUT			"							"	2A to 2Y	"	"	"	"	"	"	
		108					IN	OUT	"	OUT	IN					"	3A to 3Y	"	"	"	"	"	"	
		109							"			OUT	IN			"	4A to 4Y	"	"	"	"	"	"	
		110							"				OUT	IN		"	5A to 5Y	"	"	"	"	"	"	
		111							"					OUT	IN	"	6A to 6Y	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	112	IN	OUT					"							"	1Y	3	15	3	20	3	15	"
		113			IN	OUT			"							"	2Y	"	"	"	"	"	"	
		114					IN	OUT	"							"	3Y	"	"	"	"	"	"	
		115							"	OUT	IN					"	4Y	"	"	"	"	"	"	
		116							"			OUT	IN			"	5Y	"	"	"	"	"	"	
		117							"					OUT	IN	"	6Y	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	118	IN	OUT					"							"	1Y	"	"	"	"	"	"	
		119			IN	OUT			"							"	2Y	"	"	"	"	"	"	
		120					IN	OUT	"							"	3Y	"	"	"	"	"	"	
		121							"	OUT	IN					"	4Y	"	"	"	"	"	"	
		122							"			OUT	IN			"	5Y	"	"	"	"	"	"	
		123							"					OUT	IN	"	6Y	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 53.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA		1mA		1mA		1mA		OPEN " " " " " 1mA			1mA				1mA		1mA	GND " " " " " " " 2A4 2G	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G	1/ " " " " " " " " "	1.5 " " " " " " " "						V " " " " " " " "
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA		-1mA		-1mA		-1mA		GND " " " " " -1mA			-1mA				-1mA		-1mA	OPEN " " " " " " " 2A4 2G	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		-1.5 " " " " " " " "						" " " " " " " "
I _{CCH}	3005	21	GND	GND		GND		GND		"	GND			GND		GND		GND		GND	5.5V	V _{CC}		0.2		20				μA	
I _{CCL}	3005	22	GND	5.5V		5.5V		5.5V		5.5V		"	5.5V		5.5V		5.5V		5.5V		GND	"		0.2		20				μA	
I _{CCΔ}		223	2.4V	0.4V		0.4V		0.4V		"	0.4V		"	0.4V		0.4V		0.4V		0.4V		"	"		3.0		3.0		3.0	mA	
		224	GND	2.4V						"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		225	"	0.4V		2.4V		"		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		226	"			0.4V		2.4V		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		227	"	"		"		0.4V		2.4V		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		228	"	"		"		"		0.4V		"	2.4V		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		229	"	"		"		"		"		"	0.4V		2.4V		"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		230	"	"		"		"		"		"	"		0.4V		2.4V		"	"	"	"	"	"	"	"	"	"	"	"	
		231	"	"		"		"		"		"	"		"		0.4V		2.4V		"	"	"	"	"	"	"	"	"	"	
		232	"	"		"		"		"		"	"		"		"		0.4V		2.4V	"	"	"	"	"	"	"	"	"	
I _{CCZ}	3005	25 26	5.5V GND	5.5V GND		5.5V GND		5.5V GND		5.5V GND		"	GND 5.5V		GND 5.5V		GND 5.5V		GND 5.5V		GND 5.5V	"	"		0.1 0.1		10 10			μA μA	
V _{OH6}	3006	27 28 29 30 31 32 33 34	0.8V " " " " " " -20μA	0.8V " " " " " " -20μA		0.8V " " -20μA		0.8V " -20μA		0.8V " -20μA		"	0.8V " -20μA		-20μA " 0.8V		-20μA " 0.8V		-20μA " 0.8V		-20μA " 0.8V	4.5V " " " 0.8V " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	4.4 " " " " " " "		4.4 " " " " " " "		4.4 " " " " " " "		V	
V _{OH7}	3006	35 36 37 38 39 40 41 42	0.8V " " " " " -6.0mA	0.8V " " " " " -6.0mA		0.8V " -6.0mA		0.8V " -6.0mA		0.8V " -6.0mA		"	0.8V " -6.0mA		-6.0mA " 0.8V		-6.0mA " 0.8V		-6.0mA " 0.8V		-6.0mA " 0.8V	5.5V " " 0.8V " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	3.98 " " " " " " "		3.7 " " " " " " "		3.98 " " " " " " "		"	
V _{OL6}	3007	43 44 45 46 47 48 49 50	0.8V " " " " " 20μA	2.0V " " " " " 20μA		2.0V " 20μA		2.0V " 20μA		2.0V " 20μA		"	2.0V " 20μA		2.0V " 20μA		2.0V " 20μA		2.0V " 20μA		2.0V " 20μA	4.5V " " " 0.8V " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.1 " " " " " "		0.1 " " " " " "		0.1 " " " " " "		"

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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	
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max
V _{OL7}	3007	51	0.8V	2.0V		2.0V					GND							6.0mA		6.0mA		5.5V	1Y1		0.26		0.4		0.26	μA
		52	"					2.0V			"					6.0mA					"	"	1Y2	"	"	"	"	"	"	"
		53	"								"										"	"	1Y3	"	"	"	"	"	"	"
		54	"								"										"	"	1Y4	"	"	"	"	"	"	"
		55	"								"										"	"	2Y1	"	"	"	"	"	"	"
		56	"								"										"	"	2Y2	"	"	"	"	"	"	"
		57	"								"										"	"	2Y3	"	"	"	"	"	"	"
		58	"		6.0mA		6.0mA		6.0mA			"							2.0V		"	"	2Y4	"	"	"	"	"	"	"
I _{OZH}		59	9/	9/		9/					GND							5.5V		5.5V		5.5V	1Y1		0.2		2.0			"
		60	"					9/			"										"	"	1Y2	"	"	"	"	"	"	"
		61	"								"										"	"	1Y3	"	"	"	"	"	"	"
		62	"							9/					5.5V						"	"	1Y4	"	"	"	"	"	"	"
		63	"									"	9/								"	"	2Y1	"	"	"	"	"	"	"
		64	"									"									"	"	2Y2	"	"	"	"	"	"	"
		65	"									"									"	"	2Y3	"	"	"	"	"	"	"
		66	"		5.5V		5.5V		5.5V			"							9/		"	"	2Y4	"	"	"	"	"	"	"
I _{OZL}		67	9/	9/		9/					"							GND		GND		"	1Y1		-0.2		-2.0			"
		68	"					9/			"										"	"	1Y2	"	"	"	"	"	"	"
		69	"								"										"	"	1Y3	"	"	"	"	"	"	"
		70	"								"										"	"	1Y4	"	"	"	"	"	"	"
		71	"								"										"	"	2Y1	"	"	"	"	"	"	"
		72	"								"										"	"	2Y2	"	"	"	"	"	"	"
		73	"								"										"	"	2Y3	"	"	"	"	"	"	"
		74	"		GND		GND		GND			"							9/		"	"	2Y4	"	"	"	"	"	"	"
I _{IH}	3010	75	5.5V GND	GND 5.5V GND		GND		GND		GND		"	GND		GND		GND		GND		GND	"	1G		.05		0.1			"
		76	"	"		"		"		"		"	"		"		"		"		"	"	1A1		"	"	"	"	"	"
		77	"	"		"		"		"		"	"		"		"		"		"	"	1A2		"	"	"	"	"	"
		78	"	"		"		"		"		"	"		"		"		"		"	"	1A3		"	"	"	"	"	"
		79	"	"		"		"		"		"	"		"		"		"		"	"	1A4		"	"	"	"	"	"
		80	"	"		"		"		"		"	"		"		"		"		"	"	2A1		"	"	"	"	"	"
		81	"	"		"		"		"		"	"		"		"		"		"	"	2A2		"	"	"	"	"	"
		82	"	"		"		"		"		"	"		"		"		"		"	"	2A3		"	"	"	"	"	"
I _{IL}	3009	83	"	"		"		"		"		"	"		"		"		5.5V GND GND		5.5V GND	"	2A4		"	"	"	"	"	"
		84	"	"		"		"		"		"	"		"		"		"		"	"	2G		"	"	"	"	"	"
		85	"	5.5V	5.5V GND 5.5V		5.5V		5.5V		5.5V		"	5.5V		5.5V		5.5V		5.5V		"	1G		-0.05		-0.1			"
		86	"	"		5.5V GND 5.5V		"		"		"	"		"		"		"		"	"	1A1		"	"	"	"	"	"
		87	"	"		"		"		"		"	"		"		"		"		"	"	1A2		"	"	"	"	"	"
		88	"	"		"		"		"		"	"		"		"		"		"	"	1A3		"	"	"	"	"	"
		89	"	"		"		"		"		"	"		"		"		"		"	"	1A4		"	"	"	"	"	"
		90	"	"		"		"		"		"	"		"		"		"		"	"	2A1		"	"	"	"	"	"
I _{OS4}	3011	91	"	"		"		"		"		"	"		"		"		"		"	"	2A2		"	"	"	"	"	"
		92	"	"		"		"		"		"	"		"		"		"		"	"	2A3		"	"	"	"	"	"
		93	"	"		"		"		"		"	"		"		"		"		"	"	2A4		"	"	"	"	"	"
		94	"	"		"		"		"		"	"		"		"		"		"	"	2G		"	"	"	"	"	"
		95	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		GND	4V	1Y1	-10	-135	-10	-135	-10	-135	mA
		96	"	"		"		"		"		"	"		"		"		"		"	"	1Y2	"	"	"	"	"	"	"
		97	"	"		"		"		"		"	"		"		"		"		"	"	1Y3	"	"	"	"	"	"	"
		98	"	"		"		"		"		"	"		"		"		"		"	"	1Y4	"	"	"	"	"	"	"
		99	"			"		"		"		"		"		"		"		"	"	2Y1	"	"	"	"	"	"	"	
		100	"			"		"		"		"		"		"		"		"	"	2Y2	"	"	"	"	"	"	"	
		101	"			"		"		"		"		"		"		"		"	"	2Y3	"	"	"	"	"	"	"	
		102	"		GND		GND		"		"	"	"		"		"		"		"	"	2Y4	"	"	"	"	"	"	"

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2	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 4 T _C = +25°C							
			Test no.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max
C _i	3012	103 104 105 106 107 108 109 110 111 112	1G 2/	1A1 2/	2Y4	1A2 2/	2Y3	1A3 2/	2Y2	1A4 2/	2Y1	GND	2A1 2/	1Y4	2A2 2/	1Y3	2A3 2/	1Y2	2A4 2/	1Y1	2G 2/	GND V _{CC}	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G	1G 2Y's 1Y's		10 "					pF
C _o	3012	113 114	GND 5.5V		2/		2/		2/		2/	"		2/		2/		2/		2/	5.5V GND	5.5V 5.5V	2Y's 1Y's		20 20					"	
																							Subgroup 7 T _C = +25°C		Subgroup 8 T _C = +125°C		Subgroup 8 T _C = -55°C				
Truth table	3014 g/	115 116	B B	B A	H L	B A	H L	B A	H L	B A	H L	GND GND	B A	H L	B A	H L	B A	H L	B A	H L	B B	4.5V 4.5V	7/ 7/								
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
t _{PHL}	3003 (Fig. 3)	117 118 119 120 121 122 123 124	GND " "	IN		IN		IN		IN		GND " "		OUT		OUT		OUT		OUT		4.5V " " " " " " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	8 22		8 29		8 22		ns	
t _{PLH}	3003 (Fig. 3)	125 126 127 128 129 130 131 132	GND " "	IN		IN		IN		IN		" " "		OUT		OUT		OUT		OUT		" " " " " " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	"		
t _{pZL}	3003 (Fig. 3)	133 134 135 136 137 138 139 140	IN " "	4.5V		4.5V		4.5V		4.5V		" " "		OUT		OUT		OUT		OUT		" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	" " " " " " "	31		41		31		
t _{pZH}	3003 (Fig. 3)	141 142 143 144 145 146 147 148	IN " "	GND		GND		GND		GND		" " "		OUT		OUT		OUT		OUT		" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	"		
t _{PLZ}	3003 (Fig. 3)	149 150 151 152 153 154 155 156	IN "	4.5V		4.5V		4.5V		4.5V		" " "		OUT		OUT		OUT		OUT		" " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	"		

See footnotes at end of table.

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

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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	
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max
t _{PHZ}	3003 (Fig. 3)	157	IN	GND		GND		GND		GND	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G	4.5V	1G to 1Y1	8	31	8	41	8	31	ns	
		158	"							"	"				OUT		OUT				"	1G to 1Y2	"	"	"	"	"	"	"	
		159	"					GND		"	"										"	1G to 1Y3	"	"	"	"	"	"	"	
		160	"							"	"										"	1G to 1Y4	"	"	"	"	"	"	"	
		161	"							"	"	GND	OUT							IN	"	2G to 2Y1	"	"	"	"	"	"	"	
		162	"				OUT		OUT		"	"		GND			GND			"	"	2G to 2Y2	"	"	"	"	"	"	"	
		163	"							"	"	"							"	"	"	2G to 2Y3	"	"	"	"	"	"	"	
		164	"		OUT					"	"	"						GND	"	"	"	2G to 2Y4	"	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	165	GND	IN		IN		IN		IN		"			OUT		OUT		OUT		"	1Y1	2	12	2	16	2	12	"	
		166	"							"	"										"	1Y2	"	"	"	"	"	"	"	
		167	"					IN		IN		"		OUT		IN	OUT				"	1Y3	"	"	"	"	"	"	"	
		168	"							IN		"									"	1Y4	"	"	"	"	"	"	"	
		169	"								OUT	"		IN		IN		IN		GND	"	2Y1	"	"	"	"	"	"	"	
		170										"								"	"	2Y2	"	"	"	"	"	"	"	
		171			OUT		OUT				"	"					IN		IN		"	"	2Y3	"	"	"	"	"	"	"
		172								"	"	"								"	"	2Y4	"	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	173	GND	IN		IN		IN		IN	GND				OUT		OUT		OUT		4.5V	1Y1	2	12	2	16	2	12	ns	
		174	"							"	"										"	1Y2	"	"	"	"	"	"	"	
		175	"							"	"										"	1Y3	"	"	"	"	"	"	"	
		176	"				IN		IN		"		OUT								"	1Y4	"	"	"	"	"	"	"	
		177										"								GND	"	2Y1	"	"	"	"	"	"	"	
		178										"				IN		IN		"	"	2Y2	"	"	"	"	"	"	"	
		179										"							IN	"	"	2Y3	"	"	"	"	"	"	"	
		180			OUT							"								"	"	2Y4	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 54.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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			
			TG	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max	
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA		1mA		1mA		1mA		OPEN										GND	TG 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G	1/ " " " " " " " "	1.5 " " " " " " "						V
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA		-1mA		-1mA		-1mA		GND									-1mA	OPEN	TG 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		-1.5 " " " " " " "						
I _{COH}	3005	21	GND	5.5V		5.5V		5.5V		5.5V		"	5.5V		5.5V		5.5V		5.5V		-1mA	5.5V	V _{CC}			0.2		20			μA
I _{COI}	3005	22	GND	GND		GND		GND		GND		"	GND		GND		GND		GND		"	"	"			0.2		20			μA
I _{CCΔ}		23 24 25	0.8V 0.8V 2.4V	0.8V 0.8V 0.8V		0.8V 0.8V 0.8V		0.8V 0.8V 0.8V		0.8V 0.8V 0.8V		"	2.4V 0.8V 0.8V		0.8V 0.8V 0.8V		0.8V 0.8V 0.8V		0.8V 0.8V 0.8V		2.4V 2.4V 0.8V	"	"		.490		1.50			mA	
I _{CCZ}	3005	26 27	5.5V GND	5.5V GND		5.5V GND		5.5V GND		5.5V GND		"	GND 5.5V		GND 5.5V		GND 5.5V		GND 5.5V		5.5V GND	"	"			0.1 0.1		10 10			"
V _{OH6}	3006	28 29 30 31 32 33 34 35	0.8V " " "	2.0V		2.0V		2.0V		2.0V		"	"		-20μA		-20μA		-20μA		-20μA	4.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	4.4 " " " " " "		4.4		4.4		V	
V _{OH7}	3006	36 37 38 39 40 41 42 43	0.8V " " "	2.0V		2.0V		2.0V		2.0V		"	"		-6.0mA		-6.0mA		-6.0mA		-6.0mA	5.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	3.98 " " " " " "		3.7		3.98		"	
V _{OL6}	3007	44 45 46 47 48 49 50 51	0.8V " " "	0.8V		0.8V		0.8V		0.8V		"	"		20μA		20μA		20μA		20μA	4.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.1		0.1		0.1		"
V _{OL7}	3007	52 53 54 55 56 57 58 59	0.8V " " "	0.8V		0.8V		0.8V		0.8V		"	"		6.0mA		6.0mA		6.0mA		6.0mA	5.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.26		0.4		0.26		"

See footnotes at end of table.

TABLE III. Group A inspection for device type 54 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4		1Y1	2G	V _{CC}	Min	Max	Min		Max	Min
I _{OZH}		60 61 62 63 64 65 66 67	9/ " " " " " "	9/ " " " " " "		9/ " " " " " "		9/ " " " " " "		9/ " " " " " "	GND " " " " " "	2A1 " " " " " "	1Y4 " " " " " "	2A2 " " " " " "	1Y3 " " " " " "	2A3 " " " " " "	1Y2 " " " " " "	2A4 " " " " " "	1Y1 " " " " " "	2G " " " " " "	V _{CC} " " " " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.2 " " " " " "		2.0 " " " " " "				μA
I _{OZL}		68 69 70 71 72 73 74 75	9/ " " " " " "	9/ " " " " " "		9/ " " " " " "		9/ " " " " " "		9/ " " " " " "	GND " " " " " "	2A1 " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "		GND " " " " " "		9/ " " " " " "	GND " " " " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		-0.2 " " " " " "		-2.0 " " " " " "				
I _{IH}	3010	76 77 78 79 80 81 82 83 84 85	5.5V GND " " " " " " " "	GND 5.5V GND " " " " " "		GND 5.5V GND " " " " "		GND 5.5V GND " " " " "		GND 5.5V GND " " " " "	GND " " " " " "	2A1 " " " " " "	GND " " " " " "	GND " " " " " "	GND " " " " " "	GND 5.5V GND " " " " "		GND 5.5V GND " " " " "		GND 5.5V GND " " " " "	GND " " " " " "	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		.05 " " " " " "		0.1 " " " " " "				
I _{IL}	3009	86 87 88 89 90 91 92 93 94 95	" 5.5V " " " " " " " "	5.5V GND 5.5V " " " " "		5.5V 5.5V GND 5.5V " " " "		5.5V 5.5V GND 5.5V " " " "		5.5V 5.5V GND 5.5V " " " "	GND 5.5V GND " " " "	2A1 " " " " " "	GND 5.5V GND " " " "	GND 5.5V GND " " " "	GND 5.5V GND " " " "	5.5V 5.5V GND 5.5V " " " "		5.5V 5.5V GND 5.5V " " " "		GND 5.5V GND " " " "	GND " " " " " "	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		-.05 " " " " " "		-0.1 " " " " " "				
I _{OS4}	3011	96 97 98 99 100 101 102 103	GND " " " " " "	4V " " " " " "		4V " " " " " "		4V " " " " " "		4V " " " " " "	GND " " " " " "	4V " " " " " "	GND " " " " " "	4V " " " " " "	GND " " " " " "	4V " " " " " "	GND " " " " " "	4V " " " " " "	GND " " " " " "	4V " " " " " "	4V " " " " " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	-10 " " " " " "	-135 " " " " " "	-10 " " " " " "	-135 " " " " " "	-10 " " " " " "	-135 " " " " " "	mA	
																							Subgroup 4 T _C = +25°C							
																							Min	Max						
C _i	3012	104 105 106 107 108 109 110 111 112 113	2/ " " " " " "	2/ " " " " " "		2/ " " " " " "		2/ " " " " " "		2/ " " " " " "	GND " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	2/ " " " " " "	GND " " " " " "	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		10 " " " " " "					pF	
C _o	3012	114 115	5.5V GND	2/ "		2/ "		2/ "		2/ "	GND "	2/ "		2/ "		2/ "		2/ "		2/ "	5.5V GND	5.5V 5.5V	1Y's 2Y's	20 20						

See footnotes at end of table.

TABLE III. Group A inspection for device type 54 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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		
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max
Truth table	3014 g/	116 117	B B	B A	L H	B A	L H	B A	L H	B A	L H	GND GND	B A	L H	B A	L H	B A	L H	B A	L H	A A	4.5V 4.5V	7/ 7/							
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
																							Min	Max	Min	Max	Min	Max		
t _{PHL}	3003 (Fig. 3)	118 119 120 121 122 123 124 125	GND " "	IN " "	 OUT	IN " "	 OUT	IN " "	 OUT	IN " "	OUT " "	GND " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 4.5V "	4.5V " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	8 23 " " " " " "	23 " " " " " " "	8 30 " " " " " "	30 " " " " " " "	8 23 " " " " " "	23 " " " " " " "	ns " " " " " " "
t _{PLH}	3003 (Fig. 3)	126 127 128 129 130 131 132 133	GND " "	IN " "	 OUT	IN " "	 OUT	IN " "	 OUT	IN " "	OUT " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 4.5V "	4.5V " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	8 23 " " " " " "	23 " " " " " " "	8 30 " " " " " "	30 " " " " " " "	8 23 " " " " " "	23 " " " " " " "	ns " " " " " " "	
t _{PZH}	3003 (Fig. 3)	134 135 136 137 138 139 140 141	IN " "	4.5V " "	 OUT	4.5V " "	 OUT	4.5V " "	 OUT	4.5V " "	OUT " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 IN	OUT " "	 4.5V "	4.5V " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 33 " " " " " "	33 " " " " " " "	8 44 " " " " " "	44 " " " " " " "	8 33 " " " " " "	33 " " " " " " "	ns " " " " " " "	
t _{PZL}	3003 (Fig. 3)	142 143 144 145 146 147 148 149	IN " "	GND "	 OUT	GND "	 OUT	GND "	 OUT	GND "	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 4.5V "	4.5V " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 33 " " " " " "	33 " " " " " " "	8 44 " " " " " "	44 " " " " " " "	8 33 " " " " " "	33 " " " " " " "	ns " " " " " " "	
t _{PHZ}	3003 (Fig. 3)	150 151 152 153 154 155 156 157	IN " "	4.5V "	 OUT	4.5V "	 OUT	4.5V "	 OUT	4.5V "	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 4.5V "	4.5V " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 33 " " " " " "	33 " " " " " " "	8 44 " " " " " "	44 " " " " " " "	8 33 " " " " " "	33 " " " " " " "	ns " " " " " " "	
t _{PLZ}	3003 (Fig. 3)	158 159 160 161 162 163 164 165	IN " "	GND "	 OUT	GND "	 OUT	GND "	 OUT	GND "	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 GND "	GND "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 33 " " " " " "	33 " " " " " " "	8 44 " " " " " "	44 " " " " " " "	8 33 " " " " " "	33 " " " " " " "	ns " " " " " " "	
t _{TLH}	3004 (Fig. 3)	166 167 168 169 170 171 172 173	GND " "	IN "	 OUT	IN "	 OUT	IN "	 OUT	IN "	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 IN	OUT "	 4.5V "	4.5V " "	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	2 12 " " " " " "	12 " " " " " " "	2 16 " " " " " "	16 " " " " " " "	2 12 " " " " " "	12 " " " " " " "	ns " " " " " " "	

See footnotes at end of table.

TABLE III. Group A inspection for device type 54 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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		
			$\overline{1G}$	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min		Max
t _{THL}	3004 (Fig. 3)	174	GND	IN		IN					GND							OUT		OUT		4.5V	1Y1	2	12	2	16	2	12	ns
		175	"					IN			"					OUT						"	"	"	"	"	"	"	"	"
		176	"								"											"	"	"	"	"	"	"	"	"
		177	"								"											"	"	"	"	"	"	"	"	"
		178									"	IN									4.5V	"	"	"	"	"	"	"	"	"
		179							OUT		OUT	"				IN					"	"	"	"	"	"	"	"	"	"
		180									"										"	"	"	"	"	"	"	"	"	"
		181			OUT						"							IN			"	"	"	"	"	"	"	"	"	"

See footnotes at end of table.

TABLE III. Group A inspection for device type 55.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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							
			1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		2G	V _{CC}	Min	Max	Min	Max		Min	Max						
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA		1mA		1mA		1mA		OPEN										GND	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G	1/ 2	1.5					V						
	V _{IC} (neg)	11 12 13 14 15 16 17 18 19 20	-1mA	-1mA		-1mA		-1mA		-1mA		GND										OPEN	1G 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 2G		-1.5											
		I _{CCH}	3005	21	GND	5.5V		5.5V		5.5V		5.5V			5.5V		5.5V		5.5V		5.5V		GND	5.5V	V _{CC}		0.2		20			μA				
		I _{CCL}	3005	22	GND	GND		GND		GND		GND			GND		GND		GND		GND						0.2		20			μA				
		I _{CCΔ}	3011	223 224 225 226 227 228 229 230 231 232	2.4V GND	0.4V 2.4V 0.4V		0.4V		0.4V		0.4V		GND	0.4V		0.4V		0.4V		0.4V							3.0		3.0		3.0	mA			
			I _{CCZ}	3005	25 26	5.5V GND	5.5V GND		5.5V GND		5.5V GND		5.5V GND			GND 5.5V		GND 5.5V		GND 5.5V		GND 5.5V		GND 5.5V					0.1 0.1		10 10			μA		
				V _{OH6}	3006	27 28 29 30 31 32 33 34	0.8V "	2.0V		2.0V		2.0V		2.0V				-20μA		-20μA		-20μA		-20μA		4.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	4.4		4.4		4.4		V		
					V _{OH7}	3006	35 36 37 38 39 40 41 42	0.8V "	2.0V		2.0V		2.0V		2.0V				-6.0mA		-6.0mA		-6.0mA		-6.0mA		5.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4	3.98		3.7		3.98			
						V _{OL6}	3007	43 44 45 46 47 48 49 50	0.8V "	0.8V		0.8V		0.8V		0.8V				20μA		20μA		20μA		20μA		4.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.1		0.1		0.1	
							V _{OL7}	3007	51 52 53 54 55 56 57 58	0.8V "	0.8V		0.8V		0.8V		0.8V				6.0mA		6.0mA		6.0mA		6.0mA		5.5V	1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4		0.26		0.4		0.26

See footnotes at end of table.

TABLE III. Group A inspection for device type 55 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	T _G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	T _G		V _{CC}	Min	Max	Min	Max	Min		Max	
I _{OZH}		59 60 61 62 63 64 65 66	9/	9/		9/		9/		5.5V			GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	T _G	V _{CC}			0.2		2.0			μA	
			"	"		"		"		5.5V			"	"	5.5V		5.5V		5.5V		5.5V	"	"			"		"		"		
					5.5V		5.5V		5.5V		"		"	"	"	9/		9/		9/	"	"			"		"		"			
						5.5V		"		"		"	"	"	"	"	"	"	"	"	"	"			"		"		"			
											"		"	"	"	"	"	"	"	"	"	"			"		"		"			
											"		"	"	"	"	"	"	"	"	"	"			"		"		"			
											"		"	"	"	"	"	"	"	"	"	"			"		"		"			
I _{OZL}		67 68 69 70 71 72 73 74	9/	9/		9/		9/					"						GND		GND		"				-0.2		-2.0			
			"	"		"		"				"	"	"	GND		GND		GND		"	"			"		"		"			
						"		"				"	"	"	"		"		"		"	"			"		"		"			
											"		"	"	"		"		"		"	"			"		"		"			
											"		"	"	"		"		"		"	"			"		"		"			
											"		"	"	"		"		"		"	"			"		"		"			
											"		"	"	"		"		"		"	"			"		"		"			
I _{IH}	3010	75 76 77 78 79 80 81 82 83 84	5.5V GND	GND 5.5V GND		GND GND 5.5V GND		GND "		GND "		"	GND "		GND "		GND "		GND "		GND "		"				.05		0.1			
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
I _{IL}	3009	85 86 87 88 89 90 91 92 93 94	5.5V	5.5V GND 5.5V		5.5V 5.5V GND 5.5V		5.5V "		5.5V "		"	5.5V "		5.5V "		5.5V "		5.5V "		5.5V "		"				-0.05		-0.1			
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
I _{OS4}	3011	95 96 97 98 99 100 101 102	GND	4V		4V		4V		4V		"	4V		4V		4V		GND		GND		"			-10	-135	-10	-135	-10	-135	mA
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
			"	"		"		"		"		"	"		"		"		"		"		"			"		"		"		
																							Subgroup 4 T _C = +25°C									
C _i	3012	103 104 105 106 107 108 109 110 111 112	2/	2/		2/		2/		2/		GND										GND		"		10					pF	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
			"	"		"		"		"		"	"		"		"		"		"		"		"		"		"		"	
C _o	3012	113 114	5.5V GND		2/		2/		2/		2/		"		2/		2/		2/		2/	GND 5.5V	5.5V	1Y's 2Y's		20 20						

See footnotes at end of table.

TABLE III. Group A inspection for device type 55 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1	2G		V _{CC}	Min	Max	Min	Max	Min	
Truth table	3014 g/	115 116	B B	B A	L H	B A	L H	B A	L H	B A	L H	GND GND	B A	L H	B A	L H	B A	L H	B A	L H	B B	4.5V 4.5V	7/ 7/							
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
																							Min	Max	Min	Max	Min	Max		
t _{PHL}	3003 (Fig. 3)	117 118 119 120 121 122 123 124	GND " " " " " " "	IN " " " " " " "		IN " " " " " " "		IN " " " " " " "		IN " " " " " " "	GND " " " " " " "		IN " " " " " " "	OUT " " " " " " "		OUT " " " " " " "		OUT " " " " " " "		OUT " " " " " " "	GND " " " " " " "	4.5V " " " " " " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	8 25 " " " " " " "	25 " " " " " " "	8 " " " " " " "	33 " " " " " " "	8 " " " " " " "	25 " " " " " " "	ns " " " " " " "
t _{PLH}	3003 (Fig. 3)	125 126 127 128 129 130 131 132	GND " " " " " " "	IN " " " " " " "		IN " " " " " " "		IN " " " " " " "		IN " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	IN " " " " " " "		IN " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	GND " " " " " " "	4.5V " " " " " " "	1A1 to 1Y1 1A2 to 1Y2 1A3 to 1Y3 1A4 to 1Y4 2A1 to 2Y1 2A2 to 2Y2 2A3 to 2Y3 2A4 to 2Y4	8 31 " " " " " " "	31 " " " " " " "	8 " " " " " " "	41 " " " " " " "	8 " " " " " " "	31 " " " " " " "	ns " " " " " " "	
t _{PZL}	3003 (Fig. 3)	133 134 135 136 137 138 139 140	IN " " " " " " "	GND " " " " " " "		GND " " " " " " "		GND " " " " " " "		GND " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	GND " " " " " " "		OUT " " " " " " "		OUT " " " " " " "		IN " " " " " " "	4.5V " " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 31 " " " " " " "	31 " " " " " " "	8 " " " " " " "	41 " " " " " " "	8 " " " " " " "	31 " " " " " " "	ns " " " " " " "	
t _{PZH}	3003 (Fig. 3)	141 142 143 144 145 146 147 148	IN " " " " " " "	4.5V " " " " " " "		4.5V " " " " " " "		4.5V " " " " " " "		4.5V " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	4.5V " " " " " " "		OUT " " " " " " "		OUT " " " " " " "		IN " " " " " " "	4.5V " " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 31 " " " " " " "	31 " " " " " " "	8 " " " " " " "	41 " " " " " " "	8 " " " " " " "	31 " " " " " " "	ns " " " " " " "	
t _{PLZ}	3003 (Fig. 3)	149 150 151 152 153 154 155 156	IN " " " " " " "	GND " " " " " " "		GND " " " " " " "		GND " " " " " " "		GND " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	GND " " " " " " "		OUT " " " " " " "		OUT " " " " " " "		IN " " " " " " "	GND " " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 31 " " " " " " "	31 " " " " " " "	8 " " " " " " "	41 " " " " " " "	8 " " " " " " "	31 " " " " " " "	ns " " " " " " "	
t _{PHZ}	3003 (Fig. 3)	157 158 159 160 161 162 163 164	IN " " " " " " "	4.5V " " " " " " "		4.5V " " " " " " "		4.5V " " " " " " "		4.5V " " " " " " "	OUT " " " " " " "		OUT " " " " " " "	4.5V " " " " " " "		OUT " " " " " " "		OUT " " " " " " "		IN " " " " " " "	4.5V " " " " " " "	1G to 1Y1 1G to 1Y2 1G to 1Y3 1G to 1Y4 2G to 2Y1 2G to 2Y2 2G to 2Y3 2G to 2Y4	8 31 " " " " " " "	31 " " " " " " "	8 " " " " " " "	41 " " " " " " "	8 " " " " " " "	31 " " " " " " "	ns " " " " " " "	

See footnotes at end of table.

TABLE III. Group A inspection for device type 55 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	$\overline{1G}$	1A1	2Y4	1A2	2Y3	1A3	2Y2	1A4	2Y1	GND	2A1	1Y4	2A2	1Y3	2A3	1Y2	2A4	1Y1		$\overline{2G}$	V _{CC}	Min	Max	Min	Max		Min
t _{TLH}	3004 (Fig. 3)	165	GND	IN		IN					GND							OUT		OUT		4.5V	1Y1	2	12	2	16	2	12	ns
		166	"					IN			"					OUT		OUT			"	1Y2	"	"	"	"	"	"	"	
		167	"								"										"	1Y3	"	"	"	"	"	"	"	
		168	"							IN	OUT	"		OUT							GND	1Y4	"	"	"	"	"	"	"	
		169								OUT					IN						"	2Y1	"	"	"	"	"	"	"	
		170					OUT					"					IN				"	2Y2	"	"	"	"	"	"	"	
		171										"							IN		"	2Y3	"	"	"	"	"	"	"	
		172			OUT							"								IN		"	2Y4	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	173	GND	IN		IN					"							OUT		OUT		"	1Y1	"	"	"	"	"	"	"
		174	"								"										"	1Y2	"	"	"	"	"	"	"	
		175	"						IN			"						OUT				"	1Y3	"	"	"	"	"	"	"
		176	"								IN	OUT									"	1Y4	"	"	"	"	"	"	"	
		177										"									GND	2Y1	"	"	"	"	"	"	"	
		178									OUT					IN					"	2Y2	"	"	"	"	"	"	"	
		179					OUT					"									"	2Y3	"	"	"	"	"	"	"	
		180			OUT							"					IN		IN		"	2Y4	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 60.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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			
			1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max	
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	OPEN										GND	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G	1/ " " " " " " " "	1.5 " " " " " " " "						V
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND										OPEN	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G		-1.5 " " " " " " " "						
I _{CC}	3005	21	GND	GND	GND	GND	GND	GND	GND	GND	GND	"										GND	5.5V	V _{CC}		0.2		20			μA
I _{CC}	3005	22	GND	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"										GND	"	"		0.2		20			μA
I _{CCΔ}		223	2.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	"										"	"	"		3.0		3.0		3.0	mA
		224	GND	2.4V	"	"	"	"	"	"	"	"										"	"	"							"
		225	"	0.4V	2.4V	"	"	"	"	"	"	"										"	"	"							"
		226	"	"	0.4V	2.4V	"	"	"	"	"	"										"	"	"							"
		227	"	"	"	0.4V	2.4V	"	"	"	"	"										"	"	"							"
		228	"	"	"	"	0.4V	2.4V	"	"	"	"										"	"	"							"
		229	"	"	"	"	"	0.4V	2.4V	2.4V	"	"										"	"	"							"
		230	"	"	"	"	"	"	0.4V	2.4V	"	"										"	"	"							"
		231	"	"	"	"	"	"	"	0.4V	2.4V	"										"	"	"							"
		232	"	"	"	"	"	"	"	"	0.4V	"										2.4V	"	"	"						
I _{CCZ}		25 26	5.5V GND	5.5V GND	5.5V GND	5.5V GND	GND 5.5V	GND 5.5V	GND 5.5V	GND 5.5V	"											GND 5.5V	"	"		0.1 0.1		10 10			μA μA
V _{OH6}	3006	27 28 29 30 31 32 33 34	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	" " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	-20μA " " " " "	0.8V " " " " "	4.5V " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	4.4 " " " " "		4.4 " " " " "		4.4 " " " " "		V	
V _{OH7}	3006	35 36 37 38 39 40 41 42	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	0.8V " " " " " "	" " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	5.5V " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	3.98 " " " " "		3.7 " " " " "		3.98 " " " " "		"		
V _{OL6}	3007	43 44 45 46 47 48 49 50	0.8V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	2.0V " " " " " "	" " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	-6.0mA " " " " "	4.5V " " " " "	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y		0.1 " " " " "		0.1 " " " " "		0.1 " " " " "		"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 60 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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		
			1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y		2G	V _{CC}	Min	Max	Min	Max		Min	Max	
V _{OL7}	3007	51	0.8V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1Y		0.26		0.4		0.26	V	
		52	"	"	"	"	"	"	"	"	"	"	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	"	"	"	"	"	"	"	"		
		53	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		54	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		55	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		56	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		57	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		58	"	"	"	"	"	"	"	"	"	"	"	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	6.0mA	"	"	"	"	"	"	"		
I _{ozH}		59	0.8V	9/	9/	9/	9/	9/	9/	9/	9/	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1Y		0.2		2.0			μA	
		60	"	"	"	"	"	"	"	"	"	"	"	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"	"	"	"	"	"	"	"		
		61	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		62	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		63	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		64	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		65	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		66	"	"	"	"	"	"	"	"	"	"	"	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"	"	"	"	"	"	"	"		
I _{ozL}		67	9/	9/	9/	9/	9/	9/	9/	9/	9/	"	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1Y		-0.2		-2.0			"	
		68	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		69	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		70	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		71	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		72	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		73	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		74	"	"	"	"	"	"	"	"	"	"	"	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	"	"	"	"	"	"	"	
I _{IH}	3010	75	5.5V	GND	GND	GND	GND	GND	GND	GND	GND	"	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1G		.05		0.1			"	
		76	GND	5.5V	GND	GND	GND	GND	GND	GND	GND	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		77	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		78	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		79	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		81	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		82	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		83	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		84	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		85	GND	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1G		-0.05		-0.1			"	
		86	5.5V	GND	5.5V	GND	GND	GND	GND	GND	GND	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
87	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"			
I _{IL}	3009	88	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		89	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		90	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		91	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		92	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		93	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		94	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		95	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1G		-10	-135	-10	-135	-10	-135	mA
		96	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		97	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		98	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
		99	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"			
101	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"			
102	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"			

See footnotes at end of table.

TABLE III. Group A inspection for device type 60 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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 4 T _C = +25°C							
			Test no.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max
C _i	3012	103 104 105 106 107 108 109 110 111 112	2/	2/	2/	2/	2/	2/	2/	2/	2/	GND										GND	1G 1A 2A 3A 4A 5A 6A 7A 8A 2G		10					pF	
C _o	3012	113 114	GND 5.5V										2/	2/	2/	2/	2/	2/	2/	2/	5.5V GND	5.5V 5.5V	Y's Y's		20 20						
																							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	g/	115 116	B B	B A	B A	B A	B A	B A	B A	B A	B A	GND GND	H L	H L	H L	H L	H L	H L	H L	H L	B B	4.5V 4.5V	Z/ Z/								
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C				
																							Min	Max	Min	Max	Min	Max			
t _{PHL}	3003 (Fig. 3)	117 118 119 120 121 122 123 124	GND	IN	IN	IN	IN	IN	IN	IN	IN	GND										4.5V	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y 7A to 7Y 8A to 8Y	10	26	10	35	10	26	ns	
t _{PLH}	3003 (Fig. 3)	125 126 127 128 129 130 131 132		IN	IN	IN	IN	IN	IN	IN	IN		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT		1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y 7A to 7Y 8A to 8Y								
t _{PZH}	3003 (Fig. 3)	133 134 135 136 137 138 139 140	IN	GND	GND	GND	GND	GND	GND	GND	GND												1G to 1Y 1G to 2Y 1G to 3Y 1G to 4Y 1G to 5Y 1G to 6Y 1G to 7Y 1G to 8Y		40		53	7	40		
	3003 (Fig. 3)	141 142 143 144 145 146 147 148	GND	GND	GND	GND	GND	GND	GND	GND	GND		OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	IN		2G to 1Y 2G to 2Y 2G to 3Y 2G to 4Y 2G to 5Y 2G to 6Y 2G to 7Y 2G to 8Y				53	7			
t _{PZL}	3003 (Fig. 3)	149 150 151 152 153 154 155 156	IN	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V												1G to 1Y 1G to 2Y 1G to 3Y 1G to 4Y 1G to 5Y 1G to 6Y 1G to 7Y 1G to 8Y								

See footnotes at end of table.

TABLE III. Group A inspection for device type 60 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max
t _{PZL}	3003 (Fig. 3)	157	GND	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	GND							OUT	OUT	OUT	IN	4.5V	2G to 1Y	10	40	10	53	7	40	ns
		158	"									"									"	"	2G to 2Y	"	"	"	"	"	"	"	
		159	"									"									"	"	2G to 3Y	"	"	"	"	"	"	"	
		160	"									"									"	"	2G to 4Y	"	"	"	"	"	"	"	
		161	"									"									"	"	2G to 5Y	"	"	"	"	"	"	"	
		162	"									"									"	"	2G to 6Y	"	"	"	"	"	"	"	
		163	"									"									"	"	2G to 7Y	"	"	"	"	"	"	"	
164	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"		
t _{PLZ}	3003 (Fig. 3)	165	IN	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	GND							OUT	OUT	OUT	GND	4.5V	1G to 1Y	10	31	10	41	10	31	ns
		166	"									"									"	"	1G to 2Y	"	"	"	"	"	"	"	
		167	"									"									"	"	1G to 3Y	"	"	"	"	"	"	"	
		168	"									"									"	"	1G to 4Y	"	"	"	"	"	"	"	
		169	"									"									"	"	1G to 5Y	"	"	"	"	"	"	"	
		170	"									"									"	"	1G to 6Y	"	"	"	"	"	"	"	
		171	"									"									"	"	1G to 7Y	"	"	"	"	"	"	"	
		172	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	1G to 8Y	"	"	"	"	"	"	"	
	173	GND	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	"							OUT	OUT	IN	"	2G to 1Y	"	"	"	"	"	"	"	
	174	"										"								"	"	2G to 2Y	"	"	"	"	"	"	"		
	175	"										"								"	"	2G to 3Y	"	"	"	"	"	"	"		
	176	"										"								"	"	2G to 4Y	"	"	"	"	"	"	"		
	177	"										"								"	"	2G to 5Y	"	"	"	"	"	"	"		
	178	"										"								"	"	2G to 6Y	"	"	"	"	"	"	"		
179	"										"								"	"	2G to 7Y	"	"	"	"	"	"	"			
180	"										"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"			
t _{PHZ}	3003 (Fig. 3)	181	IN	GND	GND	GND	GND	GND	GND	GND	GND	"							OUT	OUT	OUT	GND	"	1G to 1Y	"	"	"	"	"	"	"
		182	"									"									"	"	1G to 2Y	"	"	"	"	"	"	"	
		183	"									"									"	"	1G to 3Y	"	"	"	"	"	"	"	
		184	"									"									"	"	1G to 4Y	"	"	"	"	"	"	"	
		185	"									"									"	"	1G to 5Y	"	"	"	"	"	"	"	
		186	"									"									"	"	1G to 6Y	"	"	"	"	"	"	"	
		187	"									"									"	"	1G to 7Y	"	"	"	"	"	"	"	
		188	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	1G to 8Y	"	"	"	"	"	"	"	
	189	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	"							OUT	OUT	IN	"	2G to 1Y	"	"	"	"	"	"	"	
	190	"										"								"	"	2G to 2Y	"	"	"	"	"	"	"		
191	"										"								"	"	2G to 3Y	"	"	"	"	"	"	"			
192	"										"								"	"	2G to 4Y	"	"	"	"	"	"	"			
193	"										"								"	"	2G to 5Y	"	"	"	"	"	"	"			
194	"										"								"	"	2G to 6Y	"	"	"	"	"	"	"			
195	"										"								"	"	2G to 7Y	"	"	"	"	"	"	"			
196	"										"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"			
t _{TLH}	3004 (Fig. 3)	197	GND	IN	IN	IN	IN	IN	IN	IN	IN	"								OUT	OUT	GND	"	1Y	2	12	2	16	2	12	"
		198	"									"									"	"	2Y	"	"	"	"	"	"	"	
		199	"									"									"	"	3Y	"	"	"	"	"	"	"	
		200	"									"									"	"	4Y	"	"	"	"	"	"	"	
		201	"									"									"	"	5Y	"	"	"	"	"	"	"	
		202	"									"									"	"	6Y	"	"	"	"	"	"	"	
		203	"									"									"	"	7Y	"	"	"	"	"	"	"	
		204	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8Y	"	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	205	GND	IN	IN	IN	IN	IN	IN	IN	IN	"								OUT	OUT	"	"	1Y	"	"	"	"	"	"	"
		206	"									"									"	"	2Y	"	"	"	"	"	"	"	
		207	"									"									"	"	3Y	"	"	"	"	"	"	"	
		208	"									"									"	"	4Y	"	"	"	"	"	"	"	
		209	"									"									"	"	5Y	"	"	"	"	"	"	"	
		210	"									"									"	"	6Y	"	"	"	"	"	"	"	
		211	"									"									"	"	7Y	"	"	"	"	"	"	"	
		212	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8Y	"	"	"	"	"	"	"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 61.

Symbol	MIL-STD-883 method	Cases R, S, and 2 Test no.	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											
			1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	1G	1A	2A	3A	4A		5A	6A	7A	8A	2G	Min	Max	Min	Max	Min
V _{IC} (pos)		1 2 3 4 5 6 7 8 9 10	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	OPEN										1mA	GND	1G	1A	2A	3A	4A	5A	6A	7A	8A	2G	1/	1.5				V	
V _{IC} (neg)		11 12 13 14 15 16 17 18 19 20	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	-1mA	GND											OPEN	1G	1A	2A	3A	4A	5A	6A	7A	8A	2G		-1.5				V	
I _{GCH}	3005	21	GND	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V												-1mA	GND	5.5V	V _{CC}									0.2		20		μA	
I _{CLL}	3005	22	GND	GND	GND	GND	GND	GND	GND	GND																								0.2		20		μA	
I _{CCΔ}		223	2.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V	0.4V																								3.0		3.0		3.0	mA
		224	GND	2.4V																																			
		225		0.4V	2.4V																																		
		226			0.4V	2.4V																																	
		227				0.4V	2.4V																																
		228					0.4V	2.4V																															
		229						0.4V	2.4V																														
		230							0.4V	2.4V																													
		231								0.4V	2.4V																												
232									0.4V												2.4V																		
I _{CCZ}		25 26	5.5V GND	GND 5.5V	GND 5.5V	GND 5.5V	GND 5.5V	5.5V GND	5.5V GND	5.5V GND												GND 5.5V											0.1 0.1		10 10			μA μA	
V _{OH6}	3006	27 28 29 30 31 32 33 34	0.8V 2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V												0.8V	4.5V	1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	4.4			4.4		4.4				V					
V _{OH7}	3006	35 36 37 38 39 40 41 42	0.8V 2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V												5.5V		1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y	3.98			3.7		3.98				V					
V _{OL6}	3007	43 44 45 46 47 48 49 50		0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V												4.5V		1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y			0.1		0.1			0.1			V				
V _{OL7}	3007	51 52 53 54 55 56 57 58		0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V												5.5V		1Y 2Y 3Y 4Y 5Y 6Y 7Y 8Y			0.26		0.4			0.26			V				

See footnotes at end of table.

TABLE III. Group A inspection for device type 61 – Continued.

Symbol	MIL-STD-883 method	Cases R, S and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	Min	Max	Min	Max	Min	Max	
I _{OZH}		59	0.8V	9/	9/	9/	9/	9/	9/	9/	9/	GND								5.5V	5.5V	9/	5.5V	1Y		0.2		2.0		μA
		60	"	"	"	"	9/	9/	"	"	"	"								5.5V	5.5V	"	"	2Y	"	"	"	"	"	"
		61	"	"	"	"	"	"	"	"	"	"								5.5V	5.5V	"	"	3Y	"	"	"	"	"	"
		62	"	"	"	"	"	"	"	"	"	"								5.5V	5.5V	"	"	4Y	"	"	"	"	"	"
		63	"	"	"	"	"	9/	9/	"	"	"								5.5V	5.5V	"	"	5Y	"	"	"	"	"	"
		64	"	"	"	"	"	"	"	9/	9/	"								5.5V	5.5V	"	"	6Y	"	"	"	"	"	"
		65	"	"	"	"	"	"	"	"	"	"								5.5V	5.5V	"	"	7Y	"	"	"	"	"	"
		66	"	"	"	"	"	"	"	"	9/	"	5.5V	5.5V	5.5V					5.5V	5.5V	"	"	8Y	"	"	"	"	"	"
I _{OZL}		67	9/	9/	9/	9/	9/					"								GND	0.8V	"	1Y		-0.2		-2.0		"	
		68	"	"	"	9/	9/					"								GND	GND	"	2Y		"	"	"	"	"	"
		69	"	"	"	"	9/	9/				"								GND	GND	"	3Y		"	"	"	"	"	"
		70	"	"	"	"	"	9/	9/			"								GND	GND	"	4Y		"	"	"	"	"	"
		71	"	"	"	"	"	9/	9/			"								GND	GND	"	5Y		"	"	"	"	"	"
		72	"	"	"	"	"	"	9/	9/			"							GND	GND	"	6Y		"	"	"	"	"	"
		73	"	"	"	"	"	"	"	9/	9/									GND	GND	"	7Y		"	"	"	"	"	"
		74	"	"	"	"	"	"	"	9/	GND	GND								GND	GND	"	8Y		"	"	"	"	"	"
I _{IH}	3010	75	5.5V	GND	GND	GND	GND	GND	GND	GND	GND	"									GND	"	1G		.05		0.1		"	
		76	GND	5.5V	GND	"	"	"	"	"	"	"									"	"	1A		"	"	"	"	"	"
		77	"	GND	5.5V	"	"	"	"	"	"	"									"	"	2A		"	"	"	"	"	"
		78	"	"	"	5.5V	"	"	"	"	"	"									"	"	3A		"	"	"	"	"	"
		79	"	"	"	GND	5.5V	"	"	"	"	"									"	"	4A		"	"	"	"	"	"
		80	"	"	"	"	5.5V	5.5V	"	"	"	"									"	"	5A		"	"	"	"	"	"
		81	"	"	"	"	GND	5.5V	5.5V	"	"	"									"	"	6A		"	"	"	"	"	"
		82	"	"	"	"	"	"	GND	5.5V	5.5V	GND	5.5V								"	"	7A		"	"	"	"	"	"
I _{IL}	3009	83	"	"	"	"	"	"	"	GND	GND	5.5V	"								5.5V	"	8A		"	"	"	"	"	"
		84	"	"	"	"	"	"	"	GND	GND	5.5V	"								"	"	2G		"	"	"	"	"	"
		85	GND	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	5.5V	"	"								"	"	1G		-0.05		-0.1		"	
		86	"	"	"	"	"	"	"	"	"	"									"	"	1A		"	"	"	"	"	"
		87	"	"	"	"	"	"	"	"	"	"									"	"	2A		"	"	"	"	"	"
		88	"	"	"	"	"	"	"	"	"	"									"	"	3A		"	"	"	"	"	"
		89	"	"	"	"	"	"	"	"	"	"									"	"	4A		"	"	"	"	"	"
		90	"	"	"	"	"	"	"	"	"	"									"	"	5A		"	"	"	"	"	"
I _{OS4}	3011	91	"	"	"	"	"	"	"	GND	5.5V	"	"								GND	"	6A		"	"	"	"	"	"
		92	"	"	"	"	"	"	"	"	5.5V	GND	"	"							"	"	7A		"	"	"	"	"	"
		93	"	"	"	"	"	"	"	"	5.5V	GND	5.5V	"							"	"	8A		"	"	"	"	"	"
		94	GND	4V	4V	4V	4V	4V	4V	4V	4V	GND	"								GND	4V	2G		"	"	"	"	"	"
		95	"	"	"	"	"	"	"	"	"	"									"	"	1Y	-10	-135	-10	-135	-10	-135	mA
		96	"	"	"	"	"	"	"	"	"	"									"	"	2Y	"	"	"	"	"	"	"
		97	"	"	"	"	"	"	"	"	"	"									"	"	3Y	"	"	"	"	"	"	"
		98	"	"	"	"	"	"	"	"	"	"									"	"	4Y	"	"	"	"	"	"	"
C _i	3012	103	2/	2/	2/	2/	2/	2/	2/	2/	2/	GND									GND	"	1G		10				pF	
		104	"	"	"	"	"	"	"	"	"	"									"	"	1A		"	"	"	"	"	"
		105	"	"	"	"	"	"	"	"	"	"									"	"	2A		"	"	"	"	"	"
		106	"	"	"	"	"	"	"	"	"	"									"	"	3A		"	"	"	"	"	"
		107	"	"	"	"	"	"	"	"	"	"									"	"	4A		"	"	"	"	"	"
		108	"	"	"	"	"	"	"	"	"	"									"	"	5A		"	"	"	"	"	"
		109	"	"	"	"	"	"	"	"	"	"									"	"	6A		"	"	"	"	"	"
		110	"	"	"	"	"	"	"	"	"	"									"	"	7A		"	"	"	"	"	"
C _o	3012	111	"	"	"	"	"	"	"	"	"	"	"								2/	"	8A		"	"	"	"	"	"
		112	"	"	"	"	"	"	"	"	"	"	"								"	"	2G		"	"	"	"	"	"
		113	GND									"	2/	2/	2/	2/	2/	2/	2/	2/	5.5V	5.5V	Y's		20				"	
		114	5.5V									"	2/	2/	2/	2/	2/	2/	2/	2/	GND	5.5V	Y's		20				"	

See footnotes at end of table.

TABLE III. Group A inspection for device type 61 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min	
Truth table	g/	115 116	B B	A B	A B	A B	A B	A B	A B	A B	A B	GND GND	H L	H L	H L	H L	H L	H L	H L	H L	B B	4.5V 4.5V	7/ 7/							
																							Subgroup 9 T _C = +25°C		Subgroup 10 T _C = +125°C		Subgroup 11 T _C = -55°C			
																							Min	Max	Min	Max	Min	Max		
t _{PHL}	3003 (Fig. 3)	117 118 119 120 121 122 123 124	GND " " " " " "	IN " " " " " "	IN " " " " " "	IN " " " " " "	IN " " " " " "	IN " " " " " "	IN " " " " " "	IN " " " " " "	GND " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	GND " " " " " "	4.5V " " " " " "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y 7A to 7Y 8A to 8Y	10 " " " " " " "	26 " " " " " " "	10 " " " " " " "	35 " " " " " " "	10 " " " " " " "	26 " " " " " " "	ns " " " " " " "	
t _{PLH}	3003 (Fig. 3)	125 126 127 128 129 130 131 132	" " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	IN " " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	" " " " " " "	" " " " " " "	1A to 1Y 2A to 2Y 3A to 3Y 4A to 4Y 5A to 5Y 6A to 6Y 7A to 7Y 8A to 8Y	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	
t _{PZH}	3003 (Fig. 3)	133 134 135 136 137 138 139 140	IN " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	" " " " " " "	" " " " " " "	1G to 1Y 1G to 2Y 1G to 3Y 1G to 4Y 1G to 5Y 1G to 6Y 1G to 7Y 1G to 8Y	" " " " " " "	40 " " " " " "	" " " " " " "	53 " " " " " "	7 " " " " " "	40 " " " " " "	" " " " " " "
	3003 (Fig. 3)	141 142 143 144 145 146 147 148	GND " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	4.5V " " " " " " "	GND " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	IN " " " " " "	" " " " " "	2G to 1Y 2G to 2Y 2G to 3Y 2G to 4Y 2G to 5Y 2G to 6Y 2G to 7Y 2G to 8Y	" " " " " " "	" " " " " " "	53 " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	
t _{PZL}	3003 (Fig. 3)	149 150 151 152 153 154 155 156	IN " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	GND " " " " " "	" " " " " "	1G to 1Y 1G to 2Y 1G to 3Y 1G to 4Y 1G to 5Y 1G to 6Y 1G to 7Y 1G to 8Y	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	
		157 158 159 160 161 162 163 164	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	GND " " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	OUT " " " " " "	IN " " " " " "	" " " " " "	2G to 1Y 2G to 2Y 2G to 3Y 2G to 4Y 2G to 5Y 2G to 6Y 2G to 7Y 2G to 8Y	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	" " " " " " "	

See footnotes at end of table.

TABLE III. Group A inspection for device type 61 – Continued.

Symbol	MIL-STD-883 method	Cases R, S, and 2	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.	1G	1A	2A	3A	4A	5A	6A	7A	8A	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G		V _{CC}	Min	Max	Min	Max	Min		Max
t _{PLZ}	3003 (Fig. 3)	165	IN	GND	GND	GND	GND	GND	GND	GND	GND	GND	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	2G	V _{CC}	1G to 1Y	10	31	10	41	10	31	ns	
		166	"									"										"	"	"	"	"	"	"	"	"	
		167	"									"										"	"	"	"	"	"	"	"	"	
		168	"									"										"	"	"	"	"	"	"	"	"	
		169	"									"										"	"	"	"	"	"	"	"	"	
		170	"									"										"	"	"	"	"	"	"	"	"	
		171	"									"										"	"	"	"	"	"	"	"	"	
		172	"									"										"	"	"	"	"	"	"	"	"	
		173	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	IN	"	2G to 1Y	"	"	"	"	"	"	"
		174	"									"										"	"	2G to 2Y	"	"	"	"	"	"	"
		175	"									"										"	"	2G to 3Y	"	"	"	"	"	"	"
		176	"									"										"	"	2G to 4Y	"	"	"	"	"	"	"
		177	"									"										"	"	2G to 5Y	"	"	"	"	"	"	"
		178	"									"										"	"	2G to 6Y	"	"	"	"	"	"	"
		179	"									"										"	"	2G to 7Y	"	"	"	"	"	"	"
		180	"									"										"	"	2G to 8Y	"	"	"	"	"	"	"
t _{PHZ}	3003 (Fig. 3)	181	IN	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	GND	"	1G to 1Y	"	"	"	"	"	"	"	
		182	"									"									"	"	1G to 2Y	"	"	"	"	"	"	"	
		183	"									"									"	"	1G to 3Y	"	"	"	"	"	"	"	
		184	"									"									"	"	1G to 4Y	"	"	"	"	"	"	"	
		185	"									"									"	"	1G to 5Y	"	"	"	"	"	"	"	
		186	"									"									"	"	1G to 6Y	"	"	"	"	"	"	"	
		187	"									"									"	"	1G to 7Y	"	"	"	"	"	"	"	
		188	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	1G to 8Y	"	"	"	"	"	"	"	
	3003 (Fig. 3)	189	GND	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	4.5V	"									IN	"	2G to 1Y	"	"	"	"	"	"	"	
		190	"									"									"	"	2G to 2Y	"	"	"	"	"	"	"	
		191	"									"									"	"	2G to 3Y	"	"	"	"	"	"	"	
		192	"									"									"	"	2G to 4Y	"	"	"	"	"	"	"	
		193	"									"									"	"	2G to 5Y	"	"	"	"	"	"	"	
		194	"									"									"	"	2G to 6Y	"	"	"	"	"	"	"	
		195	"									"									"	"	2G to 7Y	"	"	"	"	"	"	"	
		196	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	2G to 8Y	"	"	"	"	"	"	"	
t _{TLH}	3004 (Fig. 3)	197	GND	IN	IN	IN	IN	IN	IN	IN	IN	"								OUT	GND	"	1Y	2	12	2	16	2	12	"	
		198	"									"									"	"	2Y	"	"	"	"	"	"	"	
		199	"									"									"	"	3Y	"	"	"	"	"	"	"	
		200	"									"									"	"	4Y	"	"	"	"	"	"	"	
		201	"									"									"	"	5Y	"	"	"	"	"	"	"	
		202	"									"									"	"	6Y	"	"	"	"	"	"	"	
		203	"									"									"	"	7Y	"	"	"	"	"	"	"	
		204	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8Y	"	"	"	"	"	"	"	
t _{THL}	3004 (Fig. 3)	205	GND	IN	IN	IN	IN	IN	IN	IN	IN	"								OUT	"	"	1Y	"	"	"	"	"	"	"	
		206	"									"									"	"	2Y	"	"	"	"	"	"	"	
		207	"									"									"	"	3Y	"	"	"	"	"	"	"	
		208	"									"									"	"	4Y	"	"	"	"	"	"	"	
		209	"									"									"	"	5Y	"	"	"	"	"	"	"	
		210	"									"									"	"	6Y	"	"	"	"	"	"	"	
		211	"									"									"	"	7Y	"	"	"	"	"	"	"	
		212	"									"	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	8Y	"	"	"	"	"	"	"	

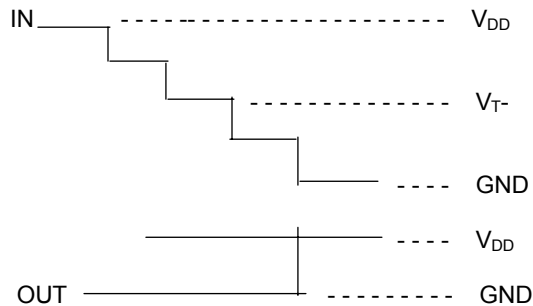
See footnotes on next page.

TABLE III. Group A inspection – Continued.

- 1/ Output pins not designated may be “high” level logic, “low” level logic, or open. Input pins not designated may be “high” level logic or “low” level logic. Exceptions are as follows:
- a. $V_{IC}(\text{pos})$ 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 test.
 - b. $V_{IC}(\text{neg})$ tests, the V_{CC} terminal shall be open.
 - c. I_{CC} tests, the output terminal shall be open.

2/ See 4.4.1c.

- 3/ Decrement input in 50 mV steps beginning 100 mV above the maximum limit specified until the output changes from V_{DD} to GND. The input voltage where this transition occurs is V_{T-} .



- 4/ Increment input in 50 mV steps beginning 100 mV below the minimum limit specified until the output changes from V_{DD} to GND. The input voltage where this transition occurs is V_{T+} .
- 5/ $V_H = (V_{T+}) - (V_{T-})$. See table III for V_H limits.
- 6/ A = 3.7 V
B = 0.4 V
- 7/ Output shall be: High ≥ 1.5 V; Low ≤ 1.5 V; $I_{OUT} = 20 \mu\text{A}$.
- 8/ A = 2.4 V
B = 0.4 V
- 9/ 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 $V_{IL} = V_{IL}(\text{max})$ and $V_{IH} = V_{IH}(\text{min})$, as required.

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 should specify the following:

- a. Title, number, and date of the specification.
- b. PIN and compliance identifier, if applicable (see 1.2).
- c. Requirements for delivery of one copy of the 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:

C_i	Input terminal-to-GND capacitance.
I_{CC}	Quiescent supply current.
V_{CC}	Positive supply voltage.
V_{IN}	Voltage level at an input terminal.
I_{IN}	Current flowing into an input terminal.
t_{PHZ}	Output disable time from high level. The time between the specified reference points on the input and output voltage waveforms with the three-state output changing from the defined high level to a high-impedance (off) state.
t_{PLZ}	Output disable time from low level. The time between the specified reference points on the input and output voltage waveforms with the three-state output changing from the defined low level to a high impedance (off) state.
t_{PZH}	Output enable time to high level. The time between the specified reference points on the input and output voltage waveforms with the three-state output changing from high impedance (off) state to the defined high level.
t_{PZL}	Output enable time to low level. The time between the specified reference points on the input and output voltage waveforms with the three-state output changing from high impedance (off) state to the defined low level.
I_{OZL}	Output current in the high-impedance mode with output voltage low.
I_{OZH}	Output current in the high-impedance mode with output voltage high.
C_{PD}	Power dissipation capacitance.
$I_{CC\Delta}$	Additional supply current when using worst case TTL input levels.
T_C	Case temperature.
GND	Ground zero voltage potential.
T_A	Free air temperature.

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.

- 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).
- A copy of each radiograph.
- The technology conformance inspection (TCI) data (see 4.4).
- Parameter distribution data on parameters evaluated during burn-in (see 3.6).
- 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-38510 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
01/51	54HC04 / 54HCT04
02/52	54HC14 / 54HCT14
03/53	54HC240 / 54HCT240
04/54	54HC241 / 54HCT241
05/55	54HC244 / 54HCT244
06	54HC365
07	54HC366
08	54HC367
09	54HC368
10/60	54HC540 / 54HCT540
11/61	54HC541 / 54HCT541

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 5962-2005-023)

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/>.