INCH-POUND

MIL-M-38510/14E 21 March 2005 SUPERSEDING MIL-M-38510/14D 2 August 1982

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, TTL, DATA SELECTORS/MULTIPLEXERS, MONOLITHIC SILICON

Inactive for new design after 7 September 1995.

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

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

- 1. SCOPE
- 1.1 <u>Scope.</u> This specification covers the detail requirements for monolithic, silicon, TTL, data selectors/multiplexers, logic microcircuits. Two product assurance classes and a choice of case outlines and lead finishes are provided and are reflected in the complete part number. For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.4).
 - 1.2 Part or Identifying Number (PIN). The PIN is in accordance with MIL-PRF-38535, and as specified herein.
 - 1.2.1 <u>Device types.</u> The device types are as follows:

| Device type | Circuit |
|-------------|--|
| 01 | Sixteen-input data selector/multiplexer, with enable |
| 02, 06 | Eight-input data selector/multiplexer, with enable |
| 03 | Dual, four-input data selector/multiplexer, with enable |
| 04 | Dual, four-input data selector/multiplexer, without enable |
| 05 | Quad, two-input data selector/multiplexer, with enable |
| | |

- 1.2.2 <u>Device class.</u> The device class is the product assurance level as defined in MIL-PRF-38535.
- 1.2.3 <u>Case outlines.</u> The case outlines are as designated in MIL-STD-1835 and as follows:

| Outline letter | Descriptive designator | <u>Terminals</u> | Package style |
|----------------|------------------------|------------------|---------------|
| Е | GDIP1-T16 or CDIP2-T16 | 16 | Dual-in-line |
| F | GDFP2-F16 or CDFP3-F16 | 16 | Flat-pack |
| J | GDIP1-T24 or CDIP2-T24 | 24 | Dual-in-line |
| K | GDFP2-F24 or CDFP3-F24 | 24 | Flat-pack |
| Z | GDFP7-F24 or CDFP8-F24 | 24 | Flat-pack |

Comments, suggestions, or questions on this document should be addressed to: Commander, Defense Supply Center Columbus, ATTN: DSCC-VAS, P. O. Box 3990, Columbus, OH 43218-3990, or emailed to bipolar@dscc.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.

AMSC N/A FSC 5962

1.3 Absolute maximum ratings.

| -0.5 V to +7.0 V |
|----------------------------|
| -1.5 V at -12 mA to +5.5 V |
| -65°C to +150°C |
| |
| 375 mW |
| 268 mW |
| 286 mW |
| 248 mW |
| 275 mW |
| 300°C |
| (See MIL-STD-1835) |
| 175°C |
| |

1.4 Recommended operating conditions.

| Supply voltage (V _{CC}) | 4.5 V minimum to 5.5 V maximum |
|---|--------------------------------|
| Minimum high level input voltage (V _{IH}) | 2.0 V dc |
| Maximum low level input voltage (V _{IL}) | 0.8 V dc |
| Maximum low level output current (I _{IL}) | 16 mA |
| Normalized fanout (each output) 3/ | |
| Low logic level | 10 maximum |
| High logic level | 20 maximum |
| Case operating temperature range (T _C) | -55°C to 125°C |

2.0 APPLICABLE DOCUMENT

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

2.2 Government documents.

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

DEPARTMENT OF DEFENSE SPECIFICATIONS

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

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883 - Test Method Standard for Microelectronics.

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.)

 $[\]underline{1}$ / Must withstand the added P_D due to short circuit condition (e.g. I_{OS} test).

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

<u>3/</u> Device will fanout in both high and low levels to the specified number of inputs of the same device type as that being tested.

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

3. REQUIREMENTS

- 3.1 <u>Qualification</u>. Microcircuits furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.3 and 6.3).
- 3.2 <u>Item requirements</u>. The individual item requirements shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.
- 3.3 <u>Design, construction, and physical dimensions.</u> The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.
- 3.3.1 <u>Logic diagrams and terminal connections.</u> The logic diagrams and terminal connections shall be as specified on figure 1 and 2.
 - 3.3.2 Truth tables. The truth tables shall be as specified on figure 3.
- 3.3.4 <u>Schematic circuit.</u> The schematic circuit shall be maintained by the manufacturer and made available to the qualifying activity and the preparing activity upon request.
 - 3.3.5 Case outlines. Case outlines shall be as specified in 1.2.3.
 - 3.4 Lead material and finish. Lead material and finish shall be in accordance with MIL-PRF-38535 (see 6.6).
- 3.5 <u>Electrical performance characteristics</u>. The electrical performance characteristics are as specified in table 1 and apply over the full recommended case operating temperature range, unless otherwise specified.
- 3.6 <u>Electrical test requirements</u>. The electrical test requirements for each device class shall be the subgroups specified in table II. The electrical tests for each subgroup are described in table III.
 - 3.7 Marking. Marking shall be in accordance with MIL-PRF-38535.
- 3.8 <u>Microcircuit group assignment.</u> The devices covered by this specification shall be in microcircuit group number 4 (see MIL-PRF-38535, appendix A).

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

| Test | Symbol | Conditions | Device | Lim | nits | Unit |
|---|-------------------|---|---------------|------|------|------|
| | | $-55^{\circ}C \le T_C \le +125^{\circ}C$ unless otherwise specified | type | Min | Max | |
| High level output voltage | Voн | V _{CC} = 4.5 V | All | 2.4 | | V |
| | | I _{OH} =8 mA | | | | |
| Low level output voltage | VoL | V _{CC} = 4.5 V | All | | 0.4 | V |
| | | I _{OL} = 16 mA | | | | |
| Input clamp voltage | V _{IC} | V _{CC} = 4.5 V | All | | -1.5 | V |
| | | I _{IN} = -12 mA | | | | |
| Low level input current | Ιμ | V _{CC} = 5.5 V | 02, 03, | -0.7 | -1.6 | mA |
| | "- | V _{IN} = 0.4 V | 04 05, 06 | | | |
| | | | 01 | -0.6 | -1.6 | |
| High-level input current | l _{IH1} | V _{CC} = 5.5 V | All | | 40 | μA |
| | ויווי | V _{IN} = 2.5 V | | | | |
| High-level input current | luuo | V _{CC} = V _{IN} = 5.5 V | All | | 100 | μA |
| | l _{IH2} | vCC = vIV = 5.5 v | | | | r |
| Short circuit output current | Ios | V _{CC} = 5.5 V | 01, 03, 06 | -20 | -55 | mA |
| | | V _{OUT} = 0 V <u>1</u> / | 02, 04, 05 | -20 | -120 | mA |
| Supply current | Icc | V _{CC} = 5.5 V | 01 | | 68 | mA |
| | 100 | VGC 0.0 V | 02,06 | | 48 | mA |
| | | | 04 | | 45 | mA |
| | | | 03 | | 52 | mA |
| | | | 05 | | 50 | mA |
| Propagation delay time high-to-low level output from A, B, C or D to W | ^t PHL1 | $R_L = 390\Omega \pm 5\%$ | 01 | 8 | 40 | ns |
| Propagation delay time low-to-high level output from A, B, C or D to W | ^t PLH1 | $C_L = 50 \text{ pF minimum}$ (figure 4) | 01 | 8 | 43 | ns |
| Propagation delay time high-to-low level output from strobe to W | tPHL2 | | 01 | 6 | 37 | ns |
| Propagation delay time low-to-high level output from strobe to W | t _{PLH2} | | 01 | 6 | 32 | ns |
| Propagation delay time high-to-low level output from E ₀ –E ₁₅ to W | t _{PHL3} | | 01 | 3 | 23 | ns |
| Propagation delay time low-to-high level output from E ₀ –E ₁₅ to W | t _{PLH3} | | 01 | 3 | 30 | ns |

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

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

| | | Conditions | Device | Lim | nits | |
|---|-------------------|--|--------|-----|------|------|
| Test | Symbol | -55°C ≤ T _C ≤ +125°C | type | Min | Max | Unit |
| | - | unless otherwise specified | | | | |
| Propagation delay time, high-to-low | t _{PHL1} | $R_L = 390\Omega \pm 5\%$ | 02 | 6 | 40 | ns |
| level output from A, B, or C to W | | _ | 06 | 6 | 48 | |
| Propagation delay time, low-to-high | t _{PLH1} | C _L = 50 pF minimum | 02 | 6 | 38 | ns |
| level output from A, B, or C to W | | (figure 4) | 06 | 6 | 43 | |
| Propagation delay time, high-to-low | t _{PHL2} | | 02 | 8 | 49 | ns |
| level output from A, B, or C to Y | | | 06 | 8 | 60 | |
| Propagation delay time, low-to-high | t _{PLH2} | | 02 | 8 | 45 | ns |
| level output from A, B, or C to Y | | | 06 | 8 | 58 | |
| Propagation delay time, high-to-low | tPHL3 | | 02 | 6 | 37 | ns |
| level output from strobe to W | | | 06 | 6 | 38 | |
| Propagation delay time, low-to-high level output from strobe to W | tPLH3 | | 02, 06 | 6 | 35 | ns |
| Propagation delay time, high-to-low | tPHL4 | | 02 | 8 | 46 | ns |
| level output from strobe to Y | 1115 | | 06 | 8 | 52 | |
| Propagation delay time, low-to-high | tPLH4 | | 02 | 8 | 42 | ns |
| level output from strobe to Y | | | 06 | 8 | 52 | |
| Propagation delay time, high-to-low | t _{PHL5} | | 02, 06 | 3 | 32 | ns |
| level output from D ₀ -D ₇ to W | | | | | | |
| Propagation delay time, low-to-high | tPLH5 | | 02, 06 | 3 | 26 | ns |
| level output from D ₀ -D ₇ to W | | | | | | |
| Propagation delay time, high-to-low | tPHL6 | | 02 | 6 | 41 | ns |
| level output from D ₀ -D ₇ to Y | | | 06 | 6 | 44 | |
| Propagation delay time, low-to-high | tPLH6 | | 02 | 6 | 33 | ns |
| level output from D ₀ -D ₇ to Y | | | 06 | 6 | 36 | |
| Propagation delay time, high-to-low level output from data to Y | ^t PHL1 | R _L = 390Ω ±5%, | 03 | 3 | 29 | ns |
| Propagation delay time, low-to-high level output from data to Y | t _{PLH1} | C _L = 50 pF minimum (figure 5) | 03 | 3 | 28 | ns |
| Propagation delay time, high-to-low | t _{PHL2} | | 03 | 6 | 44 | ns |
| level output from A or B to Y | | | - 00 | 0 | 40 | |
| Propagation delay time, low-to-high level output from A or B to Y | ^t PLH2 | | 03 | 6 | 42 | ns |
| Propagation delay time, high-to-low level output from strobe to Y | ^t PHL3 | | 03 | 6 | 32 | ns |
| Propagation delay time, low-to-high level output from strobe to Y | t _{PLH3} | | 03 | 6 | 42 | ns |

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

| | | Conditions | Device | Lim | its | |
|--|-------------------|---|--------|-----|-----|------|
| Test | Symbol | $-55^{\circ}C \le T_C \le +125^{\circ}C$ unless otherwise specified | type | Min | Max | Unit |
| Propagation delay time high-to-low level output from data to Y | t _{PHL1} | $R_L = 390\Omega \pm 5\%$, | 04 | 3 | 41 | ns |
| Propagation delay time low-to-high level output from data to Y | t _{PLH1} | $C_L = 50 \text{ pF minimum}$ (figure 5) | 04 | 3 | 39 | ns |
| Propagation delay time high-to-low level output from data to W | ^t PHL2 | | 04 | 3 | 25 | ns |
| Propagation delay time low-to-high level output from data to W | t _{PLH2} | | 04 | 3 | 24 | ns |
| Propagation delay time high-to-low level output from A or B to Y | tPHL3 | | 04 | 6 | 51 | ns |
| Propagation delay time low-to-high level output from A or B to Y | t _{PLH3} | | 04 | 6 | 51 | ns |
| Propagation delay time high-to-low level output from A or B to W | t _{PHL4} | | 04 | 6 | 39 | ns |
| Propagation delay time low-to-high level output from A or B to W | t _{PLH4} | | 04 | 6 | 34 | ns |
| Propagation delay time high-to-low level output from A to Y | tPHL1 | $R_L = 390\Omega \pm 5\%$, | 05 | 6 | 49 | ns |
| Propagation delay time low-to-high level output from A to Y | tPLH1 | C _L = 50 pF minimum (figure 6) | 05 | 6 | 41 | ns |
| Propagation delay time high-to-low level output from strobe to Y | tPHL2 | | 05 | 3 | 39 | ns |
| Propagation delay time low-to-high level output from strobe to Y | tPLH2 | | 05 | 3 | 33 | ns |
| Propagation delay time high-to-low level output from data to Y | t _{PHL3} | | 05 | 3 | 25 | ns |
| Propagation delay time low-to-high level output from data to Y | t _{PLH3} | | 05 | 3 | 35 | ns |

TABLE II. Electrical test requirements.

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

^{*}PDA applies to subgroup 1.

4. VERIFICATION

- 4.1 <u>Sampling and inspection.</u> Sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not effect the form, fit, or function as described herein.
- 4.2 <u>Screening.</u> Screening shall be in accordance with MIL-PRF-38535 and shall be conducted on all devices prior to qualification and conformance inspection. The following additional criteria shall apply:
 - a. The burn-in test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
 - b. Interim and final electrical test parameters shall be as specified in table II, except interim electrical parameters test prior to burn-in is optional at the discretion of the manufacturer.
 - c. Additional screening for space level product shall be as specified in MIL-PRF-38535.

- 4.3 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-38535.
- 4.4 <u>Technology Conformance Inspection (TCI)</u>. Technology conformance inspection shall be in accordance with MIL-PRF-38535 and herein for groups A, B, C, and D inspections (see 4.4.1 through 4.4.4).
- 4.4.1 <u>Group A inspection.</u> Group A inspection shall be in accordance with table III of MIL-PRF-38535 and as follows:
 - a. Tests shall be as specified in table II herein.
 - b. Subgroups 4, 5, and 6, shall be omitted.
 - 4.4.2 Group B inspection. Group B inspection shall be in accordance with table II of MIL-PRF-38535.
- 4.4.3 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.
 - b. The steady-state life test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.
- 4.4.4 <u>Group D inspection.</u> Group D inspection shall be in accordance with table V of MIL-PRF-38535. End-point electrical parameters shall be as specified in table II herein.
 - 4.5 Methods of inspection. Methods of inspection shall be as specified in the appropriate tables and as follows:
- 4.5.1 <u>Voltage and current</u>. All voltages given are referenced to the microcircuit ground terminal. Currents given are conventional current and positive when flowing into the referenced terminal.

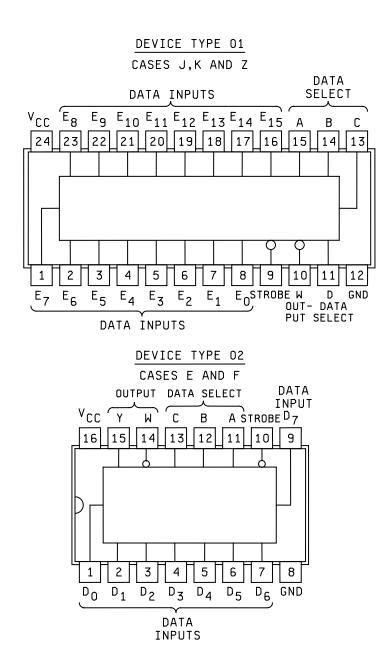
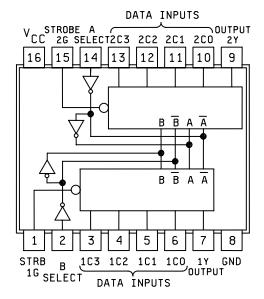


Figure 1. <u>Terminal connections (top view).</u>

DEVICE TYPE 03 CASES E AND F



DEVICE TYPE 04 CASES E AND F

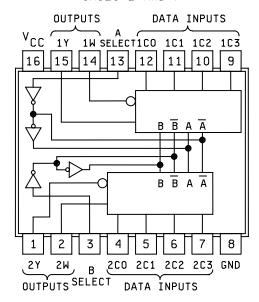
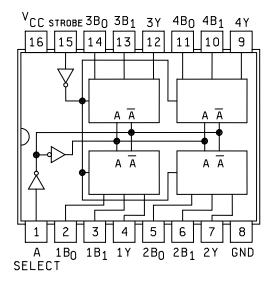


Figure 1. <u>Terminal connections (top view)</u> - Continued.

DEVICE TYPE 05 CASES E AND F



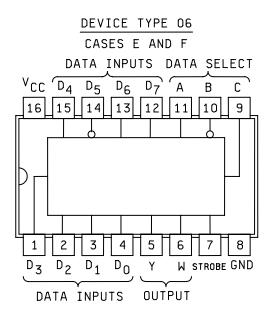


Figure 1. <u>Terminal connections (top view)</u> - Continued.

DEVICE TYPE 01 STROBE (ENABLE) E₀ -E₁ -E2 -E₅ -DATA A O— OUTPUT W E10-E₁₁-E₁₂-E14 DATA SELECT (BINARY)

Figure 2. Logic diagrams.

DEVICE TYPES 02 AND 06

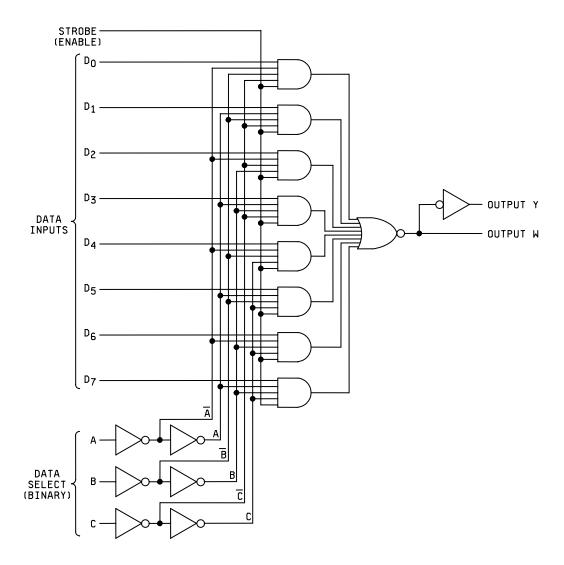


Figure 2. <u>Logic diagrams</u> – Continued.

DEVICE TYPE 03

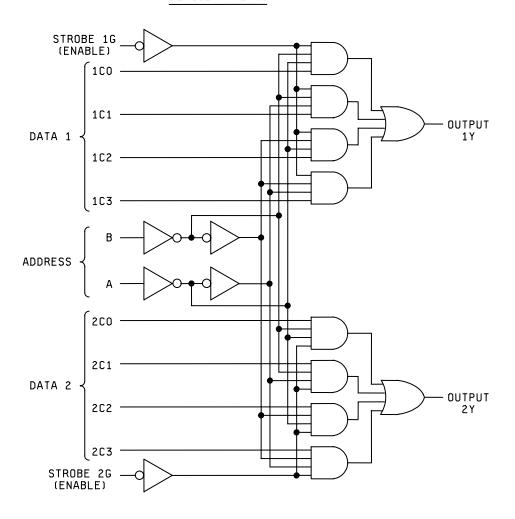


Figure 2. <u>Logic diagrams</u> – Continued.

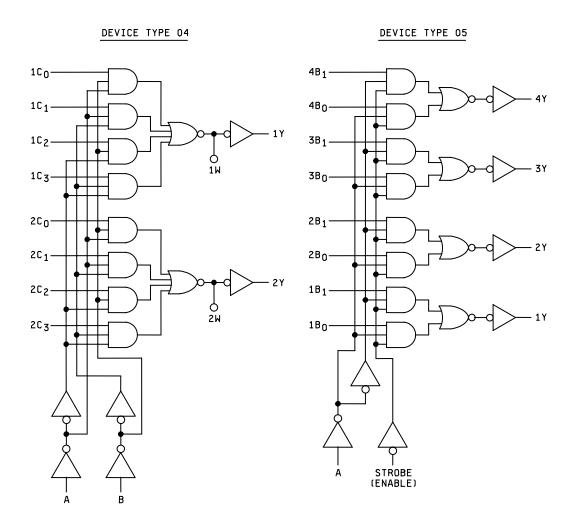


Figure 2. <u>Logic diagrams</u> – Continued.

Device type 01

| INPUTS | | | | | | | | | | | | | OUTPUT | | | | | | | | |
|--------|---|---|---|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| D | С | В | Α | STROBE | E ₀ | E ₁ | E ₂ | E ₃ | E ₄ | E ₅ | E ₆ | E ₇ | E ₈ | E ₉ | E ₁₀ | E ₁₁ | E ₁₂ | E ₁₃ | E ₁₄ | E ₁₅ | W |
| Χ | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | х | Х | Х | Х | Н |
| L | L | L | L | L | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | L | L | L | L | Ι | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | L | L | Н | L | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | L | L | Н | L | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | L | Н | L | L | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | L | Н | L | L | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | L | Н | Н | L | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | L | Н | Н | L | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | Н | L | L | L | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | Н | L | L | L | Х | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | Н | L | Н | L | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | Н | L | Н | L | Х | Х | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | Н | Н | L | L | Х | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | Н | Н | L | L | Х | Х | Х | Х | Х | Х | Η | Х | Х | Х | Х | Х | Х | Х | Х | Х | L |
| L | Н | Н | Н | L | Х | Х | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Х | Н |
| L | Н | Н | Н | L | Х | Х | Х | Х | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | Х | L |
| Н | L | L | L | L | Х | Х | Х | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Х | Н |
| Н | L | L | L | L | Х | Х | Х | Х | Х | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | Х | L |
| Н | L | L | Н | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Х | Н |
| Н | L | L | Н | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н | Х | Х | Х | Х | Х | Х | L |
| Н | L | Н | L | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L | Х | Х | Х | Х | Х | Н |
| Н | L | Н | L | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Н | Х | Х | Х | Х | Х | L |
| Н | L | Н | Н | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | L | Х | Х | Х | Х | Н |
| Н | L | Н | Н | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Η | Х | Х | Х | Х | L |
| Н | Н | L | L | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Х | L | Х | Х | Х | Н |
| Н | Н | L | L | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Х | Н | Х | Х | Х | L |
| Н | Н | L | Н | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Х | Х | L | Х | Х | Н |
| Н | Н | L | Η | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Х | Х | Н | Х | Х | L |
| Н | Н | Η | Ш | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | L | Х | Н |
| Н | Н | Η | Ш | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н | Х | L |
| Н | Н | Н | Н | L | Х | Х | Х | Х | Х | Х | Χ | Х | Х | Х | Х | Х | Х | Х | Х | L | Н |
| Н | Η | Η | Τ | L | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Н | L |

When used to indicate an input condition, X = High logic level or low logic level.

Figure 3. <u>Truth tables.</u>

Device types 02 and 06

| | | | | 11 | NPUT: | S | | | | | | OUTPUTS | |
|---|---|---|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|---|
| С | В | Α | STROBE | D ₀ | D ₁ | D ₂ | D ₃ | D ₄ | D ₅ | D ₆ | D ₇ | Υ | W |
| Х | Х | Χ | Н | Х | Х | Х | Х | Х | Х | Х | Х | L | Н |
| L | L | L | L | L | Х | Х | Х | Х | Х | Х | Х | L | Н |
| L | L | L | L | Н | Х | Х | Х | Х | Х | Х | Х | Н | L |
| L | L | Н | L | Х | L | Х | Х | Х | Х | Х | Х | L | Н |
| L | L | Н | L | Х | Н | Х | Х | Х | Х | Х | Х | Н | L |
| L | Н | L | L | Х | Х | L | Х | Х | Х | Х | Х | L | Н |
| L | Н | L | L | Х | Х | Н | Х | Х | Х | Х | Х | Н | L |
| L | Н | Н | L | Х | Х | Х | L | Х | Х | Х | Х | L | Н |
| L | Н | Н | L | Х | Х | Х | Н | Х | Х | Х | Х | Н | L |
| Н | L | L | L | Х | Х | Х | Х | L | Х | Х | Х | L | Н |
| Н | L | L | L | Х | Х | Х | Х | Н | Х | Х | Х | Н | L |
| Н | L | Н | L | Х | Х | Х | Х | Х | L | Х | Х | L | Н |
| Н | L | Н | L | Х | Х | Х | Х | Х | Н | Х | Х | Н | L |
| Н | Н | L | L | Х | Х | Х | Х | Х | Х | L | Х | L | Н |
| Н | Н | L | L | Х | Х | Х | Х | Х | Х | Н | Х | Н | L |
| Н | Н | Η | L | Х | Х | Х | Х | Х | Х | Х | L | L | Н |
| Н | Н | Н | L | Х | Х | Х | Х | Х | Х | Х | Н | Н | L |

When used to indicate an input, X = Irrelevant. H = High level, L = Low level.

| | RESS UTS | С | ATA | INPUT | S | STROBE | OUTPUT |
|---|-------------|----------------|----------------|----------------|----------------|--------|--------|
| В | Α | C ₀ | C ₁ | C ₂ | C ₃ | G | Υ |
| Х | Χ | Х | Х | Х | Х | Н | L |
| L | L | L | Х | Х | Х | L | L |
| L | L | Н | Х | Х | Х | L | Н |
| L | Н | x L | | Х | Х | L | L |
| L | Н | Х | Н | Х | Х | L | Н |
| Н | L | Х | Х | L | Х | L | L |
| Н | L | Х | Х | Η | Х | Ĺ | Η |
| Н | Н | Х | Х | Х | Ĺ | L | Ĺ |
| Н | Н | Х | Х | Х | Н | Ĺ | Н |

Address inputs A and B are common to both sections. H = high level, L = low level, X = irrelevant.

Figure 3. <u>Truth tables</u> – Continued.

Device type 04

| | ress uts | | D inp | Outputs | | | |
|---|-------------|----------------|----------------|----------------|----------------|---|---|
| В | Α | C ₀ | C ₁ | C ₂ | C ₃ | Υ | W |
| L | L | L | Χ | Χ | Χ | L | Н |
| L | L | Н | Χ | Х | Χ | Н | L |
| L | Н | Χ | L | Х | Χ | L | Н |
| L | Н | Χ | Н | Х | Χ | Н | L |
| Н | L | Χ | Χ | L | Χ | L | Н |
| Н | L | Χ | Χ | Н | Χ | Н | L |
| Н | Н | Χ | Χ | Х | L | L | Н |
| Н | Н | Χ | Χ | X | Н | Н | L |

Address inputs A and B are common to both sections. H = High level, L = Low level, X = Irrelevant.

Device type 05

| Strobe (enable) | Select input | Da inp | | Output |
|--------------------|-----------------|----------------|----------------|--------|
| G | Α | B ₀ | B ₁ | Y |
| Н | Х | Х | Х | L |
| L | Н | Х | L | L |
| L | Н | Х | Н | Н |
| L | L | L | Χ | L |
| L | L | Н | Χ | Н |

Address A and strobe G are common to all sections. H = High level, L = Low level, X = Irrelevant.

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

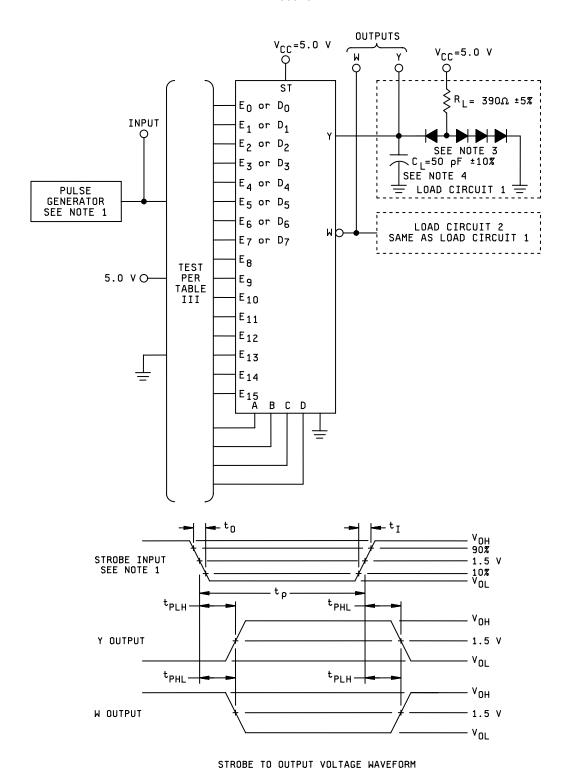
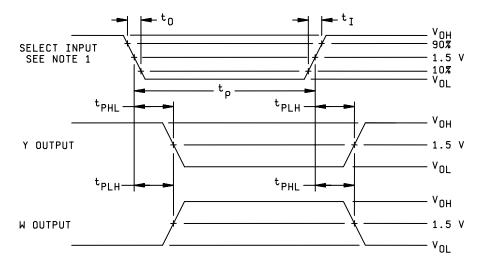
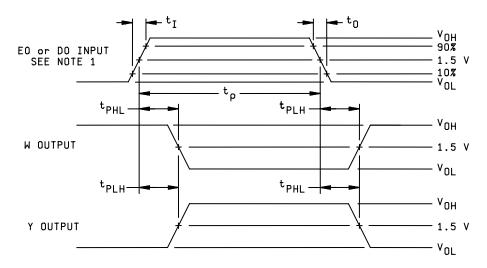


FIGURE 4. Switching test for device types 01, 02, and 06.



SELECT INPUT TO OUTPUT VOLTAGE WAVEFORM

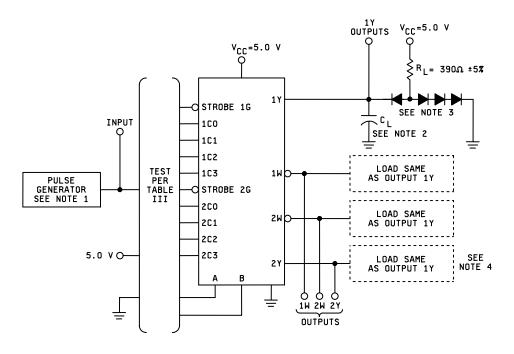


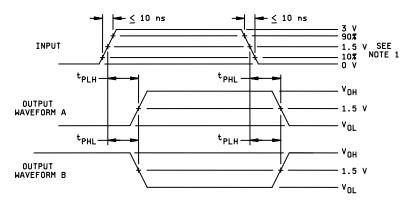
DATA INPUT TO OUTPUT VOLTAGE WAVEFORM

NOTES:

- 1. The input pulse has the following characteristics: V_{OH} = 3 V, V_{OL} = 0 V, t_1 = t_0 = 10 ns, t_p = 500 ns, PRR \leq 1 MHz, duty cycle = 50% \pm 15%, and generator $Z_{Out} \approx 50\Omega$.
- 2. C_L includes probe and jig capacitance.
- 3. All diodes are 1N3064 or equivalent.
- Load circuits on a given output are only required where the specific test given in table III indicates "OUT" on that output. Load circuits may otherwise be omitted.

FIGURE 4. Switching test for device types 01, 02, and 06 - Continued.





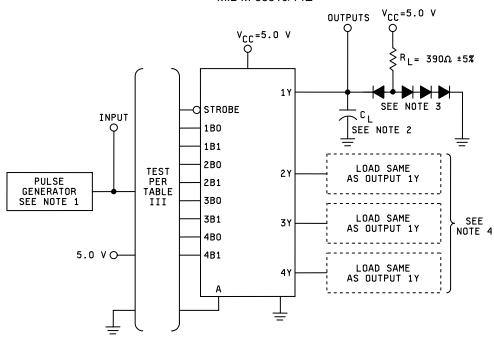
VOLTAGE WAVEFORMS

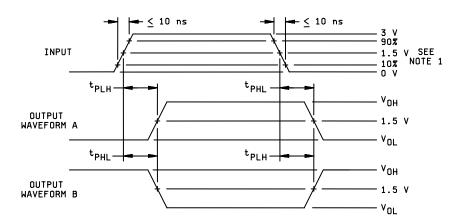
| Switching time | Output waveform |
|-------------------------------|-----------------|
| CN to Y (types 03 and 04) | A |
| CN to W (type 04 only) | В |
| A or B to Y (types 03 and 04) | А |
| A or B to W (type 04 only) | В |
| G to Y (type 03 only) | В |

NOTES:

- 1. The pulse generator has the following characteristics: PRR \leq 1 MHz, duty cycle = $50\% \pm 15\%$ and $Z_{out} \approx 50\Omega$.
- 2. $C_L = 50 \text{ pF} \pm 10\%$ and includes probe and jig capacitance.
- 3. All diodes are 1N3064, or equivalent.
- 4. Load circuits on a given output are only required where the specific test given in table III indicates "OUT" on that output. Load circuits may otherwise be omitted.

FIGURE 5. Switching test for device types 03 and 04.





VOLTAGE WAVEFORMS

| Input | Output waveform |
|--------|-----------------|
| A to Y | А |
| B to Y | А |
| S to Y | В |

NOTES:

- 1. The pulse generator has the following characteristics: PRR \leq 1 MHz, duty cycle = 50% \pm 15% and $Z_{out} \approx 50\Omega$.
- 2. $C_L = 50 \text{ pF} \pm 10\%$ and includes probe and jig capacitance.
- 3. All diodes are 1N3064 or equivalent.
- Load circuits on a given output are only required where the specific test given in table III indicates "OUT" on that output. Load circuits may otherwise be omitted.

FIGURE 6. Switching test for device type 05.

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be H \geq 2.0 V, or L \leq 0.8 V, or open).

| | Unit | > | > | >:::::::::::::::::::::::::::::::::::::: | É |
|-----------------|-------------------|-----------------|-----------------------|---|---|
| Test limits | Max | | 9.4 | r). | £ |
| Te | Min | 2.4 | | | <u>, , , , , , , , , , , , , , , , , , , </u> |
| | Meas. terminal | 8 | × | G D C D B A G C C D C B A C C C D C C D C C D C C C C C C C C C | |
| 12 | GND | GND | n | | |
| = | Ω | | GND | -12тА | ON |
| 10 | Μ | 8mA | 16mA | | |
| 6 | g | 2.0 V | 0.8 V | -12mA | GND |
| 80 | E ₀ | | 2.0 V | -12mA | > 4.0 |
| 7 | E1 | | | -12mA | > 4. |
| 9 | E2 | | | -12mA | V 4.0 |
| 5 | E3 | | | -12mA | > 4.0 |
| 4 | E4 | | | -12mA | > 4.0 |
| က | E5 | | | -12mA | V 4.0 |
| 2 | E ₆ | | | -12mA | V 4.0 |
| - | E7 | | | -12mA | V 4.0 |
| Cases J, K, | Test No. | - | 2 | e 4 6 9 6 6 7 7 7 8 6 6 7 7 8 6 7 8 6 8 6 7 7 8 6 7 8 6 7 8 6 7 8 6 7 8 7 8 | 4 2 2 2 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 |
| MIL- STD-883 | method | 3006 | 3007 | | 600: |
| 9 | эушрог | V _{ОН} | Vol | <u>0</u> | ۵ |
| 9 | dnosans | - | T _C = 25°C | | |

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be H \geq 2.0 V, or L \leq 0.8 V, or open).

| ø | Unit | ^ | ۸ | ^/ | > = | * | 3 3 | | : | * | n | ä | п | 'n | " | 39 | | n | " | " | * | 39 | , | | : 3 | ٧ | <u> </u> | * | " | " | " | " | " | n | я | " | | | = | " | ä | 27 | " | ,, | : 3 | : 3 | " | и |
|------------------|-----------------|-------|---------------------------------|------|----------|-------|-----|-----|----------------|----|----------------|----------------|-----|------------------|-----|----------|----|-------|-------|-------|-------|-----|-------|-----------------|-------|--------|----------|-------|-------|-------|-------|-------|-------|------|--------|-----------|--------|-------|-------|-------|----------|-------|-------|--------|------|------------|----------|-----------|
| Test limits | Max | | 0.4 | 15 | 2 4 | ¥ | 3 3 | : : | = | × | n | × | и | я | n | | | n | я | n | я | 9 | n | | : : | 4 | 0. | × | n | я | я | 31 | n | n | × | n | | = | n n | я | n | и | я | 9 | : 3 | : 3 | я | и |
| | Min | 2.4 | | | | | | | | | | | | | | | | | | | | | | | | 7 | ? | 7 | 3 | ä | × | 3 | 3 | ä | ä | 3 | | | 3 | ä | ä | × | 3 | 39 | : 3 | : 3 | 3 | и |
| Mose | terminal | W | W | < | (8 | ပ | ۵ (| ·9 | E ₀ | E1 | E ₂ | E ₃ | , ц | ţ ŭ | î î | E6 | E7 | E8 | Ш | F 1 | 2 ; | E11 | E12 | E ₁₃ | E14 | E15 | 0 | E1 | E2 | щ | Ē | ī L | î H | 1 1 | ì | | E3 | E10 | E11 | E12 | Щ 1 ° | 2 ; | ± ! | E15 | .D < | ∢ 0 | ם כ | ٥ |
| 24 | Vcc | 4.5 V | n | " | 3 | ¥ | | | : | ¥ | ¥ | ¥ | , | 3 | 3 | 1 | | ¥ | 3 | ¥ | " | | y | | . 3 | 7 2 7 | , , | ¥ | ¥ | ¥ | ¥ | * | ¥ | " | ¥ | ä | , | | ¥ | ¥ | ä | n | ¥ | | . 3 | : 3 | 3 | и |
| 23 | ъ В | | | | | | | | | | | | | | | | | -12mA | | | | | | | | | | | | | | | | | > > > | r O | | | | | | | | | | | | |
| 22 | E) | | | | | | | | | | | | | | | | | | -12mA | | | | | | | | | | | | | | | | | 7 7 | | | | | | | | | | | | |
| 21 | E ₁₀ | | | | | | | | | | | | | | | | | | | -12mA | | | | | | | | | | | | | | | | | ; | 0.4 \ | | | | | | | | | | |
| 20 | E11 | | | | | | | | | | | | | | | | | | | | -12m4 | | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | |
| 19 | E ₁₂ | | | | | | | | | | | | | | | | | | | | | 4 | -12mA | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | |
| 18 | E ₁₃ | | | | | | | | | | | | | | | | | | | | | | | -IZMA | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | |
| 17 | E ₁₄ | | | | | | | | | | | | | | | | | | | | | | | , | -12mA | | | | | | | | | | | | | | | | | 7 7 0 | | | | | | |
| 16 | E ₁₅ | | | | | | | | | | | | | | | | | | | | | | | | 4 | ¥1171- | | | | | | | | | | | | | | | | | 0.4 \ | r o | | | | |
| 15 | Α | | GND | 12m1 | | | | | | | | | | | | | | | | | | | | | | CND | G G | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 25.7 | | מאס מ | v :: | GND | 5.5 V | GND | 5.5 V | CINE | , r | | | 0.4 V | | |
| 41 | В | | GND | | -12mA | | | | | | | | | | | | | | | | | | | | | CND | 2 | GND | 5.5 V | 5.5 V | GND | GND | 5.5 \ | 75.5 | . כועל | | פואס : | 5.5 \ | 5.5 V | GND | GND | 75. | | 5 | | 7 7 | † | |
| 13 | ပ | | GND | | | -12mA | | | | | | | | | | | | | | | | | | | | CNO | 2 | × | 3 | 3 | 5.5 V | | 31 | ä | CNC | ָבָּ ס | | = | ä | 5.5 V | я | n | 3 | | | | 7 6 | v +: V |
| Cases J, K, Z | Test No. | - | 2 | 6 |) 4 | 2 | 1 0 | , , | ∞ | တ | 10 | 11 | 12 | i (2 | | <u> </u> | 15 | 16 | 17 | 18 | 5 6 | 2 6 | 0 70 | 17 | 77.5 | 23 | +7 | 25 | 26 | 27 | 28 | 29 | 30 | 3.3 | 33 | 33 | 00 | 34 | 35 | 36 | 37 | 38 | 30 | 9 9 | 0 ; | - 4 - c | 7 5 | 45 44 |
| MIL- STD-883 | method | 3006 | 3007 | | | | | | | | | | | | | | | | | | | | | | | 3000 | 6000 | z | × | ä | × | ä | 3 | × | 3 | 3 | | : | ¥ | 2 | n | 21 | ä | 3 | : 3 | | я | и |
| Odmy | 5 | МОН | Vol | 70. | <u>.</u> | 3 | | : : | : | = | × | ä | я | 3 | 3 | | | × | 3 | 3 | ä | = | 3 | : 1 | : 3 | | = | = | 3 | 3 | 3 | 3 | 3 | ä | 3 | 3 | , | | 4 | 3 | n | * | 3 | 8 | | : 3 | 3 | и |
| Subarous | 50.50 | - | $T_{\rm C} = 25^{\circ}{\rm C}$ | , | 35 | × | = = | | : | 3 | × | × | n | 3 | n | | | и | n | 3 | n | 3 | | | : : | ä | | 3 | × | × | n | * | 3 | n | 3 | " | | : | × | " | × | 2 | × | 3 | : 3 | | × | n |

See note at end of device type 01.

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| ts | Unit | Υп | 3 | 3 : | : 3 | | | = | 3 | 3 | n | × | | ä | 3 | ä | | × | × | | ä | ä | | ä | 3 | | 3 | = | 3 | | 3 | * | 39 | | ä | ä | × | 3 | 1 | | 3 | ä | ¥ | × | ä | | 3 | ä | 3 | 3 | * | n | | mA | МA | | | _ |
|------------------|----------------|-------|---------------------|----------|------|------------|----------------|-------|----------------|-------|-------|-----|-----------|----------------|-------|----|--------|----------|-----|-----|-----|----|------------|-----|----|-----|-----------------|-----|-------|-----|-----|-----|-----|-------|-------|-------|------|-------|-----|----------------|-------|-------|-------|-----|--------------|----|-----------------|-----|-----|-----|------------|-----|-----|------|-------|---|-------|-------------------|
| Test limits | Max | 40 | 3 | ¥ : | : 3 | | | : | z | ¥ | n | " | | 4 | 3 | 77 | | z | " | | = | n | | 3 | 3 | | 3 | 100 | | | 35 | n | 39 | | n | n | ä | 77 | 3 | | 3 | n | n | × | n | | ä | n | 39 | ¥ | ä | я | | -55 | 89 | | | |
| | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -20 | | | | |
| W d d | terminal | ტ | ∢ | ω ' | ပ (| י כ | E ₀ | Щ. | E ₂ | Е. | , т | i . | E2 | E ₆ | F. | ìı | Е | <u>е</u> | · : | E10 | E11 | | E12 | E13 | 2 | E14 | E ₁₅ | O |) < | ∢ | В | C |) (| ב | Ш | ű | ī ü | 7 1 | F3 | E ₄ | Es | Ë | , T | ìı | ا لل | E9 | E ₁₀ | E11 | E13 | 1 H | л 5 - £ | 1 L | E15 | ≯ | VCC | | | |
| 12 | GND | GND | n | 3 : | : 3 | | | = | ¥ | 35 | " | " | | 3 | 39 | * | | ¥ | " | | 39 | " | | 3 | 39 | | 3 | = | 3 | | 39 | n | , | | n | n | 39 | " | * | | 3 | 39 | " | ** | ä | | 3 | " | n | 39 | 3 | ä | | n n | ¥ | | | |
| 1 | D | | GND | GND | GND | 7.4 \ | 2.0 | = | 3 | ¥ | " | " | | 4 | 3 | | GIND | ¥ | n | | × | 77 | | * | 99 | | = | | | GND | GND | GND |) (| 2.0 < | = | n | ä | " | , | | 3 | 77 | n | | والح والح | | 3 | 79 | " | 39 | 3 | ä | | GND | 5.5 V | | | |
| 10 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | GND | | | | |
| o | 9 | 2.4 V | | | i | رن دن = | | = | 3 | ä | 3 | 3 | | = | 3 | 3 | | 3 | и | | 3 | я | | × | 3 | | = | = | 3 | | ä | я | 3 | | 3 | я | 3 | 3 | , | | ä | 3 | n | 3 | ä | | 3 | ä | 3 | 3 | 3 | × | | GND | 5.5 V | | | |
| 80 | E ₀ | | | | | 7 | V 4.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5.5 \ | | | | | | | | | | | | | | | | | | | GND | | | | |
| 7 | E1 | | | | | | | 2.4 \ | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | | |
| 9 | E ₂ | | | | | | | | 2.4 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | 75.5 | | | | | | | | | | | | | | | | | | | ed | | 7 |
| 2 | E ₃ | | | | | | | | | 2.4 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 2.0 | | | | | | | | | | | | | | | | | are omit | | TIMO OTC |
| 4 | E4 | | | | | | | | | | 2.4 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | i | 5.5 \ | | | | | | | | | | | | | | | | °C and Vi | | 2.7. 200 |
| 3 | E5 | | | | | | | | | | | 777 | ۲. ۲ ۲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | t Tr = 125 |) | 1 1 |
| 2 | E ₆ | | | | | | | | | | | | | 2.4 \ | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | o 1. excep | | n d avon |
| ~ | E7 | | | | | | | | | | | | | | 2.4 \ | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5.5 \ | | | | | | | | | | | | | Subaron | | o cirpordiro |
| Cases J, K, Z | Test No. | 45 | 46 | 47 | 84 6 | 9 d | OG I | 51 | 52 | 53 | 54 | u | e e | 26 | 22 | 0 | o o | 26 | 9 | 3 | 61 | 62 | 30 | 63 | 3 | 40 | 65 | 99 | | /9 | 89 | 69 | 1 0 | 2 | 7 | 72 | 73 | 2 - 1 | 4 | ري | 75 | 77 | 78 | 2 6 | n (| 00 | 81 | 82 | 83 | 84 | 82 | 9 8 | 8 | 87 | 88 | ions and limits as subgroup 1, except $T_C = 125^{\circ}C$ and V_{1C} are omitted | | ions and limits a |
| MIL- STD-883 | method | 3010 | n | 3 : | : 3 | : 3 | | : | 3 | я | 2 | 3 | | = | × | 3 | | ¥ | n | | 3 | × | | * | 3 | | = | = | 3 | | × | я | , | | 3 | я | 3 | 3 | | : | 3 | 3 | * | 3 | 3 | | 3 | = | * | 3 | * | 3 | | 3011 | 3005 | Same tests, terminal conditions | | terminal conditi |
| lodmy | 9 | IH | 3 | 3 | : : | | | : | 3 | ä | 3 | : | | | 3 | 3 | | 3 | ä | | 3 | ä | | 3 | 3 | | = | cHI | ZL. " | | 3 | 3 | 3 | | 3 | 3 | 3 | 3 | , | | 3 | 3 | 3 | 3 | 3 | | 3 | | 3 | 3 | * | 3 | | los | 201 | Same tests | | Same toore |
| Subarous | - Charles | _ | $T_C = 25^{\circ}C$ | 3 | : : | . 3 | | | 3 | × | ä | 3 | | 3 | 3 | 3 | | 3 | и | | 3 | × | | 3 | 3 | | = | = | | _ | * | я | 3 | | 3 | я | 3 | 3 | 1 | | × | 3 | ä | 3 | 3 | | 3 | 3 | 3 | 3 | * | 3 | | 3 | n | 2 | c | n |

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

| Supplied Supplied | Milk | Symbol STD-863 Case J. K. 13 14 15 16 17 | E ₁₅ E ₁₄ 17 2.4 V 2.4 V | | 24 V | | | | | | | |
|--|--|--|--|---|----------------|------------|-------|-------|----------------------|-----------|---------|-----|
| Michael Mich | March Marc | | E16 E14 | | 2.4 V | | | | | ┸ | | |
| Net 3010 465 600 600 240 600 | No. | I I I 3010 | 2.4 V 2.4 V | | 4.5 > 4.5 | | | ıci | | (D | 4 | |
| 1 | 1 | 1, | 2.4 \ 2.4 \ | | 4.5 > 4.5 | | | | ∀ M O | | | |
| 1 | 47 OND 54V OND 54V OND 54V OND 55V OND | 1 | 2.4 V 2.4 V | | V 4.2 | | | | m U | _ | | |
| 1 | 48 | 1 | 2.4 \ 2.4 \ | | > 4.2 | | | | ن | ~ | | = : |
| 1 | Second S | 1 | 2.4 V V 2.4 V | | 2.4 > 4.5 | | | | 3 | | | |
| 1 | 51 | Section Sect | 2.4 V V 2.4 V | | 2.4 V | | | | ء ب ح | | | 3 |
| 1 | 53 | 1, | 2.4 V | | 2.4 V | | | | <u>.</u> | 0 | | , |
| 1 | 54 GND 55V 55V 55V 55V 55V 55V 55V 55V 55V 55 | S | 2.4 V | | 2.4 V | | | | | _ | | , |
| 1 | 54 GND 55V GND | Color | 2.5 > 4.2 > 4.2 | | 24 > | | | | E2 | 2 | | |
| Second Color Seco | 54 GND 55 V GND GND 65 V GND | 1 | 2.4 V V 2.4 V | | 2.4 V | | | | E3 | 8 | | _ |
| 1 | 55 | 1 | 2.4 V | | 2.4 > | | | | " E4 | 4 | | = |
| 1 | 56 " GND 5.5 V GND CND GND CND GND | 1 | 2.4 \ \ 2.4 \ | | 2.4.5 V 4.5 | | | | E5 | D. | | * |
| 1 | 57 CND GND | HAZ GND | 2.5 > 4.2 > 4.2 > 4.2 | | V 4.2 | | | | " | | | " |
| 1 | 59 5.5 V GND 5.5 V GND 5.5 V GND GN | Section Sect | 2.4 V V 2.4 V | | V V V | | | | | | | * |
| Fig. | 58 5.5 V 5. | | 2.4 V | | V 4.2 | | | | . =7 | 7 | | |
| 1 | 59 55 V GND GND <td> HH2</td> <td>2.4 V</td> <td></td> <td>> 4.</td> <td></td> <td>></td> <td>> 4.2</td> <td></td> <td>80</td> <td></td> <td>=</td> | HH2 | 2.4 V | | > 4. | | > | > 4.2 | | 80 | | = |
| No. No. | 60 | Head of the color of the colo | 2.4 V V 2.4 V | | V 4.2 | > 4 > 4 | | | , EB | 6 | | 3 |
| 1 | 62 GND 65V 55V 6ND | Harry Gentle Ge | 2.4 V | | > 4.2 | | | | | | | n n |
| No. No. | 63 GND 6.55 GND 6.50 | HH2 | 2.4 V | | | | | | | 2 : | | * |
| High Fig. | 64 65V GND GND GND 24V | I I I I I I I I I I | 2.4 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | | | | | , - | | | - |
| Incomplete and confidence and limited as subgroups to except the feets, terminal conditions and limited as subgroup to except to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets, terminal conditions and limits as subgroup to except the feets. | 64 " " GND | I | 2.4 V V 2.4 V | > | | | | | E13 | 2 | | |
| 1 | 64 " GND | I | > 4.5 | | | | _ | | E13 | 3 | | _ |
| Introduction Fig. | 66 GND | IHA2 | | | | | | | E ₁ , | 4 | | 3 |
| 1 1 1 2 2 2 2 2 2 | 66 GND GND GND 55 V GND 67 GND 55 V GND GND 68 GND GND 68 GND GND 68 GND | IIII-2 | V 5. V ON | | | | | | " E₁ŧ | 5 | | u |
| Color Colo | 67 GND 670 6.5 V GND 680 6.5 V GND 690 690 690 690 690 690 690 690 690 690 | 68 GND 5.5 V GND GND 5.5 V GND GND 5.5 V GND GND 5.5 V GND | 2.5 V ON | | | | | | 9 " | (D | 1 | 00 |
| Color Colo | 68 GND 65V GND GND 71 GND 71 GND 71 GND 71 GND 71 GND 71 GND GND 71 GND GND 72 GND GND 65V GND | Section Sect | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | - | | | ۲, | _ | | 3 |
| Carbon C | 69 5.5 V GND GND GND GND GND F. F. C. | 1 | ON5 V 5. | _ | | | | | щ щ | | | z z |
| 1 | 70 GND | 1 | ON5 V 3: | | | | | | O " | | | * |
| 1 | 71 6.5 V 6.5 V GND 6.5 V GND 7.5 V GND 7.5 V GND 7.5 V GND 7.5 V GND 6.5 V GND 6.5 V GND 6.5 V GND 7.5 V GND 6.5 V G | 1, | 75. OND | | | | | | | _ | | n |
| 1 | 72 | 72 | | | | | | | я П | | | ı, |
| 1 | 73 | 7.7 GND 5.5 V GND 6.5 V GND 7.7 GND 6.5 V | | | | | | | , | | | * |
| 1 | 74 " GND 5.5 V GND 75 V GND 77 | Color Colo | > 5 | | | | | | , 1 | | | 3 |
| 1 | 75 GND 6.5 V GND 75 V GND 75 V GND 75 V GND 6.5 V GND 6. | 1 | | | | | | | " E3 | N 6 | | , |
| 1 | 75 " 55V GND 55V GND 6ND 6ND 6ND 6ND 6ND 6ND 6ND 6ND 6ND 6 | 1, | \ 5. | | | | | | , EA | . 4 | | u u |
| 1 | 77 | Charles | QNO | | | | | | E5 | · 10 | | " |
| 1 | 78 | Carlo Carl | .5 \ | | | | | | . Ee | 9 | | , |
| 1 | 79 5.5 V 5.5 V 6.5 S V 6.0 C C C C C C C C C C C C C C C C C C C | ## 100 CMD 100 | ONS | | | | | | " E7 | | | n n |
| 1 | 80 | 80 5.5 V GND 6.5 V 6.5 V GND 6.5 V | .5 \ | | | | | 2.5 < | E8 | 8 | | 3 |
| Same tests, terminal conditions and limits as subgroup 1, exact part at the stack of the stack | 81 | S | QNO | | | | 2.5 V | | E9 | 6 | | 3 |
| Same tests, terminal conditions and limits as subgroup 1, except in a subgroup 2, except in a subgroup 3, except in a subgroup 2, except in a subgroup 3, except in a subgroup 4, except in a subgro | Signature Sign | S | > : : | | | 5.5 \ | | | E ₁ (| 0 | | |
| Same tests, terminal conditions and limits as subgroup 1, except TC = -55°C and V _{IC} are minal conditions and limits as subgroup 1, except TC = -55°C and V _{IC} are omitted. | 84 | S | | i | 2.5 | | | | | _ | | |
| 1 | 85 " GND GND 5.5 V 5.5 V 8.6 CND GND GND 5.5 V 8.8 E.5 V 8.6 CND GND GND GND GND GND GND GND GND GND G | | | | | | | | | 12 | | |
| " " 86 " GND GND 5.5 V " E15 " E15 | 86 " GND GND GND " " E14 87 GND GND GND GND " " E15 88 5.5 V 5.5 V 5.5 V C and V _{IC} are omitted. 98 5.5 V 5.5 V 5.5 V C and V _{IC} are omitted. | S | , r | > | | | | | | e : | | 3 |
| I _{OS} 3011 87 GND GND GND GND GND GND GND GND CND CND </td <td>87 GND GND GND GND W -20 88 5.5 V 5.5 V 5.5 V 1.5 V " V_{CC} ons and limits as subgroup 1, except T_C = 125°C and V_{IC} are omitted. " V_{CC} "</td> <td>l_{OS} 3011 87 GND GND GND I_{CC} 3005 88 5.5 V 5.5 V</td> <td>5.5 \</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4 Ľ</td> <td></td> <td>*</td> | 87 GND GND GND GND W -20 88 5.5 V 5.5 V 5.5 V 1.5 V " V _{CC} ons and limits as subgroup 1, except T _C = 125°C and V _{IC} are omitted. " V _{CC} " | l _{OS} 3011 87 GND GND GND I _{CC} 3005 88 5.5 V 5.5 V | 5.5 \ | | | | | | | 4 Ľ | | * |
| l _{CC} 3005 88 5.5 V 5.5 V 5.5 V 68 88 5.5 V 6 68 88 5.5 V 6 68 88 6.5 V 6 69 68 89 6.5 V 6 69 68 68 69 69 69 69 69 69 69 69 69 69 69 69 69 | 88 5.5 V 5.5 V 5.5 V | I _{CC} 3005 88 5.5 V 5.5 V | QNS | | | | | | Α | | - | - |
| Same tests, terminal conditions and limits as subgroup 1, except $T_C = 125^{\circ}C$ and V_{IC} are omitted. Same tests, terminal conditions and limits as subgroup 1, except $T_C = -55^{\circ}C$ and V_{IC} are omitted. | ons and limits as subgroup 1, except T_C = 125°C and V_{IC} are omitted. In small limits as subgroup 1, except T_C = -55°C and V_{IC} are omitted. | | .5 V | | | | | | , , | Ç, | 9 | |
| Same tests, terminal conditions and limits as subgroup | ons and limits as subgroup | Same tests terminal conditions are similar as subary | o = 105°C and Vic are omitted | | | | - | - | | - | - | - |
| | Same tests, terminal conditions and limits as subgroup 1, except T _C = -55°C and V _{IC} are omitted. | Carrie tests, terrinial conditions and innes as subgroup | C = 123 Cand vic ale onnued. | | | | | | | | | |
| | المراجعين المراج | Same tests, terminal conditions and limits as subgroup 1, except $T_C = -55^{\circ}C$ and V_{IC} are omitted. | $_{\rm C}$ = -55°C and $\rm V_{IC}$ are omitted. | | | | | | | | | |

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TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | Unit | | 20 | 2 = | 2 2 | | 2 = | | SU | ns |
|------------------|----------------|-----------------------|--------|----------|--------|------------|-------------|--------|-------|--------|
| Test limits | Max | | 37 | 5 = | | . 6 | n | | 34 | 28 |
| Tes | Min | ેંગ | α |) = | 8 3 | : c | 0 = | | . 9 | 9 |
| v. | terminal | | W ot A | B to W | C to W | A 3 | B to W | C to W | × × × | G to W |
| M | | | - | | Ö | - | | 5 6 | 9 5 | G |
| 12 | GND | Q 0 | GND | , , | | | 3 " | | 3 | 3 |
| 1 | ۵ | □ :::::::::: | CIND | , , | * 3 | ≥ 2 | 3 5 7 | 3 | GND | GND |
| 10 | * | <u> </u> | ΕİC |)) = | 2 2 | . <u>F</u> | 5 = | | OUT | DOUT |
| 6 | ŋ | α | CINE | , , | 2 2 | |] | | Z | Z |
| 8 | E ₀ | ш ∢ | GND |) | 3 3 | : 2 | <u> </u> | | 5.0 V | 5.0 V |
| 7 | E1 | m < | 20.7 | | | | > 0.0 | | | |
| 9 | E2 | ω ∢ | | 5.0 V | | | 5.0 V | | | |
| 2 | E ₃ | ω ∢ | | | | | | | | |
| 4 | E4 | ω ∢ | | | 5.0 V | | | 5.0 V | | |
| е | Es | ш ∢ | | | | | | | | |
| 7 | Ee | ω ∢ | | | | | | | | |
| - | E7 | D | ; | | | | | | | |
| Cases J, K, Z | Test No. | Truth 3014 89 test | 122 | 123 | 124 | 125 | 127 | 128 | 130 | 131 |
| MIL- STD-883 | method | 3014 | 3003 | (Fig 4) | | : = | = | 3 3 | : 3 | ä |
| Symbol | 5 | Truth table test test | , | Ť. | 3 3 | | . FH | 3 3 | tour? | 1 H |
| Subaroup | | T _C = 25°C | | 2 | 3 : | : : | = | 3 3 | | 29 |

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| _ | | Т | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | _, | | | | | | 1 | | | | _ | _ |
|------------------|-----------------|-------|---------------------------------|------|-----|-----|-----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|----------|-----|-----|------|-----|----------------|------|-----|------|------|-----|-----|-----|-----|-----|-----|--|--------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| ø | Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ns | ä | 3 | n | SU | ä | ä | я | SU | SU |
| Test limits | Мах | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37 | × | 3 | 3 | 39 | ¥ | z | n | 34 | 28 |
| ' | Min | | | | | | | | | | | | | | | | 3/ | i | | | | | | | | | | | | | | | | | • | 80 | ä | × | и | 8 | n | ä | ш | 9 | 9 |
| M | terminal | _ | | | | | | | | | | | | | | | _ | _ | _ | | | | | | | | | | | | | | _ | , | | A to W | B to W | C to W | D to W | A to W | B to W | C to W | D to W | G to W | G to W |
| 24 | Vcc | 4.5 V | × | ¥ : | : : | | = | 3 | ¥ | × | я | × | × | × | п | n | 3 | ¥ | я | я | ¥ | × | ä | × | × | × | × | n | ä | я | × | я | ä | и | | 5.0 V | ¥ | 3 | 3 | 5.0 V | 27 | × | и | " | я |
| 23 | E ₈ | | | | | | | | | | | | | | | | | | ш | ۱ ∢ | : | | | | | | | | | | | | | | • | | | | 5.0 V | | | | 5.0 V | | |
| 22 | E9 | | | | | | | | | | | | | | | | | | | | α | ۵ ۵ | (| | | | | | | | | | | | • | | | | | | | | | | |
| 21 | E ₁₀ | | | | | | | | | | | | | | | | | | | | | | α | ۵ ۵ | (| | | | | | | | | | | | | | | | | | | | |
| 20 | E ₁₁ | | | | | | | | | | | | | | | | | | | | | | | | α | 1 4 | : | | | | | | | | | | | | | | | | | | |
| 19 | E ₁₂ | | | | | | | | | | | | | | | | | | | | | | | | | | α | > | C | | | | | | | | | | | | | | | | |
| 18 | E ₁₃ | | | | | | | | | | | | | | | | | | | | | | | | | | | | α | 1 ∢ | | | | | | | | | | | | | | | |
| 17 | E ₁₄ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | В | ∢ | | | • | | | | | | | | | | |
| 16 | E ₁₅ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | В | A | | | | | | | | | | | |
| 15 | ∢ | | В | ω. | ∢ < | ∢ | ш | ш | ⋖ | ∢ | В | В | ∢ | ∢ | В | Ф | < | < | <u> </u> | ι α | 1 4 | < ⊲ | (α | ממ | ۵ ۵ | . ⊲ | (11 | ם | ۵ ۵ | < ∢ | В | В | ∢ | A | | Z | GND | ä | 3 | Z | GND | ä | 3 | GND | GND |
| 14 | В | | В | | : : | | ∢ : | = | 3 | n | В | n | 3 | n | ۷ | " | n | n | В | " | " | n | ٥ | ۲ ۽ | n | " | α |) = | n | n | ۷ | " | 3 | n | | GND | z | GND | GND | GND | Z | GND | GND | GNĐ | GND |
| 13 | С | | В | | : : | | = | 3 | ¥ | n | ∢ | n | ¥ | ¥ | n | n | * | я | В | ۱ ۳ | ¥ | " | n | * | " | ¥ | ۵ | (= | n | n | n | n | ä | п | c = -55°C. | GND | GND | Z | GND | GND | GND | Z | GND | GNĐ | GND |
| Cases J, K, Z | Test No. | 68 | 06 | 91 | 92 | 50 | 94 | 92 | 96 | 26 | 86 | 66 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 90 5 | 5 7 | - - | 17 - | 1 7 | 21.7 | | 116 | 117 | 118 | 119 | 120 | 121 | Repeat subgroup 7 at $T_C = 125^{\circ}C$ and $T_C = -55^{\circ}C$. | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 |
| MIL- STD-883 | method | 3014 | 3 | а : | | | = | * | 3 | 3 | 3 | * | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | ä | 3 | 3 | * | 3 | 3 | 3 | * | 3 | * | 3 | я | group 7 at T _C | 3003 | (Fig 4) | 3 | 3 | = | | 3 | 3 | n | ä |
| lodmyS | 5 | Truth | table | test | : : | | = | = | 3 | 3 | 3 | × | 3 | 3 | ä | 3 | 3 | 3 | 3 | 3 | 3 | × | я | 2 | × | × | 3 | 3 | 3 | 3 | 3 | ä | 3 | 11 | Repeat sut | tPHL1 | 3 | 3 | * | tp.H1 | | n | " | tPHL2 | tPLH2 |
| diopolis | 5000 | 7 | $T_{\rm C} = 25^{\circ}{\rm C}$ | з : | : : | : : | = | * | 3 | 4 | 3 | * | 4 | 4 | 4 | 3 | ¥ | 2 | 3 | * | * | 3 | 3 | 2 | 3 | 3 | * | 3 | 4 | 8 | 3 | * | 4 | n | 8 | 6 | T _C = 25°C | * | * | | = | 4 | * | n | u |

See note at end of device type 01

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | . = | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | T | |
|------------------|----------------|---------------------|---------------------|---------------------|----------|---------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|-----------------------|----------|----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|---------|----------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|--------|------------|--------|-------------|--------|------------|-------------|--------|
| its | Unit | ns | 3 3 | | 3 | 3 | 3 | 3 | = | 2 2 | : : | : 3 | 4 | 3 | 3 | ns | 2 | = | | | 3 | и | ä | ä | 3 | 3 : | = : | | 3 | su | 3 | = = | • | = | 3 | : 3 | us | ns |
| Test limits | Мах | 18 | 3 3 | : : | 3 | ¥ | ä | ä | ä | 3 3 | : : | : : | × | ¥ | ¥ | 24 | ä | 3 | 3 3 | : : | ¥ | ä | n | ¥ | ¥ | z : | | : = | 3 | 40 | ä | | | 43 | = | : : | 37 | 32 |
| | Min | က | з : | : = | 3 | × | 3 | = | = | 3 3 | : : | : 3 | = | 3 | ä | 3 | ä | = | 3 3 | : : | ä | × | = | ä | ä | = : | : : | | = | 8 | = | : : | | = | | | 9 | 9 |
| M | terminal | E ₀ to W | E ₁ to W | E ₂ to W | E3 to W | E, to W | E ₆ to W | E ₇ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E12 to w | F13 to W | E ₁₅ to W | E ₀ to W | E ₁ to W | E ₂ to W | E ₃ to W | E ₄ to W | E5 to W | E, to W | E _s to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₅ to W | A to W | B to W | C to W | D to W | A to W | B to W | C to W | G to W | G to W |
| 12 | GND | GND | 3 3 | : 3 | 3 | z | ä | 2 | 3 | 2 3 | : : | : : | ä | ä | 3 | я | 3 | z | 3 3 | : : | z | 3 | n | 3 | 3 | = : | : : | . 3 | × | я | 3 | | | z | 3 | : 3 | и | и |
| 1 | ٥ | GND | з : | | : | = | ä | 3 | 5.0 V | z : | : : | | ¥ | ä | ä | GND | 3 | 3 | = : | | z | 3 | 5.0 V | ä | = | = : | : : | : : | 3 | GND | 3 | * : | Z | GND | = | : <u>Z</u> | GND | GND |
| 10 | * | DUT | 3 3 | . 4 | ä | 3 | ä | 3 | 3 | 3 3 | | | ä | 3 | 3 | DUT | 3 | z | a : | | 3 | ä | ä | 8 | 3 | 3 1 | : : | | 3 | OUT | ä | | | z | = | : 3 | OUT | OUT |
| 6 | ŋ | GND | 3 3 | : 3 | 3 | * | ä | 3 | 3 | 2 : | : : | : : | z | ¥ | × | 3 | * | 3 | 3 3 | : : | × | ä | × | 3 | 3 | = : | : : | : 3 | 3 | GND | ä | 3 3 | | 3 | 3 | : : | Z | Z |
| 80 | Б. | Z | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | GND | 3 | 2 2 | | z | 3 | : 3 | 5.0 V | 5.0 V |
| 7 | Ę | | z | | | | | | | | | | | | | | z | | | | | | | | | | | | | 5.0 V | | | | | | | | |
| 9 | E ₂ | | : | z | | | | | | | | | | | | | | Z | | | | | | | | | | | | | 5.0 V | | | | 5.0 V | | | |
| 2 | E ₃ | | | 2 | <u> </u> | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | | | | |
| 4 | 4 | | | | z | : | | | | | | | | | | | | | | z | | | | | | | | | | | | 5.0 V | | | | 2.0 V | | |
| ю | Es | | | | | Z | | | | | | | | | | | | | | - | ≧ | | | | | | | | | | | | | | | | | |
| 2 | E ₆ | | | | | | z | | | | | | | | | | | | | | Z | <u> </u> | | | | | | | | | | | | | | | | |
| 1 | E7 | | | | | | | Z | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | |
| Ä, | 1 | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ı | | | | | |
| Cases J, K, Z | Test No. | 132 | 133 | 134 134 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 8 4 | + + + + + | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 557 | 155 | 156 | 157 | 158 | 159 | 160 | 161 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 172 | 173 |
| MIL- Cases Z | 1 | | (Fig 4) 133 | 134 | 136 | 137 | 138 | 139 | 140 | 141 | 247 | : . 143 | * 44 7 | . 146 | 147 | 148 | . 149 | . 150 | 151 | 152 | 152 | 155 | 156 | 157 | | 159 | 160 | | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 172 | " 173 |
| | method | | (Fig 4) | 134 | 136 | 137 | 138 | . 139 | . 140 | 141 | | : : : | | 3 47 | | t _{PLH3} " 148 | 3 | " 150 | 151 | 152 | 193 | | , 156 | " 157 | . 158 | 159 | 160 | 101 | | tPHL1 " 164 | | 166 | . 167 | tPLH1 " 168 | 3 | 170 | tpHL2 " 172 | ä |

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | | П | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | \neg | | |
|------------------|-----------------|---------|-----------|---------|---------|------|-------|---------|---------------------|---------------------|---------------------|---------------------|----------------------|--------|-----|----------|----------------------|----------------------|----------------------|---------|---------|---------|---------|---------------|-----------|---------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| s | Unit | us | 3 | 35 | 3 | ä | 3 | 3 | : | 3 | 3 | ä | n | " | " | 25 | : | ä | 3 | ns | ä | я | ä | ä | 3 | 1 | : | ä | 3 | ä | ä | я | ä | ä | ä | 3 | su | ä | ä | " | " | * | ¥ | я | ns | SU |
| Test limits | Max | 18 | | 3 | 3 | = | = | 3 | | × | 3 | × | 3 | = | ä | 3 | | 3 | ä | 24 | | 3 | = | × | 3 | 3 | | = | 3 | 3 | ä | ä | ä | ä | 3 | 3 | 40 | ä | ä | = | 43 | 3 | : | ä | 37 | 32 |
| | Min | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | ä | n | ä | я | 3 | | 4 | 3 | 3 | | 3 | ä | * | 3 | | | 3 | 3 | 3 | 3 | ä | 3 | ä | * | 3 | 8 | ä | ä | 3 | n | * | 3 | 3 | 9 | 9 |
| W av | terminal | Fo to W | E, to W | F. to W | F, to W | , to | 5 4 5 | E5 to w | E ₆ to W | E ₇ to W | E ₈ to W | E _o to W | F ₁₀ to W | 1 to W | 2 4 | E12 to w | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | Eo to W | F, to W | F, 10 W | E2 to W | , to w | 1 5 10 VV | E5 to w | E ₆ to W | E ₇ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | A to W | B to W | C to W | D to W | A to W | B to W | C to W | D to W | G to W | G to W |
| 24 | Vcc | 5.0 V | 3 | 3 | 3 | z | 3 | 3 | | 3 | 3 | ä | × | 3 | 3 | 3 | | 3 | ä | n | 3 | * | ä | 3 | 3 | | | 3 | 3 | 3 | 3 | × | 3 | ä | 3 | 3 | n | ä | ä | 3 | n | 3 | 3 | n | 3 | = |
| 23 | E ₈ | | | | | | | | | | z | | | | | | | | | | | | | | | | | | z | | | | | | | | | | | 5.0 V | | | | 5.0 V | | _ |
| 22 | E ₉ | , | | | | | | | | | | z | | | | | | | | | | | | | | | | | | z | | | | | | | | | | | | | | _ | | _ |
| 21 | E ₁₀ | : | | | | | | | | | | | z | | | | | | | | | | | | | | | | | | z | | | | | | | | | | | | | _ | | |
| 50 | E11 | | | | | | | | | | | | | z | | | | | | | | | | | | | | | | | | z | | | | | | | | | | | | | | |
| 2 | | - | | | | | | | | | | | | _ | | | | | | | | | | | | | | | | | | _ | | | | | | | | | | | | | | |
| 19 | E ₁₂ | | | | | | | | | | | | | | 2 | = | | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | |
| 18 | E ₁₃ | | | | | | | | | | | | | | | 3 | Z | | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | |
| 17 | E ₁₄ | | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | | Z | | | | | | | | | | | |
| 16 | E ₁₅ | | | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | | Z | | | | | | | | | | |
| 15 | ۷ | GND | 5.0 V | GNB | 5.0 \ | CNC | 2 2 | > 0.0 | GND | 2.0 \ | GND | 5.0 V | GND | > 0 | | | 2.0 < | GND | 5.0 V | GND | 5.0 \ | GND | > 0 | י בו בו | | 20.0 | GND | 2.0 \ | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | Z | GND | GND | GND | Z | GND | GND | GND | GND | GND |
| 41 | В | GND | GND | 20 \ | 5.0 V | CNC | | פואס ל | 2.0 < | 2.0 V | GND | GND | 5.0 V | > 0 | 200 | בו בי | O CENT | 5.0 V | 5.0 V | GND | GND | 20.0 | > 0 5 | ָר באַ באַ | | 2 2 2 | 2.0 \ | 2.0 \ | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | Z | GND | GND | GND | Z | GND | GND | GND | GND |
| 13 | O | GND | = | 3 | ä | 70.5 | · · | 3 | | × | GND | ä | ä | ä | > | > = | | × | × | GND | 4 | я | ä | > 0 2 | > = | | | 3 | GND | × | ä | ä | 5.0 V | × | ä | 3 | GND | GND | z | GND | GND | GND | z | GND | GND | GND |
| Cases J, K, Z | Test No. | 132 | 133 | 134 | 135 | 136 | 7 2 2 | 13/ | 138 | 139 | 140 | 141 | 142 | 143 | 7 7 | <u> </u> | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 15.2 | 201 | 2 : | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 |
| MIL- STD-883 | method | 3003 | (Fig 4) | | 3 | ä | я | 3 | | 2 | n | я | я | 3 | 3 | 3 | | 3 | 3 | n | 3 | 3 | я | z | 3 | | | я | я | 3 | я | 3 | я | 3 | ä | ä | 3 | 3 | 3 | 3 | 3 | 3 | * | я | 3 | 2 |
| lod my S. | | 4 | ř 2 = | ä | 3 | * | 3 | 3 | | ¥ | n n | " | n | 2 | 3 | 3 | | ¥ | ä | ţ, | 2 * | 3 | 2 | * | * | ì | | , | 3 | * | 3 | ä | 3 | × | * | 3 | tPHL1 | * | × | 2 | tPLH1 | į | 4 | × | tPHL2 | to us |
| anozodnis | 5 | o | Tc = 25°C | ; | * | n | 3 | " | : | 3 | n | n | n | 2 | 3 | * | : | 3 | * | 3 | 3 | ä | × | 3 | × | 3 | | × | n | " | * | n | n | ä | я | я | 10 | T _C = 125°C | 3 | = | * | " | 4 | n | n | 3 |

See note at end of device type 01

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | ı — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|----------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| ω. | Unit | us | 3 | 3 | ä | ä | * | ä | * | ä | ä | 3 | 3 | 3 | ä | * | 3 | su | ä | * | ä | ä | 3 | * | ä | * | * | * | * | ä | 3 | * | 3 | |
| Test limits | Max | 23 | = | = | z | ¥ | 3 | ¥ | = | × | 3 | = | 3 | 3 | 3 | 3 | = | 30 | × | = | = | = | ¥ | = | z | 3 | = | 3 | ¥ | × | 3 | 3 | 3 | |
| | Min | က | ¥ | ¥ | ¥ | × | ä | × | 3 | ¥ | n | ¥ | ä | ä | n | ä | × | 3 | ¥ | 3 | ¥ | ¥ | × | × | ¥ | 3 | ä | 3 | ¥ | ¥ | ä | × | 3 | |
| Meas | terminal | E ₀ to W | E ₁ to W | E ₂ to W | E ₃ to W | E ₄ to W | E ₅ to W | E _e to W | E ₇ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | E ₀ to W | E ₁ to W | E ₂ to W | E ₃ to W | E ₄ to W | E ₅ to W | E ₆ to W | E ₂ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | |
| 12 | GND | GND | 3 | 3 | 3 | ä | 3 | z | 3 | ä | ä | ä | 3 | ä | ä | я | 3 | = | ä | 3 | ä | ä | 3 | 3 | 3 | 3 | 3 | 3 | ä | ä | ä | ä | 3 | |
| 7 | ٥ | GND | 3 | 3 | z | z | 3 | 3 | 3 | 5.0 V | ä | ä | 3 | ä | ä | ä | 3 | GND | z | 3 | ä | ä | 3 | ä | z | 5.0 V | 3 | 3 | ä | z | ä | ä | 3 | |
| 10 | 8 | OUT | 3 | 3 | 3 | 3 | 4 | × | 3 | = | 3 | 3 | 3 | 3 | 3 | 4 | 3 | = | = | 3 | 3 | 3 | 2 | = | 3 | 3 | 3 | 3 | 3 | = | 3 | 3 | 3 | |
| 6 | ŋ | GND | 3 | 3 | 3 | × | 3 | 3 | 3 | 3 | я | ä | 3 | ä | я | ä | 3 | = | 3 | 3 | ä | ä | 3 | 3 | 3 | 3 | 3 | 3 | ä | 3 | ä | 3 | 3 | |
| 8 | E ₀ | z | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | |
| 7 | E1 | | Z | | | | | | | | | | | | | | | | z | | | | | | | | | | | | | | | |
| 9 | E ₂ | | | z | | | | | | | | | | | | | | | | z | | | | | | | | | | | | | | |
| 2 | E3 | | | | Z | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | |
| 4 | E4 | | | | | Z | | | | | | | | | | | | | | | | z | | | | | | | | | | | | 5°C. |
| က | Es | | | | | | Z | | | | | | | | | | | | | | | | Z | | | | | | | | | | | 3- = J |
| 2 | Ee | | | | | | | z | | | | | | | | | | | | | | | | z | | | | | | | | | | n 10 exc |
| ~ | E7 | | | | | | | | z | | | | | | | | | | | | | | | | z | | | | | | | | | Salbaron |
| Cases J, K, Z | Test No. | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | Same tests: terminal conditions and limits as subaroup 10 except $T_C = -55$ °C. |
| | method | 3003 | (Fig 4) | 3 | 3 | я | 3 | ä | * | 3 | 3 | 3 | я | 3 | 3 | ä | я | | = | * | 3 | 3 | * | 3 | 3 | ä | 3 | ä | * | 3 | 3 | ä | я | terminal condit |
| Symbol | 6 | tPHL3 | 3 | 3 | ¥ | × | ä | ä | 3 | = | z | 2 | × | 3 | z | 3 | ä | фГНЗ | = | 3 | 2 | 2 | = | 3 | ¥ | 3 | 3 | 3 | ¥ | = | 3 | 2 | * | Same tests |
| Subdroup | 5 | 10 | T _C = 125°C | * | * | , | n | 3 | 4 | * | = | 2 | * | 3 | = | я | я | | = | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | я | 1 |

TABLE III. Group A inspection for device type 01 – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | Unit | su | n | n | 3 | n | n | n | n | n | n | ä | ä | n | n | ä | ш | su | 3 | * | n | n | ä | 3 | ä | n | n | " | ¥ | n | n | n | п | |
|------------------|-----------------|---------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---|
| Test limits | Max | 23 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 11 | 30 | 3 | 3 | 3 | × | 3 | 3 | 3 | 3 | 3 | 3 | ä | 3 | 3 | 3 | 11 | |
| | Min | 3 | 3 | 3 | ¥ | 3 | ä | n | 3 | 3 | 3 | 3 | ä | ä | 3 | 3 | n. | 3 | = | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | ä | 3 | * | 3 | n. | |
| Meas | terminal | E ₀ to W | E ₁ to W | E ₂ to W | E ₃ to W | E ₄ to W | E ₅ to W | E ₆ to W | E ₇ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | E ₀ to W | E ₁ to W | E ₂ to W | E ₃ to W | E ₄ to W | E ₅ to W | E ₆ to W | E ₇ to W | E ₈ to W | E ₉ to W | E ₁₀ to W | E ₁₁ to W | E ₁₂ to W | E ₁₃ to W | E ₁₄ to W | E ₁₅ to W | |
| 24 | Vcc | 2.0 V | " | 3 | 3 | × | ä | × | n | × | ä | * | ä | ä | n | 3 | п | | * | 3 | × | × | * | ä | 3 | n | n | × | " | × | " | × | п | |
| 23 | E8 | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | | | | | | | | |
| 22 | E9 | | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | | | | | | | |
| 21 | E ₁₀ | | | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | | | | | | |
| 20 | E11 | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | | | | | |
| 19 | E ₁₂ | | | | | | | | | | | | | z | | | | | | | | | | | | | | | | Z | | | | |
| 18 | E13 | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | | | |
| 17 | E ₁₄ | | | | | | | | | | | | | | | z | | | | | | | | | | | | | | | | Z | | |
| 16 | E ₁₅ | | | | | | | | | | | | | | | | Z | | | | | | | | | | | | | | | | Z | 55°C. |
| 15 | ٧ | GND | 5.0 V | GND | 2.0 \ | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | sept T _C = - |
| 14 | В | GND | GND | 2.0 \ | 2.0 \ | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | oup 10 exc |
| 13 | С | GND | n | n | ¥ | 5.0 V | n | n | п | GND | n | × | n | 5.0 V | п | я | и | GND | × | × | я | 5.0 V | × | n | я | GND | n | n | × | 5.0 V | n | я | и | s as subgr |
| Cases J, K, Z | Test No. | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | Same tests, terminal conditions and limits as subgroup 10 except $T_{\rm C}$ = -55°C. |
| MIL- STD-883 | method | 3003 | (Fig 4) | я | × | ä | ä | 3 | ä | ä | × | я | n | ä | ä | ä | ш | = | = | 3 | ä | и | я | и | ä | ä | 3 | 3 | × | ä | 3 | ä | ш | terminal con |
| Svmbol | <u> </u> | фнгз | и | z | ä | × | ä | 3 | × | × | я | 3 | × | ä | × | z | и | th1H3 | 3 | 3 | × | n | 3 | и | z | × | × | = | 3 | × | 3 | × | и | Same tests, |
| Subaroup | | 10 | $T_{\rm C} = 125^{\circ}{\rm C}$ | и | × | × | × | z | × | × | × | × | я | ä | 3 | z | и | | | 3 | ä | 3 | × | и | z | × | 3 | 25 | * | ä | 3 | × | ш | 11 |

F1⊘1⊗1

 I_{1L} minimum limit for CKT E is -0.6 mA. A = 3.0 V minimum, B = 0.0 V or GND. H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

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|--------------------------|-------------------|---------|---------------------|-------|-------|----------------|----------|----------------|--------|------|----------------|-----------|--------|----------------|--------|--------|------------------|--------|-------|----------|----|-------|-------|-------|-------|-------|-------|-------|---------------------------------------|----------|-------|------|-------|-----|-------|-----|-------|---------|----------------|--------|----------------|-------|-------|----------------|
| ts | Unit | > | 3 | 3 | n | " | 3 | 3 | 3 | 3 | 3 | : | : | 3 | 3 | 3 | 3 | 3 | < | <u> </u> | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | μĄ | 3 | 3 | 3 | 3 | 3 | 3 | | = | 3 | 3 | 3 | n |
| Test limits | Max | | | 0.4 | 0.4 | -1.5 | 3 | n | n | я | 3 | , | : | n | n | n | 3 | 3 | 0 | 0. | : | n | 3 | я | n | 3 | 3 | 3 | 3 | 3 | n | 40 | n | n | 7 | " | я | n | | = | 3 | я | ä | п |
| | Min | 2.4 | 2.4 | | | | | | | | | | | | | | | | 7 | ٠. ٻ | : | n | n | п | n | n | n | 31 | я | 3 | n | | | | | | | | | | | | | |
| | Meas. terminal | > | > | > | Μ | D ₀ | <u>0</u> | D ₂ | ے ا | 3 6 | 2 0 | 5 | °C | D ₇ | Q | ٥ | . α | a C |) (| . פ | ⋖ | В | O | ۵ | , 5 | - £ | 2 6 | 2 0 | ֓֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓ | ရှိ ရ | 5 | G | ∢ | В | O | ے د | 3 2 | 5 1 | D ₂ | ص ص | D ₄ | Ds | De | D ₇ |
| 16 | Vcc | | 3 | 3 | п | n | 3 | я | 2 | 3 | 3 | | : | 3 | 3 | 3 | 3 | ä | 7 2 2 | 2.5 | : | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | ä | n | 3 | ä | 3 | " | n | n | | : | 3 | 3 | 3 | п |
| 15 | > | -0.8 mA | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 8 | | -0.8 mA | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 14 | O | V 8.0 | | 2.0 V | 0.8 V | | | | | | | | | | | | | -12 mA | C | 2.5 | : | 3 | 0.4 V | GND | ä | 3 | 3 | 5.5 V | я | 3 | ä | GND | GND | GND | 2.4 V | > 2 | | n | . : | = | GND | 3 | 3 | " |
| 12 | В | + | | | | | | | | | | | | | | | -12 mA | | | | | 0.4 V | | | GND | 5.5 \ | 5.5 \ | | | 5.5 V | 5.5 V | - | GND | | | | | 2 6 | G.N.D | | | 5.5 V | GND | GND |
| = | ⋖ | + | | 2.0 V | _ | | | | | | | | | | | -12 mA | | | + | | | | | | 5.5 V | | | | | | | - | 2.4 V | | | | | | | | | | | GND |
| 9 | O | + | | 2.0 V | | | | | | | | | | | -12 mA | | | | + | | _ | 7 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 3 | я | 1 | 5.5 V | | 3 | 3 | я | ä | | = | 3 | 3 | 3 | п |
| 2 3 4 5 6 7 8 9 10 11 12 | D7 | | | | | | | | | | | | | -12 mA | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | 2.4 V |
| 8 | GND | GND | n | ä | 77 | " | 'n | n | n | я | 3 | | : | 3 | " | " | 3 | n | n | | : | n | 3 | n | n | 7 | 7 | 3 | 3 | 3 | я | n | " | ä | n | n | 3 | " | | = | 3 | " | 3 | " |
| 7 | De | | | | | | | | | | | | -12 mA | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | | 2.4 V | |
| 9 | D5 | | | | | | | | | | 2 | ¥II 7 I - | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | 2.4 V | | |
| 5 | D4 | | | | | | | | | 12 m | 1 | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | | 2.4 V | | | |
| 4 | D ₃ | | | | | | | | -12 mA | | <u> </u> | | | | | | | | | | | | | | | | V 4.0 | | | | | | | | | | | | | 2.4 \ | | | | |
| 3 | D2 | | | | | | | -12 mA | | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | ; | > 4.2 | | | | | |
| 2 | <u>0</u> | | | | | | -12 mA | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | 2 4 V | > t. | | | | | | |
| _ | D ₀ | 2.0 V | | | 2.0 V | -12 mA | | | | | | | | | | | | | İ | | | | | 0.4 V | | | | | | | | | | | | 247 | i | | | | | | | |
| Cases E, F | Test No. | - | 2 | ဇ | 4 | 2 | 9 | 7 | 00 | σ | » (| 2 : | 11 | 12 | 13 | 4 | . . . | 5 4 | 5 1 | <u> </u> | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 8 % | 5 6 | 32 | 36 | 37 | 38 | 39 | . 40 |
| MIL- | STD-883 method | 3006 | 3006 | 3007 | 3007 | | | | | | | | | | | | | | 0000 | 3008 | : | n | 3 | 7 | n | 3 | 3 | 3 | 3 | 3 | я | 3010 | " | я | " | " | я | 3 | | = | 3 | 3 | 3 | TI TI |
| - | | Vон | Vон | VoL | Vol | VIC | 3 | n | n | я | 3 | | | 3 | n | n | 3 | n | T. | = - | | n | 3 | n | n | 3 | 3 | 3 | 3 | 3 | n | Ē | × | ņ | ä | ä | n | n | | = | 3 | n | 3 | n |
| | Subgroup Symbol | - | $T_C = 25^{\circ}C$ | я | 3 | 3 | 31 | 2 | 3 | 3 | 3 | : | | 3 | " | " | 3 | я | 3 | 3 | ı | " | 31 | 3 | " | 3 | 3 | з | 3 | з | я | 3 | 3 | я | 3 | 3 | я | 3 | | = | 3 | 3 | 3 | n |

TABLE III. Group A inspection for device type 02- Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| Test limits | Max Unit | 100 μА | | " | n n | n n | n n | n | " | " | 2 | " | " | -120 | -120 mA | 48 mA | - | | | | | | | | | | | | | | | | | | _ |
|-------------|-------------------|--------|-----------------------|-------|-------|-------|------------|-------|--------|-------|-------|-------|-------|-------|---------|-------|---|--|--------------|---------------------|------|----|----|----|----|----|----------|----|----|----|----|----|----|----|----|
| | Ā | | | | | | | | | | | | | -20 | -20 | | | | | | | | | | | | 2/ | | | | | | | | |
| 2 | Meas. terminal | ŋ | ∢ | В | ပ | ۵ | , <u>c</u> | 6 | ۔ 2 | , Q | | De | 0 | > | ≷ | VCC | | | _ | _ | | | | | | _ | <u> </u> | _ | | | | | | _ | - |
| 16 | Vcc | 5.5 V | 3 | 3 | 3 | 3 | 3 | я | я | 3 | 3 | 3 | 3 | = | 3 | n | | | 4.5 V | 3 | 3 | 3 | я | я | я | 3 | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | |
| 15 | > | | | | | | | | | | | | | | GND | | | | ٦ | _ | I | _ | I | _ | I | _ | I | _ | I | _ | I | _ | I | _ | |
| 14 | > | | | | | | | | | | | | | GND | | | | | H <u>2</u> / | I | _ | I | _ | I | _ | I | _ | I | _ | I | _ | I | _ | I | |
| 13 | O | GND | " | 3 | 5.5 V | 3 | 3 | я | 3 | GND | 3 | а | а | = | | = | | | | В | 3 | 3 | 3 | 3 | 3 | я | я | ∢ | я | я | я | 3 | 3 | 3 | ,, |
| 12 | В | GND | GND | 5.5 V | GND | 5.5 V | 5.5 V | GND | GND | 5.5 V | 5.5 V | GND | | = | | = | | | | В | 3 | 3 | 3 | ∢ | ä | 3 | я | В | 3 | 3 | 3 | ∢ | 3 | 3 | |
| 11 | ∢ | GND | 5.5 V | GND | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | = | - | = | | | | В | В | ∢ | ∢ | В | В | ∢ | ∢ | В | В | ∢ | ∢ | В | В | ⋖ | |
| 10 | Ŋ | 5.5 V | GND | 3 | ä | ä | ä | n | ä | ä | ä | n | n | 5.5 V | GND | GND | | | A 1/ | В | ä | n | n | n | ä | n | n | 3 | 7 | n | 3 | ä | ä | 3 | _ |
| 9 | D ₇ | | | | | | | | | | | | 5.5 V | GND | | | nitted. | nitted. | | | | | | | | | | | | | | | | В | |
| 8 | GND | GND | 3 | 3 | 3 | 3 | 3 | n | я | 3 | 3 | 3 | 3 | = | 3 | n | s are omitted | s are omitted | GND | 3 | 3 | 3 | я | я | ä | 3 | я | 3 | 3 | 3 | 3 | 3 | я | 3 | |
| 7 | D_6 | | | | | | | | | | | 5.5 V | | GND | - | = | V _{IC} test | and V _{IC} tests | | | | | | | | | | | | | | В | ∢ | | |
| 9 | D5 | | | | | | | | | | 5.5 V | | | GND | | = | = 125°C and V _{IC} tests | -55°C and | | | | | | | | | | | | В | ∢ | | | | |
| 2 | D4 | | | | | | | | | 5.5 V | | | | GND | = | = | L C | T _C = | | | | | | | | | | В | ∢ | | | | | | |
| 4 | D3 | | | | | | | | 5.5 V | | | | | GND | | = | , except | 1, except | | | | | | | | В | ∢ | | | | | | | | |
| 3 | D2 | | | | | | | 5.5 V | | | | | | GND | | = | bgroup 1 | bgroup | | | | | | В | ∢ | | | | | | | | | | |
| 2 | <u>Ω</u> | | _ | _ | | | 5.5 V | | | | | | | GND | | | its as su | its as sn | | | | В | ∢ | | | | | | | | | | | | _ |
| 1 | D ₀ | | | | | 5.5 V | | | | | | | | GND | 5.5 V | 5.5 V | and lim | and lim | | В | ۷ | | | | | | | | | | | | | | |
| Cases E, F | Test No. | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 20 | 51 | 52 | 53 | 54 | 22 | Same tests, terminal conditions and limits as subgroup 1, | Same tests, terminal conditions and limits as subgroup | 26 | 22 | 28 | 29 | 09 | 61 | 62 | 63 | 64 | 65 | 99 | 29 | 89 | 69 | 70 | 71 | |
| MIL- | STD-883 method | 3010 | я | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | я | я | 3011 | 3011 | 3005 | sts, termin | sts, termin | | | | | | | | | | | | | | | | | |
| | Symbol | IH2 | я | 3 | 3 | 3 | 3 | ä | 3 | 3 | 3 | а | а | sol | los | 221 | Same te | Same te | Truth | table | test | 3 | я | я | 3 | а | я | 3 | а | а | 3 | 3 | 3 | 3 | _ |
| Subgroup | | - | T _C = 25°C | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | 2 | 2 | = | = | = | 2 | 3 | 7 | $T_C = 25^{\circ}C$ | 3 | я | n | я | n | n | я | 3 | 2 | n | 3 | 7 | n | 3 | _ |

See note at end of device type 02.

TABLE III. Group A inspection for device type 02- Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | Unit | su | 3 | n | " | 3 | 3 | 'n | 3 | 3 | 31 | 3 | ä | n | 3 | я | 3 | n | 3 | 3 | 3 | 4 | 3 | а | 3 | - | 3 | 3 | я | 3 | 3 | " | z . |
|-------------|-------------------|---------|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Test limits | Мах | 32 | з | n | 29 | я | 3 | 40 | з | 3 | 39 | a a | 3 | 28 | 24 | 37 | 35 | 20 | а | з | 3 | 3 | 3 | я | з | 17 | 3 | 3 | 3 | 3 | 3 | 3 | и |
| Te | Min | 9 | 3 | 73 | n | я | 3 | n | 3 | 3 | n | я | я | | 9 | | 80 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | = | z | 3 | я | 3 | 3 | 3 | я |
| | Meas. terminal | A to W | B to W | C to W | A to W | B to W | C to W | A to Y | B to Y | C to Y | A to Y | B to Y | C to Y | G to W | G to W | G to Y | G to Y | D _o to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W | D _o to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W |
| 16 | Vcc | 2.0 V | | n | n | n | 3 | " | 3 | 3 | n | n | я | " | 3 | я | 3 | " | 3 | 3 | 3 | 3 | 3 | 3 | 3 | - | 3 | 3 | n | 3 | 3 | 3 | n |
| 15 | > | | | | | | | OUT | 3 | 3 | n | n | 3 | | | OUT | OUT | | | | | | | | | | | | | | | | |
| 14 | W | OUT | 3 | п | n | я | я | | | | | | | OUT | OUT | | | OUT | 3 | 3 | 3 | я | 3 | 3 | 3 | = | 3 | n n | я | 3 | я | 3 | я |
| 13 | O | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | 3 | 3 | з | GND | з | з | 3 | 5.0 V | 3 | 3 | з | GND | 3 | 3 | 3 | 5.0 V | 3 | 3 | n |
| 12 | В | GND | Z | GND | GND | z | GND | GND | Z | GND | GND | z | GND | GND | 3 | я | я | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | | | | 5.0 V | 5.0 V |
| 11 | ∢ | Z | GND | GND | Z | GND | GND | Z | | | Z | GND | GND | | | 3 | 3 | | | | 5.0 V | | | | 5.0 V | | | | | | 5.0 V | | |
| 10 | | GND | | п | n | 3 | 3 | n | 4 | 3 | n | 3 | я | Z | 3 | я | 4 | GND | 3 | 3 | 3 | 3 | 3 | 3 | 3 | - | 3 | 3 | 3 | 3 | 3 | 3 | я |
| 6 | D ₇ | | | | | | | | | | | | | | | | | | | | | | | | z | | | | | | | | Z |
| 8 | GND | GND | 3 | п | " | 3 | 3 | n | 3 | 3 | n | 7 | я | n | 3 | я | 3 | n | 3 | 3 | 3 | я | 3 | 3 | 3 | = | 3 | 3 | 7 | 3 | 3 | 3 | u |
| 7 |) Pe | _ | | | | | | | | | | | | | | | | | | | | | | z | | | | | | | | z | |
| 9 | Ds | | | | | | | | | | | | | | | | | | | | | | Z | | | | | | | | z | | |
| 2 | D4 [| | | 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | | | | | | | z | | | | | | | | Z | | | |
| 4 | D3 [| | | 5. | | | 5 | | | 5 | | | 5 | | | | | | | | z | _ | | | | | | | z | _ | | | |
| | D ₂ | | 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | | | | | | _ | _ | | | | | | | 7 | _ | | | | |
| 3 | | | 2.0 | | ^ | 5.0 | | ^ | 2.0 | | > | 5.0 | | | | | | | _ | ∠ | | | | | | | _ | | | | | | |
| 2 | | D 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | > | | | | | Z | | | | | | | | Z | | | | | | |
| F 1 | Do | GND | 3 | " | " | 3 | 3 | " | 3 | 3 | n | я | 3 | 5.0 V | 3 | 3 | 3 | Z | | | | | | | | Z | | | | | | | |
| Cases E, | Test No. | 73 | 74 | 75 | 9/ | 77 | 78 | 42 | 80 | 81 | 82 | 83 | 8 | 85 | 98 | 87 | 88 | 88 | 06 | 91 | 95 | 93 | 94 | 92 | 96 | 26 | 86 | 66 | 100 | 101 | 102 | 103 | 104 |
| MIL- | S1D-883 method | 3003 | (Fig 4) | n | n | 3 | 3 | n | 3 | 3 | n | n | n | n | 3 | ä | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | = | = | 3 | 3 | 3 | 3 | 3 | n |
| | Symbol | tPHL1 | | n | tPLH1 | я | я | tPHL2 | " | " | tPLH2 | я | я | tPHL3 | фГНЗ | tPHL4 | tPLH4 | tPHL5 | 3 | 3 | " | я | 3 | 3 | 3 | tPLH5 | 3 | n | я | я | n | 3 | я |
| | Subgroup | 6 | $T_C = 25^{\circ}C$ | я | я | я | я | 3 | ä | n | ä | n | n | n | я | ä | я | ä | ä | 3 | я | я | 3 | 3 | 3 | = | = | n | n | 3 | 3 | 3 | n |

See note at end of device type 02.

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| Group A inspection for device type 02- | ۰ |
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| TABLE III. | |
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| 2 3 4 5 | 2 3 4 5 6 | 3 4 5 6 | 2 | 5 6 | 9 | | 7 | 8 | 6 | 10 | 1 | 12 | 13 | 41 | 15 | 16 | Meas. | | Test limits | s |
|----------|-----------|---------|-------|----------------|----------------|----------------|-------|-----|----------------|-----|-------|-------|-------|-----|-----|-------|---------------------|-----|-------------|------|
| Test No. | ° | ۵ | D2 | D ₃ | D ₄ | D ₅ | D_6 | GND | D ₇ | ഗ | ⋖ | Ф | ပ | ≯ | > | Vcc | terminal | Min | Max | Unit |
| 105 | Ζ | | | | | | | GND | | GND | GND | GND | GND | | OUT | 5.0 V | | 9 | 59 | SU |
| 106 | | Z | | | | | | 3 | | 3 | 5.0 V | GND | 3 | | 3 | 3 | D ₁ to Y | я | я | ı |
| 107 | | | Z | | | | | 3 | | 3 | GND | 2.0 \ | 3 | | 3 | 3 | D ₂ to Y | 3 | 3 | 3 |
| 108 | | | | Z | | | | 3 | | я | 5.0 V | 2.0 \ | 3 | | ı | 3 | D ₃ to Y | " | ä | n |
| 109 | | | | | Z | | | 3 | | 3 | GND | GND | 5.0 V | | n | 3 | D ₄ to Y | n | 3 | n |
| 110 | | | | | | Z | | 3 | | 3 | 5.0 V | GND | я | | я | 3 | D ₅ to Y | ä | я | 3 |
| 7 | | | | | | | z | я | | ä | GND | 5.0 V | 3 | | ä | 3 | D ₆ to Y | 3 | я | 3 |
| 112 | | | | | | | | 3 | Z | 3 | 5.0 V | | 3 | | ı | 31 | D ₇ to Y | 3 | 3 | 3 |
| 113 | Z | | | | | | | 3 | | n | GND | GND | GND | | n | я | Do to Y | 9 | 59 | n |
| 114 | | Z | | | | | | 3 | | 3 | 5.0 V | GND | я | | я | 3 | D ₁ to Y | u | я | 3 |
| 115 | | | Z | | | | | 3 | | 2 | GND | 5.0 V | 7 | | n | 3 | D ₂ to Y | " | 3 | ä |
| 116 | | | | Z | | | | 3 | | 3 | 5.0 V | 5.0 V | 3 | | n | 3 | D ₃ to Y | " | n | n |
| 117 | | | | | z | | | 3 | | n | GND | GND | 5.0 V | | n | 3 | D ₄ to Y | 7 | 3 | n |
| 118 | | | | | | Z | | 3 | | 3 | 5.0 V | GND | n | | я | 3 | D ₅ to Y | n | ä | 3 |
| 119 | | | | | | | z | 3 | | 3 | GND | 5.0 V | ä | | n | " | D ₆ to Y | 3 | 3 | 3 |
| 120 | | | | | | | | 3 | Z | 3 | 5.0 V | 5.0 V | 3 | | ä | 3 | D ₇ to Y | 3 | 3 | 3 |
| 121 | GND | 5.0 V | | | | | | п | | n | Z | GND | GND | OUT | | n | A to W | 9 | 40 | n |
| 122 | " | | 5.0 V | | | | | 3 | | 2 | GND | Z | GND | 3 | | 3 | B to W | я | 3 | n |
| 123 | n | | | | 5.0 V | | | п | | n | GND | GND | Z | п | | n | C to W | n | n | " |
| 124 | n | 5.0 V | | | | | | n | | n | Z | GND | GND | n | | n | A to W | n | 38 | n |
| 125 | 3 | | 5.0 V | | | | | 3 | | 3 | GND | Z | GND | з | | 3 | B to W | 3 | 3 | 3 |
| 126 | n | | | | 5.0 V | | | п | | n | GND | GND | Z | n | | n | C to W | n | п | " |
| 127 | n | 5.0 V | | | | | | n | | n | Z | GND | GND | | TUO | n | A to Y | 8 | 49 | " |
| 128 | 3 | | 5.0 V | | | | | 3 | | 3 | GND | Z | GND | | ı | 3 | B to Y | 3 | я | 3 |
| 129 | n | | | | 5.0 V | | | п | | п | GND | GND | Z | | n | п | C to Y | n | п | " |
| 130 | n | 5.0 V | | | | | | 3 | | n | Z | GND | GND | | n | я | A to Y | n | 45 | n |
| 131 | 3 | | 5.0 V | | | | | 3 | | 3 | GND | Z | GND | | я | 3 | B to Y | u | я | 3 |
| 132 | 3 | | | | 5.0 V | | | 3 | | 3 | GND | GND | Z | | я | 3 | C to Y | u | я | 3 |
| 133 | 2.0 V | | | | | | | 3 | | Z | GND | GND | GND | OUT | | n | G to W | 9 | 37 | n |
| 134 | 3 | | | | | | | 3 | | 3 | 3 | я | 3 | OUT | | 3 | G to W | 9 | 32 | 7 |
| 135 | 7 | | | | | | | 3 | | 2 | 2 | n | n | | OUT | 3 | G to Y | œ | 46 | ı |
| 136 | п | | | | | | | п | | п | п | п | п | | OUT | п | G to Y | 8 | 42 | n |
| 137 | Z | | | | | | | и | | GND | GND | GND | GND | OUT | | n | D _o to W | 3 | 32 | n |
| 138 | | Z | | | | | | я | | 3 | 5.0 V | GND | 3 | z | | 3 | D ₁ to W | ä | я | ä |
| 139 | | | Z | | | | | 3 | | 3 | GND | 5.0 V | 3 | 3 | | 3 | D ₂ to W | " | 3 | ä |
| 140 | | | | Z | | | | 3 | | я | 5.0 V | 5.0 V | 3 | 3 | | " | D ₃ to W | 3 | я | 3 |
| 141 | | | | | Z | | | 3 | | 3 | GND | GND | 5.0 V | 3 | | 3 | D ₄ to W | 3 | 3 | 3 |
| 142 | | | | | | Z | | 3 | | 3 | 5.0 V | GND | 3 | 3 | | 3 | D ₅ to W | " | 3 | ä |
| 143 | | | | | | | z | з | | 2 | GND | 5.0 V | z | 3 | | 3 | D ₆ to W | 3 | ä | ä |
| 144 | | | | | | | | 7 | Z | 3 | 20 < | 20.5 | 3 | 3 | | 3 | N + 10 | 7 | 3 | 3 |

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TABLE III. Group A inspection for device type 02- Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| _ | | _ | | | | | | | | _ | | | | | | | | | | | | | | | | |
|-------------|-------------------|---------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---|
| ts | Unit | Su | 3 | ı | ı | 3 | 3 | 3 | ı | n | 3 | 3 | я | 3 | 3 | я | " | n | 3 | 3 | 3 | ä | 3 | ä | 3 | |
| Test limits | Мах | 26 | з | з | з | з | з | 3 | з | 41 | 3 | 3 | з | 3 | 3 | z | n | 33 | 3 | 3 | з | з | 3 | з | з | |
| _ | Min | 3 | 3 | " | " | я | я | 3 | " | 9 | " | " | n | 3 | " | " | и | n | " | 3 | 3 | n | " | n | 3 | |
| : | Meas. terminal | D _o to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W | D _o to Y | D ₁ to Y | D ₂ to Y | D ₃ to Y | D ₄ to Y | D ₅ to Y | D ₆ to Y | D ₇ to Y | D _o to Y | D ₁ to Y | D ₂ to Y | D ₃ to Y | D ₄ to Y | D ₅ to Y | D ₆ to Y | D ₇ to Y | |
| 16 | Vcc | 5.0 V | 3 | 3 | 3 | 3 | 3 | " | 3 | 3 | 3 | 3 | я | 3 | я | я | n | n | 3 | 3 | 3 | я | я | я | 3 | |
| 15 | λ | | | | | | | | | OUT | 3 | 3 | 3 | 3 | 3 | 3 | n | n | 3 | 3 | 3 | я | 3 | я | 3 | |
| 14 | W | OUT | 71 | 71 | 71 | n | n | n | 71 | | | | | | | | | | | | | | | | | |
| 13 | C | GND | ä | n | n | 5.0 V | n | n | n | GND | n | n | n | 5.0 V | n | n | п | GND | n | n | ä | 5.0 V | n | n | ä | |
| 12 | В | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | |
| 11 | Α | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | |
| 10 | 9 | GND | ä | я | я | я | я | я | я | n | я | 3 | 3 | я | я | 3 | п | n | я | я | я | я | я | я | я | |
| 6 | ² G | | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | |
| 8 | GND | GND | 3 | ä | ä | ä | ä | ä | | n | ņ | n | n | ņ | n | n | n | n | ņ | ņ | ä | n | n | n | ä | |
| 7 | 9Q | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | |
| 9 | DS | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | 55°C. |
| 2 | D4 | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | ot T _A = -: |
| 4 | D3 | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | I0, excep |
| 3 | D2 | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | bgroup ' |
| 2 | D1 | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | ts as su |
| - | D ₀ | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | and lim |
| Cases E, F | Test No. | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 191 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | Same tests, terminal conditions and limits as subgroup 10, except T_A = -55°C |
| MIL- | S1D-883 method | 3003 | (Fig 4) | 3 | 3 | я | я | 7 | 3 | п | я | п | я | я | я | я | и | n | я | я | 3 | я | я | я | 3 | ts, termina |
| | Symbol | tPLH5 | 3 | 3 | 3 | я | я | " | 3 | tPHL6 | n | 21 | я | n | я | я | n | фГН | n | n | 31 | я | я | я | 31 | Same tes |
| | Subgroup | 10 | $T_{\rm C} = 125^{\circ}{\rm C}$ | 3 | 3 | n | n | n | 3 | 3 | ä | n | 3 | ä | ä | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 11 |

Terminal conditions (pins not designated may be H > 2 0 V or 1 < 0 8 V or open)

| | Unit | > | " | 3 3 | n | 7 | | 3 | π | 7 | 3 | 3 | " | , | | " | z z | 2 | Δm | | " | 3 | 3 | | | n | 77 | 3 | 3 | 3 | 3 | Αμ | , | 3 | 3 | ,, | 3 | 7 | 3 | " | 7 | | | |
|-------------|-------------------|-------|---------------------|------------|------|------------------|--------|--------|--------|----------|--------|-------|-----|----------|--------|-----------------|--------|----------|-------|--------|----------|-----|---------|-------|-------|-----------------|-----------------|-----------------|-------|-----------------|-------|----------|-------|-------|-------|-------|-------|-------|------|-------|-------------|-------|------------|----------|
| Test limits | | | | 4 4 | | υ | | | _ | _ | | | | | | _ | | | + | | | | | | | | | | | | | | | | | | | | | | | | _ | |
| Test | n Max | 4 | _ | 4.0 | 5 7 | <u>.</u> | | 3 | 3 | 3 | 3 | 3 | - | | - | 3 | 2 | 3 | 7 | | 3 | 3 | - | _ | - | 3 | 3 | 3 | 3 | 2 | 2 | 40 | 3 | 3 | " | 3 | 3 | 3 | 3 | 3 | 3 | - | | _ |
| _ | a Min | 2.4 | 5. | | | | | | | | | | | | | | | | 7 0 | 5 3 | 2 | 3 | n | | | | z | 3 | 3 | 3 | 3 | | | | | | | | | | | | | 4 |
| | Meas. terminal | 7 | 2Υ | ≿ ≿ | ; < | ∢ (| n | ဂ္ဂ | 5 | <u>ဂ</u> | 1 5 | | 2 6 | 20 | 2C1 | 2C ₂ | 20, | 2G 2G | } | (00 | י ה | 2 (| ָ נְ | ပို | ဉ် | 1C ₂ | 1C ₃ | 2C ₀ | 2C1 | 2C ₂ | 2C3 | ⋖ | В | 16 | 2G | 5 | 5 | 5 5 | 2 2 | 2 6 | ر د د | ZC1 | 2C2 | 2C3 |
| 16 | Vcc | 4.5 V | и | 3 3 | n | 3 | | 3 | 3 | я | 3 | 3 | 3 | , | : | 3 | я | я | 7 2 7 | • • | я | 3 | 3 | | = | 3 | 3 | я | 3 | 3 | 3 | 3 | ä | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | : |
| 15 | 2G | | 0.8 V | 707 | | | | | | | | | | | | | | -12 mA | | | | > 7 | 4. > | | | | | GND | 3 | 3 | 3 | | | | 2.4 V | | | | | 7 2 7 |)) ; | 3 | : : | : |
| 14 | A | 0.8 V | 0.8 V | | 4 | AIII 71- | | | | | | | | | | | | | 7 7 7 | • | | | 2 | GND | 5.5 \ | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | 2.4 V | | | | 5.5 V | GND | 75.5 | GND | 7 7 7 | > (| מוס ו | 5.5 \ | GND |
| 13 14 | 2C3 | | | | ` | 1 | | | | | | | | | | | -12 mA | | , | | | | | | | _ | | _ | - | _ | 0.4 V | ., | | | | | _ | | | | | | - | 4 |
| 12 | 2C ₂ 2 | | | | | | | | | | | | | | | -12 mA | ÷ | | | | | | | | | | | | | 0.4 V | 0 | | | | | | | | | | | | 2.4 V | 2. |
| 11 | 2C ₁ 2 | | | | | | | | | | | | | | -12 mA | -12 | | | | | | | | | | | | | 0.4 V | 0 | | | | | | | | | | | | > 4.2 | 4 | _ |
| 10 1 | 2C ₀ 2 | | > | | | | | | | | | | 20 | <u> </u> | -12 | | | | | | | | | | | | | 0.4 V | ò | | | | | | | | | | | 7 7 7 | | , i | | _ |
| _ | | | nA 2.0 V | Ą | 1 | | | | | | | | ç | 7 | | | | | | | | | | | | | | 0.7 | | | | | | | | | | | | ò | 4 | | | |
| 6 | D 2Y | 0 | 8 mA | 16 mA | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | _ |
| 8 | GND | A GND | " | * * | n | 3 | | 3 | 3 | 3 | 3 | 3 | 3 | | : | 3 | " | я | n | 3 | 3 | 3 | 3 | _ | = | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | - | : |
| ^ | 7 | 8 mA | | 16 mA | | | | _ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 1C ₀ | 2.0 V | | | | | | -12 mA | | | | | | | | | | | | | | | ; | 0.4 \ | | | | | | | | | | | | 2.4 V | | | | | | | | |
| 2 | 1C ₁ | | | | | | | | -12 mA | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | 2.4 \ | i | | | | | | |
| 4 | 1C ₂ | | | | | | | | | -12 mA | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | 2 4 V | i | | | | | |
| 3 | 1C ₃ | | | | | | | | | | -12 mA | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | 747 | i | | | | |
| 2 | В | 0.8 V | 0.8 V | | | | -12 mA | | | | | | | | | | | | | V 4 V | | | 2 | GND | GND | 5.5 V | 5.5 V | GND | GND | 5.5 V | 5.5 V | | 2.4 V | | | 5.5 V | 5.5 V | CNC | ON C | 7 7 7 | > 1 | 2.0.0 | GND | GND |
| _ | 1G | 0.8 V | | 2.0 V | | | _ | | | | | -12mA | | | | | | | | | V 4 V | · | 2 | ON:5 | = | | 3 | | | | | | | 2.4 V | | 5.5 V | 3 | 3 | 3 | | | | | |
| Cases E, F | Test No. | | 2 | w 4 | | ი (| ٥ | 7 | ∞ | 6 | 10 | | | 7 | 13 | 4 | 15 | 9 12 | 2 2 | - 6 | <u> </u> | | | | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | | | | 35 | 99 | 37 | ò 6 | 20 0 | 65. 65. | 40 |
| - | STD-883 method | 3006 | 3006 | 3007 | | | | | | | | | | | | | | | 3000 | 3 | я | я | 3 | | = | 3 | 3 | я | 3 | я | я | 3010 | 3 | я | я | я | 3 | я | я | 3 | 3 | | . 3 | - |
| _ | Symbol | Vон | Vон | Vol. | , OL | _ _ _ _ | | 3 | n | 3 | 3 | 3 | 3 | | : | 3 | я | n | - | ⊒" | я | n | n | | = | 3 | 3 | я | 3 | 3 | 3 | <u>H</u> | я | я | z | z | n | n | n | я | 3 | 3 | | |
| | Subgroup | - | $T_C = 25^{\circ}C$ | 3 3 | 3 | 3 | ı | a | 3 | " | ¥ | n | ä | ; | • | ä | " | ŋ | 3 | 7 | ä | " | 3 | | = | 3 | ä | ä | 3 | " | " | " | ı | 31 | " | " | 3 | " | " | 3 | 3 | ** | | . (|

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TABLE III. Group A inspection for device type 03 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| 6 | Unit | hΑ | 3 | n | n | " | n | n | n | 71 | n | n | " | МA | ΑM | mA | | | | | | | | | | | | | su | 77 | 3 | 3 | 3 | 3 | 3 | я |
|-------------|--------------------------------|-------------------|---------------------|-------|-------|-------|------------|-------|-------|-----------------|-------|-----------------|-------|-------|-------|------|--|--|--------------|-----------------------|------|----|----|----|----|----|----|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Test limits | Мах | 100 | 3 | я | а | 3 | a a | ä | ä | з | з | а | 3 | -55 | -55 | 52 | | | | | | | | | | | | | 25 | 3 | 3 | 3 | 3 | 3 | 3 | я |
| Ě | Min | | | | | | | | | | | | | -20 | -20 | | | | | | | | 2/ | | | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | я . |
| | Meas. terminal | A | Ф | 16 | 5G | ပိ | , <u>5</u> | . 5 | , 5 | 2C ₀ | 2C1 | 2C ₂ | 2C3 | 17 | 2 | Vcc | | | | _ | | | 人 | | | _ | ١ | | 1C ₀ to 1Y | IC ₁ to 1Y | 1C ₂ to 1Y | IC ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y |
| 16 | Vcc | 5.5 V | 3 | 3 | ,, | 3 | ä | ä | ä | 3 | ,, | " | , | n | ,, | " | | | 4.5 V | ä | 3 | 3 | 3 | ,, | 7 | ä | п | | 5.0 V | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 15 | 2G | | | | 5.5 V | | | | | 5.5 V | я | z | 3 | | GND | GND | | | ∢ | В | ä | 3 | 3 | 3 | з | 3 | n | | | | | | GND | 3 | 3 | n |
| 14 | ∢ | 5.5 V | | | | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | = | | | | | | В | В | ∢ | ∢ | В | В | ∢ | ٧ | | GND | 5.0 V |
| 13 | 2C ₃ | | | | | | | | | | | | 5.5 V | | GND | GND | | | | | | | | | | В | ٧ | | | | | | | | | Z |
| 12 | 2C2 | | | | | | | | | | | 5.5 V | | | GND | GND | | | | | | | | В | ⋖ | | | | | | | | | | z | |
| 11 | 2C1 | | | | | | | | | | 5.5 V | | | | GND | GND | | | | | | В | ⋖ | | | | | | | | | | | Z | | |
| 10 | 2C ₀ | | | | | | | | | 5.5 V | | | | | 5.5 V | GND | | | | В | ∢ | | | | | | | | | | | | Z | | | |
| 6 | 2 | | | | | | | | | | | | | | GND | | nitted. | itted | | _ | I | _ | I | _ | I | _ | I | | | | | | OUT | ä | ä | n |
| 8 | GND | GND | 3 | ä | n | 3 | ņ | ņ | ņ | 3 | n | ¥ | n | n | n | n | s are on | -55°C and Vic tests are omitted | GND | 'n | 3 | 3 | 3 | n | n | 7 | n | | GND | 3 | 7 | ä | n | 3 | 3 | n |
| 7 | <u></u> | | | | | | | | | | | | | GND | | | V _{IC} test | Vic test | L <u>2</u> / | _ | I | _ | I | _ | I | _ | I | | OUT | 3 | я | ä | | | | |
| 9 | ဂ္ဂ | | | | | 5.5 V | | | | | | | | 5.5 V | | GND | 5°C and | 5°C and | | В | ∢ | | | | | | | | Z | | | | | | | |
| 2 | 5 | | | | | | 5.5 V | | | | | | | GND | | GND | $T_C = 12$ | 1Tc = -5 | | | | В | ∢ | | | | | | | Z | | | | | | |
| 4 | 1C ₂ | | | | | | | 5.5 V | | | | | | GND | | GND | I, except | 1 except | | | | | | В | ∢ | | | | | | Z | | | | | |
| 3 | 103 | | | | | | | | 5.5 V | | | | | GND | | GND | bgroup ' | parono | | | | | | | | В | Α | ڼ | | | | Z | | | | |
| 2 | В | | 5.5 \ | | | 5.5 V | 5.5 V | GND | GND | 5.5 V | 5.5 V | GND | | = | | | ts as sn | its as su | | В | В | В | В | ∢ | ∢ | ∢ | ٧ | Tc = -55 | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V |
| - | 16 | | | 5.5 V | | 5.5 V | n | n | n | | | | | GND | | | and lim | and lim | A 1/ | В | 3 | " | " | n | n | n | и | 125°C and T _C = -55°C. | GND | " | n | ä | | | | |
| Cases E, F | Test No. | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 20 | 51 | 52 | 53 | 54 | 55 | Same tests, terminal conditions and limits as subgroup 1, except $T_C = 125$ °C and V_{IC} tests are omitted | terminal conditions and limits as subgroup 1 | 56 | 57 | 58 | 29 | 09 | 61 | 62 | 63 | 64 | Ш | 99 | 99 | 29 | 89 | 69 | 20 | 7.1 | 72 |
| MIL- | method | 3010 | 3 | 3 | 3 | 3 | ä | 3 | 3 | 3 | я | 3 | n | 3011 | 3011 | 3005 | sts, termir | ests termin | | | | | | | | | | Repeat subgroup 7 at Tc | 3003 | (Fig 5) | 3 | 3 | я | 3 | 3 | 3 |
| | Symbol | I _I H2 | | 31 | 3 | 3 | ä | я | я | 3 | 3 | 3 | я | SOI | sol | 22 | Same te | Same tests | Truth | table | test | 3 | 3 | 3 | я | 3 | n | Repeat | tpHL1 | | 3 | 3 | я | 3 | 3 | ı |
| _ | Subgroup Symbol STD-863 method | - | $T_C = 25^{\circ}C$ | 3 | я | 3 | ä | я | я | 3 | я | а | я | я | я | а | 2 | 3 | 7 | T _C = 25°C | 3 | 3 | 3 | 3 | 3 | 3 | n | ∞ | 6 | $T_C = 25^{\circ}C$ | 3 | я | я | 3 | я | n |

See notes at end of device type 03.

TABLE III. Group A inspection for device type 03 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| $\overline{}$ | | | | | | | | | | | | | | | | | | _ | | | | _ | | | | | | | | | | | | | | | |
|---------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| S | Unit | SU | 3 | 3 | 3 | 3 | 3 | я | п | n | ä | ä | n | = | ä | 3 | 3 | n | n | n | " | n | 3 | 3 | 3 | 3 | 3 | 3 | ä | 3 | 3 | 3 | 3 | 3 | 3 | я | n |
| Test limits | Мах | 24 | 3 | 3 | ä | n | n | n | ш | 36 | n | 3 | и | 34 | 31 | n | n | 28 | 28 | 38 | 38 | 29 | n | n | n | n | n | 3 | п | 28 | n | ä | ı | n | n | n | 11 |
| - | ΜË | က | 3 | 3 | 3 | з | я | 3 | n | 9 | z | z | п | 9 | 3 | 3 | 3 | n | n | n | n | 3 | 3 | 3 | 3 | 3 | з | 3 | n | z | я | 3 | 3 | 3 | 3 | 3 | Ħ |
| : | Meas. terminal | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y | A to 1Y | B to 1Y | A to 2Y | B to 2Y | A to 1Y | B to 1Y | A to 2Y | B to 2Y | 1G to 1Y | 2G to 2Y | 1G to 1Y | 2G to 2Y | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y |
| 16 | V _{CC} | 5.0 V | | ä | 3 | ä | ä | 3 | n | n | n | ä | n | 5.0 V | ä | 3 | 3 | n | " | " | " | " | 3 | 3 | 3 | 3 | 3 | 3 | n | n | n | 3 | 3 | 3 | ä | 3 | n |
| 15 | 2G | 7 | | | | GND | n | 3 | n | | | GND | GND | | | GND | GND | | Z | | Z | | | | | GND | 3 | 3 | ä | | | | | GND | 3 | 3 | n |
| 14 | ⋖ | GND | 5.0 V | Z | GND | Z | GND | Z | GND | Z | GND | GND | GND | GND | GND | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V |
| 13 | 2C3 | | | | | | | | Z | | | | | | | | | | | | | | | | | | | | Z | | | | | | | | Z |
| 12 | 2C2 | | | | | | | z | | | | | 5.0 V | | | | 5.0 V | | | | | | | | | | | z | | | | | | | | z | |
| 11 | 2C1 | | | | | | z | | | | | 5.0 V | | | | 5.0 V | | | | | | | | | | | Z | | | | | | | | Z | | |
| 10 | 2C ₀ | | | | | Z | | | | | | GND | GND | | | GND | GND | | 5.0 V | | 5.0 V | | | | | Z | | | | | | | | Z | | | |
| 6 | 7 | | | | | OUT | 3 | 3 | п | | | OUT | | | | OUT | | | OUT | | OUT | | | | | OUT | 3 | 3 | n | | | | | OUT | 3 | 3 | a a |
| 8 | GND | GND | 3 | 3 | 3 | n | ņ | 3 | n | n | 3 | 3 | n | GND | 3 | ņ | 3 | n | n | ŋ | n | n | n | ı | ı | n | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | n | n |
| 7 | \ | OUT | 3 | 3 | ä | | | | | OUT | OUT | | | OUT | OUT | | | OUT | | OUT | | OUT | ä | 3 | 3 | | | | | TUO | 3 | ä | ä | | | | |
| 9 | ე ე | Z | | | | | | | | GND | GND | | | GND | GND | | | 2.0 V | | 2.0 V | | Z | | | | | | | | Z | | | | | | | |
| 2 | 5 | | Z | | | | | | | 5.0 V | | | | 2.0 V | | | | | | | | | Z | | | | | | | | Z | | | | | | |
| 4 | 1C ₂ | | | z | | | | | | | 5.0 V | | | | 5.0 V | | | | | | | | | z | | | | | | | | z | | | | | |
| 3 | స్ట | | | | Z | | | | | | | | | | | | | | | | | | | | Z | | | | | | | | z | | | | |
| 2 | В | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | Z | GND | Z | GND | Z | GND | z | GND | GND | GND | GND | GND | GND | 5.0 V | 5.0 V | GND | GND | 2.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 2.0 V |
| 1 | 16 | GND | | | 3 | | | | | GND | | | | GND | | | | Z | | Z | | GND | | n | n | | | | | Ω | ı | 3 | 3 | | | | |
| Cases E, F | Test No. | | | 75 | 9/ | 77 | 78 | 79 | | | | 83 | | | | 87 | 88 | 68 | 90 | 91 | | | | 92 | 96 | 26 | 86 | 66 | | | 102 | 103 | 401 | 105 | 106 | 107 | 108 |
| MIL- | method | 3003 | (Fig 5) | 3 | я | n | z | 3 | и | я | 3 | 3 | и | н | = | n | 3 | " | и | n | и | n | 3 | 3 | а | 3 | 3 | 3 | п | 3 | 3 | я | 3 | 3 | 3 | я | я |
| | | tpLH1 | 3 | 3 | 3 | 3 | я | 3 | n | tPHL2 | 3 | 3 | n | tpLH2 | 3 | 3 | 3 | tpHL3 | tPHL3 | tpLH3 | tPLH3 | tPHL1 | 3 | з | 3 | 3 | 3 | 3 | и | tPLH1 | 3 | 3 | 3 | 3 | 3 | я | ä |
| - | Subgroup Symbol | 6 | $T_C = 25^{\circ}C$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | - | = | 3 | 3 | 3 | 3 | 3 | " | 10 | T _C = 125°C | я | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n |

See notes at end of device type 03.

TABLE III. Group A inspection for device type 03 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | | MIL- | Cases E, F | 1 | 2 | 3 | 4 | 2 | 9 | 7 | 8 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | : | Ĺ | Test limits | |
|-------------------------|---------|-------------------|---|-----------|-----------|-----------------|------------|------------------------|-----------------|-----|-----|-----|-----------------|-----------------|-------|-----|-----|-----|-------|-------------------|-----|-------------|------|
| Subgroup Symbol STD-883 | Symbol | STD-883 method | Test No. | 16 | В | 1C ₃ | 1C2 | 101 | 1C ₀ | 17 | GND | 2Y | 2C ₀ | 2C ₁ | 2C2 | 2C3 | A | 2G | Vcc | Meas. terminal | Min | Мах | Unit |
| 10 | tPHL2 | 3003 | 109 | GND | GND | | | 5.0 V | GND | | GND | | | | | | Z | | 5.0 V | A to 1Y | 9 | 4 | ns |
| $T_C = 125$ °C | ä | (Fig 5) | 110 | GND | Z | | 5.0 V | | GND | OUT | 3 | | | | | | GND | | 3 | B to 1Y | ä | 3 | 3 |
| 3 | n | n | 111 | | GND | | | | | | ä | OUT | GND | 5.0 V | | | Z | GND | 3 | A to 2Y | ä | ä | 3 |
| я | ä | 3 | 112 | | Z | | | | | | 3 | DUT | GND | | 5.0 V | | GND | GND | 3 | B to 2Y | ä | 3 | 3 |
| 3 | tPLH2 | n | 113 | GND | GND | | | 5.0 V | | OUT | n | | | | | | Z | | n | A to 1Y | n | 42 | n |
| 7 | ä | ä | 114 | GND | Z | | 5.0 V | | GND | DO | 3 | | | | | | GND | | a a | B to 1Y | 3 | 3 | я |
| 3 | n | 3 | 115 | | GND | | | | | | 'n | | GND | 5.0 V | | | Z | GND | 3 | A to 2Y | 3 | 3 | я |
| 3 | n | 3 | 116 | | Z | | | | | | 'n | DUT | GND | | 5.0 V | | GND | GND | 3 | B to 2Y | 3 | 3 | 3 |
| 3 | ғтна | n | 117 | Z | GND | | | | 5.0 V | OUT | n | | | | | | GND | | n | 1G to 1Y | n | 32 | n |
| 3 | tPHL3 | 3 | 118 | | GND | | | | | | 3 | OUT | 5.0 V | | | | GND | z | 3 | 2G to 2Y | 3 | 32 | 3 |
| 3 | ғнта | n | 119 | Z | GND | | | | 5.0 V | OUT | n | | | | | | GND | | n | 1G to 1Y | n | 42 | n |
| n | tргнз | n | 120 | | GND | | | | | | n | OUT | 5.0 V | | | | GND | Z | , | 2G to 2Y | n | 42 | п |
| 11 | Same te | sts, termin | Same tests, terminal conditions and limits as subgroup 10, except T _C = -55°C. | s and lim | its as su | bgroup 1 | 10, except | ot T _C = -(| 55°C. | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 04. Terminal conditions (pins not designated may be H ≥ 2.0 V, or L ≤ 0.8 V, or open).

| S | Unit | ^ | п | ä | и | n | 3 | u | n | n | 3 | n | n | " | n | " | 3 | ä | 3 | mA | я | * | " | 3 | 7 | 7 | n | " | " | ηЧ | n | n | " | " | 3 | n n | " | " | 77 |
|-------------|-----------------|---------|---------------------|---------|---------|-------|----------|-------|-------|--------|--------|--------|------------|--------|------------|--------|--------|-----------------|-----------------|-------|-------|--------|-------|-----------------|-------|-----------------|-------|-----------------|-----------------|-------|-------|-------|------------|-----------------|-------|-----------------|-------|-----------------|-------|
| Test limits | Мах | | | | | 0.4 | 3 | 3 | 77 | -1.5 | 3 | n | n | " | n | " | 3 | n | 3 | -1.6 | n | 3 | n | я | 3 | 3 | n | n | n | 40 | и | n | 7 | n | 3 | n n | 77 | 33 | " |
| ř | Min | 2.4 | а | 3 | п | | | | | | | | | | | | | | | 7.0- | я | 3 | з | я | а | я | а | 3 | 3 | | | | | | | | | | |
| 000 | terminal | 17 | 1 | 2≺ | 2W | 1W | 7 | 2W | 2 | 4 | В | ပို | , <u>5</u> | 5 | <u>5</u> 5 | SC S | SC 2 | 2C ₂ | 2C ₃ | ٧ | Ф | ς S | 5 | 1C ₂ | 103 | 2C ₀ | 2C1 | 2C ₂ | 2C ₃ | ∢ | В | ပို | <u>,</u> ნ | 1C ₂ | ည် | 2C ₀ | 2C1 | 2C ₂ | 2Ç3 |
| 16 | | 4.5 V | 3 | 3 | n | п | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5.5 V | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | 3 | 3 | 3 | ¥ | 3 | 3 |
| 15 | \ | -0.8 mA | | | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | ¥ | | -0.8 mA | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | ⋖ | 0.8 V | | 3 | п | , " | 3 | 3 | " | -12 mA | | | | | | | | | | 0.4 V | | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | 2.4 V | | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND |
| 12 | ე ე | 2.0 V | 0.8 V | | | 2.0 V | 0.8 V | | | ľ | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | | | | | | |
| 7 | 17 | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | | | | | |
| 10 | 1C ₂ | | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 \ | | | | | | | | | | 2.4 V | | | | | |
| 6 | 1C ₃ | | | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | | | |
| 8 | GND | GND | n | ä | п | n | 3 | 3 | ä | n | 3 | ä | n | 3 | ä | 3 | 3 | ä | ä | n | z | 3 | 3 | ä | 3 | ı | n | 3 | ı | n | n | n | n | ä | ä | 3 | 3 | 3 | 3 |
| 7 | 2C3 | | | | | | | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V |
| 9 | 2C2 | | | | | | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | |
| 2 | 2C1 | | | | | | | | | | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | |
| 4 | 2C ₀ | | | 2.0 V | 0.8 V | | | 2.0 V | 0.8 V | | | | | | | -12 mA | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | | |
| 3 | В | 0.8 V | | | n | n | 3 | 3 | | | -12 mA | | | | | | | | | | 0.4 V | GND | GND | 5.5 V | 5.5 V | | GND | 5.5 V | 5.5 V | | 2.4 V | 5.5 V | 5.5 V | GND | | 5.5 V | 5.5 V | GND | GND |
| 2 | 2W | | | | -0.8 mA | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | 7 | | | -0.8 mA | ~ | | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cases E, F | Test No. | 1 | | ب « | 4 | 2 | 9 | 7 | | | 10 | 7 | 12 | 13 | 4 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 52 | 56 | 27 | 78 | 59 | 30 | 31 | 32 | 33 | 34 | 32 | 36 | 37 | 38 |
| | | 3006 | n | 3 | п | 3007 | 3 | 3 | 3 | | | | | | | | | | | 3009 | 3 | 3 | 3 | ä | 3 | 3 | n | 3 | n | 3010 | n | n | n | я | ä | 3 | 3 | 3 | a a |
| Jodan |) logillog | Мон | n | 3 | п | Voi | l) = | 3 | " | VIC | 3 | я | n | 3 | 3 | 3 | 3 | 3 | 3 | 1 | n | 3 | 3 | 3 | " | " | n | 3 | 3 | IH1 | 3 | n | " | 3 | 3 | 3 | ¥ | 3 | я |
| MIL- | dnoifians | 1 | $T_C = 25^{\circ}C$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | я | я | 3 | 3 | 2 | ä | 3 | я | я | n | 3 | 3 | я | 3 | 3 | 3 | 3 | я | я | 3 | 2 | 3 | 3 | 3 | я | 3 | 3 | з | 3 |

See note at end of device type 04.

TABLE III. Group A inspection for device type 04 - Continued. Terminal conditions (pins not designated may be H ≥ 2.0 V, or L ≤ 0.8 V, or open).

| | | 1 | | | | | | | | | | _ | | | | _ | | | | | | | | | | | | | | | | | | | _ |
|-------------|--------------------------------|-------|-----------------------|--------|-------|-------|-------|-----------------|-----------------|-------|-------|------|----------|-----|-------|-------|---|---|--------------|---------------------|------|----|----|----|----|----|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| ts | Unit | Su | 3 | 3 | " | " | 31 | 31 | n | 3 | n | μM | " | 77 | n | " | | | | | | | | | | | | su | 3 | n | n | 3 | 3 | я | я |
| Test limits | Мах | 100 | 3 | ä | n | ¥ | ä | ä | n | " | я | -120 | 3 | 3 | n | 45 | | | | | | | | | | | | 59 | 3 | ä | n | 3 | з | я | ä |
| T | Min | | | | | | | | | | | -20 | з | 3 | п | | | | | | | 7 | | | | | | 8 | з | 3 | 3 | 3 | 3 | 3 | я |
| | Meas. terminal | ∢ | В | ე ე | , ဉ် | 1C2 | ' స్ట | 2C ₀ | SC ₁ | 2C. | 2C3 | 1W | \ | 2W | 2Υ | Vcc | | | | | | ノ | _ | | | / | | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y |
| 16 | Vcc | 5.5 V | 3 | я | ä | я | я | я | ä | 3 | n | n | 3 | z | и | n | | | 4.5 V | з | 2 | я | 3 | я | з | п | | 5.0 V | з | 3 | 3 | 3 | 3 | я | n |
| 15 | 17 | | | | | | | | | | | | GND | | | | | | ٦ | I | _ | I | _ | I | _ | I | | DUT | з | 3 | 3 | | | | |
| 14 | W1 | | | | | | | | | | | GND | | | | | | | I | _ | I | _ | I | _ | I | ٦ | | | | | | | | | |
| 13 | Α | 5.5 V | | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | 5.5 V | GND | n | n | n | и | n | | | В | В | ٨ | ∢ | В | В | ⋖ | А | | GND | 5.0 V |
| 12 | 1C ₀ | | | 5.5 V | | | | | | | | GND | 5.5 V | | | 5.5 V | | | В | ⋖ | | | | | | | | Z | | | | | | | |
| 11 | 10, | | | | 5.5 V | | | | | | | GND | GND | | | GND | | | | | В | ⋖ | | | | | | | Z | | | | | | |
| 10 | 1C2 | | | | | 5.5 V | | | | | | GND | GND | | | GND | | | | | | | В | ∢ | | | | | | Z | | | | | |
| 6 | 1C ₃ | | | | | | 5.5 V | | | | | GND | GND | | | GND | = 125°C and V _{IC} tests are omitted | = -55°C and V _{IC} tests are omitted | | | | | | | В | А | | | | | Z | | | | |
| 8 | GND | GND | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | п | n | tests are | ests are | GND | n | n | n | n | n | n | ш | | GND | n | n | " | " | 3 | n | n |
| 7 | 2C3 | | | | | | | | | | 5.5 V | | | GND | и | n | and V _{IC} | ind V _{IC} 1 | | | | | | | В | А | | | | | | | | | Z |
| 9 | 2C2 | | | | | | | | | 5.5 V | | | | GND | u | n | 125°C | -55°C a | | | | | В | ∢ | | | | | | | | | | Z | |
| 2 | 2C1 | | | | | | | | 5.5 V | | | | | GND | n | n | | | | | В | ∢ | | | | | | | | | | | z | | |
| 4 | 2C ₀ | | | | | | | 5.5 V | | | | | | GND | 5.5 V | 5.5 V | o 1, exce | limits as subgroup 1, except T _C | В | ⋖ | | | | | | | | | | | | Z | | | |
| 3 | В | | 5.5 V | 3 | 3 | GND | GND | | 5.5 V | GND | * | n | 3 | | п | n | ubgroup | upgroup | B <u>1</u> / | 3 | 3 | 3 | ⋖ | 3 | ä | n | : = -55°C. | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V |
| 2 | 2W | | | | | | | | | | | | | GND | | | nits as s | nits as s | I | _ | I | _ | I | _ | I | L | Tc = -{ | | | | | | | | |
| 1 | 27 | | | | | | | | | | | | | | GND | | is and lir | is and lir | | I | _ | I | _ | I | _ | I | 5°C and | | | | | OUT | n | я | n |
| Cases E, F | Test No. | 39 | 40 | 14 | 42 | 43 | 4 | 45 | 46 | 47 | 48 | 49 | 20 | | | 53 | Same tests, terminal conditions and limits as subgroup 1, except T _C | Same tests, terminal conditions and | 54 | 22 | 26 | 22 | 28 | 69 | 09 | 61 | Repeat subgroup 7 at T_C = 125°C and T_C | 62 | 63 | 64 | 65 | | 29 | 89 | 69 |
| | S1D-883 method | 3010 | n | n | n | я | n | n | n | n | * | 3011 | 3 | n | n | 3008 | tests, tern | tests, tern | | | | | | | | | at subgroul | 3003 | (Fig 5) | 3 | 3 | 3 | 3 | 3 | 3 |
| | Symbol | IIH2 | 7 | 3 | n | n | n | n | " | " | n | los |) = | n | п | lcc | Same | Same | Truth | table | test | n | 3 | n | 3 | и | Repe | tPHL1 | ä | 3 | 3 | 3 | 3 | 3 | n |
| | Subgroup Symbol S1D-883 method | - | T _C = 25°C | 3 | ı | n | n | n | n | 3 | n | ä | 3 | n | n | 71 | 2 | 3 | 7 | $T_C = 25^{\circ}C$ | 7 | n | n | n | 3 | n | 8 | 6 | $T_C = 25^{\circ}C$ | 3 | n | 3 | 3 | 71 | ä |

See note at end of device type 04.

TABLE III. Group A inspection for device type 04 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | \neg |
|-------------|--------------------------------|-----------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| its | Unit | Su | 3 | 3 | 3 | 3 | 3 | 3 | n | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | " | 3 | 3 | 3 | 3 | 3 | 3 | ä | us | 3 | 3 | n | n | 3 | я | я | " | 3 | 3 | 3 |
| Test limits | Max | 59 | ä | ä | 3 | 3 | 3 | 3 | n | 18 | 3 | 3 | 3 | 3 | 3 | " | 3 | 17 | ä | 3 | n | 3 | 3 | ä | n | 37 | я | ä | n | 37 | я | 3 | n | 28 | 3 | я | 3 |
| | Min | ဗ | я | я | ä | 3 | 3 | я | n | n | 3 | 3 | 3 | 3 | 3 | я | я | " | 3 | ä | я | z | 3 | 3 | n | 9 | 3 | 3 | я | n | 3 | 3 | 73 | " | 3 | я | 3 |
| | Meas. terminal | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y | 1C ₀ to 1W | 1C ₁ to 1W | 1C ₂ to 1W | 1C ₃ to 1W | 2C ₀ to 2W | 2C ₁ to 2W | 2C ₂ to 2W | 2C ₃ to 2W | 1C ₀ to 1W | 1C ₁ to 1W | 1C ₂ to 1W | 1C ₃ to 1W | 2C ₀ to 2W | 2C ₁ to 2W | 2C ₂ to 2W | $2C_3$ to $2W$ | A to 1Y | A to 2Y | B to 1Y | B to 2Y | A to 1Y | A to 2Y | B to 1Y | B to 2Y | A to 1W | A to 2W | B to 1W | B to 2W |
| 16 | Vcc | 5.0 V | я | 3 | 3 | 3 | 3 | 3 | и | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 71 | я | 3 | 3 | 3 | 3 | 3 | я, | - | 3 | 3 | n | 77 | 3 | 3 | и | " | 3 | 3 | 3 |
| 15 | 17 | _ | я | 3 | 7 | | | | | | | | | | | | | | | | | | | | | OUT | | OUT | | OUT | | OUT | | | | | |
| 4 | W1 | | | | | | | | | OUT | 2 | 3 | 3 | | | | | OUT | з | 3 | 3 | | | | | | | | | | | | | OUT | | DO | |
| 13 | A | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | z | Z | GND | GND | Z | Z | GND | GND | Z | | GND | GND |
| 12 | 100 | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | GND | | GND | | GND | | GND | | GND | | GND | |
| 7 | 101 | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V | | | |
| 10 | 1C2 | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V | |
| 6 | 1C ₃ | | | | Z | | | | | | | | z | | | | | | | | Z | | | | | | | | | | | | | | | | |
| 8 | GND | GND | 3 | 3 | 3 | я | я | я | п | n | 3 | 3 | я | я | я | n | 3 | n | ä | 3 | z | 3 | 3 | z | п | | я | 3 | п | n | ı | я | п | n | я | 2 | 3 |
| 7 | 2C ₃ | | | | | | | | Z | | | | | | | | Z | | | | | | | Z | | | | | | | | | | | | | |
| 9 | 2C2 | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V |
| 2 | 2C ₁ | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V | | |
| 4 | 2C ₀ | | | | | z | | | | | | | | Z | | | | | | | | Z | | | | | GND |
| 3 | В | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | Z | IN | GND | GND | Z | IN | GND | GND | Z | Z |
| 2 | 2W | | | | | | | | | | | | | OUT | 3 | n | n | | | | | OUT | n | 3 | ш | | | | | | | | | | OUT | | OUT |
| - | 2Y | | | | | OUT | 3 | ä | п | | | | | | | | | | | | | | | | | | OUT | | OUT | | OUT | | OUT | | | | |
| Cases E, F | Test No. | 70 | 71 | 72 | 73 | 74 | 75 | 9/ | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 98 | 87 | 88 | 88 | 06 | 91 | 92 | 93 | 94 | 92 | 96 | 6 | 86 | 66 | 100 | 101 | 102 | 103 | 104 | 105 |
| MIL- | STD-883 method | 3003 | (Fig 5) | 3 | 3 | " | 3 | 3 | п | n | 3 | 3 | 3 | n | 3 | я | 3 | n | 3 | 3 | 3 | 3 | 3 | я | п | | - | 3 | п | 3 | 3 | 3 | п | n | 3 | 3 | 3 |
| | Symbol | tPLH1 | 3 | 3 | 3 | 3 | 3 | 3 | n | tPHL2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | tPLH2 | 3 | 3 | 3 | 3 | 3 | я | п | tPHL3 | 3 | 3 | n | £НПа | 3 | 3 | n | tPHL4 | 3 | 3 | 3 |
| | Subgroup Symbol STD-883 method | 6 | $T_{\rm C} = 25^{\circ}{\rm C}$ | ä | я | 3 | я | я | 3 | 3 | 3 | 3 | 3 | я | 3 | я | я | 3 | 3 | 3 | ä | 3 | 3 | я | я | = | - | я | я | 3 | 3 | 3 | 3 | 3 | 3 | я | ä |

See note at end of device type 04.

| _ | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
|--------------------------------|-------------------------|---------|---------------------|---------|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------------|
| ts | Unit | su | 3 | 3 | n | n | 3 | 7 | 3 | я | 3 | 3 | n | " | 7 | я | я | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 7 | 3 | 3 | " | 3 | 3 | n | |
| Test limits | Мах | 26 | 3 | 3 | n | 41 | я | 3 | 3 | 3 | з | 3 | n | 39 | 3 | 3 | 3 | 3 | 3 | 3 | з | 25 | 3 | 3 | 3 | 3 | 3 | 3 | п | 24 | 3 | 3 | 3 | 3 | 3 | 3 | и | |
| - | Min | 9 | 3 | 3 | п | 3 | з | 2 | я | 3 | я | з | п | я | 2 | я | я | я | я | 3 | я | n | я | 3 | з | 3 | 3 | 3 | п | з | 3 | 3 | з | 2 | 3 | 3 | z | |
| : | Meas. terminal | A to 1W | A to 2W | B to 1W | B to 2W | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y | 1C ₀ to 1Y | 1C ₁ to 1Y | 1C ₂ to 1Y | 1C ₃ to 1Y | 2C ₀ to 2Y | 2C ₁ to 2Y | 2C ₂ to 2Y | 2C ₃ to 2Y | 1C ₀ to 1W | 1C ₁ to 1W | 1C ₂ to 1W | 1C ₃ to 1W | 2C ₀ to 2W | 2C ₁ to 2W | 2C ₂ to 2W | 2C ₃ to 2W | 1C ₀ to 1W | 1C ₁ to 1W | 1C ₂ to 1W | 1C ₃ to 1W | 2C ₀ to 2W | 2C ₁ to 2W | 2C ₂ to 2W | 2C ₃ to 2W | |
| 16 | Vcc | 5.0 V | n | n | и | n | n | n | n | n | n | 3 | п | n | 3 | n | n | n | n | n | n | n | n | n | 3 | 3 | n | 3 | п | n | 3 | 3 | 3 | 3 | 3 | 3 | n | |
| 15 | 17 | | | | | OUT | ä | 3 | 3 | | | | | OUT | 3 | я | я | | | | | | | | | | | | | | | | | | | | | |
| 41 | 1W | OUT | | OUT | | | | | | | | | | | | | | | | | | OUT | n | 3 | 3 | | | | | OUT | ä | 3 | n | | | | | |
| 2 3 4 5 6 7 8 9 10 11 12 13 14 | ٨ | Z | Z | GND | GND | GND | 5.0 V | |
| 12 | 1C ₀ | GND | | GND | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | |
| 7 | 1C ₁ | 5.0 V | | | | | Z | | | | | | | | z | | | | | | | | Z | | | | | | | | Z | | | | | | | |
| 10 | 1C2 | | | 5.0 V | | | | Z | | | | | | | | z | | | | | | | | z | | | | | | | | Z | | | | | | |
| 6 | 1C ₃ | | | | | | | | Z | | | | | | | | z | | | | | | | | Z | | | | | | | | Z | | | | | |
| 8 | GND | GND | 3 | ä | " | " | 3 | 3 | 3 | 3 | 3 | 3 | n | " | 3 | я | я | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | я | 3 | 3 | п | n | 3 | 3 | 3 | 3 | 3 | я | z z | |
|) <u></u> | 2C ₃ | | | | | | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | |
| 9 | 2C ₂ | | | | 5.0 V | | | | | | | z | | | | | | | | Z | | | | | | | | z | | | | | | | | z | | |
| 2 | 2C ₁ 2 | | 2.0 V | | 5 | | | | | | z | | | | | | | | z | | | | | | | | Z | | | | | | | | z | | | |
| 4 | 2C ₀ | | GND 5 | | GND | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | z | | | | |
| 3 | В | GND | GND | z | N G | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 2.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | |
| 2 | 2W | 9 | OUT | | OUT | 9 | 0 | 2 | 2 | 0 | 0 | 2 | 5 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | Θ | 0 | Ω. | 2 | — | | | . 5 | 0 | 0 | 2 | Ω. | - | <u>"</u> | | . 5 | |
| _ | 2Y ; | | 0 | | 0 | | | | | OUT | 3 | 3 | a | | | | | OUT | 3 | 3 | 3 | | | | | | | | | | | | | O | | | | e 04. |
| Cases E, F | Test No. | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | | 117 | 118 | 119 | 120 | 121 | 122 0 | 123 | | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | See note at end of device type 04 |
| | | 3003 | (Fig 5) | 3 | n | n | 3 | " | " | 3 | 3 | 3 | п | n | 3 | 3 | 3 | " | " | 3 | 3 | n | " | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | t end o |
| | l Slodmy | tPLH4 | <u>"</u> | я | n | tPHL1 | я | 3 | " | n | 3 | 3 | n | фГН1 | 3 | 7 | 7 | " | " | 3 | 3 | tPHL2 | " | 3 | 3 | 3 | 3 | 3 | n | tPLH2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | note a |
| | Subgroup Symbol STD-883 | 6 | $T_C = 25^{\circ}C$ | я | n | 10 1 | $T_C = 125^{\circ}C$ | 3 | я | 3 | я | 3 | ä | 3 | я | 3 | 3 | я | я | я | я | 3 | я | 3 | я | я | я | 3 | 3 | 3 | я | я | я | я | 3 | я | 3 | Set |

TABLE III. Group A inspection for device type 04 - Continued. Terminal conditions (pins not designated may be H ≥ 2.0 V, or L ≤ 0.8 V, or open).

| | | MIL- | Cases E, F | _ | 2 | 3 | 4 | 2 | 9 | 7 | 8 | 6 | 10 | 11 | 12 | 13 1 | 14 | 15 | 16 | | ř | Test limits | |
|------------------------|--------|-------------------------|---|------------|------------|---------|-----------------|--------------------------------------|--------|-----------------|-----|-----|-------|---------|-----|--------|-----|-----|-------|-------------------|-----|-------------|------|
| roup | Symbol | Subgroup Symbol STD-883 | Test No. | 2Y | 2W | В | 2C ₀ | 2C1 | 2C2 | 2C ₃ | GND | 103 | 1C2 | 5 | 100 | A 1 | M | 7 | VCC | Meas. terminal | Min | Мах | Unit |
| 10 | tPHL3 | 3003 | 142 | | | GND | | | | | GND | | | 5.0 V (| GND | Z | 0 | OUT | 5.0 V | A to 1Y | 9 | 51 | ns |
| T _C = 125°C | 3 | (Fig 5) | 143 | OUT | | GND | GND | 5.0 V | | | 3 | | | | | z | | | 3 | A to 2Y | з | 3 | 3 |
| | 3 | n | 14 | | | z | | | | | 7 | | 5.0 V | | GND | GND | 0 | OUT | 7 | B to 1Y | з | 3 | я |
| 3 | n | n | 145 | OUT | | z | GND | | 5.0 V | | n | | | | | GND | | | 7 | B to 2Y | я | я | я |
| 3 | tргнз | n | 146 | | | GND | | | | | n | | | 5.0 V | GND | Z | 0 | OUT | n | A to 1Y | n | я | n |
| | 3 | n | 147 | OUT | | GND | GND | 5.0 V | | | я | | | | | z | | | 3 | A to 2Y | я | 3 | я |
| , | 3 | n | 148 | | | Z | | | | | n | | 5.0 V | | GND | GND | 0 | OUT | 3 | B to 1Y | 3 | 3 | я |
| , | n | n | 149 | OUT | | z | GND | | 5.0 V | | 7 | | | | | GND | | | 7 | B to 2Y | 3 | n | я |
| | tPHL4 | n | 150 | | | GND | | | | | n | | | 5.0 V | GND | ō N | OUT | | n | A to 1W | n | 39 | n |
| | n | n | 151 | | OUT | GND | GND | 5.0 V | | | 3 | | | | | z | | | 3 | A to 2W | я | 3 | я |
| , | n | n | 152 | | | z | | | | | 3 | / | 5.0 V | | GND | GND OI | OUT | | 3 | B to 1W | з | 3 | 3 |
| , | n | n | 153 | | OUT | z | GND | | 5.0 V | | 3 | | | | | GND | | | 3 | B to 2W | з | 3 | 3 |
| , | tPLH4 | n | 154 | | | GND | | | | | n | | | 5.0 V | GND | ō N | OUT | | n | A to 1W | n | 34 | n |
| | n | n | 155 | | OUT | GND | GND | 5.0 V | | | 3 | | | | | z | | | 3 | A to 2W | 3 | 3 | 3 |
| | 3 | n | 156 | | | z | | | | | ä | / | 5.0 V | | GND | GND | OUT | | 3 | B to 1W | я | 3 | 3 |
| u | и | n | 157 | | OUT | Z | GND | | 5.0 V | | n | | | | ن | GND | | | n | B to 2W | n | п | n |
| 11 | Samet | tests, term | Same tests, terminal conditions and limits as subgrou | ıs and lin | nits as sı | ubgroup | 10, exce | ip 10, except $T_C = -55^{\circ}C$. | -55°C. | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

| e 05. | |
|--------------------------------|--|
| typ(| |
| evice | |
| for d | |
| inspection for device type 05. | |
| inspe | |
| up A | |
| Gro | |
| TABLE III. | |
| Ľ | |
| | |

| ts | Unit | > | n | n | n | n | ä | 3 | " | n | ı | ı | ä | n | 3 | ä | ı | 3 | ı | mA | " | ä | n | 3 | n | n | n | ä | n | γh | 3 | ä | 3 | n | 3 | ı | ı | n | n |
|----------------------------------|-------------------|-------|---------------------|-------|-------|-------|-------|-------|-------|--------|-----------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------|-------|-------|-----------------|-----------------|-----------------|-------|-------|-----------------|-------|--------|------------------|-------|-----------------|-------|-----------------|-------|-------|-------|-----------------|------------|
| Test limits | Max | | | | | 0.4 | n | " | n | -1.5 | n | n | п | n | я | я | n | 3 | n | -1.6 | n | я | n | 31 | я | n | n | n | и | 40 | n | n | 71 | n | я | n | n | n | и |
| Ĺ | Min | 2.4 | я | n | u | | | | | | | | | | | | | | | 7.0- | ä | 3 | 3 | 3 | n | n | n | 3 | u | | | | | | | | | | |
| | Meas. terminal | 7 | 2 | 37 | 47 | 17 | 2 | 37 | 74 | A | 1B ₀ | 1B ₁ | 2B ₀ | 2B1 | 4B1 | 4B0 | 3B1 | 3B ₀ | ŋ | g | ∢ | 1B ₀ | 1B ₁ | 2B ₀ | 2B1 | 4B1 | 4B ₀ | 3B1 | $3B_0$ | 9 | ∢ | 1B ₀ | 1B1 | 2B ₀ | 2B1 | 4B1 | 4B0 | 3B ₁ | $3B_0$ |
| 16 | Vcc | > | n | 3 | " | n | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | , | 3 | 3 | 3 | 5.5 V | 3 | 3 | 3 | 3 | я | 3 | 3 | n | п | " | n | 3 | 7 | 'n | 3 | 3 | 3 | 3 | n |
| 15 | ტ | 0.8 V | n | 3 | " | 2.0 V | ı | ä | з | | | | | | | | | | -12 mA | 0.4 V | GND | 3 | ä | 3 | я | ı | 3 | n | п | 2.4 V | 5.5 V | ä | ä | 'n | 3 | ŋ | ŋ | 3 | n |
| 14 | 3B ₀ | | | | | | | | | | | | | | | | | -12 mA | | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V |
| 13 | 3B1 | | | 2.0 V | | | | | | | | | | | | | -12 mA | | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | |
| 12 | 37 | | | 8 mA | | | | 16 mA | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 4B ₀ | | | | | | | | | | | | | | | -12 mA | | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | |
| 10 | 4B1 | | | | 2.0 V | | | | | | | | | | -12 mA | | | | | | | | | | | 0.4 V | | | | | | | | | | 2.4 V | | | |
| 6 | 74 | | | | 8 mA | | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ∞ | GND | GND | а | n | | n | а | 3 | , | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | n | а | n | 3 | n | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 |
| 7 | 27 (| | 8 mA | | | | 16 mA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 2B ₁ | | 2.0 V 8 | | | | 7 | | | | | | | -12 mA | | | | | | | | | | | V 4.0 | | | | | | | | | | 2.4 V | | | | |
| 2 | 2B ₀ | | 2 | | | | | | | | | | -12 mA | 7 | | | | | | | | | | 0.4 V | 0 | | | | | | | | | 2.4 V | 7 | | | | |
| 4 | * | 8 mA | | | | 16 mA | | | | | | | 7 | | | | | | | | | | | | | | | | | | | | 2.4 V | (1 | | | | | |
| 3 | 1B ₁ | 2.0 V | | | | 1 | | | | | | -12 mA | | | | | | | | | | | 0.4 V | | | | | | | | | | N | | | | | | |
| 2 | 1B ₀ | (4 | | | | | | | | | -12 mA | 7 | | | | | | | | | | 0.4 V | 0 | | | | | | | | | 2.4 V | | | | | | | |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 | | > | | 3 | n | | | | | mA | 7 | | | | | | | | | | > | | 5.5 V | 9 | > | > | 9 | > | 9 | | > | | 9 | > | 9 | 9 | > | 9 | > 2 |
| E, F 1 | O | 2.0 V | 3 | | , | | | | | -12 mA | | | | | | | | | | | 0.4 V | GND | 5.5 | GND | 5.5 V | 5.5 V | GND | 5.5 V | GND | | 2.4 V | 5.5 V | GND | 5.5 V | GND | GND | 5.5 V | GND | 5.5 V |
| Cases E, F | Test No. | - | 7 | က | 4 | 9 | 9 | 7 | 00 | 6 | 10 | 7 | 12 | 13 | 4 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 58 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| -JIM | STD-883 method | 3006 | 3 | 3 | n | 3007 | 3 | 3 | 3 | | | | | | | | | | | 3009 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | п | 3010 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | " 38 5.5 V |
| | Symbol | МОН | я | 3 | п | Vol | а | 3 | 3 | VIC | 3 | 3 | 3 | 3 | я | я | 3 | 3 | 3 | - | 3 | я | 3 | 3 | 3 | а | 3 | я | n | l _{IH1} | 3 | 3 | 3 | я | я | 3 | 3 | 3 | n |
| | Subgroup | - | $T_C = 25^{\circ}C$ | n | 3 | n | 75 | 3 | ¥ | 3 | n | n | 3 | 3 | я | я | 3 | n | 3 | ä | 3 | n | 3 | я | 3 | 3 | 3 | я | n | n | n | 3 | я | я | я | n | n | n | п |

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TABLE III. Group A inspection for device type $\overline{05}$ – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| S | Unit | μĄ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | я | 3 | mA | 3 | 3 | 3 | n | | | | | | | | | SU | 3 | я | з | 71 | 3 | 3 | n |
|-------------|-------------------------|-------|---------------------|-----------------|-----------------|-----------------|-----------------|-------|-----------------|-------|-----------------|-------|-------|-------|-------|------|---|--|--------------|---------------------|------|----|----|---|---------|---------------------|---------|---------|---------|---------|---------|---------|
| Test limits | Мах | 100 | я | n | n | n | n | n | n | n | n | -120 | я | n | n | 50 | | | | | | | | | 30 | 3 | я | n | 27 | n | я | и |
| T | Min | | | | | | | | | | | -20 | n | " | n | | | | | | /5 | | | | 9 | n | n | n | n | n | 3 | n |
| 74000 | Meas. terminal | 9 | ∢ | 1B ₀ | 1B ₁ | 2B ₀ | 2B ₁ | 4B1 | 4B ₀ | 3B1 | 3B ₀ | 17 | 27 | 47 | 37 | Vcc | | | , | | | | ` | | A to 1Y | A to 2Y | A to 3Y | A to 4Y | A to 1Y | A to 2Y | A to 3Y | A to 4Y |
| 16 | Vcc | 5.5 V | 3 | " | n | 3 | " | " | 7 | 7 | " | n | " | 3 | 3 | n | | | 4.5 V | " | 3 | 3 | n | | 2.0 V | 3 | 3 | 3 | " | 3 | 3 | 3 |
| 15 | G | 5.5 V | n | ä | n | 3 | 3 | 3 | ä | n | n | GND | n | 3 | z | GND | | | ٧ | В | 3 | 3 | п | | GND | z | n | 3 | n | 3 | 3 | 3 |
| 14 | $3B_0$ | | | | | | | | | | 5.5 V | | | | 5.5 V | GND | | | | | | В | ٧ | | | | GND | | | | GND | |
| 13 | 3B1 | | | | | | | | | 5.5 V | | | | | 5.5 V | GND | | | | В | ⋖ | | | | | | 5.0 V | | | | 5.0 V | |
| 12 | 37 | | | | | | | | | | | | | | GND | | | | ٦ | _ | I | _ | I | | | | OUT | | | | DOL | |
| 11 | 4B ₀ | | | | | | | | 5.5 V | | | | | 5.5 V | | GND | | | | | | В | ٧ | | | | | GND | | | | GND |
| 10 | 4B1 | | | | | | | 5.5 V | | | | | | 5.5 V | | GND | | | | В | ∢ | | | | | | | 5.0 V | | | | 5.0 V |
| 6 | 4 | | | | | | | | | | | | | GND | | | omitted. | mitted. | _ | _ | I | _ | I | | | | | OUT | | | | OUT |
| 8 | GND | GND | ä | ä | n | " | z | z | ä | n | n | n | ä | " | n n | п | sts are o | sts are c | GND | и | n | 3 | и | | GND | z | ä | я | n | 3 | 3 | п |
| 7 | 2Y | | | | | | | | | | | | GND | | | | nd V _{IC} te | oup 1, except T _C = -55°C and V _{IC} tests are omitted | ٦ | 7 | I | ٦ | Н | | | OUT | | | | OUT | | |
| 9 | 2B ₁ | | | | | | 5.5 V | | | | | | 5.5 V | | | GND | 125°C ar | -55°C ar | | В | ∢ | | | | | 5.0 V | | | | 5.0 V | | |
| 2 | 2B ₀ | | | | | 5.5 V | | | | | | | 5.5 V | | | GND | pt Tc = | pt Tc = | | | | В | ٧ | | | GND | | | | GND | | |
| 4 | 7 | | | | | | | | | | | GND | | | | | 1, exce | 1, exce | L <u>2</u> / | _ | I | _ | I | | OUT | | | | OUT | | | |
| 3 | 1B ₁ | | | | 5.5 V | | | | | | | 5.5 V | | | | GND | abgroup | ubgroup | | В | ⋖ | | | Ö. | 5.0 V | | | | 5.0 V | | | |
| 2 | 1B ₀ | | | 5.5 V | | | | | | | | 5.5 V | | | | GND | nits as sı | mits as s | | | | В | ٧ | I T _C = -5! | GND | | | | GND | | | |
| 1 | Α | | 5.5 V | 5.5 V | GND | 5.5 V | GND | GND | 5.5 V | GND | 5.5 V | 5.5 V | я | 3 | з | GND | ns and lir | ns and li | | A 1/ | ∢ | В | В | 25°C and | Z | 3 | я | 3 | я | 3 | 3 | n |
| Cases E, F | Test No. | 68 | 40 | 41 | 42 | 43 | 4 | 45 | 46 | 47 | 48 | 49 | 20 | 51 | 52 | 53 | Same tests, terminal conditions and limits as subgroup 1, except T_C = 125°C and V_{IC} tests are omitted | Same tests, terminal conditions and limits as subgr | 54 | 22 | 26 | 22 | 28 | Repeat subgroup 7 at T_C = 125°C and T_C = -55°C. | 29 | 09 | 61 | 62 | 63 | 64 | 99 | 99 |
| | STD-883 method | 3010 | 3 | я | я | 3 | 3 | 3 | я | n | 3 | 3011 | я | з | 3 | 3005 | sts, termi | ests, term | | | | | | subgroup | 3003 | (Fig 6) | я | я | я | 3 | 3 | n |
| | Symbol | 2HI1 | я | я | n | 3 | 3 | 3 | я | я | n | los | я | 3 | n | lcc | Same te | Same te | Truth | table | test | 3 | n | Repeat | tPHL1 | 7 | я | ä | tpLH1 | n | n | n |
| 1 | Subgroup Symbol STD-863 | 1 | $T_C = 25^{\circ}C$ | n | n | 3 | 3 | n | 3 | * | * | n | n | ¥ | 3 | п | 2 | 3 | 7 | $T_C = 25^{\circ}C$ | 3 | ı | п | 80 | 6 | $T_C = 25^{\circ}C$ | n | 3 | 3 | 3 | 3 | 11 |

See notes at end of device type 05.

TABLE III. Group A inspection for device type 05 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | T | Ħ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------|-----------------|---------|---------------------|---------|---------|---------|---------|---------|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------|----------------|---------|---------|--------|---------|---------|---------|---------|----------|---------|---------|
| di. | <u></u> | Unit | SU | 77 | 3 | 3 | n | 3 | 3 | я | 3 | 7 | 3 | 3 | 3 | " | 3 | 3 | n | ä | 3 | 3 | 3 | 3 | 3 | " | " | 3 | 77 | 3 | я | 3 | 3 | 3 | 31 | 3 | 3 | π |
| Toot limits | 162 | Мах | 28 | 7 | 3 | 3 | 23 | n | 7 | 3 | 20 | 71 | 3 | 7 | 3 | 3 | " | 3 | 20 | " | " | 3 | 3 | 3 | 7 | n | 49 | ä | 7 | 3 | 41 | " | 31 | ¥ | 39 | 3 | 3 | n |
| ľ | | Min | 3 | 3 | 3 | з | n | 3 | 3 | 3 | я | 3 | з | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 11 | 9 | 3 | 3 | 3 | 31 | 3 | 3 | 3 | 3 | 3 | 3 | n |
| | Meas | terminal | G to 1Y | G to 2Y | G to 3Y | G to 4Y | G to 1Y | G to 2Y | G to 3Y | G to 4Y | 1B ₀ to 1Y | 1B ₁ to 1Y | 2B ₀ to 2Y | 2B ₁ to 2Y | 3B ₀ to 3Y | 3B ₁ to 3Y | 4B ₀ to 4Y | 4B ₁ to 4Y | 1B ₀ to 1Y | 1B ₁ to 1Y | 2B ₀ to 2Y | 2B ₁ to 2Y | 3B ₀ to 3Y | 3B ₁ to 3Y | 4B ₀ to 4Y | 4B ₁ to 4Y | A to1Y | A to 2Y | A to 3Y | A to 4Y | A to1Y | A to 2Y | A to 3Y | A to 4Y | G to 1Y | G to 2Y | G to 3Y | G to 4Y |
| 4 | 2 | Vcc | 5.0 V | n | n | 3 | n | n | n | n | n | n | ä | n | n | n | n | ä | n | n | n | ä | ä | n | n | ш | n | ä | " | " | " | n | n | 3 | " | 2 | ä | п |
| n t | 2 | G | Z | 3 | 3 | 3 | я | z | 3 | 3 | GND | 3 | 3 | 3 | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | 3 | 3 | n | п | n | 3 | 3 | 3 | я | 3 | я | 3 | Z | 3 | 3 | п |
| GII). | <u>†</u> | 3B ₀ | | | | | | | | | | | | | Z | | | | | | | | Z | | | | | | GND | | | | GND | | | | | |
| , c | 2 | 3B1 | | | 5.0 V | | | | 5.0 V | | | | | | | z | | | | | | | | Z | | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V | |
| 0.0 | 7 | 37 | | | OUT | | | | OUT | | | | | | OUT | OUT | | | | | | | OUT | OUT | | | | | OUT | | | | OUT | | | | TUO | |
| ; 2 5 | = | 4B ₀ | | | | | | | | | | | | | | | Z | | | | | | | | Z | | | | | GND | | | | GND | | | | |
| 2.0.4 | 2 | 4B1 | | | | 5.0 V | | | | 5.0 V | | | | | | | | z | | | | | | | | Z | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V |
|) | 6 | 4 | | | | OUT : | | | | OUT | | | | | | | OUT | OUT | | | | | | | OUT | OUT | | | | OUT | | | | OUT | | | | OUT |
| , IIIay | 0 | GND | GND | 3 | 3 | 3 | n | з | 2 | я | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 23 | 3 | 3 | я | я | 3 | 3 | п | n | 3 | 3 | 3 | я | 3 | 3 | 3 | n | 3 | 3 | и |
|) | 1 | 2Y (| | OUT | | | | OUT | | | | | OUT | OUT | | | | | | | OUT | OUT | | | | | | OUT | | | | OUT | | | | OUT | | |
| or des | 0 | 2B ₁ | | 2.0 V | | | | 5.0 V | | | | | | Z | | | | | | | | Z | | | | | | 2.0 V | | | | 5.0 V | | | | 2.0 V | | |
| SIIId) | C | 2B ₀ | | <u></u> | | | | | | | | | Z | | | | | | | | Z | | | | | | | GND | | | | GND | | | | <u> </u> | | |
| | 1 | 1 | OUT | | | | OUT | | | | OUT | OUT | | | | | | | OUT | OUT | | | | | | | OUT | | | | OUT | | | | OUT | | | |
| , | r | 1B ₁ | 5.0 V | | | | 5.0 V | | | | | Z | | | | | | | | Z | | | | | | | 5.0 V | | | | 5.0 V | | | | 5.0 V | | | |
| Terminal conditions (pins not designated may be n ≥ 2.0 V, or L ≥ 0.0 V, or oben) | 7 | 1B ₀ | | | | | | | | | z | | | | | | | | Z | | | | | | | | GND | | | | GND | | | | | | | |
| , | - | ٧ | 5.0 V | 3 | 3 | я | з | а | а | я | GND | 5.0 V | Z | а | 3 | 3 | я | 3 | я | 3 | 5.0 V | 3 | 3 | и |
| | ۱, ٦ | Test No. | | 89 | 69 | 02 | 71 | 72 | 73 | 74 | | | | | | | | | | | | | | | 68 | | 91 | 95 | 93 | 94 | 95 | 96 | 26 | 86 | 66 | 00 | 101 | 102 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <i></i> | _ | _ | _ |
| - IIM | STD-8 | method | | (Fig 6) | 3 | 3 | n | " | " | " | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | " | 3 | 3 | ä | ä | 3 | я | n | 3003 | (Fig 6) | 3 | 3 | n | 3 | " | 3 | " | 3 | 3 | n |
| | Symbo | Cyllin. | tPHL2 | | 3 | ä | tPLH2 | n | n | n | tPHL3 | 7 | 71 | 3 | 3 | 3 | 3 | 3 | tPLH3 | 3 | 3 | n | n | 3 | n | n | tPHL1 | | 3 | 3 | tPLH1 | 7 | n | " | tPHL2 | 3 | 3 | n |
| | Subaroup | dpoigano | 6 | $T_C = 25^{\circ}C$ | n | n | n | n | n | n | n | n | n | ¥ | n | ¥ | n | я | n | n | ¥ | n | n | n | n | n | 10 | $T_C = 125$ °C | n | n | n | n | n | я | 3 | 3 | n | п |

See notes at end of device type 05.

TABLE III. Group A inspection for device type $\overline{05}$ – Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| | Unit | ns | 3 | " | " | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
|-------------|--------------------------------|---------|----------------------|---------|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|
| imits | | | | | | | | | | | | | | | | | | | | | | |
| Test limits | Мах | 33 | 3 | n | n | 25 | 3 | n | ä | n | ä | 3 | 3 | 35 | 3 | ä | 3 | 3 | ä | 3 | 3 | |
| | Min | 3 | 3 | 3 | 3 | " ~ | " ~ | * >- | " ~ | " ~ | " ~ | * >- | * >- | : >- | * >- | " ~ | * >- | " ~ | " ~ | * - | 3 >- | |
| | Meas. terminal | G to 1Y | G to 2Y | G to 3Y | G to 4Y | 1B ₀ to 1Y | 1B ₁ to 1Y | 2B ₀ to 2Y | 2B ₁ to 2Y | 3B ₀ to 3Y | 3B ₁ to 3Y | 4B ₀ to 4Y | 4B ₁ to 4Y | 1B ₀ to 1Y | 1B ₁ to 1Y | 2B ₀ to 2Y | 2B ₁ to 2Y | 3B ₀ to 3Y | 3B ₁ to 3Y | 4B ₀ to 4Y | 4B ₁ to 4Y | |
| 16 | Vcc | 5.0 V | 3 | 3 | 3 | . 1 | , | , 2 | , 2 | 3 | " " | ² 4 | ² 4 | | * | , 2 | , 2 | " " | 3 | ² 4 | ² 4 | |
| 15 | 9 | Z Z | 3 | 3 | 3 | GND | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 14 | 3B ₀ | | | | | | | | | Z | | | | | | | | Z | | | | |
| . 13 | | | | 5.0 V | | | | | | | z | | | | | | | | z | | | |
| | 3B1 | | | | | | | | | _ | | | | | | | | _ | | | | |
| 12 | 37 | | | OUT | | | | | | OUT | 9 | | | | | | | 9 | OUT | | | |
| 11 | 4B0 | | | | | | | | | | | Z | | | | | | | | Z | | |
| 10 | 4B1 | | | | 5.0 V | | | | | | | | Z | | | | | | | | Z | |
| 6 | 47 | | | | OUT | | | | | | | OUT | OUT | | | | | | | OUT | OUT | |
| 8 | GND | GND | 3 | 3 | n | n | 3 | я | 3 | n | 3 | 3 | 3 | = | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 7 | 2Y | | DUT | | | | | OUT | OUT | | | | | | | OUT | OUT | | | | | |
| 9 | 2B ₁ | | 5.0 V | | | | | | Z | | | | | | | | z | | | | | 55°C. |
| 2 | 2B ₀ | | | | | | | Z | | | | | | | | z | | | | | | t T _C = -{ |
| 4 | 17 | OUT | | | | OUT | OUT | | | | | | | OUT | OUT | | | | | | | p 10, except T _C = -55°C |
| 3 | 1B1 | 5.0 V | | | | | Z | | | | | | | | Z | | | | | | | group 10 |
| 2 | 1B ₀ | | | | | z | | | | | | | | Z | | | | | | | | s as sub |
| _ | ∢ | 5.0 V | 3 | 3 | 3 | GND | 5.0 V | and limit |
| Cases E, F | Test No. | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | Same tests, terminal conditions and limits as subgrou |
| | | 3003 | (Fig 6) | я | я | я | я | я | я | я | я | я | я | = | | я | я | я | я | я | 3 | s, termina |
| - | Symbol | tPLH2 | 3 | 3 | я | tPHL3 | я | 3 | я | я | я | з | з | фгнз | 3 | я | з | я | я | я | я | Same test |
| - | Subgroup Symbol STD-883 method | 10 | $T_C = 125^{\circ}C$ | n | n | я | n | 77 | n | n | n | n | n | = | = | n | n | n | n | n | n | 11 |

| e 06. |
|------------|
| rice type |
| for dev |
| inspection |
| Group A |
| TABLE III. |
| |

| | 1 | 1 | | | 1 | | | | | | | | | | | | | | -1 | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-------------------|------------|-----------------------|-------------|----------|--------|--------|--------|--------|--------|-------|-----|--------|--------|--------|-----------|---------|----------|----|----------|-------|-------|-------|-----|-------------|-----|---------------|--------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------|
| its | Unit | > | n | 3 3 | | 3 | 7 | n | " | n | n | " | | 3 | 3 | n | " | " | ٠ | mA | я | " | " | n | " | n | " | | 7 | " | n | n | γh | n | n | 3 | n | " | я | n | 3 | n | n | я |
| Test limits | Мах | | | 4.0 | 4.0 | -1.5 | 3 | " | " | " | 3 | 3 | | 3 | 3 | 3 | 3 | 7 | ١ | -1.6 | " | " | " | " | " | " | 3 | | 3 | 3 | " | " | 40 | 3 | " | 31 | " | " | " | " | " | " | n | 3 |
| | Min | 2.4 | 2.4 | | | | | | | | | | | | | | | | | -0.7 | n | " | 3 | " | " | " | n | | 3 | 3 | " | " | | | | | | | | | | | | |
| | Meas. terminal | > | M | > | M | ۵ | 7 | D2 | ద | 2 | ל ל | ĵ i | ရိ | 0 | Ŋ | ⋖ | α | ם כ | ن | ტ | ∢ | В | O | ٥ | 3 2 | ، د | 1 | ຕິ | Δ | D² | De | D ₇ | 9 | ∢ | В | O | ۵ | 3 5 | ے د | 2 6 | 3 0 | Ğ | ် ဝ | <u>0</u> |
| 16 | Vcc | 4.5 V | и | 3 3 | | n | 3 | n | n | n | n | 7 | | 3 | n | n | 3 | " | | 5.5 V | n | n | n | п | n | n | n | | 3 | я | 3 | 3 | n | n | n | n | n | n | n | n | " | n | я | ä |
| 15 | D4 | | | | | | | | | -12 mA | ! | | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | 2.4 V | | | | |
| 41 | Ds | | | | | | | | | | -12 m | 1 | | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | 2.4 \ | | |
| 13 14 | De | | | | | | | | | | | | -12 mA | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | 2.4 V | |
| 12 | D2 | | | | | | | | | | | | 1 | -12 mA | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | 2.4 V |
| | 4 | V 8.0 | 2.0 V | 2.0 V | ۰.۵ م | | | | | | | | | `1 | | -12 mA | | | | 5.5 V | 0.4 V | 5.5 V | 5.5 V | CNC | \ \ \ \ \ \ | | 2 2 2 | 2.0 | GND | 5.5 V | GND | 5.5 V | GND | 2.4 V | GND | GND | 5.5 V | GND | 5.5 \ | GND | 5.5 V | GND | 5.5 V | |
| 10 | В | - | _ | 2.0 \ | -+ | | | | | | | | | | | <u>'ı</u> | -12 m A | <u> </u> | | | 5.5 V | | | | | | | | | | | 2.5 \ | | GND | 2.4 V | GND | 5.5 V | | | | | | | |
| 6 | O | 1 | | 2.0 \ | -+ | | | | | | | | | | | | `` | | 7 | | 5.5 V | | | | | 3 | 3 | | > | 3 | | 3 | | GND | GND | 2.4 \ | | | 3 | 3 | GND | | 3 | 3 |
| & | GND | Ω | , | 3 3 | T | 3 | 3 | n | 2 | n | я | 3 | | 3 | ä | я | 3 | | | 3 | 3 | 3 | , | , | 3 | 3 | n | | 3 | n | 3 | 3 | , , | , | , | 3 | 3 | " | 3 | n | - | n | n | 3 |
| | 9 | 0.8 V | .0 V | 2.0 V | > 0. | | | | | | | | | | -12 mA | | | | | 0.4 V | GND | 3 | 3 | 7 | 3 | 3 | 3 | | 3 | 3 | 3 | 3 | 2.4 V | > 5. | 3 | 3 | 7 | 3 | 3 | 7 | 3 | 3 | 3 | 3 |
| 9 | * | 0 | -0.8 mA 2 | | n Am oi | | | | | | | | | | 7 | | | | | 0 | | | | | | | | | | | | | 2 | ĽΩ | | | | | | | | | | |
| 2 | > | -0.8 mA | | 16 mA | = | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | D ₀ | 2.0 V -0.8 | | | Z.U V | -12 mA | | | | | | | | | | | | | | | | | | 740 | • | | | | | | | | | | | | 2.4 V | | | | | | | |
| 2 3 4 5 6 7 8 9 10 11 | D ₁ | 2. | | c | 7 | - | -12 mA | | | | | | | | | | | | | | | | | C | 7 7 0 | • | | | | | | | | | | | 2 | 2.4 V | | | | | | |
| 2 | D ₂ | | | | | | - | -12 mA | | | | | | | | | | | | | | | | | | 2 | 1 > | | | | | | | | | | | 2 | 2.4 \ | | | | | |
| _ | D3 [| | | | | | | -12 | -12 mA | | | | | | | | | | | | | | | | | • | | > 4.0 | | | | | | | | | | | 2 | 2.4 V | | | | |
| Ь | | | | | | | | | -12 | | | | | | | | | | | | | | | | | | (| ò — | | | | | | | | | | | | 5 | | | | |
| Cases E, | Test No. | - | 2 | ი - | 4 | 2 | 9 | 7 | ∞ | σ | , 5 | 2 ; | = 1 | 12 | 13 | 4 | 7 | 2 9 | J0 | 17 | 18 | 19 | 20 | 2 | ; s | 1 8 | 3 3 | 47 | 22 | 56 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 8 | 35 | 38 | 37 | 38 | 39 | 40 |
| MIL- | STD-883 method | 3006 | 3006 | 3007 | 3007 | | | | | | | | | | | | | | | 3009 | 2 | я | 3 | n | я | ŋ | n | | 3 | z | 3 | 3 | 3010 | ä | 3 | я | n | 3 | 3 | n | 3 | n | я | я |
| _ | | МОН | Vон | Vol | VOL | VIC | 3 | я | n | 3 | я | ¥ | | 3 | я | я | 3 | n | | <u>=</u> | , a | я | 3 | 3 | 3 | 7 | 8 | | 3 | я | 3 | 3 | IH1 | 3 | 3 | 3 | я | 3 | 3 | 3 | 3 | я | я | 3 |
| | Subgroup Symbol | - | T _C = 25°C | я я | | 3 | 3 | " | " | 3 | 3 | 3 | | 3 | я | я | 3 | 8 | ' | 3 | 3 | я | 3 | 7 | 3 | 3 | 3 | | 3 | 7 | 3 | 3 | 3 | 3 | з | 3 | з | 3 | 3 | 2 | 3 | 3 | 3 | 3 |

TABLE III. Group A inspection for device type 06 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| Subjourney Survive Sur | | Ħ | d | | | | | | | | | | | | 4 | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
|--|---------|-----------------|------------------|--------|-----|-----|-----|-------|--------|--------|-----|----------------|----------------|----|-----|-------|-------|-----------|----------|-------|----------------|------|----|----|----|----|----|----------|----|----|----|----|----|----|---|----|---------|
| Symbol S | mits | | | | 3 | 3 | " | * | " | 3 | " | 3 | _ | - | | | | | | | | | | | | | | | | | | | | | | _ | 1 |
| Symbol STD-3802 Test-No. Casea E. F 1 2 3 4 5 6 7 8 7 8 9 10 11 12 13 14 15 16 Measure metals between conficious and limits as subgroup; 1 each of test size with a section of test | Test li | | 100 | 2 | 3 | 3 | 3 | z | ä | 3 | 3 | " | • | - | | | 48 | | | | | | | | | | | | | | | | | | | _ | 1 |
| Name | | | | | | | | | | | | | | | -20 | -20 | | | | | | | | | | | | 2 | | | | | | | | | 1 |
| Name | | Meas. ermina | 9 | ⋖ | Ф | ပ | ٥ | 2 5 | - ć | 2 0 | D4 | D ₅ | D ₆ | D2 | 8 | > | Vcc | | | _ | | | | | | | | <u> </u> | _ | | | | | | _ | ` | İ |
| Name | | | .5 V | 3 | 3 | 3 | 3 | ä | 3 | 3 | 3 | 3 | | 3 | n | 3 | n | | | .5 V | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 |
| Symbol St.D. Case E 1 2 3 4 5 6 7 8 9 10 11 12 13 14 | ıo | | 2 | | | | | | | | > | | | | Q | | | | | 4 | | | | | | | | | | | | | | | | | ı |
| Milk Case F 1 2 3 4 5 6 7 8 9 10 11 12 13 | _ | | | | | | | | | | 5.5 | | | | ō | _ | | | | | | | | | | | | | | _ | | | | | | | ı |
| Mile | 14 | Ds | | | | | | | | | | 5.5 V | | | GND | = | = | | | | | | | | | | | | | | В | ⋖ | | | | | 1 |
| Mile | 13 | De | | | | | | | | | | | 5.5 V | | 3ND | | - | | | | | | | | | | | | | | | | В | ⋖ | | | |
| Name State | 12 | D7 | | | | | | | | | | | 4, | | | | | | | | | | | | | | | | | | | | | | В | ⋖ | |
| MML Cases E, F 1 2 3 4 5 6 7 8 9 10 MIL ML ML ML ML ML ML ML | _ | | 9 | > 2 | 9 | 9 | > 2 | 9 | . > | 9 | > 2 | 9 | > 2 | | | 3 | , | | | | m | m | 4 | 4 | m | m | 4 | 4 | m | m | 4 | 4 | m | m | | 4 | Ì |
| Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name State Name Name Name State Name Name Name Name Name Name State Name Nam | | _ | | | | | | | | | | | | ซิ | | | | | | | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 1 |
| Symbol S | 10 | В | | N S | 5.5 | | | 5.5 | 8 8 | S S | | | N S | 3 | n | я | n | | | | В | я | я | 3 | ∢ | 3 | 3 | 3 | В | 3 | я | 3 | ⋖ | я | 3 | 2 | 1 |
| Name | 6 | ပ | GND | n | 3 | 5.5 | " | n | n | 3 | GND | - | - | 3 | n | ä | n | nitted. | nitted. | | Ф | n | n | " | " | " | n | 3 | ∢ | " | n | " | n | n | 3 | " | ı |
| Name | 80 | GND | GND | 3 | 3 | 3 | ä | 3 | ä | 3 | ä | 3 | = | 3 | n | 3 | n | are on | are on | GND | 3 | n | n | ı | n | n | 3 | 3 | n | n | n | ä | n | n | 3 | n | Ì |
| Name | 7 | ŋ | 2.5 V | 3 | я | 3 | 3 | я | n | ä | n | 3 | | | = | GND | GND | IC tests | c tests | 4 | В | n | n | n | n | n | 3 | 3 | n | n | n | n | n | n | 3 | n | 1 |
| Name | 9 | | 4) | | | | | | | | | | | | | | | and V | and V | | ェ | _ | ェ | _ | ェ | _ | ı | _ | ェ | _ | ェ | _ | ı | _ | | _ | İ |
| Name | | | | | | | | | | | | | | | 9 | _ | | |)°53-= | 7 | | | | | | | | | | | | | | | | _ | Ì |
| | 2 | <u>></u> | | | | | | | | | | | | | | | | pt Tc = | | — | _ | エ | _ | エ | _ | エ | _ | Ι | _ | エ | _ | エ | _ | エ | _ | | 1 |
| | 4 | ۵ | | | | | 5.5 | | | | | | | | GND | 5.5 V | 5.5 V | 1, exce | 1, exc | 7 | Ф | ⋖ | | | | | | | | | | | | | | | |
| | 3 | 5 | | | | | | 5.5 V | | | | | | | GND | = | = | ogroup | bgroup | | | | В | ⋖ | | | | | | | | | | | | | ني |
| | 2 | D2 | | | | | | | 5.5 V | | | | | | GND | - | = | s as sul | s as su | | | | | | В | ۷ | | | | | | | | | | | . = -55 |
| | _ | D ₃ | | | | | | | | 2.5 \ | | | | | SND | | - | nd limits | nd limit | | | | | | | | В | ⋖ | | | | | | | | | and To |
| | | o O | | | | | | | | 4) | | | | | | | | ions ar | tions a | | | | | | | | | | | | | | | | | | 125°C |
| | Cases I | Test | 41 | 45 | 43 | 4 | 45 | 46 | 47 | 48 | 49 | 20 | 51 | 52 | 53 | 72 | 22 | al condi | al condi | 26 | 22 | 28 | 29 | 90 | 61 | 62 | 63 | 4 | 65 | 99 | 29 | 89 | 69 | 70 | 7 | 72 | at Tc = |
| | | hod | 10 | _ | _ | _ | _ | , | _ | | _ | _ | _ | _ | 11 | 7 | 90 | ermina | termina | | | | | | | | | | | | | | | | | | roup 7 |
| | ₹ | met D | 30 | • | _ | _ | • | • | _ | | • | _ | _ | _ | 30 | 30 | 30 | tests, t | tests, | | | | | | | | | | | | | | | | | | at subg |
| Subgroup TC = 25°C TC = 25°C TC = 25°C | c | Symbo | I _{IH2} | 3 | 3 | 3 | 3 | я | 3 | 3 | 3 | 3 | | = | los | los | 8 | Same | Same | Truth | table | test | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | ä | Repe |
| | roup | | | 25°C | | | | | | | | | | | | | | | | | 25°C | | | | | | | | | | | | | | | | |
| | Subg | | | TC | ٠ | ď | 4 | 3 | 3 | 4 | a | 4 | _ | | a | • | a | ., | (,, | | T _O | • | • | a | ٩ | ٩ | • | 4 | a | ٩ | • | a | ٠ | ٠ | • | a | Ψ |

See notes at end of device type 06.

TABLE III. Group A inspection for device type 06 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| S | Unit | SU | я | я | 3 | 3 | 3 | n | n | 3 | " | n | , | n | n | n | n | n | ¥ | n | 3 | = | 3 | 3 | з | n | з | n | " | 3 | 3 | я |
|-------------|--------------------------------------|--------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------|
| Test limits | Мах | 32 | я | я | 59 | 3 | 3 | 40 | з | з | 39 | я | я | 28 | 26 | 37 | 35 | 20 | 3 | 3 | 3 | = | 3 | 3 | я | 17 | я | я | з | з | 3 | z |
| Te | Min | 9 | я | 3 | n | " | 3 | 80 | я | 3 | n | я | я | 9 | 9 | ∞ | œ | 3 | " | 3 | 7 | - | 3 | 3 | ä | n | я | я | я | 3 | 3 | 3 |
| : | Meas. terminal | A to W | B to W | C to W | A to W | B to W | C to W | A to Y | B to Y | C to Y | A to Y | B to Y | C to Y | G to W | G to W | G to Y | G to Y | D ₀ to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W | D ₀ to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | W of a C |
| 16 | Vcc | 5.0 V | 3 | ä | я | 3 | 3 | я | 3 | z | я | 3 | 3 | я | 3 | я | 3 | п | 3 | 3 | 2 | = | 3 | 3 | 3 | 3 | ä | 3 | 3 | z | 3 | 3 |
| 15 | D4 | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | | | | | | | Z | | | | | | | | Z | | |
| 14 | D5 | | | | | | | | | | | | | | | | | | | | | | Z | | | | | | | | Z | |
| 13 | De | | | | | | | | | | | | | | | | | | | | | | | z | | | | | | | | 2 |
| 12 | D7 | | | | | | | | | | | | | | | | | | | | | | | | z | | | | | | | |
| 11 | A | Z | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | 3 | п | 3 | я | 3 | n | 5.0 V | GND | 5.0 V | CINC |
| 10 | В | GND | Z | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | я | 3 | я | 3 | n | 3 | 5.0 V | 5.0 V | GND | GND | 5.0 V | 5.0 V | GND | GND | 5.0 V | | | | 7 |
| 6 | C | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | GND | Z | GND | 3 | 3 | з | 3 | з | 3 | 3 | 5.0 V | 3 | 3 | 3 | GND | я | 3 | 3 | 5.0 V | 3 | " |
| 8 | GND | GND | n | 3 | з | 3 | 3 | n | а | n | з | n | n | n | 3 | n | n | n | 3 | 2 | 3 | = | 3 | 3 | 3 | n | 3 | 3 | 3 | n | 3 | 3 |
| 7 | Э | GND | n | n | " | 3 | 3 | n | n | n | " | n | n | Z | n | n | n | GND | 3 | n | z | GND | 3 | 3 | n | n | " | n | " | n | 2 | " |
| 9 | 8 | OUT | 3 | 3 | n | 3 | 3 | | | | | | | OUT | OUT | | | OUT | 3 | 2 | 3 | OUT | 3 | 3 | я | n | я | я | я | z | 3 | 77 |
| 2 | \ | | | | | | | OUT | n | n | n | n | n | | | OUT | OUT | | | | | | | | | | | | | | | |
| 4 | D ₀ | GND | я | я | я | 3 | 3 | я | я | я | я | я | я | 5.0 V | 3 | я | я | Z | | | | | | | | Z | | | | | | |
| 3 | D1 | 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | | | | | | Z | | | | | | | | z | | | | | |
| 2 | D2 | | 5.0 V | | | 5.0 V | | | 5.0 V | | | 5.0 V | | | | | | | | Z | | | | | | | | Z | | | | |
| 1 | D3 | | | | | | | | | | | | | | | | | | | | Z | | | | | | | | Z | | | |
| Cases E, F | Test No. | 73 | 74 | 75 | 92 | 77 | 78 | 62 | 80 | 81 | 82 | 83 | 8 | 85 | 98 | 87 | 88 | 68 | 06 | 91 | 92 | 93 | 94 | 92 | 96 | 26 | 86 | 66 | 100 | 101 | 102 | 103 |
| | method | 3003 | (Fig 4) | я | я | з | 3 | я | 3 | я | я | я | я | я | n | я | я | 3 | 3 | 3 | 3 | = | - | 3 | n | я | я | я | я | я | 3 | n |
| | Symbol S | tPHL1 | | n | tpLH1 | 3 | 3 | tPHL2 | " | " | tpLH2 | * | * | tPHL3 | tPLH3 | tPHL4 | tPLH4 | tPHL5 | 3 | " | 3 | tPHL5 | 3 | 3 | 7 | tPLH5 | 7 | 3 | 7 | " | 3 | " |
| | Subgroup Symbol STD-883 method | 6 | T _C = 25°C | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | n | n | 3 | ä | 3 | n | 3 | 3 | n | 3 | = | = | 3 | ä | 3 | я | ä | ä | 3 | 3 | 3 |

See notes at end of device type 06.

TABLE III. Group A inspection for device type 06 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| J | Cases E, F | - | 2 | 3 | 4 | 2 | 4 5 6 7 8 9 10 11 12 13 1 | 7 | 8 | 6 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | Test | Test limits |
|-----|------------|----|-------|-------|-------|-----|---------------------------|-----|-----|-------|-------|-------|----|----------------|----------------|-------|-----------------|------------------|---------------------|--------|-------------|
| Tes | Test No. | D3 | D2 | ٥ | D0 | > | > | ტ | GND | O | В | ∢ | D7 | D ₆ | D ₅ | D4 | V _{CC} | | Meas. terminal | in Max | × |
| _ | 105 | | | | Z | OUT | | GND | GND | GND | GND | GND | | | | | 5.0 V | 1 | | 3 29 | Su (|
| ` | 106 | | | Z | | 3 | | 3 | 3 | 3 | GND | 5.0 V | | | | | 3 | <u></u> | | 3 | 3 |
| _ | 107 | | Z | | | 3 | | 3 | 3 | 3 | 5.0 V | GND | | | | | 2 | D ₂ . | D ₂ to Y | - | 3 |
| | 108 | Z | | | | 3 | | 3 | 3 | 3 | 5.0 V | 5.0 V | | | | | 3 | D3 | D ₃ to Y | | 3 |
| | 109 | | | | | 3 | | 3 | 3 | 5.0 V | GND | GND | | | | Z | 3 | D4 | D ₄ to Y | | 3 |
| | 110 | | | | | 3 | | 3 | n | 3 | GND | 5.0 V | | | Z | | 3 | D ₂ | D ₅ to Y | | 3 |
| | 111 | | | | | 3 | | 3 | 7 | 3 | 5.0 V | GND | | Z | | | 3 | De | De to Y | - | 3 |
| | 112 | | | | | 3 | | 3 | n | 3 | 5.0 V | 5.0 V | Z | | | | 3 | D ₂ | D ₇ to Y | | 3 |
| | 113 | | | | Z | n | | n | n | GND | GND | GND | | | | | n | D0 | Do to Y | 33 | |
| | 114 | | | Z | | 3 | | 3 | n | 3 | GND | 5.0 V | | | | | 3 | 2 | D ₁ to Y | 3 | 3 |
| | 115 | | Z | | | 3 | | 3 | 3 | 3 | 5.0 V | GND | | | | | 3 | D ₂ | D ₂ to Y | | 3 |
| | 116 | Z | | | | 3 | | 3 | 3 | 3 | 5.0 V | 5.0 V | | | | Z | 3 | ۵ | D ₃ to Y | | 3 |
| | 117 | | | | | 3 | | 3 | 3 | 5.0 V | GND | GND | | | Z | | 3 | D4 | D ₄ to Y | | 3 |
| | 118 | | | | | 3 | | 3 | 3 | 3 | GND | 5.0 V | | | | | 3 | De | D ₅ to Y | | 3 |
| | 119 | | | | | 3 | | 3 | ı | 3 | 5.0 V | GND | | Z | | | 3 | De | De to Y | | 3 |
| | 120 | | | | | 3 | | з | 3 | 3 | 5.0 V | 5.0 V | Z | | | | 3 | D2 | D ₇ to Y | | 3 |
| | 121 | | | 5.0 V | GND | | OUT | я | n | GND | GND | Z | | | | | n | A to | A to W | 48 | |
| | 122 | | 5.0 V | | 3 | | " | 3 | n | GND | Z | GND | | | | | 3 | B tc | " × | - | 3 |
| | 123 | | | | з | | я | 3 | n | z | GND | GND | | | | 5.0 V | " | Ö | C to W | 3 | 3 |
| | 124 | | | 5.0 V | " | | n | n | n | GND | GND | Z | | | | | n | A to | A to W | 43 | |
| | 125 | | 5.0 V | | 3 | | 7 | 3 | 3 | GND | Z | GND | | | | | 3 | B tc | " M | | 3 |
| | 126 | | | | и | | п | и | п | Z | GND | GND | | | | 5.0 V | , " | Ct | C to W | ı, | n |
| 1 | 127 | | | 5.0 V | n | OUT | | n | n | GND | GND | Z | | | | | n | Αt | | 8 60 | , (|
| | 128 | | 5.0 V | | 3 | 3 | | 3 | 3 | GND | Z | GND | | | | | 3 | Bţ | | | 3 |
| | 129 | | | | u | n | | п | n | Z | GND | GND | | | | 5.0 V | , a | Ct | C to Y | n n | n |
| | 130 | | | 5.0 V | " | n | | n | n | GND | GND | Z | | | | | n | Αt | A to Y | , 28 | |
| | 131 | | 5.0 V | | 3 | 3 | | 3 | 3 | GND | Z | GND | | | | | 2 | Bţ | | 3 | 3 |
| | 132 | | | | 3 | 3 | | 3 | 3 | Z | GND | ı | | | | 5.0 V | " | ct | C to Y | " | 3 |
| Ī | 133 | | | | 5.0 V | | OUT | Z | n | GND | n | n | | | | | n | G to | | 98 | |
| | 134 | | | | n | | OUT | и | n | а | n | α | | | | | n | G te | G to W 6 | 35 | , . |
| Ī | 135 | | | | n | OUT | | n | n | n | n | n | | | | | n | G t | | 8 5 | , |
| | 136 | | | | 3 | OUT | | 3 | 3 | 3 | 3 | 3 | | | | | 3 | Gt | G to Y | | 3 |
| | 137 | | | | Z | | OUT | GND | n | 3 | n | я | | | | | n | D ₀ t | | 3 32 | " |
| | 138 | | | Z | | | 3 | 3 | 3 | 3 | n | 5.0 V | | | | | 3 | <u>D</u> | | | 3 |
| | 139 | | Z | | | | я | 3 | 3 | 3 | 5.0 V | GND | | | | | 3 | D ₂ t | D ₂ to W | - | 3 |
| | 140 | Z | | | | | 'n | n | n | ä | 5.0 V | 5.0 V | | | | | 3 | ć | " >> | 3 | 3 |

See notes at end of device type 06.

TABLE III. Group A inspection for device type 06 - Continued. Terminal conditions (pins not designated may be H \ge 2.0 V, or L \le 0.8 V, or open).

| iits | Unit | us | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|-------------|-------------------|---------------------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Test limits | Max | 32 | 3 | 3 | 3 | 56 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 44 | 3 | 3 | я | 3 | 3 | 3 | 3 | 36 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Min | က | 3 | 3 | 3 | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | meas. terminal | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W | D ₀ to W | D ₁ to W | D ₂ to W | D ₃ to W | D ₄ to W | D ₅ to W | D ₆ to W | D ₇ to W | D ₀ to Y | D ₁ to Y | D ₂ to Y | D ₃ to Y | D ₄ to Y | D ₅ to Y | D ₆ to Y | D ₇ to Y | D ₀ to Y | D ₁ to Y | D ₂ to Y | D ₃ to Y | D ₄ to Y | D ₅ to Y | D ₆ to Y | D ₇ to Y |
| 16 | Vcc | 5.0 V | | " | я | n | 3 | 3 | 7 | " | " | " | " | n | " | " | " | 3 | 7 | " | 3 | n | n | 3 | " | " | 3 | n | 3 |
| 15 | D4 | Z | | | | | | | | Z | | | | | | | Z | | | | | | | | | Z | | | |
| 14 | Ds | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | | z | | |
| 13 | De | | | z | | | | | | | | z | | | | | | | | Z | | | | | | | | Z | |
| 12 | D ₇ | | | | Z | | | | | | | | z | | | | | | | | Z | | | | | | | | Z |
| 7 | ∢ | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V | GND | 5.0 V |
| 10 | | GND | | | | | | 5.0 V | 5.0 V | GND | GND | | | _ | | | 5.0 V | GND | GND | | | - | | | | | | 5.0 V | 5.0 V |
| 6 | ပ | 5.0 V | | n | | | | 3 | n | 5.0 V | 3 | 3 | | _ | | n | n | 5.0 V | n | | | GND | | n | n | 5.0 V | n | n | 3 |
| œ | GND | GND | 3 | " | 3 | n | 3 | 3 | 3 | " | 3 | 3 | 3 | n | n | n | 3 | 3 | " | n | 3 | n | n | 3 | 3 | n | 3 | n | з |
| 7 | O | GND | n | " | я | n | 3 | 3 | " | " | 3 | 3 | " | n | n | n | n | 3 | " | n | 3 | n | n | 3 | n | n | 3 | n | 3 |
| 9 | > | OUT | 3 | 3 | n | я | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | |
| 2 | > | | | | | | | | | | | | | OUT | n | n | n | 3 | ä | n | n | n | n | n | n | n | ä | n | 3 |
| 4 | ۵ | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | | | |
| က | 7 | | | | | | z | | | | | | | | z | | | | | | | | z | | | | | | |
| 2 | D2 | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | | |
| - | D3 | | | | | | | | Z | | | | | | | | Z | | | | | | | | Z | | | | |
| Cases E, F | Test No. | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 |
| MIL- | method | 3003 | (Fig 4) | я | я | я | а | 3 | а | а | 3 | 3 | я | п | я | я | 2 | 3 | а | я | я | n | я | ä | я | я | я | я | 3 |
| MIL- | | tPHL5 | n | n | n | фгн5 | ¥ | 3 | n | n | 3 | 3 | n | tPHL6 | n | n | 3 | 3 | n | n | n | фГН | n | n | n | n | n | n | 3 |
| 210000 | dnoifianc | 10 | T _C = 125°C | 3 | n | ¥ | 3 | 3 | n | n | 3 | 3 | n | 3 | n | n | я | 3 | n | n | n | 3 | я | 3 | n | n | n | я | 3 |

5. PACKAGING

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

6. NOTES

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

- 6.1 <u>Intended use.</u> Microcircuits conforming to this specification are intended for original equipment design applications and logistic support of existing equipment.
 - 6.2 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 conformance inspection data pertinent to the device inspection lot to be supplied with each shipment by the device manufacturer, if applicable.
 - d. Requirement for certificate of compliance, if applicable.
 - e. Requirements for notification of change of product or process to acquiring activity in addition to notification to the qualifying activity, if applicable.
 - f. Requirements for failure analysis (including required test condition of method 5003), corrective action and reporting of results, if applicable.
 - g. Requirements for product assurance options.
 - h. Requirements for carriers, special lead lengths or lead forming, if applicable. These requirements shall not affect the part number. Unless otherwise specified, these requirements will not apply to direct purchase by or direct shipment to the Government.
 - i. Requirements for "JAN" marking.
 - j. Packaging requirements (see 5.1).
- 6.3 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DSCC-VQ, 3990 E. Broad Street, Columbus, Ohio 43123-1199.
- 6.4 <u>Superseding information</u>. The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.

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

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

- 6.6 <u>Logistic support.</u> Lead materials and finishes (see 3.3) are interchangeable. Unless otherwise specified, microcircuits acquired for Government logistic support will be acquired to device class B (see 1.2.2), lead material and finish A (see 3.4). Longer lead lengths and lead forming shall not affect the part number.
- 6.7 <u>Substitutability.</u> The cross-reference information below is presented for the convenience of users. Microcircuits covered by this specification will functionally replace the listed generic-industry type. Generic-industry microcircuit types may not have equivalent operational performance characteristics across military temperature ranges or reliability factors equivalent to MIL-M-35810 device types and may have slight physical variations in relation to case size. The presence of this information should not be deemed as permitting substitution of generic-industry types for MIL-M-38510 types or as a waiver of any of the provisions of MIL-PRF-38535.

| Military device type | Generic-industry type |
|-------------------------|--------------------------|
| | |
| 01 | 54150 |
| 02 | 9312 |
| 03 | 54153 |
| 04 | 9309 |
| 05 | 9322, 54157 |
| 06 | 54151 |

6.8 <u>Manufacturers designation.</u> Manufacturer circuits included in this specification are designated as shown in table IV herein.

TABLE IV. Substitutability and manufacturers designator.

| Device Types | Motorola | Signetics | Fairchild | Texas Instruments | National | Advanced Micro Device |
|----------------------------------|-----------------------|-----------------------|-------------|----------------------|------------------|-----------------------------|
| | Α | В | С | D | Е | F |
| 01 02 03 04 05 06 | X X X X X | X X X X X | X X X | X X | X X X X | x x |

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

Custodians:

Army - CR Navy - EC Air Force - 11

DLA - CC

Preparing activity: DLA - CC

(Project 5962-2103)

Review activities:

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

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