

PART NUMBER 54LS243BCA-ROCS

Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All re-creations are done with the approval of the Original Component Manufacturer. (OCM)

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceeds the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-38535
 - Class Q Military
 - Class V Space Level

Qualified Suppliers List of Distributors (QSLD)

 Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OCM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

INCH-POUND
MIL-M-38510/328C
18 November 2003
SUPERSEDING
MIL-M-38510/328B
23 March 1984

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, BIPOLAR, LOW-POWER SCHOTTKY TTL, BUS TRANSCEIVERS WITH THREE STATE OUTPUTS, MONOLITHIC SILICON

Inactive for new design after 18 April 1997.

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, low-power Schottky TTL, bus transceivers with three state outputs. Two product assurance classes and a choice of case outlines and lead finishes are provided for each type and are reflected in the complete part number. For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.3).
- 1.2 Part or Identifying Number (PIN). The PIN should be in accordance with MIL-PRF-38535, and as specified herein.
 - 1.2.1 Device types. The device types should be as follows:

| Device type | <u>Circuit</u> |
|-------------|---|
| 01 | Quadruple inverting bus transceivers with three state outputs |
| 02 | Quadruple noninverting bus transceivers with three state outputs |
| 03 | Octal noninverting bus transceivers with three state outputs |
| 04 | Octal inverting bus transceivers and registers with three state outputs |
| 05 | Octal inverting bus transceivers and registers with three state outputs |

- 1.2.2 Device class. The device class should be the product assurance level as defined in MIL-PRF-38535.
- 1.2.3 Case outlines. The case outlines should be as designated in MIL-STD-1835 and as follows:

| Outline letter | Descriptive designator | <u>Terminals</u> | Package style |
|----------------|------------------------|------------------|------------------------------|
| Α | GDFP5-F14 or CDFP6-F14 | 14 | Flat pack |
| С | GDIP1-T14 or CDIP2-T14 | 14 | Dual-in-line |
| D | GDFP1-F14 or CDFP2-F14 | 14 | Flat pack |
| R | GDIP1-T20 or CDIP2-T20 | 20 | Dual-in-line |
| S | GDFP2-F20 or CDFP3-F20 | 20 | Flat pack |
| L | GDIP3-T24 or CDIP4-T24 | 24 | Dual-in-line |
| 2 | CQCC1-N20 | 20 | Square leadless chip carrier |

Comments, suggestions, or questions on this document should be addressed to: Commander, Defense Supply Center Columbus, ATTN: DSCC-VAS, 3990 East Broad St., Columbus, OH 43216-5000, 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 www.dodssp.daps.mil.

AMSC N/A FSC 5962

1.3 Absolute maximum ratings.

| Supply voltage rangeInput voltage rangeStorage temperature range | -1.5 V dc at -18 mA to +5.5 V dc |
|--|--------------------------------------|
| Maximum power dissipation (P _D) <u>1</u> / | |
| Device type 01 and 02 | |
| Device type 03 | |
| Device type 04 and 05 | 907.5 mW dc |
| Lead temperature (soldering, 10 seconds) | +300°C |
| Thermal resistance, junction to case (θ_{JC}): | |
| Cases A, C, D, R, S, L, and 2 | (See MIL-STD-1835) |
| Junction temperature (T _J) <u>2</u> / | |
| 1.4 Recommended operating conditions. | |
| Supply voltage (V _{CC}) | 4.5 V dc minimum to 5.5 V dc maximum |
| Minimum high level input voltage (V _{IH}) | 2.0 V |
| Maximum low level input voltage (V _{IL}): | |
| Device types 01, 02, and 03 | 0.7 V dc |
| Device types 04 and 05 | 0.5 V dc |
| Normalized fanout (each input) 3/ | 20 maximum |

Device types 04 and 05 0 ns

2. APPLICABLE DOCUMENTS

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

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

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

^{3/} The device shall fanout in both high and low levels to the specified number of inputs of the same device type as that being tested.

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 www.dodssp.daps.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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

3. REQUIREMENTS

- 3.1 <u>Qualification</u>. Microcircuits furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.3 and 6.4).
- 3.2 <u>Item requirements</u>. The individual item requirements shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.
- 3.3 <u>Design, construction, and physical dimensions.</u> The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.
- 3.3.1 <u>Logic diagrams and terminal connections</u>. The logic diagrams and terminal connections shall be as specified on figure 1.
 - 3.3.2 Truth tables. The truth tables shall be as specified on figure 2.
- 3.3.3 <u>Schematic circuits</u>. The schematic circuits shall be maintained by the manufacturer and made available to the qualifying activity and the preparing activity upon request.
 - 3.3.4 <u>Case outlines.</u> The case outlines shall be as specified in 1.2.3.
 - 3.4 Lead material and finish. The lead material and finish shall be in accordance with MIL-PRF-38535 (see 6.6).
- 3.5 <u>Electrical performance characteristics</u>. The electrical performance characteristics are as specified in table I, and apply over the full recommended case operating temperature range, unless otherwise specified.
- 3.6 <u>Electrical test requirements.</u> The electrical test requirements for each device class shall be the subgroups specified in table II. The electrical tests for each subgroup are described in table III.
 - 3.7 Marking. Marking shall be in accordance with MIL-PRF-38535.
- 3.8 <u>Microcircuit group assignment.</u> The devices covered by this specification shall be in microcircuit group number 9 (see MIL-PRF-38535, appendix A).

4. VERIFICATION

- 4.1 <u>Sampling and inspection.</u> Sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not effect the form, fit, or function as described herein.
- 4.2 <u>Screening.</u> Screening shall be in accordance with MIL-PRF-38535 and shall be conducted on all devices prior to qualification and quality conformance inspection. The following additional criteria shall apply:
 - a. The burn-in test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
 - b. Interim and final electrical test parameters shall be as specified in table II, except interim electrical parameters test prior to burn-in is optional at the discretion of the manufacturer.
 - c. Additional screening for space level product shall be as specified in MIL-PRF-38535, appendix B.
 - 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 Group A inspection. 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 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. Subgroups 3 and 4 shall be added to the group C inspection parameters for class B devices and shall consist of the tests, conditions, and limits specified for subgroups 10 and 11 of group A.
 - c. 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.

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

| Test | Symbol | Conditions | Device | Lir | mits | Unit | |
|--|-------------------|--|-------------------------|------------|------|------|----|
| | | -55°C ≤ T _C ≤ +12 | type | Min | Max | | |
| High level output voltage | V _{OH1} | $V_{CC} = 4.5 \text{ V}, V_{IH} = 2.0 \text{ V},$ | $V_{IL} = 0.7 \ V$ | 01, 02, 03 | 2.4 | | V |
| | | $I_{OH} = -3 \text{ mA}$ | $V_{IL} = 0.5 V$ | 04, 05 | 2.4 | | = |
| | V _{OH2} | $V_{CC} = 4.5 \text{ V}, V_{IH} = 2.0 \text{ V},$ | $V_{IL} = 0.5 V$ | 01, 02, 03 | 2.0 | | = |
| | | I _{OH} = -12 mA | $V_{IL} = 0.5 V$ | 04, 05 | 2.0 | | " |
| High level output voltage | V _{OL} | $V_{CC} = 4.5 \text{ V}, V_{IH} = 2.0 \text{ V},$ | $V_{IL} = 0.7 \ V$ | 01, 02, 03 | | 0.4 | " |
| | | I _{OL} = 12 mA | V _{IL} = 0.5 V | 04, 05 | | 0.4 | ıı |
| Input clamp voltage | Vic | $V_{CC} = 4.5 \text{ V}, I_{IN} = -18 \text{ mA}$ $T_{C} = +25^{\circ}\text{C}$ | , | All | | -1.5 | II |
| High level input current | I _{IH1} | $V_{CC} = 5.5 \text{ V}, V_{IN} = 2.7 \text{ V}$ | | All | | 20 | μΑ |
| High level input current | I _{IH2} | V _{CC} = 5.5 V, V _{IN} = 5.5 V | | All | | 0.1 | mA |
| Inhibited state output | I _{OZH} | V _{CC} = 5.5 V, V _{OUT} = 2.7 \ | / | 01, 02 | | 40 | μΑ |
| leakage current | | | | 03 | | 20 | · |
| - | | | | 04, 05 | | 20 | |
| | I _{OZL} | $V_{CC} = 5.5 \text{ V}, V_{OUT} = 0.4 \text{ V}$ | / | 01, 02, 03 | | -200 | μΑ |
| | | | | 04, 05 | | -400 | , |
| Low level input current | I _{IL} | $V_{CC} = 5.5 \text{ V}, V_{IN} = 0.4 \text{ V}$ | | 01, 02, 03 | 0 | -240 | μΑ |
| | | | | 04, 05 | 0 | -200 | , |
| Short circuit output current | Ios | V _{CC} = 5.5 V <u>1</u> / | | All | -40 | -225 | mA |
| Supply current | I _{CCH} | V _{CC} = 5.5 V | | 01, 02 | | 38 | mA |
| | | | | 03 | | 70 | |
| | | | | 04, 05 | | 145 | |
| | I _{CCL} | V _{CC} = 5.5 V | | 01, 02 | | 50 | mΑ |
| | | | | 03 | | 90 | |
| | | | | 04, 05 | | 165 | |
| | I _{CCZ} | $V_{CC} = 5.5 \text{ V}$ | | 01, 02 | | 50 | mΑ |
| | | | | 03 | | 95 | |
| | | | | 04, 05 | | 165 | |
| Propagation delay time, low to high clock to bus | t _{PLH1} | $V_{CC} = 5.0 \text{ V},$ $R_L = 110\Omega,$ | | 04, 05 | 2 | 39 | ns |
| Propagation delay time, | t _{PHL1} | C _L = 50 pF | | 04 | 2 | 52 | ns |
| high to low clock to bus | | | | 05 | 2 | 59 | |
| Propagation delay time, | t _{PLH2} | | | 01, 02 | 2 | 25 | ns |
| low to high bus to bus | | | | 03 | 2 | 22 | |
| | | | | 04, 05 | 2 | 30 | ns |

See footnote at end of table.

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

| Test | Symbol | Conditions | Device | Lim | its | Unit |
|--------------------------------------|-------------------|---------------------------------|--------|-----|-----|------|
| | | -55°C ≤ T _C ≤ +125°C | type | Min | Max | |
| Propagation delay time, | t _{PHL2} | V _{CC} = 5.0 V, | 01, 02 | 2 | 30 | ns |
| high to low bus to bus | | $C_L = 50 \text{ pF},$ | 03 | 2 | 22 | |
| | | $R_L = 110 \Omega$ | 04 | 2 | 33 | |
| | | | 05 | 2 | 39 | |
| Propagation delay time, low to high | t _{PLH3} | | 04 | 2 | 59 | ns |
| select (with bus input high) to bus | | | 05 | 2 | 78 | |
| Propagation delay time, high to low | t _{PHL3} | | 04 | 2 | 52 | ns |
| select (with bus input high) to bus | | | 05 | 2 | 59 | |
| Propagation delay time, low to high | t _{PLH4} | | 04 | 2 | 72 | ns |
| select (with bus input low) to bus | | | 05 | 2 | 59 | |
| Propagation delay time, high to low | t _{PHL4} | | 04 | 2 | 39 | ns |
| select (with bus input low) to bus | | | 05 | 2 | 59 | |
| Propagation delay time, disabled | t _{PZH1} | | 01, 02 | 2 | 36 | ns |
| to high level output | | | 03 | 2 | 58 | |
| Propagation delay time, disabled to | t _{PZH2} | | 04 | 2 | 78 | ns |
| high level output enable to bus | | | 05 | 2 | 72 | |
| Propagation delay time, disabled to | t _{PZH3} | | 04 | 2 | 65 | ns |
| high level output direction to bus | | | 05 | 2 | 59 | |
| Propagation delay time, disabled to | t _{PZL1} | | 01, 02 | 2 | 46 | ns |
| low level output | | | 03 | 2 | 58 | |
| Propagation delay time, disabled to | t _{PZL2} | | 04 | 2 | 91 | ns |
| low level output enable to bus | | | 05 | 2 | 78 | |
| Propagation delay time, disabled to | t _{PZL3} | | 04 | 2 | 85 | ns |
| low level direction to bus | | | 05 | 2 | 65 | |
| Propagation delay time high level | t _{PHZ1} | | 01, 02 | 2 | 46 | ns |
| to disabled output | | | 03 | 2 | 39 | |
| Propagation delay time high level | t _{PHZ2} | | 04 | 2 | 52 | ns |
| to disabled output enable to bus | | | 05 | 2 | 65 | |
| Propagation delay time high level | t _{PHZ3} | | 04 | 2 | 46 | ns |
| to disabled output direction to bus | | | 05 | 2 | 52 | |
| Propagation delay time, low level to | t _{PLZ1} | | 01, 02 | 2 | 39 | ns |
| disabled output | | | 03 | 2 | 39 | |
| Propagation delay time, low level to | t _{PLZ2} | | 04 | 2 | 52 | ns |
| disabled output enable to bus | | | 05 | 2 | 52 | |
| Propagation delay time, low level to | t _{PLZ3} | | 04 | 2 | 46 | ns |
| disabled output direction to bus | | | 05 | 2 | 46 | |

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

TABLE II. Electrical test requirements.

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

^{*}PDA applies to subgroup 1.

- 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 specified 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 and positive when flowing into the referenced terminal.
- 4.6 <u>Inclusion with other detail specifications.</u> For qualification and quality conformance inspection purposes, devices covered by this specification may be treated as though they were included on the same detail specification as devices covered by MIL-M-38510/324. In addition, if a manufacturer is already qualified for type 32402, and if the respective devices on this specification (MIL-M-38510/328) are designed and manufactured identically (same die, same process, same screening) in all respects except electrical testing, then device type 32802 may be qualified by conducting only group A electrical tests with approval of the qualifying activity including subgroups A-10 and A-11, and submitting data in accordance with MIL-M-38510, appendix D (i.e., groups B, C, and D tests are not required).

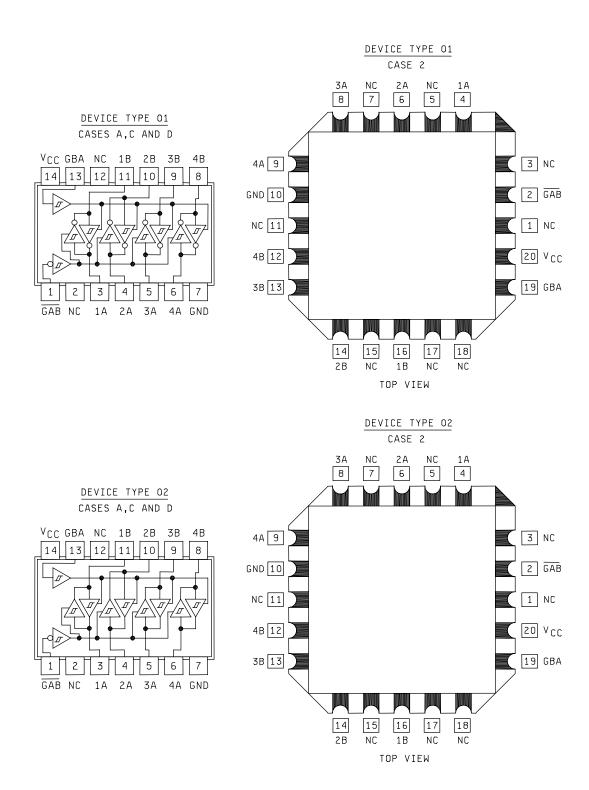
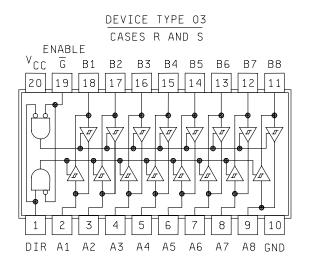


FIGURE 1. Logic diagrams and terminal connections.



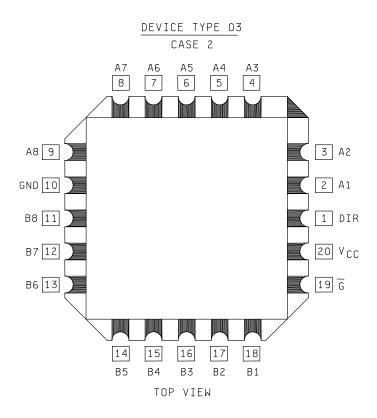


FIGURE 1. <u>Logic diagrams and terminal connections</u> - Continued.

DEVICE TYPES 04 AND 05 TERMINAL CONNECTIONS CASE L VCC BA BA G B1 B2 B3 B4 B5 B6 B7 B8 24 23 22 21 20 19 18 17 16 15 14 13 1 2 3 4 5 6 7 8 9 10 11 12 CLOCK SELECT AB AB DIR A1 A2 A3 A4 A5 A6 A7 A8 GND

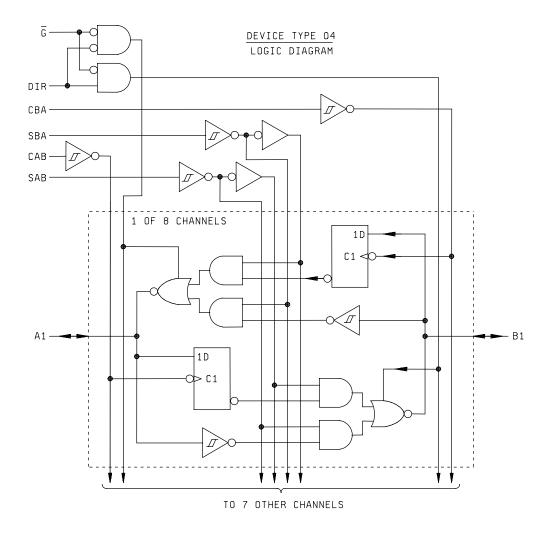


FIGURE 1. Logic diagrams and terminal connections - Continued.

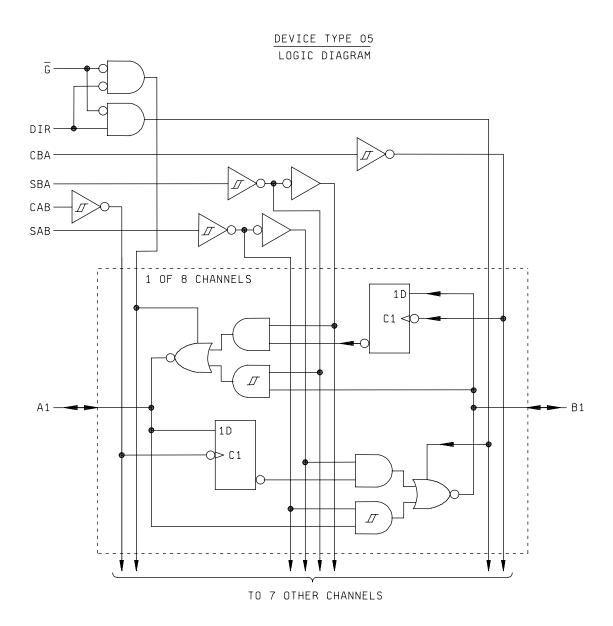


FIGURE 1. <u>Logic diagrams and terminal connections</u> - Continued.

Device type 01

| CON | TROL | DATA | PORT |
|-----|------|------|------|
| INP | UTS | STA | TUS |
| GAB | GBA | Α | В |
| Н | Н | ō | I |
| L | Н | * | * |
| Н | L | ISOL | ATED |
| L | L | I | ō |

^{*} Possibly destructive oscillation may occur if the transceivers are enabled in both directions at once.

Device type 02

| CON | TROL | DATA | PORT |
|-----|------|------|------|
| INP | UTS | STA | TUS |
| GAB | GBA | Α | В |
| Н | Н | 0 | I |
| L | Н | * | * |
| Н | L | ISOL | ATED |
| L | L | I | 0 |

^{*} Possibly destructive oscillation may occur if the transceivers are enabled in both directions at once.

Device type 03

| ENABLE G | DIRECTION CONTROL DIR | OPERATION |
|-------------|-----------------------------|-----------------|
| L | L | B data to A bus |
| L | Н | A data to B bus |
| Н | X | Isolation |

H = high level, L = low level, X = irrelevant

FIGURE 2. Truth tables.

 $I = Input, O = Output, \overline{O} = Inverting Output$

 $I = Input, O = Output, \overline{O} = Inverting Output$

Device type 04

| | | IN | PUTS | | | DATA | 4 I/O * | OPERATION OR FUNCTION |
|---|-----|----------|----------|-----|-----|------------|------------|---------------------------|
| G | DIR | CAB | CBA | SAB | SBA | A1 thru A8 | B1 thru B8 | |
| Н | Х | H or L | H or L | Х | Х | Input | Input | Isolation |
| Н | Х | ↑ | ↑ | Χ | Χ | | | Store A and B Data |
| L | L | Х | Х | Х | L | Output | Input | Real Time B Data to A Bus |
| L | L | Χ | Χ | X | Η | | | Stored B Data to A Bus |
| L | Н | X | Χ | L | X | Input | Output | Real Time A Data to B Bus |
| L | Н | H or L | Х | Н | X | | | Stored A Data to B Bus |

H = High Level

L = Low Level

X = Irrelevant

↑ = Low to high level transition

Device type 05

| | | IN | IPUTS | | | DATA | 4 I/O * | OPERATION OR FUNCTION |
|---|-----|----------|----------|-----|-----|------------|------------|---------------------------|
| G | DIR | CAB | CBA | SAB | SBA | A1 thru A8 | B1 thru B8 | |
| Н | Χ | H or L | H or L | Х | Х | Input | Input | Isolation |
| Н | Х | ↑ | ↑ | Х | Х | | | Store A and B Data |
| L | L | Х | Х | Х | L | Output | Input | Real Time B Data to A Bus |
| L | L | X | Χ | Х | Н | | | Stored B Data to A Bus |
| L | Н | X | X | L | Χ | Input | Output | Real Time A Data to B Bus |
| L | Н | H or L | Х | Н | Х | | | Stored A Data to B Bus |

H = High Level

L = Low Level

X = Irrelevant

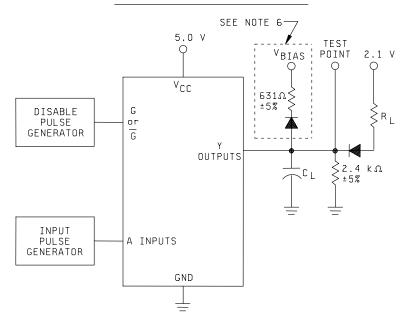
 \uparrow = Low to high level transition

FIGURE 2. Truth tables - Continued.

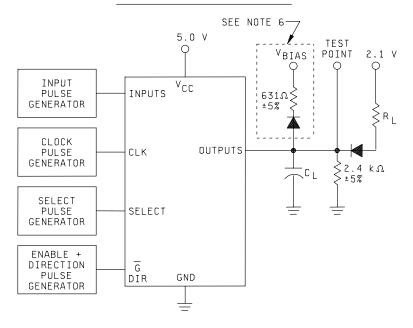
^{*} The data output function may be enabled or disabled by various signals at the \overline{G} and DIR inputs. Data input functions are always enabled, i.e., data at the bus pins will be stored on every low to high transition on the clock inputs.

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

TEST CIRCUIT TYPES 01,02 AND 03



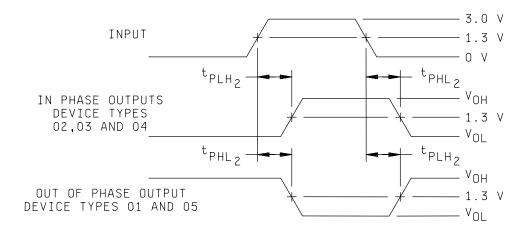
TEST CIRCUIT TYPES 04 AND 05



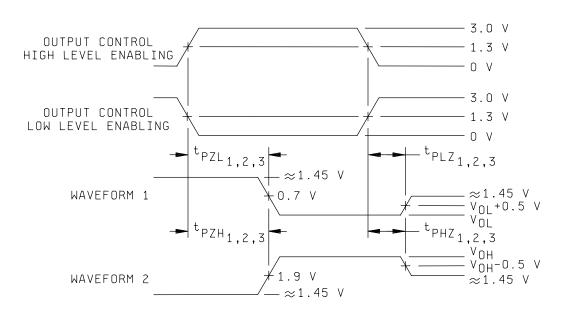
NOTES:

- 1. $R_L = 110\Omega \pm 5\%$
- 2. All diodes are 1N3064 or equivalent.
- 3. $C_L = 50 \text{ pF} \pm 10\%$ including probe and jig capacitance.
- 4. The pulse generators have the following characteristics: $V_{gen} = 3.0 \text{ V}$, $PRR \le 1 \text{ MHz}$, $t_{TLH} \le 15 \text{ ns}$, $t_{THL} \le 6 \text{ ns}$ $Z_{OUT} = 50\Omega$.
- 5. Clock pulse characteristics: $t_{P(CLK)} = 20 \text{ ns}$, $t_{SETUP} = 20 \text{ ns}$.
- 6. The diode and resistor shown within the dotted area are optional. When the diode and resistor are used, V_{BIAS} shall be 5.5 V for all tests except for t_{PHZ}, for t_{PHZ} tests, V_{BIAS} shall be -0.6V.

FIGURE 3. Switching time test circuit and waveforms.

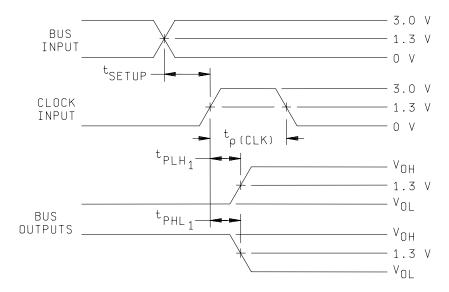


VOLTAGE WAVEFORMS PROPAGATION DELAY TIMES



VOLTAGE WAVEFORMS ENABLE AND DISABLE TIMES, THREE-STATE OUTPUTS, ALL DEVICES

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



CLOCK TO OUTPUT (TYPES 04 AND 05)

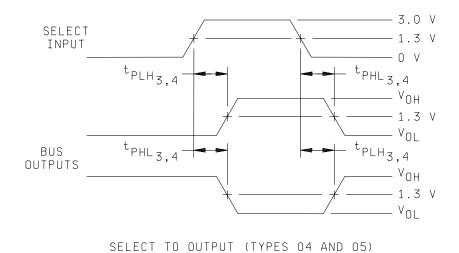


FIGURE 3. Switching time test circuit and waveforms - Continued.

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be high ≥ 2.0 V, or low ≤ 0.7 V, or open).

| | 5 | | > : | - - | = | = | = | = | | - | = | = | - - | = | = | = | | | = | = | | = 0 | /4= | | = | = | - - | | Ϋ́ | = | = | . - | = | = | - - | | | | = | = | | | = |
|------------------|----------|----------|------------------|-----------|-------|----------|-------|-------|---------|--------|-----------|--------|--------|------------|----------|-------|-------|----------|----------|-------|-------|-------|----------|-------|---------|-------|-------|-------|-------|-------|-------|----------|---------|-------|-------|---------------|----------|---------|----------|-------|-------|-------|----------|
| zi i i | IIIS | Мах | | | | | | | | | | | | | | 9.0 | | | | = | ı | = 0 | <u>"</u> | : = | - | u u | | | -200 | ı | = | | | = | = c | _{ان} | | | = | = | | : : | |
| <u>:</u> | | Min | 2.4 | | = | = | | | = (| 2.0 | = | | | | | | | | | | | | | | | | | | | | | | | | ć |)ر ار | | | - | = | | | |
| Measured | terminal | | 18 | 2B | 8 4B | 14 14 | 2A | 3A | 44 - | 1B | 3B 3B | 4B | 1A | 7.4 3.4 | 4 | 1B | 2B | 38 4B | 15 | 2A | 3A | 4A | 1A | 3A A | 44 4 | 18 | 2B | 38 | 14 P | 2A | 3A | 44 18 | 2B | 3B | 4B | GAB | 1A | ZA S | 3A 4A | 4B | 3B | 2B | GBA |
| 14 | 70 | Vcc | 4.5 V | | = | = | | | | | = | | | | - | | | | = | = | | = = | 5.5 \ | | | | | | = | = | - | | = | - | | | | | - | = | | | |
| 13 | <u>n</u> | GBA | 0.7 V | | = | 2.0 V | | н | = 1 | 0.5 V | = | | 2.0 V | | | 0.7 V | | | 2.0 V | = | н | = | 0.7 \ | | | | | | 0.7 V | | = : | - | | | | | GND - | | - | | | | 0.4 V |
| 12 | 0 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 19 | 91 | 18 | -3 mA | | | 0.7 V | | | | -12 mA | | | 0.5 V | | | 12 mA | | | 2.0.7 | · | | | | | | | | 7.4.0 | ۷. ۲ | | | | | | 0.4 V | | | | | | | 7 7 0 | ٥.4 ٧ |
| 10 17 | + | 2B | | -3 mA | | | 0.7 V | | | 12 m | - 12 IIIA | | | 0.5 V | | | 12 mA | | | 2.0 V | | | | | | | | 2.7 V | | | | | | 0.4 V | | | | | | | | 0.4 V | † |
| 9 13 | 2 | 3B | | V ac | ¥III? | | | 0.7 V | | | -12 mA | | | 0.5.0 | | | | 12 mA | | | 2.0 V | | | | | | 2.7 V | | | | | | 0.4 V | | | | | | | | 0.4 V | | |
| 8 6 | 71 | 4B | | | -3 mA | | | | 0.7 V | | | -12 mA | | | 0.5 V | | | 12 m 4 | <u> </u> | | | 2.0 V | | | | 2.7 V | | | | | | V 4 V | 1 | | | | | | | 0.4 V | | | Ť |
| 7 01 | 0 | GND | GND | | 33 | = | | " | 3 3 | : : | = | n | 3 3 | : = | - | " | » : | : 3 | " | ,, | " | , | | : 3 | " | n | 3 3 | : 3 | ,, | " | n | : : | " | n | 3 3 | | " | : 3 | , , | , | 31 | | 3 |
| φ σ | n. | 4A | | | 0.7 V | | | | -3 mA | | | 0.5 V | | | -12 mA | | | 700 | > 0.9 | | | 12 mA | | | 2.7 V | | | | | | | 0.4 \ | | | | | | | 0.4.V | è | | | Ť |
| 2 & | 0 | 3A | | 77.0 | ^ ^ | | | -3 mA | | | 0.5 V | | | -12 mA | 7 | | | 2.0 V | | | 12 mA | | | 777 | i | | | | | | 0.4 V | | | | | | | 2 | V.4 V | | | | T |
| 4 & | 0 | 2A | ; | 0.7 V | | | -3 mA | | | 7 2 0 | v c: | | | -12 mA | | | 2.0 V | | | 12 mA | | | 1 | 2.7 V | | | | | | 0.4 V | | | | | | | | 0.4 V | | | | | + |
| ε 4 | 4 | 14 | 0.7 V | | | -3 mA | | | | 0.5 V | | | -12 mA | | | 2.0 V | | | 12 mA | | | | 2.7 V | | | | | | 0.4 V | | | | | | | | 0.4 V | | | | | | + |
| 2 6 | r | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - 0 | 7 | GAB | 0.7 V | | = | 2.0 V | | | = 1 | 0.5 V | = | - | 2.0 V | : = | - | 0.7 V | | | 2.0 V | - | ш | = | | | | 2.0 V | | | | | | 707 |) = | = | = 2 | V 4.0 | | | | 5.5 V | | | † |
| Cases A, C, D | 2 1/ | Test no. | | 2 | 0 4 | | | 7 | | 6 0 | 2 1 | | | 14 | | 17 | 18 | 19 | | | 23 | 24 | 25 | 26 | | | 30 | 31 | 33 | 34 | 35 | 36 | | 39 | 1 | | 42 | 43 | 44 | 46 | | 48 | 49 50 |
| | | | 9(| 1 | | | | | | 1 | 1 | | | 1 | | | | | | | | | | 1 | | | | | 1 | | | | | | ç | 2 | | | 1 | | | | Ц |
| MIL-STD- | | | 9008 | - | - | - | - | = | - | - | - | - | | - | - | 3002 | | | - | - | = | = | | | | | | | 1 | | | | | | 0000 | 300 | | | - | - | | - | = |
| Sympo | | | V _{ОН1} | | | | | | | OH2 | | | | | | ОГ | | | | | | | OZH | | | | | | IZO | | | | | | | 2 | | | | | | | |
| Sibologia | dnoibane | | - | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See footnotes at end of device type 01.

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be high $\geq 2.0~V,$ or low $\leq 0.7~V,$ or open).

| | Unit | × | Αμ | = | | | | - | = | = | = | - | = | = | - | = | = | | | | 1 | | - : | | : = | = | = | | | . Am | | | 2 | | = | = | | | - | | | | | | 36 only) |
|------------------|---------------|----------|-------|--------------------|-------|-------|-------|-------|----------|-------|-------|-------|------|-------|------|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|----------|--------|--------|--------|------------|-------|-------|----------|------|-----|----------|-----|-----|--------------|--|--------------|--------------------|----------------|----|----------------------|
| | Limits | Min Max | 20 | | | | - | - | - | = | = | 100 | = | = | - | = | = | | | | • | -1.5 | = : | | : = | = | = | | | 38 | 20 | | -40 -225 | : - | - | = | | | - | | | 2/ | ŠI | | 6/ for test 96 only) |
| | Measured | | GAB | 1A | 2A | 3A | 44 A | 4B | 35 28 | 1B | GBA | GAB | 14 | 2A | 34 | 44 4 | 4B | 3B | 2B | 1B | GBA | GAB | 1A | 2A | 3A | 4A 4B | 3B | 2B | 1B | GBA | Vcc | | | | 4B | 1A | 2A | 3A | 4 A | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | _ | T | Ī | | _ |
| 14 | 20 | Vcc | 5.5 V | | | - - | - | = | - | - | | | - | - | = | = | = | - | = | | + | 4.5 V | | | : = | = | = | | | 55.7 | ╀ | | | : - | = | | | = : | - | | 70.7 | ; = | = | = | - |
| 13 | 19 | GBA | | GND | | | | | | | 2.7 V | | CIND | 5 = | = | = | | | | í | 5.5 \ | | GND | | : = | | | | | GND GND | B B B | GND | GND | : : | = | 4.5 V | = | | - | | α | α α | < | A | α. |
| 12 | 18 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 16 | 18 | | | | | | | | 777 | ۷., | | | | | | | | | 5.5 V | | | | | | | | | -18 mA | | | | GND | | | GND | | | | | - | ı | : ∢ | В | I |
| 10 | 14 | 2B | | | | | | | 277 | > '-1 | | | | | | | | | 5.5 V | | | | | | | | | -18 mA | | | | | ! | GND | | | GND | | | | | ı | : < | В | _ |
| 6 | 13 | 3B | | | | | | 7.4.0 | 7.7 | | | | | | | | | 5.5 V | | | | | | | | | -18 mA | | | | | | | CINC | 5 | | | GND | | | | ı | : < | В | ı |
| 8 | 12 | 4B | | | | | 7.4.0 | ^ / ` | | | | | | | | | 5.5 V | | | | | | | | | -18 mA | ╫ | | | | | | | | GND | | | | GND | | | ı | . ∢ | В | _ |
| 7 | 10 | GND | GND | ,, | | , , | 1 | t | ,, | , | n, | 3 | ,, | ,, | ,, | , | | | ,, | ,, | : 3 | | 31 | 3 3 | : " | | | ,, | , , | : : | ,, | ,, | 3 3 | : : | | | ,, | | , | | CIND | 2 = | 3 | " | " |
| | | | Ö | | | > | > | | | | | | | | | 5.5 V | | | | | | | | | 40 20 | ¥ | | | | GND |) > | | | | GND | | | | GND | iiited. | | O B | <u> </u> - | | _ |
| 9 | 6 | 44 | | | | ^ | 7.7 | | | | | | | | > | | | | | | | | | - | + | 2 | | | | | | | | | | | | _ | GP | and V _{1.5} tests are omitted | SIS AIR UII | 1 | | エ | _ |
| 2 | 80 | 3A | | | _ | 2.7 V | | | | | | | | L | 7.57 | S | | | | | | | | + | -18 mA | | | | | GND | | | | CNU | 5 | | H | GND | - N Pac | and Victo | A VIC I | α | - | エ | _ |
| 4 | 9 | 2A | | | 2.7 V | | | | | | | | | 5.5 V | 2 | | | | | | | | + | -18 mA | | | | | | GND | 5.5 V | | ! | GND | | | GND | | | 755°C | | α | , <u> </u> _ | Ι | 3 |
| က | 4 | 14 4 | | 2.7 V | | | | | | | | | 557 | 200 | | | | | | | | | -18 mA | | | | | | | GND | 5.5 V | | GND | | | GND | | | T tagged | except To | ovcept 1 | c M | , _ | I | ı |
| 2 | က | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | baroup 4 | haroup 1, | dnoificir | | | | |
| - | 2 | GAB | 2.7 V | | | | 200 | 2.0 < | = | - | | 5.5 V | | | | | 5.5 V | = | = | = | | -18 mA | | | | 5.5 \ | | ш | = | GND | GND | 5.5 V | GND | | = | 4.5 V | | | = 0,00 | to ac for el | 15 d5 101 oc | a a | 1 ⋖ | Α | ۷ |
| Cases A. C. D | Case 2 1/ | Test no. | 51 | 52 | 53 | 54 | 22 | 50 | 27 | 20 | 60 | 61 | 62 | 63 | 64 | 65 | 99 | 29 | 89 | 69 | 0/2 | 7. | 72 | 73 | 75 | 6/ | 2.2 | 78 | 79 | 80 | 82 | 83 | 84 | 85 | 87 | 88 | 68 | 06 | 91 | Same feets, terminal conditions, and limits as for subgroup 1, except 10 = | 92 | 93 | 94 | 92 | 96 |
| | 883 method | | 3010 | _ | | | | | | | | | | | | _ | _ | _ | _ | | | | | _ | | | | | | 3005 | 005 | 3005 | 11 | | 1 | <u> </u> | | | itibaco loai | inal conditi | | <u>L</u> | 1_ | Ш | Test 96 |
| MIL | | 2 | 30 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | <u>ಜ</u> | | | | | | otot otool | tests, term | (2213) | _ | | | Ĭ |
| | Symbol | | Ŧ | | | | | | | | | H2 | | | | | | | | | | 2 | | | | | | | | Š | 5 5 | CCZ | so | | | | | | Como | Same | Trith | | tests | ` | |
| | Subgroup | | - | $Tc = 25^{\circ}C$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | c | ۷ e | 2 1 | $Tc = 25^{\circ}C$ |) | | |

See footnotes at end of device type 01.

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be high ≥ 2.0 V, or low ≤ 0.7 V, or open).

| | Unit | | ns | = | - | - | - - | | | | | . | . | | = | = | = | = | = | = | = | | | : : | | | = | = | - | | | = | = | = | = | = | | |
|------------------|---------------|----------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | ts. | Мах | 19 | = | = | = | | : | | = | 23 | | | | = | = | = | 35 | = | = | = | | | | 28 | = | = | = | н | | | 30 | - | - | = | | | . |
| | Limits | Min | 2 | | = | = | | : | = : | | | | | | | = | | | = | = | - | | | : = | | - | = | = | | | | = | = | | = | | | |
| | Measured | | 1A to 1B | 2A to 2B | 3A to 2B | 4A to 2B | 1B to 1A | ZB to ZA | 3B to 3A | 4B to 4A | 1A to 1B | 2A to 2B | 3A to 2B | 4A to 2B | 2B to 2A | 3B to 3A | 4B to 4A | GAB to 1B | GAB to 2B | GAB to 2B | GAB to 2B | GBA to 1A | GBA to 2A | GBA to 3A | GAB to 1B | GAB to 2B | GAB to 2B | GAB to 2B | GBA to 1A | GBA to 2A | GBA to 3A | GAB to 1B | GAB to 2B | GAB to 2B | GAB to 2B | GBA to 1A | GBA to 2A | GBA to 3A |
| 14 | 20 | Vcc | 5.0 V | | = | = | | : | | - | | | | | н | = | = | - | = | = | = | | | : = | - | - | = | = | | | | - | = | - | = | | | |
| 13 | 19 | GBA | GND | | = | = | 4.5 \ | : | | - | GND | | | . 45.7 | > : | = | = | GND | = | = | = | Z | | : = | GND | - | = | = | Z | | | GND | = | = | = | Z | | |
| 12 | 18 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 16 | 1B | OUT | | | | z | | | | OUT | | | Z | = | | | OUT | | | | 4.5 V | | | OUT | | | | GND | | | OUT | | | | 4.5 V | | |
| 10 | 14 | 2B | | OUT | | | - | Z | | | į | 100 | | | Z | | | | OUT | | | | 4.5 V | | | OUT | | | | GND | | | TUO | | | | 4.5 V | |
| 6 | 13 | 3B | | | OUT | | | | Z | | | Ė | 00 | | | Z | | | | OUT | | | | 4.5 V | | | OUT | | | | GND | | | OUT | | | | 4.5 V |
| ∞ | 12 | 48 | | | | OUT | | | | z | | | Ē | 100 | | | Z | | | | OUT | | | 4.5 V | | | | OUT | | | CNC | 9 | | | OUT | | | ; |
| 7 | 10 | GND | GND | n | ,, | 31 | | : | z : | | = 3 | : 3 | : 3 | : = | = | 31 | n | | 3 | : | 3 | | | : 3 | - | 3 | 3 | 3 | | = 3 | = = | = | , | * | : | = | = 3 | |
| 9 | 6 | 44 | | | | Z | | | ! | OUT | | | 3 | Z | | | OUT | | | | 4.5 V | | | TUO | | | | GND | | | E | 3 | | | 4.5 V | | | į |
| 2 | 80 | 3A | | | Z | | | | OUT | | | 3 | Z | | | OUT | | | | 4.5 V | | | Ŀ | 100 | | | GND | | | ! | OUT | | | 4.5 V | | | Ŀ | 100 |
| 4 | 9 | 2A | | Z | | | Ē | 100 | | | | Z | | | LIC | | | | 4.5 V | | | | OUT | | | GND | | | | DOL | | | 4.5 V | | | | TU0 | |
| င | 4 | 14 | Z | | | | OUT | | | | Z | | | E | 5 | | | 4.5 V | | | | OUT | | | GND | | | | OUT | | | 4.5 V | | | | OUT | | |
| 2 | ဗ | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | 2 | GAB | GND | = | = | = | 4.5 \ | | = : | | GND | | | | > : | = | = | Z | - | - | = | 4.5 V | | | Z | = | = | = | 4.5 V | | | Z | = | - | - | 4.5 V | | . |
| Cases A. C. D | Case 2 1/ | Test no. | 26 | 86 | 66 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| MIL-STD- | 883 method | 1 | 3003 | See fig. 3 | = | = | | | = : | | | | | : = | = | | = | = | = | = | = | - | | : : | = | = | = | = | <u>. </u> | | | = | = | = | = | <u> </u> | | |
| | Symbol | | фгнг | | | | | | | | PHL2 | | | | | | | PZL1 | | | | | | | PZH1 | | | | | | | PLZ1 | | | | | | |
| | Subgroup | | 6 | rc = 25°C | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | | 1 | | | | | | |

See footnotes at end of device type 01.

TABLE III. Group A inspection for device type 01. Terminal conditions (pins not designated may be high \geq 2.0 V, or low \leq 0.7 V, or open).

| | Unit | | ns | | = | = | - | | | _ | | | | | | = | |
|------------------|----------------------|----------|-------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|---|------|------|------|------|------|--|
| | ts | Max | 35 | = | = | = | = | | | = | 25 | 30 | 46 | 36 | 36 | 46 | |
| | Limits | Min | 2 | = | = | = | = | | | = | | | | | | | |
| | Measured terminal | | GAB to 1B | GAB to 2B | GAB to 2B | GAB to 2B | GBA to 1A | GBA to 2A | GBA to 3A | GBA to 4A | | | | | | | |
| 14 | 20 | Vcc | 5.0 V | = | = | = | = | | | = | | | | | | | |
| 13 | 19 | GBA | GND | = | = | = | Z | | | | | | | | | | |
| 12 | 18 | NC | | | | | | | | | | | | | | | |
| 11 | 16 | 1B | OUT | | | | GND | | | | | | | | | | |
| 10 | 14 | 2B | | OUT | | | | GND | | | | | | | | | |
| 6 | 13 | 3B | | | OUT | | | | GND | | | | | | | | |
| ∞ | 12 | 4B | | | | OUT | | | | GND | | | | | | | |
| _ | 10 | GND | GND | 3 | ŋ | n | = | | " | " | | | | | | | |
| 9 | 6 | 44 | | | | GND | | | | DOT | | | | | | | |
| 2 | 8 | 3A | | | GND | | | | TUO | | | | | | | | |
| 4 | 9 | 2A | | GND | | | | DOUT | | | = +125°C. | | | | | | 0 |
| ო | 4 | 1A | GND | | | | DOT | | | | except Tc | | | | | | H to see |
| 7 | 3 | NC | | | | | | | | | subgroup 9, | | | | | | 4 |
| 1 | 2 | GAB | Z | = | = | = | 4.5 V | | | = | nditions as | | | | | | custo cotic |
| Cases A, C, D | Case 2 1/ | Test no. | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | s terminal cor | | | | | | all back castile |
| MIL-STD- | 883 method | | 3003 | See fig. 3 | = | = | | | | | Same tests ans terminal conditions as subgroup 9, except Tc = +125°C. | | | | | | Control of the contro |
| | Symbol | | t _{PHZ1} | | | | | | | | t _{PLH2} | PHL2 | PZL1 | PZH1 | PLZ1 | PHZ1 | Come took |
| | Subgroup | | 6 | Tc = 25°C | | | | | | | 10 | | | | | | - |

<u>1</u>/ Pins not referenced are N/C. <u>2</u>/ The l_{OZH} limit for circuits A, B, and C shall be 40 μ A maximum. <u>3</u>/ The l_{L} limits are as follows:

| | Ш | 0/-150 |
|--------------------------------|---|----------|
| ircuit: | D | -10/-150 |
| Min/Max limits µA for circuit: | ၁ | 0/-200 |
| Min/Ma | В | 0/-100 |
| | A | -5/-200 |
| Test | 1 | 1 |

 $\underline{4}/$ A = 3.0 V minimum; B = 0.0 V or GND. $\underline{5}/$ H > 1.5 V; L < 1.5 V. $\underline{6}/$ Mdd resistor of 0.5 kΩ to 5 kΩ between V $_{CC}$ and each output.

TABLE III. Group A inspection for device type 02. Terminal conditions (pins not designated may be high \geq 2.0 V, or low \leq 0.7 V, or open).

| | Unit | | > : | = | = | = | = | | . | - | | = | = | = | = | = | = | = | = | = | | | | 10 |)i = | = | = | | = | = | = | Αщ | - - | = | = | = | - | - | - | = | = | = | | = | | | . = |
|------------------|----------------------|----------|------------------|-----------|-------|-------|-------|-------|-------|----------|--------|----------|----------|--------|--------|--------|-------|-------|----------|-------|-------|----------|--------|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| | Limits | Max | | | | | | | | | | | | | | | 0.4 | = | | - | | | | 10 |)i = | = | = | | - | = | = | -200 | | = | = | = | - | | /SI | = | = | = | = | = | | | |
| | Ë | Min | 2.4 | | = | = | = | | : (| 2.0 | : - | = | = | = | = | = | | | | | | | | | | | | | | | | | | | | | | | %। | = | = | = | | | | | |
| | Measured terminal | | 18 | 2B 3B | 4B | 14 E | 2A | 3A | 4A | 18 | 7B | 3B 4B | 14 14 | 2A | 3A | 44 | 1B | 2B | 3B | 4B | 1A | ZA 24 | 3A | 44 | 2A | 3A | 4A | 4B | 3B | 2B | 1B | 1A | 2A | 44 | 4B | 3B | 2B | 1B | GAB | 14 | 2A | 3A | 4A | 4B | 3B | 2B | JB ABA |
| 14 | 20 | Vcc | 4.5 V | | = | = | = | | | - - | : = | = | = | = | = | - | | - | | - | | | : - | 7 2 7 | · = | = | - | | - | - | | = | | = | = | = | | - | | = | - | - | | - | | | : = |
| 13 | 19 | GBA | 0.7 V | : = | - | 2.0 V | - | | : 1 | 0.5 V | : = | = | 2.0 V | | = | = | 0.7 V | = | = : | = | 2.0 V | | | 7.7.0 | . = | = | - | | | | | 0.7 \ | | = | | | | | | GND | = | - | | | | | 0.4.7 |
| 12 | 18 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 16 | 1B | -3 mA | | | 2.0 V | | | | -12 mA | | | 2.0 V | | | | 12 mA | | | | 0.7 V | | | | | | | | | | 2.7 V | | | | | | | 0.4 V | | | | | | | | | V.4 V |
| 10 | 14 | 2B | H | -3 mA | | | 2.0 V | | | \dashv | -12 mA | | | 2.0 V | | | H | 12 mA | | | - | 0.7.0 | | | | | | | | 2.7 V | | | | | | | 0.4 V | | | | | | | | | 0.4 V | |
| 6 | 13 | 3B | | -3 mA | | | | 2.0 V | | | 12 m | ¥II 7 | | | 2.0 V | | | | 12 mA | | | + | 0.7 V | | | | | | 2.7 V | | | | | | | 0.4 V | H | | | | | | | | 0.4 V | | |
| 8 | 12 | 4B | | `` | -3 mA | | | | 2.0 V | | 7 | -12 mA | <u> </u> | | - | 2.0 V | | | _ | 12 mA | | |) // (| > . | | | | 2.7 V | 7 | | | | | | 0.4 V | | | | | | | | | 0.4 V | 0 | | |
| 7 | | | GND | : 3 | * | | _ | 3 3 | | , , | | | 3 | " | | | ,, | n | 3 : | ,, | : : | : 3 | : : | 0 " | n | ,, | , | . 2 | n | n | 3 : | y, | 3 3 | , | 0 | 3 | n | " | 2 | 3 | n | ,, | n | 0 " | 3 3 | | : 3 |
| 9 | | 4A G | 9 | | 2.0 V | _ | | | -3 mA | | | 707 | > | | | -12 mA | | | | 0.7 V | | | V 000 | AIII 7 | | | 2.7 V | | | | | | | V 4 V | | | | | | | | | 0.4 V | | | | |
| | | 3A 4 | | > | | i | | -3 mA | ij | | > | - | 7.7 | | ┝ | | | | <u> </u> | O | | 4 | 12 mA | 7 | | > | - | | | | | | > | | 5 | | | | | | | >: | | | | | |
| 2 | | | | 2.0 V | í | | | | | ; | ^ | 7.7 | | mA | -12 mA | | | | 0.7 V | | | + | 12 | | ^ | 2.7 V | | | | | | | > | 5 | | | | | | | > | 0.4 V | | | | | |
| 4 | | 2A | - | 2.0 V | | A | -3 mA | | | + | 2.0 V | | Ą | -12 mA | | | H | 0.7 V | | | + | 12 mA | | > | 27.0 | ij | | | | | | | 0.4 V | | | | | | | > | 0.4 V | | | | | | |
| 3 | | | 2.0 V | + | | -3 mA | _ | | | 2.0 V | | | -12 mA | | | | 0.7 V | | | | 12 mA | | | 7 Z V | | | | | | | , | 0.4 V | | | | | | | | 0.4 V | | | | | | | |
| 2 | 3 | NC | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | 2 | | 0.7 V | = | = | 2.0 V | = | | : : | 0.5 V | : = | = | 2.0.7 | i = | = | = | 0.7 V | = | = : | = | 2.0 V | | : = | | | | | 2.0 V | = | = | = | | | | 2.0 V | = | = | - | 0.4 V | | | | | 5.5 V | | | : |
| Cases A, C, D | Case 2_1/ | Test no. | - 0 | 7 8 | 4 | 2 | 9 | 7 | ∞ (| o ; | 10 | 12 | 13 5 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 77.7 | 23 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 98 | 37 | 38 | 33 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| MIL-STD- | 883 method | | 9008 | : = | - | = | | | | = : | : : | | - | | = | | 3007 | = | = : | - | | | : : | | | 1 | 1 | | | | | | | -1 | | | | | 3009 | - | | | = | = | = : | | : = |
| | Symbol | | V _{ОН1} | | | | | | | OH2 | | | | | | | ОГ | | | | | | | i | HZO | | | | | | | OZL | | | | | | | П | | | | | | | | |
| | Subgroup | | - | lc = 25°C | | | | | | > | | | | | | | > | | | | | | | 1 | | | | | | | J | | | | | | | | | | | | | | | | |

See footnotes at end of device type 02.

TABLE III. Group A inspection for device type 02. Terminal conditions (pins not designated may be high ≥ 2.0 V, or low ≤ 0.7 V, or open).

| | Unit | | Αų | = | | | | = | = | = | = | | | | = | = | = | = | - | = | = | | > | = | | - | = | = | = | = | = | - | mA | = | | | = | = | - | = | = | - | | | | | | | 5 | | |
|------------------|---------------|----------|------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-------|------|----------|------------|----------|-------|-------------|----------|-------|---------|---|--|--------|-----------|-------|----|----------------------|--|--|
| | ş | Max | 20 | = | н | н | | = | | = | = | = | 100 | | | = | = | = | - | = | = | | -1.5 | = | - | - | = | = | = | = | = | - | 38 | 20 | 50 | -225 | = | = | - | = | = | = | | | | | | | 6/ for test 96 only) | | |
| | Limits | Min | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | -40 | = | = | - | = | = | = | | | | 2/ | | | 6/ for | ı | |
| | Measured | i | GAB | 1A | 2A | 3A | 4A | 4B | 3B | 2B | 1B | GBA | GAB | 1A | 2A | 3A | 4A | 4B | 3B | 2B | 1B | GBA | GAB | 14 | 2A | 3A | 44 | 4B | 3B | 2B | 18 | GBA | Vcc | Vcc | ος. | 18 | 25 25 | 20 0 | 1 1 1 | <u> </u> | ₹ ₹ | 44 4 | | | | | | | | | |
| 14 | 20 Me | Vcc | 5.5 V | = | | | | | | = | | | | | | | | | - | - | | | 4.5 V | = | | - | = | = | - | = | = | | 5.5 V | | | | = | - | - | | = | - | | | 5.0 V | = | = | - | | | |
| 13 | 19 | GBA | 4) | GND | | | | | | | | 2.7 V | | GND | = | = | - | | | | | 5.5 V | 7 | CINC | 2 = | _ | = | = | | | | | GND | GND | OND E | GND - | = | - | 7 2 7 | > = = | = | - | | | | В | ⋖ | A | В | | |
| 12 | 18 | NC | | | | | | | | | | | |) | | | | | | | | Ę | | | | | | | | | | - | 0 | 0 | | | | | | , | | | _ | | | | | | | _ | |
| 11 | 16 | 1B | | | | | | | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | | | | 9 | GND | | | 7 2 7 | > | | | | | I | 1 | A | В | I | | |
| 10 | 14 | 2B | | | | | | | | 2.7 V | 2 | | | | | | | | | 5.5 V | 5 | | | | | | | | | -18 mA | H | | | | , | | 2 | | 2 | 2 | > | | | | _ | 1 | ٧ | В | Н | | |
| | | | | | | | | | | 2. | | | | | | | | | | 5. | | | | | | | | | mA | - | | | | | | (| - | 2 | - | и | ╁ | | | | | | | | | | |
| 6 | 13 | 3B | | | | | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | | | | | | | | CINC | Ś | | | 7 7 / | 3 | | | I | 1 | A | В | I | | |
| ω | 12 | 4B | | | | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | | | | | | | | | | CINC | GIND | | | 75.7 | | | I | _ | ٧ | В | Ι | | |
| 7 | 10 | GND | GND | " | 11 | " | " | 16 | 11 | и | 11 | " | = | и | 11 | n, | W. | n, | ı | n, | и | 11 | " | 77 | n | n | " | и | " | " | " | " | " | н | " | : " | " | 77 | п | " | и | " | | | GND | n | " | " | " | | |
| 9 | 6 | 4A | | | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | | | | | | 5.5 V | GND | | | | 7 2 7 | v | | | GND | re omitted. | re omitted | 4 | В | I | _ | I | | |
| 2 | 8 | 3A | | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | | | | | | | 5.5 V | GND | | | 7 2 7 | ٥.0 | | | CINC | 9 | 5°C and V ₁ tests are omitted | and Vicitests are omitted | 4 | В | I | | I | | |
| 4 | 9 | 2A | | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | + | | | | | | | 5.5 V | GND | | 7 11 11 | v 0.0 | | | CIVI | OND | | 25°C and | 55°C and \ | | В | I | _ | I | d -55°C. | |
| က | 4 | 1A | | 2.7 V | | | | | | | | | | 5.5 V | | | | | | | | | | -18 mA | + | | | | | | | | 5.5 V | GND | | 5.5 V | | | CINC | O NO | | | cept Tc = 1 | cent Tc = - |) V | В | I | _ | Ι | +125°C an | |
| 7 | 3 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | aroup 1, ex | aroun 1 ex | | | | | | xcept Tc = | |
| - | 2 | GAB | 2.7 V | | | | | 5.5 V | | | | | 2.5 \ | | | | | 5.5 V | = | - | = | | -18 mA | | | | | 5.5 V | - | = | = | | GND | GND | 5.5 V | ONS END | = | = | 7 2 7 | > = | = | = | ts as for sub | ts as for sub | B | В | ۷ | V | < | Jaroup 7. e | |
| Cases A, C, D | Case 2 1/ | Test no. | 51 | 52 | 53 | 54 | 55 | 56 | 22 | 58 | 59 | 09 | 61 | 62 | 63 | 64 | 65 | 99 | 29 | 89 | 69 | | | 72 | 73 | 74 | 75 | 92 | 2.2 | 78 | 62 | 80 | 81 | 82 | 83 | 84 | 00 | 00 | /0 | 000 | 60 | 93 | itions, and limi | itions and limi | 92 | 93 | 94 | 92 | 96 | onditions as st | |
| MIL-STD- | 883 method | | 3010 | | = | | = | | = | = | | = | | = | = | = | = | | - 1 | = | = | - | | 1 | 1 | 1 | 1 | 1 | | 1 | ı | ı | 3005 | 3005 | 3005 | 3011 | = | = | - | = | | - | Same tests, terminal conditions, and limits as for subgroup 1, except $Tc = 12$ | Same tests terminal conditions and limits as for subdroup 1 except Tc = -55°C. | | 1 | 1 | 1 | | Same tests and terminal conditions as subgroup 7, except Tc = +125°C and | |
| | Symbol | | l _{IH1} | | | | | | | | | | IH2 | | | | | | | | | | O I | | | | | | | | | | CCH | CCL | ccz | so | | | | | | | Same tests | Same tests | Truth | table | tests | _ | ì | Same tests | |
| | Subgroup | | 1 | Tc = 25°C | | | | | | | | | | | | | | | | | | | <u> </u> | | | | | | | | | | | I | 1 | | | | | | | | 2 | | | Tc = 25°C | | | | 80 | |

See footnotes at end of device type 02.

TABLE III. Group A inspection for device type 02. Terminal conditions (pins not designated may be high ≥ 2.0 V, or low ≤ 0.7 V, or open).

| | | | | | | | П | | | | | | | 7 | 1 | J | | | | | I | I | 1 | | l | | | | | | | | | J | | | 1 | | | | Τ |
|------------------|---------------|----------|-------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------------|
| | Unit | ı | Su | - | = | = | - | = | | | | | = | = | = | = | = | = | = | = | = | = | = | = | - | = | - | = | - | = | - | - | = | = | - | = | = | = | = | - | |
| | Limits | Max | 19 | | н | = | н | = | н | н | 23 | н | | = | = | = | = | = | 35 | | = | = | = | = | = | = | 28 | = | = | = | | н | н | = | 30 | = | = | = | = | = | |
| | Ē | Min | 2 | = | | | | = | | | = | | - | = | = | = | = | | = | = | = | = | = | = | = | = | | = | = | = | = | | | = | = | = | = | = | = | | - - |
| | Measured | | 1A to 1B | 2A to 2B | 3A to 3B | 4A to 4B | 1B to 1A | 2B to 2A | 3B to 3A | 4B to 4A | 1A to 1B | 2A to 2B | 3A to 3B | 4A to 4B | 1B to 1A | 2B to 2A | 3B to 3A | 4B to 4A | GAB to 1B | GAB to 2B | GAB to 3B | GAB to 4B | GBA to 1A | GBA to 2A | GBA to 3A | GBA to 4A | GAB to 1B | GAB to 2B | GAB to 3B | GAB to 4B | GBA to 1A | GBA to 2A | GBA to 3A | GBA to 4A | GAB to 1B | GAB to 2B | GAB to 3B | GAB to 4B | GBA to 1A | GBA to 2A | GBA to 3A GBA to 4A |
| 14 | 20 | Vcc | 5.0 V | = | = | = | | = | | н | = | н | | = | = | = | | = | - | | = | = | = | = | = | - | | = | = | = | - | | = | = | - | = | = | = | = | = | |
| 13 | 19 | GBA | GND | = | | | 4.5 V | - | | | GND | | = | | 4.5 V | = | - | | GND | = | | = | z | = | = | - | GND | = | | = | Z | = | | = | GND | = | = | = | Z | | |
| 12 | 18 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | 16 | 1B | DUT | | | | Z | | | | DUT | | | | Z | | | | DUT | | | | GND | | | | OUT | | | | 4.5 V | | | | TUO | | | | GND | | |
| 10 | 14 | 2B | | DUT | | | | z | | | | OUT | | | | Z | | | | OUT | | | | GND | | | | OUT | | | | 4.5 V | | | | OUT | | | | GND | |
| 6 | 13 | 3B | | | OUT | | | | Z | | | | OUT | | | | Z | | | | OUT | | | | GND | | | | OUT | | | | 4.5 V | | | | OUT | | | | GND |
| ∞ | 12 | 4B | | | | OUT | | | | N | | | | OUT | | | | Z | | | | OUT | | | | GND | 2 | | | OUT | | | | 4.5 V | | | | OUT | | | GND |
| 7 | 10 | GND | GND | " | ,, | *** | н | | " | " | | " | и | " | | = | 77 | *** | = | 39 | 2 | , | = | = | n | ,, | = | n | 3 | 2 | - | | " | " | - | 7 | 3 | ,, | - | - | 3 3 |
| 9 | 6 | 44 | | | | Z | | | | OUT | | | | Z | | | | OUT | | | | GND | | | | TUO | 3 | | | 4.5 V | | | | OUT | | | | GND | | | TUO |
| 2 | 8 | 3A | | | Z | | | | OUT | | | | Z | | | | OUT | | | | GND | | | | OUT | | | | 4.5 V | | | | OUT | | | | GND | | | | OUT |
| 4 | 9 | 2A | | Z | | | | OUT | | | | N | | | | OUT | | | | GND | | | | TUO | | | | 4.5 V | | | | OUT | | | | GND | | | | OUT | |
| က | 4 | 1A | z | | | | OUT | | | | Z | | | | OUT | | | | GND | | | | TUO | | | | 4.5 V | | | | OUT | | | | GND | | | | DUT | | |
| 2 | 3 | NC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _ | 2 | GAB | GND | | | | 4.5 V | = | н | н | GND | | | | 4.5 V | = | | | Z | = | - | - | 4.5 V | = | = | - | Z | | = | = | 4.5 V | | | = | Z | = | = | = | 4.5 V | = | = = |
| Cases A. C. D | Case 2 1/ | Test no. | 26 | 86 | 66 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| MIL-STD- | 883 method | | 3003 | See fig. 3 | = | = | = | = | = | = | | = | = | = | = | = | = | | = | = | - | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | - | |
| | Symbol | | t _{PLH2} | | | | | | | | PHL2 | | | | | | | | PZL1 | | | | | | | | PZH1 | | | | | | | | PLZ1 | | | | | | |
| | Subgroup | | 6 | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | <u> </u> | | | | | | | | | | | | | | |

See footnotes at end of device type 02.

TABLE III. Group A inspection for device type 02. Terminal conditions (pins not designated may be high ≥ 2.0 V, or low ≤ 0.7 V, or open).

| | | MIL-STD- | Cases A, C, D | - | 2 | 3 | 4 | 2 | 9 | 7 | 8 | 6 | 10 | 11 | 12 | 13 | 14 | | | | |
|-----------|------------|--|----------------------|----------------|--------------|-------------|----------|-------|-------|-----|-------|-------|-------|-------|----|-----|-------|----------------------|--------|-----|------|
| Subgroup | Symbol | 883 method | Case 2 <u>1</u> / | 2 | ဗ | 4 | 9 | 8 | 6 | 10 | 12 | 13 | 14 | 16 | 18 | 19 | 20 | Measured terminal | Limits | ts | Unit |
| | | | Test no. | GAB | NC | 1A | 2A | 3A | 44 | GND | 4B | 3B | 2B | 1B | NC | GBA | Vcc | | Min | Max | |
| 6 | фн21 | 3003 | 137 | Z | | 4.5 V | | | | GND | | | | OUT | | GND | 5.0 V | GAB to 1B | 2 | 35 | Su |
| Tc = 25°C | | See fig. 3 | 138 | = | | | 4.5 V | | | 3 | | | OUT | | | = | = | GAB to 2B | = | = | = |
| | | = | 139 | = | | | | 4.5 V | | n | | OUT | | | | = | = | GAB to 3B | = | = | = |
| | | = | 140 | = | | | | | 4.5 V | n | OUT | | | | | = | = | GAB to 4B | = | | = |
| | | | 141 | 4.5 V | | TUO | | | | | | | | 4.5 V | | Z | - | GBA to 1A | | - | = |
| | | | 142 | - | | | DUT | | | | | | 4.5 V | | | | | GBA to 2A | = | - | - |
| | | = | 143 | | | | | OUT | | " | | 4.5 V | | | | | | GBA to 3A | н | | |
| | | | 144 | | | | | | OUT | 27 | 4.5 \ | | | | | | н | GBA to 4A | н | | |
| 10 | фина | Same tests ans terminal conditions as subgroup 9, except Tc = +125°C. | is terminal con | iditions as su | ubgroup 9, o | except Tc = | +125°C. | | | | | | | | | | | | = | 25 | - |
| | PHL2 | | | | | | | | | | | | | | | | | | | 30 | = |
| | PZL1 | | | | | | | | | | | | | | | | | | | 46 | = |
| | PZH1 | | | | | | | | | | | | | | | | | | н | 36 | |
| | PLZ1 | | | | | | | | | | | | | | | | | | | 39 | |
| | PHZ1 | | | | | | | | | | | | | | | | | | = | 46 | - |
| 11 | Same tests | Same tests, terminal conditions, and limits as for subgroup 10, except Tc = -55°C. | ditions, and lim | nits as for su | bgroup 10, | except Tc = | = -55°C. | | | | | | | | | | | | | | |

<u>1</u>/ Pins not referenced are N/C. <u>2</u>/ The l_{OZH} limit for circuits A, B, and C shall be 40 μ A maximum. <u>3</u>/ The l_{OZH} limits are as follows:

-10/-150 Min/Max limits µA for circuit: 0/-100 -5/-200 Test

 $\underline{4}/$ A = 3.0 V minimum; B = 0.0 V or GND. $\underline{5}/$ H > 1.5 V; L < 1.5 V. $\underline{6}/$ Add resistor of 0.5 k Ω to 5 k Ω between Vcc and each output.

TABLE III. Group A inspection for device type 03. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

| .± | <u> </u> | | > | - | = | = | - | - | - | - | = | | | - | - | | - | - | = | = | = | = | - | = | = | - | - | | | | - | - | | | - | - | | | = | = | | | | - | = | - | - | Ŀ | - | = | = | - | = | = | = | | | | |
|--|-------------|--------|--------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|----------|-------|--------|--------|--------|----------|-----------|--------|--------|--------|--------|
| ٩ | Mox | ναν | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | | | = | - | | | | | - | - | - | | - | - | -1. | 2 = | - | - | | | | | - |
| Toot limits | Miss I | | 2.4 | = | = | = | | | | | = | | | | | | | | 2.0 | | | | = | | | | 1 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | - | | | + | + | _ |
| | | | | _ | | | | | | | | | | | | | | | | | | ļ. | | | | l | | | | | | | | | | | | | | | | | | | | | | | <u> </u> | | . ~ | , | | | | | _ | 1 | 1 |
| | Wieds ui eu | | B1 | B2 | B3 | B4 | BS | Be | B7 | BB | A1 | A2 | A3 | A4 | A5 | 9Y | A7 | A8 | B1 | B2 | B3 | B4 | B5 | Be | 2 2 | à | Po | A. | A2 | A3 | A | A5 | Ae | A | A8 | B1 | BZ | B3 | B4 | BS | Be | 9 | PG | - X | A3 | AA | A5 | A6 | 2 7 | Y Y | 2 2 | A1 | A | A3 | A4 | A5 | A6 | A & | AG |
| 20 | > | | 4.5 V | = | = | = | = : | - | = | = | = | | | | = | | = | = | = | = | = | = | = | = | = | = | - | | | | = | = | | | = | - | | | = | = | | | - | | = | = | - | = | = | = | = | = | = | = | = | | | | |
| 19 | 1 | ഗ | 0.7 V | = | = | = | | | = | = | = | | | | - | | = | - | 0.5 V | H | = | = | = | = | = | - | - | | | | - | = | | | - | 0.7 V | | | = | = | | | - | = | = | = | = | = | = | = | 557 | · : | | = | = | | | | |
| 18 | 2 | 5 | -3mA | | | | | | | | 2.0 V | | | | | | | | -12mA | | | | | | | | 2 | 2.0 \ | | | | | | | | 12 mA | | | | | | | 1 | 0.7 | | | | | | | | | | | | | | | |
| 17 | 00 | 77 | | -3mA | | | | | | | | 2.0 V | | | | | | | | -12mA | | | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | 7.4.0 | | | | | | | | | | | | | | | |
| open). | 00 | 3 | | | -3mA | | | | | | | | 2.0 V | | | | | | | | -12mA | | | | | | | | | 2.0 V | | | | | | | 4 | 12 mA | | | | | | | 7 / 0 | > | | | | | | | | | | | 1 | 1 | |
| lerminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open) | 70 | 5 | | | 7 | -3mA | | | | | | | | 2.0 V | | | | | | | _ | -12mA | | | | | | | | + | 2.0 V | | | | | | | - | 12 mA | | | | | | | 7 / 0 | | | | | | | | | | | | 1 | 1 |
| N ≤ 0.7 | 20 | 3 | | | | - | -3mA | | | | | | | | 2.0 V | | | | | | | | -12mA | | | | | | | | + | 2.0 V | | | | | | | - | 12 mA | | | | | | | 0.7 \ | | | | | | | | | | | 1 | 1 |
| ٥ / . ع () | 90 | | | | | | + | -3mA | | | | | | | 2 | 2.0 V | | | | | | | - | -12mA | : | - | | | | | | _ | 2.0 V | | | | | | | - | 12 mA | | | | | | С | 72.0 | > | | | | | | | | + | + | 4 |
| ın ≥ 2. | + | | | | | | | + | Ψ | | | | | | | _ | | | | | | | | -12 | _ | <u> </u> | | _ | | | | | - | > | | | | | | | 4 | Ā | - | | | | | C | + | > | | | | | | | + | _ | 4 |
| De nig | 70 | ב ב | | | | | | | -3mA | _ | | | | | | | 2.0 V | | | | | | | | -12m4 | + | - | _ | | | | | | 2.0 V | | | | | | | | 12 mA | 1 | | | | | | 7.4.0 | t | | | | | | | _ | 1 | 4 |
| d may | å | 3 | | | | | | | | -3mA | | | | | | | | 2.0 V | | | | | | | | 12m | 1171- | | | | | | | | 2.0 V | | | | | | | 7 | 12 mA | | | | | | | V 2 0 | | | | | | | | 1 | |
| ignate 10 | | Š | GND | = | = | = | | | = | = | = | - | = | | - | | = | - | GND | = | = | = | = | = | = | = | - | | | | - | = | | | | | | | = | = | | | - | | = | = | = | = | = | = | = | = | = | = | = | | | | |
| ot des | ٥٧ | Ĉ | | | | | | | | 2.0 V | | | | | | | | -3mA | | | | | | | | 700 | v 0.2 | | | | | | | | -12mA | | | | | | | 1 | o.'. | | | | | | | 12 mA | 1 | | | | | | | | -18 mA |
| n suid | ٧٧ | č | | | | | | | 2.0 V | | | | | | | | -3mA | | | | | | | | 207 | > 0:4 | | | | | | | | -12mA | | | | | | | i | 0.7. | | | | | | | 12 m | 2 | | | | | | | | -18 mA | |
| Iltions (| 34 | 2 | | | | | | 2.0 V | | | | | | | | -3mA | | | | | | | | 207 | i | | | | | | | | -12mA | | | | | | | | 0.7 V | | | | | | | 12 mA | 2 | | | | | | | | -18 mA | | |
| 9 000 | 4 | č | | | | | 2.0 V | | | | | | | | -3mA | | | | | | | | 2.0 V | | | Ì | | | | | | -12mA | | | | | | | | 0.7 V | | | Ì | | | | 12 mA | | | | | | | | | -18 mA | Ì | 1 | 1 |
| ermina 5 | ~ | ŧ | | | | 2.0 V | | | | | | | | -3mA | - | | | | | | | 2.0 V | H | | | | | | | | -12mA | _ | | | | | | | 0.7 V | | | | | | | 12 mA | | | | | | | | | -18 mA | | | 1 | 1 |
| 4 | c V | 2 | | | 2.0 V | | | | | | | | -3mA | | | | | | | | 2.0 V | + | | | | | | | | -12mA | | | | | | | 1 | 0.7 V | | | | | | | 12 mA | _ | | | l | | | | | -18 mA | <u>``</u> | | 1 | 1 | 1 |
| က | ç | ž | | 2.0 V | | | | | | | | -3mA | | | | | | | | 2.0 V | ╁ | | | | | Ì | | | -12mA | • | | | | | | | 0.7 V | | | | | | Ì | 12 m | | | | | | | | | -18 mA | 5 | | | | 1 | 1 |
| 2 | ~ | ī | 2.0 V | | | | | | | | -3mA | | | | | | | | 2.0 V | | | | | | | | 4 | -12mA | | | | | | | | 0.7 \ | | | | | | | 40.4 | | | | | | | | | -18 mA | | | | | | | |
| _ | ٥ | | 2.0 V | = | = | = | = : | - | = | - | 0.7 V | | | | | | | | 2.0 V | | = | = | = | = | = | - | | 0.5 V | | | - | = | | | | 2.0 V | | | = | | | | | ^ <u>"</u> | = | = | - | = | = | = | -18 mA | 1 | | | | | | 1 | |
| Cases | 7, 0, 7 | | | 2 | 3 | 4 | 2 | 9 | 7 | 8 | 1 | 10 | 11 | 12 | 13 | 14 | 15 | | | | 19 | 20 | 21 | 22 | 23 | 27 | Ť | 7 | 26 | 27 | 28 | 59 | 30 | 31 | 1 | T | 34 | 35 | 36 | 37 | 38 | 39 | T | T | 43 | 44 | 45 | 46 | 47 | 48 | Т | | 51 | 52 | 53 | 54 | 55 | 56 | 2/ |
| MIL-STD- | Coo L | - | 3006 | - | - | = | | | = | = | = | - | - | - | - | - | _ | - | | - | - | - | - | - | - | | | | | | | = | | | = | 3007 | | | = | = | | | | | | _ | _ | _ | _ | _ | | 1 | 1 | <u> </u> | 1 | | | | 1 |
| MIL | | | V _{ОН1} 3 | | | | | | | | | | | | | | | | OH2 | | | | | | | | | | | | | | | | | ر ام | | | | | | | | | | | | | | | | 2 | | | | | | | 1 |
| o de la companya de l | dno | | | 2°C | | | | | | | | | | | | | | | Ľ | | | | | | | | | | | | | | | | _ | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| o di | ibano | | _ | Tc = 25°C | | | | | | | | | | | | | | | > | | | | | | | | | | | | | | | | | _ | | | | | | | | | | | | | | | _ | | | | | | | | |

See footnotes at end of device type 03.

TABLE III. Group A inspection for device type 03. Terminal conditions (pins not designated may be high $\geq 2.0~V$; low $\leq 0.7~V$; or open).

| | Unit | | > | - | | . - | | - | - | - | | μĄ | | | | | - | = | - | = | - | - | - | - | - | - | - | = | = | - | | | | | | | = | - | | | = | | = | | - | - | = | = | | | | _ | | | = | | - | = | = | = : | = : | |
|-------------------------------------|------------------|-----------------|--------|--------------------|--------|--------|--------|-------|--------|--------|----|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-----|-------|--------|-------|------|-------|-------|---------|-------|-------|------------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|
| ŀ | | Max | -1.5 | | | | | | | | | 10 1/ | | | | | | _ | | | | _ | | | _ | | _ | -200 | 0 = | - | | | | | | | = | | | | | | | | -200 2/ | | = | = | | | _ | | = | | | | | | | - | _ | - |
| | Test limits | Min | | | | - | - | | | | | 1 | | | | | | | | | | | | | | | | ` | | | | | | | | | | | | | | | | Н | -5 | | | | | + | _ | | | | | | | | | 1 | + | |
| - | | <u> </u> | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | - | - | | | | | | | | | | | | 3- | | = | = | | 1 | | - | - | | | - | | - | - | - | 1 | _ |
| | Measured | terminal | B8 | B7 | Be | 82 | 42 | B 22 | 8 B | 5 10 | פי | A1 | A2 | A3 | A4 | A5 | 9V | A7 | A8 | 88 88 | B7 | Be | B2 | B4 | B3 | B2 | 8 | 7 | - c< | ¥ ° | SA A | ¥ : | A2 | Ap 7 | A. | A8 | B 8 | B7 | Be | B2 | B4 | B3 | B2 | B1 | DIR | A1 | A2 | A3 | 44 : | A A | A6 | A7 | A8 | B8 | B7 | Be | B5 | B4 | B3 | B2 | B1 | ΙØ |
| S | 70 | Vcc | 4.5 V | " | - | | | - | | | | 5.5 V | " | " | " | " | | | | | | | | | " | - | | | | | | | . | | | | - | - | " | | " | " | - | | и | " | = | = | | | | | | " | | " | " | | | - | = : | - |
| | <u>n</u> | ΙØ | 5.5 V | | | | - | | = | -18 mA | | 2.0 V | | | | | | = | = | = | = | = | = | = | - | = | = | | = | = | - | | . | | | = | = | = | | | | | = | н | 5.5 V | | | | | | | | = | | | = | | | | = : | = . | 0.4 \ |
| 9 | <u>0</u> | B1 | | | | | | | -18 mA | _ | | | | | | | | | | | | | | | | | 277 | · | | | | | | | | | | | | | | | | 0.4 V | | | | | | 1 | | | | | | | | | | : | 0.4 V | |
| 7 | <u> </u> | B2 | | | | | | -18 m | - | | | | | | | | | | | | | | | | | 2.7 V | ╁ | | | | | | | | | | | | | | | | 0.4 V | | | | | | | + | 1 | | | | | | | | | 0.4 V | + | |
| open). | 9 | B3 | H | | | 1 | 4 | | 1 | | | | | | | | | | | | | | | | 2.7 V | - | + | | | | | | | | | | | | | | | 0.4 V | 0 | | | | | | | + | 1 | | | | | | | | 0.4 V | | + | |
| 5 | | B4 E | | | | V | -18 mA | - | | | | | | | | | | | | | | | | 2.7 V | Н | | | | | | | | | | | | | | | | 0.4 V | 0. | | | | | | | | _ | | | | | | | | 0.4 V | H | 1 | + | |
| >. - | | | | | | _ | 21- | | | | | | | | | | | | | | | | ^ | | | | | | | | | - | | | | | | | | - | H | | | | | | | | | + | _ | | | | | | - | 0. | | \dashv | + | |
| \; \; \; | <u></u> | BS | | | -+ | -18 mA | - | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | - | | | | | | | | 0.4 V | | | | | | | | | | 1 | _ | | | | | | 0.4 V | | | _ | _ | |
| ا.> ≥ ر | 2 | Be | | | -18 mA | | | | | | | | | | | | | | | | ┢ | 2.7 V | | | | | | | | | | | | | | | | - | 0.4 V | | | | | | | | | | | 1 | | | | | - | 0.4 V | | | _ | 4 | _ | |
| oe nigr | 2 | B7 | | -18 mA | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | ╛ | | |
| designated may be nign ≥ 2.0 V; low | = | B8 | -18 mA | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | |
| gnated | 2 | GND | GND | н | | | | | | | | " | " | | н | н | | = | | = | | " | " | | " | - | = | = | | | - | | . | | | | = | | н | | | " | - | | н | н | = | = | | | | | - | , | | | " | - | - | - | | - |
| ot desi | n | A8 | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | |
| n suid) | ю | A7 | | | | | | | | | | | | | | | | 2.7 \ | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | |
| altions | _ | A6 | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | |
| l erminal conditions (pins not | ٥ | A5 | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | - | 1 | 1 | |
| ermin | ი | A4 | | | | | Ī | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | 7 | 0.4 v | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | 1 | 1 | |
| F | 4 | A3 | | | | | Ì | | | | | | | 2.7 V | | | | | | | | | | | | | | | | / / / | + | | | | | | | | | | | | | | | | | 0.4 V | | 1 | | | | | | | | | | 1 | 1 | |
| c | າ | A2 | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | 7 7 0 | + | | | | | | | | | | | | | | | | | 0.4 V | | | 1 | | | | | | | | | | | | |
| c | ٧ | A1 | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | 7 7 7 | > ! | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | |
| , | - | DIR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | |
| | Cases R, S, 2 | Test no. | 58 | 29 | 09 | 61 | 70 | 64 | 65 | 99 | | 29 | 89 | 69 | 20 | 71 | 72 | 73 | 74 | 75 | 9/ | 77 | 78 | 6/ | 80 | 81 | 82 | 2 2 | 8 8 | 40 | 600 | gg ! | 87 | 88 | 68 | 06 | 91 | 92 | 93 | 94 | 92 | 96 | 26 | _ | _ | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 |
| CEC | 883 | method Test no. | | | | -1 | | 1 | - | | | | | | | | | | | | 1 | • | • | | | - | | | 1 | | | | | -1 | | 1 | | | | | | | | | 60 | | - | - | | | | | = | - | - | - | - | - | - | | | |
| N.A. | Ioqu. | | Vıc | | | | | | | | | HZO | | | | | | | | | | | | | | | | i | 770 | | | | | | | | | | | | | | | | IL. | | | | | _ | | | | | | | | | _ | _ | _ | |
| - | Subgroup Symbol | | _ | | | | | | | | | | | | | | | | | | | | | | | | | 1_ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Subg | | _ | $Tc = 25^{\circ}C$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE III. <u>Group A inspection for device type 03.</u>

| Unit | <u> </u> | | μA | | = | = | | = | = | - | - | : = | - | | | - | | | | | = | = | = | = | = | - | - | = | = | = | = | - | - | = | | | : : | | mA | = | = | | = | - | | = | = | = | = | = | = | = | | | = | |
|---|----------|----------|-------------------|-----------|-------|------|-----|-----|-------|-----|-----|-------|----------|------|-------|-------|-------|------|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|-------|-------|-------|-------|-------|-------|----|-------------|-------|-------|-------|-------|----------|-------|----------|-------|-------|----------|-------|-------|-------|---------------|--------------|------------------|--|
| sjits | Max | Max | 20 | | = | = | = | = | = | - | | : = | | | | | | | | | 100 | = | = | = | - | | | | | = | = | = | = | = | | | | | -225 | | - | | = | - | = | = | = | = | = | - | - | | = (1 | 2 6 | 92 | |
| Test limits | Miss | IMILI | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -40 | | | | = | | = | | = | = | = | | | = | | t | | |
| Measured | | ₹ | DIR | A1 | AZ V | 2 < | A5 | 200 | 24 | ζ < | A8 | P 2 | 200 | Bo | B5 | 4 6 | B3 | B2 | B. | ıσ | DIR | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B5 | B4 | B3 | B2 | בי | ıσ | B1 | B2 | B3 | B4 | 600 | BO B7 | 88 6 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | VCC | \ \ \ \ | |
| 20 | - | v cc | 5.5 V | | | = | = | = | = | - | | : = | | | | | | | | | | | | | | | | | н | = | = | = | = | = | | | | | = | | - | | | - | = | - | = | = | = | - | - | - | | | - | |
| 19 | ı | Ŋ | T | | = | | = | = | = | | - | : = | | | | - | | | | 2.7. | 5.5 V | = | = | = | = | - | | | | | = | = | = | = | | | | | GND | | | | = | - | | - | = | - | - | - | - | - | = = | | 5.5 V | |
| 18 | 2 | ٥ | | | | | | | | | | | | | | | | | 7.7 | | | | | | | | | | | | | | | | | , | 2.5 V | | GND | | | | | | | 5.5 V | | | | | | | , | 5.5 V | į | |
| 17 | 00 | D2 | | 1 | | | | | | | | | | | | | 1 | 7.7. | | | | | | | | | | | | | | | | | 2 | 5.5 V | -/ | | | GND | | | | | | - | 5.5 V | | | | | | _ | 0.5 V | + | |
| .1 | 00 | | | 1 | | | | | | | | | | | | 1 | 7.7.7 | 7 | | | | | | | | | | | | | | | | | 5.5 V | 2 | | | | | GND | | | | | | 5 | 5.5 V | 1 | | | | _ | 0.5 V | 44 | |
| Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open) \leq 6 7 8 9 10 11 12 13 14 15 16 | 0.4 | | | | | | | | | | 1 | | | | ; | 7.7.7 | 7. | | | | | | | | | | | | | | | | | 5.5 V | 5. | | | | | | H | GND | | | | | | 5. | 5.5 V | | | | \dashv | 9.5 V | \pm | |
| V ≤ 0.7 | 0.0 | | | 1 | | | | | | | + | | | | + | 7 | | | | | | | | | | | | | | | | | _ | 5. | | | | | | | | + | j | | | | | | 5. | - | | | - | + | + | |
| 7 V; low | | | | 1 | 1 | | 1 | | | | 1 | | , | + | 2.7 V | 1 | | | _ | | | | | | | | | | | | | _ | 5.5 V | | | | | | | | | ć | + | _ | | | | | l | 5.5 V | | | \rightarrow | > 2.5 V | + | |
| 3h ≥ 2.0 13 | 90 | | | 1 | | | | | | | _ | , | + | 7.7. | | _ | | | | | | | | | | | | | | | \dashv | 5.5 V | | | | | | | | | | | | + | | | | | | | 5.5 V | Н | -+ | 2.5 V | + | |
| / be hig | 07 | ρ, | | 1 | | | | | | | | , , , | 7.7 | | 1 | - | | | | | | | | | | | | | | \dashv | 5.5 V | | | | | | | | | | | | | CNC | + | | | | <u> </u> | | | 5.5 V | + | 0.5 V C.C | + | |
| ed may | ٥ | | | | | | | | | | 1 | 7.7. | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | GND | 5 | | | | | | | 5.5 V | 3.5 v | j | |
| signat | | פואס | GND | | - | = | = | = | = | | - | : = | - | | . - | - | - | | | | - | = | = | = | = | | | | | | = | = | = | = | | | | : | GND | | = | | - | - | = | = | = | - | - | = | - | = | | | = | |
| s not de | 0 | Yo | | 1 | | | | | , | 1 | 7.7 | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | 5.5 \ | | | | | | | Н | GND | 1 | | |
| srid) st | ^ | Ì | | 1 | | | | | 27. | 7.7 | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | 557 | 5.5 | | | | | | - | GND | | 1 | | |
| ondition 7 | 9 | Ao | | | | | | 777 | | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | 7 | 0.0 | | | | | L | | GND | | | _ | | |
| ninal co | 34 | CY CY | | | | | 277 | | | | | | | | | | | | | | | | | | - | 5.5 V | | | | | | | | | | | | | | | | į | 0.0 | | | | | | | GND | | | | 1 | | |
| lerr 5 | ~ | A 4 | | 1 | , | 27.7 | 7.7 | | | | | | | | | | | | | | | | | H | 5.5 V | | | | | | | | | | | | | | | | - | 5.5 V | | | | | | | GND | 9 | | | | 1 | | |
| 4 | C < | | | | 2 7 7 | 7.7 | | | | | - | | | | 1 | - | | | | | | | > | 5.5 V | | | | | | | | | | | | | | | | - | 5.5 V | | | | | | | GND | | | | | | \downarrow | _ | |
| n | · · | | , | ^ | 7.7 | | | | | 1 | - | | | | | - | | | - | | | _ | 5.5 V | | | | | | | | | | | | | | | | +- | 5.5 V | | - | | | | ٥ | GND | | - | | | | | + | \perp | |
| 2 | 010 | , | > | 2.7 V | | | | | | | - | | | | | - | | | | | 5.5 V | 5.5 V | | | | | | | | | | | | | | | | | 5.5 V 5.5 V | | | _ | - | | | GND GND | + | | _ | | | | | 1 | + | |
| Cases R.S. 2 | | oj. | 117 2.7 | 118 | 200 | 2 5 | 22 | 23 | 24 | + 2 | 2 2 | 72 | / 2 | 87.0 | 53 | 2 20 | 15 | 32 | 33 | 45 | ╁ | 136 | 37 | 38 | 39 | 40 | 41 | 142 | 43 | 44 | 45 | 46 | 47 | 48 | 149 | 2 2 | 10 | | H | | 155 | 26 | /0 | 0 0 | 90 | t | t | 93 | 94 | 92 | 99 | 97 | 88 | 100 | 171 | |
| TD- Ca | . F | | | | - + | - - | | - | - - | - - | -[| - + | <u> </u> | - - | - ; | -[| -[| - - | _[| | ÷ | F | ÷ | ť | ŕ | 1 | Ļ | Ť | Ť | 7 | ÷ | ÷ | ÷ | ÷ | - F | -[| - - | | | Ť | Ť | -[| - = | - + | 1 | <u> </u> | 1 | Ť | <u>آ</u> | Ť | Ť | | + | + | + | |
| MIL-STD- | 3 4 | _ | 3010 | | - | - | - | - | - | - | - | | | | _ | - | | | | | = | - | - | - | - | - | - | - | - | - | = | - | = | = | | | | | 3011 | - | - | | - | - | - | - | - | - | - | - | - | - | - | + | 3005 | |
| lodmyS, autorioris | | | 1 I _{IH} | Tc = 25°C | | | | | | | | | | | | | | | | | Ē | ! | | | | | | | | | | | | | | | | | SO | | | | | | | | | | | | | | | HOO | CCZ | |
| di S | Ś | | | Ë | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See footnotes at end of device type 03.

TABLE III. Group A inspection for device type 03. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open).

| ÷ | <u> </u> | | | Ì | | | 2 | | ns | = | - | | - | = | = | = | | - | = | | | = | = | - | = | = | | .]. | . | | = | = | = | | = | = | - | | | = | = | = | = | - |
|------------------|--------------------|-------|---|------------|--------------|----------------|--------------------|--|---------------------|----------|----------|----------|-------|---------|---------|---------|---------|---------|--------|---------|---------|-------|---------|--|----------|---------|---------|---------|---------|----------|---------|--|---------|----------|----------|----------|----------|---------|----------------|---------|-------|----------|---------|---------|
| ofice | Max | Y | | | | 4 1 | 5/ (test 176 only) | | 17 | - | | - - | - | = | - | = | | = | = | - | | = | = | - | | = | - | | | | - | | = | | = | = | 45 | - | = | - | = | - | | - |
| Toot limits | Min | | | | | | 5/ (te | i | 2 | - | | | - | = | | | н | = | = | | : = | = | - | | = | | | | | | - | = | = | | - | - | - | - | | - | = | = | = | |
| 000 N | terminal | 3 | | | | | | | B1 to A1 | B2 to A2 | B3 to A3 | t to A4 | to A5 | 7 to A7 | 3 to A8 | l to B1 | 2 to B2 | 3 to B3 | to B4 | 5 to B5 | 5 to B6 | 10 BB | 1 to B1 | 2 to B2 | A3 to B3 | t to B4 | 5 to B5 | 5 to B6 | 7 to B7 | A8 to B8 | 2 to A2 | B3 to A3 | t to A4 | B5 to A5 | 7 to A7 | B8 to A8 | to A1 | Ē to A2 | <u>G</u> to A3 | G to A4 | to A5 | ⊡ to A6 | G to A7 | G to A8 |
| 20 | V _{CC} te | - | | 20.7 | . = | _ | | | 5.0 V B | | " B; | ě ě | i a | - - | - B | A | " A3 | A | ¥ • | ¥. | ¥ < | | ¥ | A | " A | À | ¥ · | ř | ¥ . | | B. | " B; | ě. | | á lá | E B | 19 " | 10 | 10 - | 10 - | 10 | <u>ε</u> | 10 | 10 = |
| 19 | 10 | | | R | | В | a < | 1 | GND 5 | | | | | | | | н | = | = | | | = | | | | | | | | | | | = | | | | Z | - | - | - | - | - | = | - |
| 18 | B1 | _ | | I | | ١V | <u>ш</u> | _ | N. | | | 1 | | | | OUT | | | | | | | DUT | | | | | | | Z | | | | | | | GND | | | | | | | |
| . 11 | B2 | | | _ | | ١V | ш п | | | z | | 1 | | | | 0 | OUT | | | | | | 0 | <u>. </u> | | | | | | | z | | | | | | 9 | GND | | | | | | |
| _ | B3 B | | | - | | | + | | | | 7 | | | | | | Н | Т | | | | | | TUO | Т | | | | | | _ | 7 | | | | | | ั้ | 9 | | | | | |
| 15 16 | | | | _ | | | B 1 | | | | Z | _ | | | | | | OUT | Т | | | | | | OUT | Т | | | | | | Z | _ | | | | | | GND | ₽ | | | | |
| | B4 | | | _ | | | + | | | | | Z | | | | | | | OUT | ⊢ | | | | | | OUT | _ | - | | - | | | ≥ | _ | | | | | | GND | ٥ | | | |
| 14 | B5 | | | _ | | | ω = | | _ | | | - | | | | | | | | OUT - | | | | | | | | | 1 | | | | | Z | <u> </u> | | | | | | GND | 0 | | |
| 2 13 | B6 | | | 1 | | ١× | ω = | E . | | | | | 2 | = | | | | | | | 3 | | | | | | - | | _ | | | | | Z | | | | | | | | GND | | |
| _ | B7 | i | | _ | - | V | ω ⊐ | C | | | | - | | Z | | | | | | | Ċ | + | | | | | | | 100 | | | | | | Z | | | | | | | | GND | |
| 1 | B8 | | | I | | ۷ | ω ⊐ | E | | | | 1 | | | Z | | | | | | | Ē | 9 | | | | | | Č | 000 | | | | | | Z | | | | | | | | GND |
| 10 | GND | | ted. | GND GND | = | = | | | GND | - | | | = | = | - | = | | = | = | | : = | = | = | = | = | = | | · - | | | - | | = | | = | - | - | = | = | = | = | = | - | - |
| 6 | A8 | 2 | are omit | A | В | I | _ 1 | C | | | | - | | | TUO | | | | | | | 2 | | | | | | | - | Z | | | | | | OUT | | | | | | | | OUT |
| 8 | A7 | | V _{IC} tests | VIC ICOLO | В | I | _ 1 | = -55°C. | | | | 1 | 1 | ДÖ | | | | | | | 2 | | | | | | | - | Z | | | | | 1 | TUO |) | | | | | | | TUO | |
| 7 | A6 | 2 | 5°C and | Z 4 | В | I | _ = | and Tc = | | | | 1 | 5 | 3 | | | | | | : | Z | | | | | | - | ≥ | | | | | | | 5 | | | | | | | OUT | | |
| 9 | A5 | 2 | t Tc = 12 | 4 | В | + | _ 1 | +125°C (| _ | | | <u>!</u> | 3 | | | | | | | Z | | | | | | | Z | | | | | | - | OUT | | | | | | _ | OUT | | | |
| 2 | 3 A4 | | 1, excep | 1, excep | | \vdash | _ 1 | ept Tc = | _ | | Н | OUT | | | | | | | Z | | - | | | | H | Z | - | _ | - | | | | DOL | | | | | | ⊢ | TUO | | | | |
| 3 4 | A2 A3 | ! | subgrou | A A | В | H | _ I | oup 7. exc | _ | DUT | OUT | 1 | | | | | Z | Z | | | | | | z | Z | | | | - | 1 | OUT | OUT | | | | | | OUT | OUT | | | | | |
| 2 | A1 , | · | nits as for | A A | В | H | _ | for subarc | OUT | 0 | | 1 | | | | Z | | | | | | | z | | | | | | | TIIO | ╁ | | | | | | OUT | 0 | | | | | | |
| - | DIR | í | is, and lin | Β, α IC | < | + | <u>ш</u> | itions as | GND | - | | | | = | - | 4.5 V | | = | = | | : - | = | 4.5 V | L | = | | | | | UNU | _ | | = | | = | - | <u> </u> | - | | - | = | | = | = |
| Cases | | | condition | 172 | 173 | 174 | 175 | inal cond | 177 | | 179 | 180 | 181 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 100 | T | H | 195 | 196 | 197 | 198 | 199 | 200 | - | 203 | 204 | 205 | 207 | 208 | 509 | 210 | 211 | 212 | 213 | 214 | 212 | 216 |
| MIL-STD- | method T | - | Same tests, terminal conditions, and limits as for subgroup 1, except Tc = 125°C and V _{1C} tests are omitted commenced to the strength of the | , (di | 1 | 1 | | Same tests and terminal conditions as for subgroup 7, except Tc = +125°C and Tc. | 3003 | ဗ | | | | - | - | - | - | = | = | | | - | | - | <u> </u> | - | | | | | - | <u>. </u> | - | | | - | | - | = | - | - | - | | = |
| MIL | Ĕ | | ame tests | rith Tale | able | tests | | ame tests | t _{PHL2} 3 | | | | | | | | | | | | | | E H2 | ! | | | | | | | | | | | | | PZL1 | | | | | | | |
| lodany O another | dnoig | | 2 3 0 | | Tc = 25°C ta | 2 | | 8 | | ပ္ပ | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| ď | 3 | | | 7 | . II |) - | | Ĺ | | Tc= | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 03. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open).

| imits Unit | | - | | | | | | l | | | | 1 1 | | | | | - | | | l | | = | | | 1 | | | | | | | | . 1 |
|--------------------|----------|---------|----------------|---------|----------------|----------------|----------|---------|----------------|-------|----------|----------------|-----------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|----------------|---------|------|-------|-------|-----|---------|-------|---------|-----------|
| _:⊑ | Мах | 45 | = | - | = | = | - | = | = | - | - | - | - | - | - | - | = | - | | - | - | - | - | - | - | 30 | - | = | - | - | - | - | - |
| Test limits | Min | 2 | = | - | = | = | - | | = | | - | | | | | | | - | | - | | | - | | - | | - | | | | - | | - |
| Measured | terminal | G to B1 | <u>G</u> to B2 | G to B3 | <u>G</u> to B4 | <u>G</u> to B5 | <u> </u> | G to B7 | <u>G</u> to B8 | to B1 | <u> </u> | <u>G</u> to B3 | _ G to B4 | G to B5 | G to B6 | G to B7 | G to B8 | <u> </u> | ☐ to A2 | G to A3 | G to A4 | G to A5 | ☐ to A6 | <u>G</u> to A7 | ☐ to A8 | _ | to A2 | to A3 | _ | ☐ to A5 | to A6 | G to A7 | G to A8 |
| | | | ľŰ | Ð | ľΰ | ľ | ıσ | ľΰ | ľ | 9 | ΙÖ | ΙØ | ΙŰ | ΙŰ | ľ | ľ | ΙÐ | 19 | ıσ | 19 | ľΰ | ľΰ | ΙÖ | 19 | ıσ | ΙØ | ı٥ | ľΰ | 10 | 19 | ΙØ | ľ | ľ |
| 20 | | 5.0 V | = | - | = | = | - | = | = | | - | - | = | = | - | - | | | | | = | = | - | - | - | | - | = | - | - | - | - | - |
| 19 | ΙØ | Z | = | - | = | = | = | = | = | | = | - | = | = | | - | | - | = | - | = | = | = | = | = | = | | = | = | = | - | | - |
| 18 | B4 | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | | | | | | |
| 17 | B2 | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | | | | | |
| 16 | B3 | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | | | | |
| 15 | B4 | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | | | |
| 14 | B5 | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | | |
| 13 | B6 | | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | | |
| 12 | B7 | | | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND | |
| 11 | B8 | | | | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | GND |
| | | Q | | | | | | | | | | | | | | | | | | | | _ | | | 4.5 | | | | | | | | |
| 10 | | GND | - | | - | - | | | | | | | = | | | | > | - | | | | - | | | | | | - | | | - | | |
| 6 | 7 A8 | | | | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | TUO |
| 8 | A7 | | | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | OUT | |
| 7 | A6 | | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | OUT | | |
| 9 | A5 | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | OUTD | | | |
| 2 | 44 | | | | GND | | | | | | | - | 4.5 V | | | | | | | | OUT | | | | | | | | OUT | | | | |
| 4 | А3 | | - | GND | | | | | | | _ | 4.5 V | | | | | | | | OUT | | | | | | | | OUT | | | | | |
| ဧ | A2 | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | OUT | | | | | | |
| 2 | - | dND / | | | | | | | | 4.5 V | | | | | | | | TUO | | | | | | | | OUT | | | | | | | |
| ~ ^· | | 4.5 V | = | - | = | = | - | - | = | | - | - | = | = | = | = | | GND | - | = | - | = | - | | - | | - | = | = | | = | = | = |
| - Cases R, S, 2 | _ | | | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 |
| MIL-STD- 883 | method | 3003 | See fig. 3 | - | - | = | - | - | = | = | - | = | = | = | = | = | = | = | - | = | - | = | - | - | - | = | - | = | - | - | = | = | - |
|] Symbol | | tpzL1 | - | | | | | | | PZH1 | | | | | | | | | | | | | | | | PLZ1 | | | | | | | \exists |
| Subgroup Symbol | | 6 | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 03. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

| | Unit | | su | = | = | = | = | = | = | - | - | - | - | - | - | - | - | = | = | = | - | - | = | - | - | - | = | | = | - | - | \Box |
|---|-----------------|----------|----------|------------|---------|---------|----------------|----------------|---------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|---------|---------|---------|----------------|----------------|-------|----------------|---------|-------------------|------|---|--------------|------|---|
| ŀ | | Max | 30 | = | | = | | = | = | | | | | | | | | = | | = | | | = | | = | = | 22 | 22 | 28 | 39 | 39 | |
| | Test limits | Min | 2 | | = | = | = | = | | | | = | = | = | = | - | - | = | = | = | | | = | = | = | = | | | | - | | |
| - | | | B1 | B2 | B3 | . B4 | B5 | 9B 0 | B7 | B8 | B1 | B2 | B3 | B4 | B5 | 9B 0 | B7 | B8 | A1 | . A2 | . A3 | A4 | . A5 | 9 Y 0 | A7 | . A8 | | | | Ш | L | |
| L | Measured | terminal | | _ G to B2 | 10 5 | G to B4 | <u>G</u> to B5 | <u>G</u> to B6 | ☐ to B7 | G to B8 | <u>G</u> to B1 | <u>G</u> to B2 | <u>G</u> to B3 | <u>G</u> to B4 | <u>G</u> to B5 | <u>G</u> to B6 | <u>G</u> to B7 | G to B8 | G to A1 | G to A2 | G to A3 | <u>G</u> to A4 | <u>G</u> to A5 | G to | <u>G</u> to A7 | G to A8 | | | | | | |
| Š | 70 | Vcc | 5.0 V | = | = | = | = | = | = | | | - | = | = | = | - | - | = | = | = | = | = | = | = | = | = | | | | | | |
| , | 18 | ΙŰ | Z | = | = | = | = | = | = | = | | = | = | = | | - | - | = | = | = | = | = | = | = | = | = | _ | | | | | |
| , | 28 | B1 | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | | | | | | |
| ļ | 1/ | B2 | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | | | | | |
| open). | 91 | B3 | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | | | | |
| reminia conditions (pins not designated may be might ≥ 2.0 V, low ≥ 0.7 V, or object) | 15 | B4 | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | | | |
|) / ; | 4 | B5 | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | | |
| , v , v | <u>ლ</u> | B6 | | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | |
| 7 Igii | N. | B7 I | | | | | | 0 | OUT | | | | | | | 0 | OUT | | | | | | | 4 | 4.5 V | | | | | | | |
| ay De i | | | | | | | | | ō | Т | | | | | | | | <u> </u> | | | | | | | 4. | > | | | | | | |
| oill nair | - | D B8 | | | | | | | | OUT | | | | | | | | OUT | | | | | | | | 4.5 V | _ | | | | | |
| oi licol | | | GND | = | - | = | - | - | = | D | | | - | | | | | ^ | - | = | - | - | = | | = | | - | | | | | |
| 2010 | ກ | A8 | | | | | | | 0 | GND | | | | | | | | 4.5 V | | | | | | | <u></u> | OUT | - | Ç | | | | |
| ાાત) જા | x | A7 | | | | | | | GND | | | | | | | _ | 4.5 V | | | | | | | | OUT | | _ | ř | ot IC = 12 | | | |
| oliulio 1 | _ | A6 | | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | excep | | | Ŝ. |
| ֓֞֟֝֟֟֝֟֝֟֝֟֝ ֓֓֞֓ | ω | A5 | | | | | GND | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | 1 | subgroup | | | Tc = 125 |
| י פ | | A4 | | | | GND | | | | | | | _ | 4.5 V | | | | | | | | DOUT | | | | | | | ts as tor | | | 9, except |
| - | 4 | A3 | | | GND | | | | | | | / | 4.5 V | | | | | | | | OUT | | | | | | _ | 7 | and IIm | | | bgroup (|
| • | m | A2 | 0 | GND | | | | | | | | 4.5 V | | | | | | | _ | OUT | | | | | | | | 9 | nditions, | | | as for su |
| • | N | | OND ^ | | | | | | | | 4.5 V | | | | | | | | TUO O | | | | | | | | | 1 | rminal cc | | | nd limits |
| | | _ | 4.5 V | | = | = | = | = | = | = | - | = | = | - | = | = | | = | GND | - | = | | | - | - | = | | , | Same tests, terminal conditions, and limits as for subgroup 9, except $1c = 125^{\circ}C$. | | | Same tests, terminal conditions, and limits as for subgroup 9, except Tc = 125°C. |
| | R, S, 2 | Ė | | | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | _ | ć | Same | | | inal cond |
| i i | MIL-S1D- 883 | method | 3003 | See fig. 3 | - | = | - | - | - | - | - | - | - | - | - | - | - | = | = | = | - | - | = | - | - | = | | | | | | sts, tern |
| | Symbol | | tpLZ1 | | | | | | | | PHZ1 | | | | | | | | | | | | | | | | t _{PHL2} | PLH2 | PZL1 | PZH1 PLZ1 | PHZ1 | Same te |
| | Subgroup Symbol | | တ | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | 11 |
| L | Ø | | <u> </u> | ř | | | | | | | | | | | | | | | | | | | | | | | <u> </u> | ₽. | - + | | J | |

| Unit | | > | | | = | | = | = | | = | = | = | | = | = | | . | | | = | | | н | = | = | = | = | = | = | = | = | | | . | | | = | = | = | = | = | | = : | | . | | . | | = | = | | = | = | = | = | = | |
|-----------------------|----------|------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-----|-----|------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|--------|----------|----------|--------|--------|--------|--------|--------|--|
| imits | Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | | | | : = | = | = | = | = | = | | | | . | = ! | -1.5 | . - | = | = | = | = | - | = | | = | |
| Test Limits | Min | 2.4 | | н | = | | = | = | | = | = | | н | | = | - | 2.0 | | | = | = | | | = | = | = | | = | | | = | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measured | terminal | B1 | B2 | B3 | B4 | B2 | B0 | 88 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B1 | B2 | 83 24 | 4 % | 88 | B7 | 3 82 | A1 | A2 | A3 | ¥ | A5 | A6 | A7 | A8 | B1 | B2 | B3 | P4 1 | 82 82 | B0 | 88 6 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | CAB | SAB | A1 | - 64 | A2 A3 | A4 | A5 | A6 | A7 | A8 | |
| 12 | GND | GND | н | | = | | = | | | = | | | | | = : | | | | : : | = | | = | = | | = | | | = | | н | | | | - - | | | | = | | | = | н | | - - | | | | | = | = | = | | = | | | = | |
| | A8 | 2 | | | | | | 2.0 V | i | | | | | | | -3 mA | | | | | | | 20.7 | i | | | | | | | -12 mA | | | | | | | 0.5 V | 5 | | | | | | | 12 mA | | | | | | | | | | -18 mA | |
| 10 | A7 | | | | | | 207 | . 0.1 | | | | | | | -3 mA | | | | | | | 207 | | | | | | | | -12 mA | | | | | | | 0.5.7/ | > 0.0 | | | | | | 4 07 | 12 mA | | | | | | | | | | -18 mA | | |
| 6 | A6 | 2 | | | | 2 | 2.0 V | | | | | | | -3 mA | | | | | | | 207 | 2 | | | | | | | -12 mA | | | | | | | 7 3 0 | v c.o | | | | | | | 12 mA | | | | | | | | | Ī | -18 mA | | | * |
| 8 | A5 | 2 | | | | 2.0 V | | | | | | | -3 mA | | | | | | | 207 | > | | | | | | | -12 mA | | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | | | | -18 mA | | | | |
| 7 | A4 | | | | 2.0 V | | | | | | | -3 mA | | | | | | | | V.O.2 | | | | | | | -12 mA | | | | | | | i | 0.5 V | | | | | | | 12 mA | | | | | | | | | | -18 mA | 2 | | | | • |
| 9 | A3 | | | 2.0 V | | | | | | | -3 mA | | | | | | | | 2.0 V | | | | | | | -12 mA | | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | | | | -18 mA | | | | | | |
| 2 3 4 5 6 7 8 9 10 11 | A2 | ļ | 2.0 V | | | | | | | -3 mA | | | | | | | | 2.0 V | | | | | | | -12 mA | | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | | | | 18 m | 201- | | | | | | |
| 4 | A1 | 2.0 V | | | | | | | -3 mA | | | | | | | | 2.0 V | | | | | | | -12 mA | | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | | | | 10 m | HII 01 - | | | | | | | page |
| е | DIR | 2.0 V | | | = | | = | = | 0.5 V | = | = | | | | = | = | 2.0 V | | | = | = | = | = | 0.5 V | · = | = | = | = | - | = | = | 2.0 V | - - | | | : = | = | = | 0.5 V | = | = | | | - - | | = | | 40 00 | HIIOI- | | | | | | | | on nex |
| 2 | SEL AB | 0.5 V | н | н | = | | н | н | | н | | н | н | | = | | | | | | н | н | н | | | | | | | н | н | | | | | | н | н | | | н | н | | | | | 40. | -18 MA | | | | | | | | | 13 thru 24 on next page |
| - | CLK AB | 0.5 V | | | = | | = | = | = | = | = | | = | = | = | - | | | . - | = | = | - | = | = | = | = | = | = | - | | = | | | - - | | : = | = | = | = | = | = | | | - - | | = (| -18 mA | | | | | | | | | | |
| Case L | + | + | 2 | 3 | 4 | 2 | 0 1 | - 00 | 0 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 9 9 | 19 | 27 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 32 | 36 | 3/ | 30 00 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 20 | 31 | 32 | 54 | 55 | 26 | 22 | 28 | 69 | e type 04 |
| MIL-STD- 883 | method | 3006 | | = | = 1 | | | | | = | = | | = | = | = 1 | = | | | | - | | - | = | - | | | | = | | = | = | = : | | | | | - | - | - | | = | | | | | | | | - | - | | | - | - | | = | 1 of device |
| Symbol | | V _{ОН1} | | | | | | | | | | | | | | | OH2 | | | | | | | | | | | | | | | Б | | | | | | | | | | | | | | | <u>o</u> | | | | | | | | | _ | tes at enc |
| Subgroup | | - | Tc = 25°C | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | See footnotes at end of device type 04. Pins |

| TABLE III. Group A inspection for device type 04 . rminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open). |
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| Unit | | > | . = | = | = | = | = | = | | = | = | = | = | | - | = | = | = | = | = | | | = | = | | = | | - | | | | = | | = | = : | | | = | | = | = | = : | . - | = | = | = | | | = | = | = | | | | |
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| mits | Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 5 = | | | = : | | | = | н | | = | = : | | = | 1 5 | | = | = | | | = | = : | | | - |
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| Measured | terminal | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | A A | ¥ S | S S | 74 VE | A5 | Ab A7 | AB | B1 | B2 | B3 | B4 | B5 | 2 2 | D/ | P0 | A2 | A3 | A4 | A5 | A6 | A/ | B1 | B2 | B3 | B4 | B2 | B6 | B7 B8 | A1 | A2 | A3 | A4 | A5 | A6 | Ϋ́ | A C | CAD | SAB PIR | A1 | A2 | A3 | A4 | A5 | A6 | A/ | A8 |
| 24 | V _{CC} | 4.5 V | | = | = | | = | = | | | | = | = | | | = | = | = | = | = | | : = | = | = | = | = | | - | | | | = | " | = | = : | | | = | н | | = | = : | | = | = | = | = | | | = | | | | | - |
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| 3 14 15 16 17 18 19 20 21 22 23 | SEL BA | 0.5 V | . = | = | = | | | = | | | | = | = | | | = | = | = | = | = | | | = | | = | = | | = | | | | = | " | = | = : | | | = | | = | | | | = | | | | | | | | | | | |
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| 20 | B1 | -3 mA | | | | | | | | Z.U V | | | | | | | -12 mA | | | | | | | 207 | i | | | | | | 12 mA | 7 | | | | | | 0.5 V | | | | | | | | | | | | | | | | | _ |
| 19 | B2 | | -3 mA | | | | | | | 7,00 | 2.0 V | | | | | | | -12 mA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | | 0.5 V | | | | | | | | | | | | | | | | |
| 18 | B3 | | | -3 mA | | | | | | | 7,00 | Z.U V | | | | | | | -12 mA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | | 0.5 V | | | | | | | | | | | | | | | |
| 17 | B4 | | | | -3 mA | | | | | | | 700 | V.O.2 | | | | | | | -12 mA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | | 0.5 V | | | | | | | | | | | | | | |
| 16 | B5 | | | | | -3 mA | | | | | | | | 2.0 \ | | | | | | | -12 mA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | | 0.5 V | | | | | | | | | | | | | |
| 15 | B6 | | | | | | -3 mA | | | | | | | | 2.0 v | | | | | | | -12 mA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | | 0.5 V | | | | | | | | | | | | |
| 41 | B7 | | | | | | | -3 mA | | | | | | | 207 | v 0.4 | | | | | | 40.04 | - 12 IIIA | | | | | | | 2.0 V | | | | | | | 12 mA | | | | | | 0.57 | ۷.5.۷ | | | | | | | | | | | |
| 13 | B8 | | | | | | | | -3 mA | | | | | | | 207 | 201 | | | | | | 12 m | ¥11.71- | | | | | | | ×.0.4 | | | | | | 12 m4 | 7 | | | | | | 740 | v c.o | | | | | | | | | | |
| Case L | Test no. | - | - 2 | 3 | 4 | 2 | 9 | 7 | 8 | D 5 | 01. | - 22 | 12 | 13 | 1,4 | 16 | 17 | 18 | 19 | 20 | 21 | 77. | 27 | 25 | 26 | 27 | 28 | 59 | 30 | 31 | 33 | 34 8 | 35 | 36 | 37 | 88 8 | 33 | 41 | 42 | 43 | 44 | 45 | 46 | 4/ | 04 | 9 G | 27 | 52 | 53 | 54 | 55 | 26 | 57 | 28 | 26 |
| MIL-STD- 883 | method | 3006 | = | = | = | = | = | = | = : | | | = | - | : : | | - | - | = | = | = | | : = | = | = | = | = | = | = | = : | | = | = | = | = | = : | | : : | = | = | = | = | | | = | = | - | - | = | = | = | = | | | | = |
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| | Test Limits | Max | -1.5 | = | . - | | | | . - | | - | = | = | -200 | 2 = | - | | = | = | - | | = | - | : : | | | | | | - | = | - | | = | | | = | 20 |) - | - | = | | | | | - | = | | | = | | = | = | = | | | - | - | | = | - | _ |
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| _ | Measured | terminal | B8 | B7 | Be | B2 | B4 | 3 G | Z 2 | B1 | ΙØ | ARS | CBA BA | CAR | SAR | 3 C | V 1 | Α2 | A3 | ΑΔ | 7.7 | 84 | 70 | Α/ | A8 | B8 | B7 | B6 | BS | B4 | . E3 | 8 8 | 7 2 | 5 1 | <u>ග</u> | SBA | CBA | CAB | SAR | מאס | ۲ <u>۲</u> | - c | AZ | A3 | ¥4 | A5 | A6 | A7 | A8 | B8 | B7 | Re | 85 | 2 2 | t 6 | B3 | BZ | ם. | O | SBA | CBA | |
| | 12 | GND | GND | = | | | | | | | = | | | = | = | = | | = | = | - | | | = | : | | | | | - | | = | | | = | | | = | = | = | - | = | | | | | = | | = | | | | = | = | | | | = | | | = | = | |
| open). | 1 | 8Y | | | | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | | | | 7.7 | | | | | | | | | | | | | |
| .7 V; or | 10 | A7 | | | | | | | | | | | | | | | | | | | | | 7 7 7 | 0.4 V | | | | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | |
| , low ≤ 0 | 0 | A6 | | | | | | | | | | | | | | | | | | | | V 4 V | | | | | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | • |
| h ≥ 2.0 V | 8 | A5 | | | | | | | | | | | | | | | | | | | 7 7 0 | · | | | | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | - |
| be high | 7 | A4 | | | | | | | | | | | | | | | | | | 0.4.7 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.7 V | | | | | | | | | | | | | | | | | |
| ted may | 9 | A3 | | | | | | | | | | | | | | | | | 0.4.7 | | | | | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | | |
| Terminal conditions (pins not designated may be high $\ge 2.0 \text{ V}$; low $\le 0.7 \text{ V}$; or open) | 2 | A2 | | | | | | | | | | | | | | | | V 4 V | | | | | | | | | | | | | | | | | | | | | | | | 71 | Z./ V | | | | | | | | | | | | | | | | | | | |
| oce III. (pins no | 4 | A1 | | | | | | | | | | | | | | | 7 7 7 | > | | | | | | | | | | | | | | | | | | | | | | | 11.7.0 | 7.7 | | | | | | | | | | | | | | | | | | | | page. |
| ditions | က | DIR | | | | | | | | | | | | | | 0.4.V | | | | | | | | | | | | | | | | | | | | | | | | 7.4.0 | 7.7 | | | | | | | | | | | | | | | | | | | | | on next |
| ninal con | 2 | SEL AB | | | | | | | | | | | | | V 7 V | | | | | | | | | | | | | | | | | | | | | | | | 27.0 | ۷., ۷ | | | | | | | | | | | | | | | | | | | | | | 3 thru 24 on next page. |
| Terr | - | CLK AB | | | | | | | | | | | | 047 | | | | | | | | | | | | | | | | | | | | | | | | 2.7 V | i | | | | | | | | | | | | | | | | | | | | | | | . Pins 13 |
| • | Case L | Test no. | 09 | 61 | 62 | 63 | 64 | 60 | 99 | 29 | 89 | 69 | 86 | 7 2 | 72 | 73 | 27 | 75 | 2/6 | 2.2 | 78 | 0,0 | 60 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 08 | 88 | OS. | 91 | 65 | 93 | 94 | 94 | CS of | 30 | 16 | 98 | 66 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 100 | 000 | 109 | 110 | 11.1 | 71. | 113 | 114 | type 04 |
| • | MIL-STD- 883 | method | | | | -1 | | | | | | 1 | 1 | 3000 | = | - | | = | | - | | - | - | | - 1 | = | | | = | - | = | - | | - | | = | | 3010 | = | - | = | | | | | | = | | | = | - | - | = | - | | | | - | | = | - | 1 of device |
| - | Symbol | | VIC | | | | | | | | | | | | _ | | | | | | | | | | | | | | | | | | | | | | | Š | Ē | | | | | | | | | | | | | | | | | | | | | | | es at enc |
| F | Subgroup | | - | Tc = 25°C | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | See footnotes at end of device type 04. Pins 1 |

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TABLE III. Group A inspection for device type 04.

Terminal conditions (pins not designated may be high > 2.0 V: low < 0.7 V.

| | Unit | | ^ | = | | = | = | = | | = | = | = | = | ٧٠١ | <u>S</u> .= | = | = | = | | = | = | = | = | = | = | = | | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | | = | = | | | : = | = | = | = | | | | = |
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| | nits | Max | -1.5 | | | | = | - | | | = | | - | -200 | 2 = | = | = | - | | = | - | - | = | = | - | - | | = | = | = | - | - | = | - | - | 20 | 2 = | | = | - | - | = | - | | = | = | | | : = | - | = | - | | = | = | = |
| | Test Limits | Min | | | | | | | | | | | | C |) = | = | = | = | = | = | = | - | - | - | - | - | - | = | = | = | = | = | = | - | | | | | | | | | | | | | | | | | | | | | | |
| | Measured | terminal | B8 | B7 | B6 | B5 | B4 | B3 | B2 | B1 | ΙØ | ۷۵۷ | S S S | CAB | S S S | 8 2 | A1 | A2 | Δ3 | 2 8 | 44 | S 9 | Δ4 | Α8 | 2 8 | B7 | ä | 90 | 84 83 | B3 | BZ | B1 | ١٣ | 0 6 | SBA SBA | CAB | SAB | S S | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | 88 | B/ | Be | B3 | £ 8 | B2 | B1 | 10 | SBA | CBA |
| | 24 | V _{cc} | 4.5 V | н | | | = | | | = | = | | = | 557 | - - | | | = | - | = | = | = | | | | = | | = | = | = | = | = | = | = | = | = | | = | = | = | = | = | = | | = | | | | : = | = | = | = | | | | |
| open). | 23 | CLK BA | | | | | | | | | | | -18 mA | C . | | | | | | | | | | | | | | | | | | | | | 7 7 7 | v +. | | | | | | | | | | | | | | | | | | | | 277 |
| Terminal conditions (pins not designated may be high ≥ ∠.∪ V, low ≤ ∪.7 V; or open) | 22 | SEL BA | | | | | | | | | | 18 m | ¥ 0 - | | | | | | | | | | | | | | | | | | | | | 7 6 | 0.4 v | | | | | | | | | | | | | | | | | | | | 27.7 | |
| .ow ≥ 0. | | IØ | | | | | | | | | -18 mA | | | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | |
| . Z.O V. | 20 | B4 | | | | | | | | -18 mA | 1 | | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | |
|) | 19 | B2 | | | | | | | -18 mA | - | | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | + | | | |
| ط االعام م | 18 | B3 | | | | | | -18 mA | `. | | | | | | | | | | | | | | | | | | | | | 0.4 V | ╁ | | | | | | | | | | | | | | | | | | | | 777 | ╁ | | | | |
| Signate — | 17 | 8 | | | | | -18 mA | ` | | | | | | | | | | | | | | | | | | | | | 047 | | | | | | | | | | | | | | | | | | | | | 27.7 | | | | | | |
| - In a | | | | | | | -18 | | - | | | | - | | | | | | | | | | | | | | | > | - | 5 | | | | | | - | | | - | | | | | | | | - | | > | | 7 | | | | | |
| 1 2 2 | | B2 | | | - | -18 mA | | | | | | | | | | | | | | | | | | | | | ^ | ^ | | | | | | | | | | | | | | | | | | | | | \ \ \ | 7.7 | | | | | | |
| | | B6 | | - | -18 mA | | | _ | | | | 1 | - | | | | | | | | 1 | | | | | | 7 7 7 | | | | | | | | | - | | | | | | | | | | _ | | | 2.7 V | | - | | | | | |
| <u></u> | 14 | B7 | H | -18 mA | | | | | | | | | | | | | | | | | | | | | | 7 / / | 5 | | | | | | | | | | | | | | | | | | | | Î | 2.7 V | | | | | | | | |
| | 13 | 88 88 | -18 mA | | | | | | | | | | | | | | | | | | | | | | 7 / 0 | ÷. | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | |
| | Case L | Test no. | 09 | 61 | 62 | 63 | 64 | 65 | 99 | 29 | 89 | 80 | 60 | 2 2 | 7.2 | 73 | 74 | 75 | 2/2 | 2 1 | 7.8 | 20,7 | 80 | 8 2 | 5 6 | 83 | 8 | 90 | 8 | 87 | 88 | 83 | 06 | 5 | 5 6 | 92 | 97 | 95 | 96 | 97 | 86 | 66 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 108 | 100 | 110 | 111 | 112 | 113 | 114 |
| MIL-STD- | 883 | method | | | | | | | 1 | | | | | 3000 |) = | | - | = | - | = | = | = | | | = | = | = | = | | = | = | = | | | - | 3010 | = | - | = | - | = | = | = | = | = | = | | | : = | = | | = | | - | | - |
| Symbol | | | VIC | | | | | | | | | | | | _ | | | | | | | | | | | | | | | | | | | | | 1 | Ē | | | | | | | | | | | | | | | | | | | |
| Subgroup | | | 1 | Tc = 25°C | | | | | | | | | | l | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 04. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; o

| | its Unit | Max | 100 µА | | = | = : | | : : | | | : | - | - | = | = | - | = | | = | - | = | = | = | | = | = | -400 | = | = | | = | = | - | = | - |]- | | = : | - | - | = | = | = | 50 | | - | | = | - | = | - | : = | : : | : | = | = | | | - | = |
|---|-------------|----------|--------|-----------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-------|-----|-------|---------|---------------------------------------|----------|-------|-------|-----|-----|------|-----|-----|-----|-----|-----|-----|----------|-------|-------|-------|-----|-------|-----|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|
| | Test Limits | Min | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | L |
| | Measured | terminal | CAB | SAB | DIR | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B8 | R7 | a a | 8 4 | 200 | B4 | B3 | B2 | B1 | 10 | פ | SBA | CBA | Α1 | Δ2 | 7 V | 2 8 | 1 | AS AS | A0 | ά | 9 0 | 100 | , B/ | B6 | B5 | B4 | B3 | B2 | 1 | A1 | A2 | A3 | A4 | Α5 | AG | 24 | ì | A8 | 21 02 | B7 | B6 | B5 | B4 | B3 | B2 | B1 |
| | 12 | GND | GND | - | = | | | : : | | | | | | | = | - | = | | | | | = | | | | | = | = | = | = | = | = | - | = | - | - | | - | | | = | = | = | = | | - | - | = | - | = | - | : = | : = | | - | - | | | | |
| oben). | 7 | A8 | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | 7 7 7 | 4.0 | | | | | | | | | | | | | | | | 1 | 2.7 V | | | | | | | | |
| .7 V; or | 10 | A7 | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | 7 7 7 | ÷. | | | | | | | | | | | | | | | | 777 | ۷.7.7 | | | | | | | | | |
| /; low ≤ (| 6 | A6 | | | | | | | | l | 5.5 V | | | | | | | | | | | | | | | | | | | | | 7 7 7 | 4: | | | | | | | | | | | | | | | | 27. | ٠ | | | | | | | | | | |
| ∠ 2.0 \ | 8 | A5 | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | V 4.0 | | | | | | | | | | | | | | | | 777 | ۸ ۱۰۶ | | | | | | | | | | | |
| / be high | 7 | A4 | | | | | | i | 5.5 V | | | | | | | | | | | | | | | | | | | | | \ V \ V | r C | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | |
| ited may | 9 | A3 | | | | | i | 5.5 V | | | | | | | | | | | | | | | | | | | | | 7 7 0 | r S | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | |
| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 2 | A2 | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | 047 | ż. | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | |
| (pins no | 4 | A1 | | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | V 4.0 | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | |
| nditions | 8 | DIR | | | 5.5 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ninal co | 2 | SEL AB | | 5.5 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Teri | - | CLK AB | 5.5 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Ī | | | | | | | |
| | Case L | Test no. | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 120 | 671 | 130 | 131 | 132 | 133 | 134 | | 135 | 136 | 137 | 138 | 130 | 140 | 7 7 1 | 141 | 142 | 24.5 | 144 | 143 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 100 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 |
| OTO IIM | | method | ! | = | = | = : | | : : | | | 1 : | - | = | = | = | - | = | | | - | = | = | = | | = | = | | | - | - | | _1_ | _1_ | 1 | | 1 | ı | | | | l | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | - 1 | - 1 | | | | | | |
| | oy IIIDOI | | 丑 | | | | | | | | | | | | | | | | | | | | | | | | 20 | 770 | | | | | | | | | | | | | | | | 720 | 5 | | | | | | | | | | | | | | | |
| - | dnoifianc | | ~ | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | ı | | | | | | | | | | | | | | | | | <u> </u> | | | | | | | | | | | | | | | | _ |

| A CLK BA V _{CC} correlated Min Max 1000 CLK BA V _{CC} CAB 1000 CLK BA V _{CC} CAB 1000 CLK BA V _{CC} CAB 1000 CLK BA CL | | | | 1 | - | 2 | | | | = | _ | 22 | 23 | 24 | Measured | Test Limits | Unit |
|---|--------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|----------|-------------|------|
| \$\times_{\time | | st no. | - B8 | B7 | . B6 | B5 | . B | B3 | B2 | - FA | ופ | SEL BA | CLK BA | Vcc | terminal | - | |
| 110 | | 15 | | | | | | | | | 0 | | | 5.5 V | CAB | 100 | ΨΠ |
| 6.5 V 5.5 V | | 16 | | | | | | | | | | | | = | SAB | = | = |
| \$5.0 \text{5.5 V}\$ \$5.0 \text{5.0 \text{5.5 V}}\$ \$5.0 \text{5.0 V}\$ \$5.0 \text{5.0 V}\$ \$5 | , | 17 | | | | | | | | | | | | н | DIR | | н |
| 5.5 V 5.6 V | - | 18 | | | | | | | | | | | | = | A1 | = | = |
| 6.65 V 6.64 6.64 6.64 6.64 6.64 6.64 6.64 6. | ÷ | 19 | | | | | | | | | | | | = = | A2 | | |
| \$\frac{5.5}{5.5}\$\frac{5.5}{5. | | 21 | | | | | | | | | | | | | ¥4 | = | = |
| 6.5 V 5.5 V 5.5 V 6.5 V <td< td=""><td>-</td><td>22</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A5</td><td>=</td><td>=</td></td<> | - | 22 | | | | | | | | | | | | | A5 | = | = |
| S | - 1 | 23 | | | | | | | | | | | | = | A6 | = | = |
| 5.5 V 5.5 V 6.5 V <td< td=""><td>1.</td><td>24</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>н</td><td>A7</td><td></td><td>н</td></td<> | 1. | 24 | | | | | | | | | | | | н | A7 | | н |
| 5.5 V 5.5 V 5.5 V 6.5 V <td< td=""><td>1,</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>н</td><td>A8</td><td></td><td></td></td<> | 1, | | | | | | | | | | | | | н | A8 | | |
| S S V S V S V S S V | 1. | | 5.5 V | | | | | | | | | | | н | B8 | | |
| S S V S S | 1. | 27 | | 5.5 V | | | | | | | | | | н | B7 | | = |
| | . 7 | 28 | | | 5.5 V | | | | | | | | | | B6 | | = |
| 04V | 1, | 29 | | | | 5.5 V | | | | | | | | | B5 | = | |
| 0.4V 0.4V <td< td=""><td>-</td><td>30</td><td></td><td></td><td></td><td></td><td>5.5 V</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>B4</td><td>=</td><td>=</td></td<> | - | 30 | | | | | 5.5 V | | | | | | | | B4 | = | = |
| 04V | - | 31 | | | | | | 5.5 V | | | | | | | B3 | = | - |
| Signature Sign | = | 32 | | | | 1 | | 200 | 7 2 7 | | | | | | 200 | = | - |
| 0.4V | - | 32 | | | | | | | > 0.0 | 7 2 7 | | | | | D2 D4 | = | = |
| 04V | - | 23 | | | | | | | | 2.0 \ | | | | | DI | - | |
| Color Colo | | 34 | | | | | | | | | 2.5 \ | | | | IJ | | |
| 04V | - | 35 | | | | | | | | | | 557 | | | SBA | = | |
| 0.4V | = | 200 | | | | l | | j | l | | | > 0. | // 2 | | V 000 | = | - |
| 0.4V | | 30 | | | | | | | | | | | 2.0 | | S S | 400 | |
| 04V | | 3/ | | | | | | | | | 2.0 v | | | | AT | -400 | |
| 0.4V | Ť | 38 | | | | | | | | | | | | | A2 | | |
| 0.4V | 7 | 39 | | | | | | | | | | | | | A3 | | |
| 0.44 V 0.44 V< | 1, | 40 | | | | | | | | | | | | | A4 | = | - |
| 0.4V | 1 | 41 | | | | | | | | | | | | | A5 | - | |
| 0.4V | Ť | 42 | | | | | | | | | = | | | | A6 | = | = |
| 0.4V 0.4V 0.4V <t< td=""><td>Ť</td><td>43</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A7</td><td>=</td><td>-</td></t<> | Ť | 43 | | | | | | | | | | | | | A7 | = | - |
| 0.4V 0.4V </td <td>7</td> <td>44</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>=</td> <td></td> <td></td> <td>=</td> <td>A8</td> <td>=</td> <td>=</td> | 7 | 44 | | | | | | | | | = | | | = | A8 | = | = |
| 0.44 V | - | | 74. | | | | | | | | = | | | = | B8 | = | = |
| 2.7 V 0.4 V <td< td=""><td></td><td></td><td></td><td>7 7 7</td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>B7</td><td>-</td><td></td></td<> | | | | 7 7 7 | | 1 | | | | | | | | | B7 | - | |
| 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V | | 4 4 | | ÷ | 7 7 7 | l | | j | Ì | | = | | | | 20 | = | = |
| 2.7 V 2.7 V <td< td=""><td><u>`</u></td><td>4/</td><td></td><td></td><td>0.4 v</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>80</td><td>-</td><td></td></td<> | <u>`</u> | 4/ | | | 0.4 v | | | | | | | | | | 80 | - | |
| 2.7V | 7 | 48 | | | | 0.4 V | | | | | | | | | B5 | = | - |
| March Marc | 1 | 49 | | | | | 0.4 V | | | | | | | | B4 | = | - |
| 2.7 V | 1; | 20 | | | | | | 0.4 V | | | | | | | B3 | = | - |
| 2.7V | 7 | 51 | | | | | | | 0.4 V | | - | | | | B2 | - | - |
| 2.7 V 2.7 V <td< td=""><td>1</td><td>52</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>7 7 0</td><td>=</td><td></td><td></td><td></td><td>B1</td><td>-</td><td>-</td></td<> | 1 | 52 | | | | | | | | 7 7 0 | = | | | | B1 | - | - |
| 2.7 V | 7 | 52 | | | | 1 | | | | | | | | = | 2 < | Ç. | = |
| 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V | | 200 | | | | 1 | | | | | | | | | ۸2 | 2 = | = |
| 2.7 v | | 5 1 | | | | | | j | | | | | | | 7.5 | - | |
| 2.7 V | | 22 | | | | 1 | | | | | | | | | AS | | |
| 2.7 V | 1 | 96 | | | | | | | | | | | | | A4 | | |
| 2.7.V 2.7.V 2.7.V 3.7.V 3.7.V <td< td=""><td>-</td><td>22</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>=</td><td>A5</td><td>-</td><td>-</td></td<> | - | 22 | | | | | | | | | | | | = | A5 | - | - |
| 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V 2.7V | 11 | 58 | | | | | | | | | | | | | A6 | | u |
| 2.7 V 2.7 V | 11 | 59 | | | | | | | | | = | | | = | A7 | = | = |
| 2.7 V 2.7 V < | | 80 | | | ĺ | | | | | | | | | | ۵V | - | |
| 2.7V 2.7V 8B BB BB BB | | 1 | | | | | | | | | | | | | 70 | | |
| 2.7V 2.7V " BT 8.7V " " BB 8.6 " BB 1. BB " BB 2.7V " BB " BB 1. BB " BB BB | = | | 2.7 V | | | | | | | | | | | | B8 | | |
| 2.7V " B6 2.7V " B6 2.7V " B4 2.7V " B4 2.7V " B3 2.7V " B3 3.7V " B1 B1 " B1 | <u>~</u> | 62 | | 2.7 \ | | | | | | | | | | = | B7 | = | = |
| 2.7 V | 7 | 63 | | | 2.7 V | | | | | | | | | = | B6 | = | |
| 2.7 V 2.7 V " " " " " " " " " " " " " " " " " " | 1 | 84 | | | i | 777 | | | | | = | | | | Br | - | - |
| 2.7 V 2.7 V | - | 904 | | | | ۷ / ۲ | 1 | | | | | | | | 60 | | |
| 2.7 \ 2.7 \ 2.7 \ | = | 60 | | | | | 2.7 V | | | | : 1 | | | | B4 | | |
| 2.7 \ | Ť | 99 | | | | | | 2.7 V | | | | | | | B3 | = | |
| \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | <u>~</u> | 29 | | | | | | | 2.7 V | | | | | = | B2 | = | |
| | 7 | 68 | | | | | | | | 27.7 | | | | = | B1 | = | = |

| inspection for device type 04. | tod may be bigh > 2 0 1/1 low < 0 7 1/1 or open) |
|--------------------------------|--|
| TABLE III. Gro | Tarming landitions and anima |

| | Unit | | mA | | | | = | | = | | | = | = | | = | | | = | = | = | = | | | | | | | | | | | | | | | | | us " | - | = | = | = | | = | = | = | = | = | | = | = | = | |
|---|-----------------|----------|-------|-----------|-------|-------|-------|-------|-------|-------|-----|------------|-----|------------|-----|----------|-----|-----|-------|-------|-------|---|--------------------------|--------|-----------|-------|-----|-----|-----|----------|----------|-----|-----|-----|-----|-----|---|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|
| | mits | Max | -225 | | н | = | | = | - | = | = | = | = | = | = | = | - | = | 145 | 165 | 165 | | | | | | | | | | | | | | | | 0 | 30 | = | = | | = | = | | - | = | = | н | н | | = | = | |
| | Test Limits | Min | -40 | | н | = | | = | = | | | = | = | | = | = | = | = | | | | | | | | | | | | (/ () | | | | | | | | 7 | | | | | | | | | | | | | | | |
| | Measured | terminal | B1 | B2 | B3 | B4 | B5 | Be | B7 | 88 | A1 | A 2 | A3 | A 4 | . Y | ye Ye | A7 | A8 | Vcc | Vcc | Vcc | | | | | | | | | | | | | | | | | CAB to B1 | CAB to B3 | CAB to B4 | CAB to B5 | CAB to B6 | CAB to B7 | CAB to B8 | CBA to A1 | CBA to A2 | CBA to A3 | CBA to A4 | CBA to A5 | CBA to A6 | CBA to A7 | CBA to A8 | |
| | 12 | GND | GND | " | | | | | = | | | - | | | | | | = | | | | | | GND | | н | | | н | | н | и | и | н | | | 2 | GND " | н | н | н | | | н | | | | н | н | н | | " | |
| open). | 7 | A8 | | | | | | | | 4.5 V | | | | | | | | GND | 4.5 V | GND | 4.5 V | | | ٧ | В | I | ٦ | A | Α | В | В | L | т | Н | 7 | _ | | | | | | | | Z | | | | | | | | OUT | |
| 7 V; or (| 10 | A7 | | | | | | | 4.5 V | | | | | | | | GND | | 4.5 V | GND | 4.5 V | | | Α | В | I | 7 | A | Α | В | В | L | H | Н | 7 | _ | | | | | | | Z | | | | | | | | OUT | | |
| $low \leq 0$ | თ | A6 | | | | | | 4.5 V | | | | | | | | GND | | | 4.5 V | GND | 4.5 V | | | 4 | В | I | _ | ∢ | Α | В | В | | I | I | ٦. | _ | | | | | | Z | | | | | | | | OUT | | | |
| ≥ 2.0 V; | œ | A5 | | | | | 4.5 V | | | | | | | | GND | | | | 4.5 \ | GND | 4.5 \ | | | ⋖ | В | I | ٦ | 4 | Α | В | В | ٦ | I | I | ٦. | _ | | | | | Z | | | | | | | | OUT | | | | |
| be high | 7 | A4 | | | | 4.5 V | | | | | | | | GND | | | | | 4.5 \ | GND | 4.5 V | | | ٧ | В | I | ٦ | ٧ | Α | В | В | ٦ | I | н | ٦. | _ | | | | Z | | | | | | | | OUT | | | | | |
| ed may | 9 | A3 | | | 4.5 V | | | | | | | | GND | | | | | | 4.5 V | GND | 4.5 V | ests. | ls. | | В | | 7 | ٧ | Α | В | В | L | н | Н | 7 | _ | | | Z | | | | | | | | OUT | | | | | | |
| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 2 | A2 | | 4.5 V | | | | | | | | GND | | | | | | | 4.5 V | GND | 4.5 V | subgroup 1, except $T_c = +125^{\circ}C$ and omit V_{1c} tests. | omit V ₁₀ tes | 4 | В | I | ٦ | ٧ | Α | В | В | L | I | I | ٦. | 7 | = -55°C. | 2 | 2 | | | | | | | OUT | | | | | | | |
| (pins not | 4 | A1 | 4.5 V | | | | | | | | GND | | | | | | | | 4.5 V | GND | 4.5 V | +125°C an | -55°C and | A | В | I | _ | A | Α | В | В | ٦ | Н | I | 7 | - I | $\stackrel{\circ}{\vdash}$ | 2 | | | | | | | OUT | | | | | | | | page. |
| ditions | က | DIR | 4.5 V | " | н | | | = | = | = | GND | = | = | | = | = | = | = | 4.5 V | 4.5 V | 4.5 V | xcept T _c = | xcept T _c = | \ \ | < < | В | В | ۷ | н | = | н | В | " | н | | | | 4.5 \ | = | = | = | = | = | н | GND | = | = | н | н | | = | = | on next |
| ninal cor | 2 | SEL AB | GND | | | | " | = | | | | = | = | | = | = | = | = | = | = | = | group 1, e | aroup 1. e | В | = | = | | A | | - | | В | | | | | 7, except T _c = +125° | 4.5 V | - | = | = | | | | GND | | = | | | | = | | 13 thru 24 on next page. |
| Tern | _ | CLK AB | GND | | | | = | | = | - | | = | = | | = | = | = | = | = | = | = | mits as sub | mits as sub | В | = | = | = | - | Α | В | ٧ | В | | | | 7 | 윽 | ≥ = | - | = | = | = | | | GND | = | = | н | | - | = | | Pins |
| | Case L | Ġ. | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | itions, and li | itions, and li | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | conditions as | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | type 04. |
| | MIL-STD- 883 | method | 3011 | | - | - | | | | | | = | = | | | | | - | 3005 | = | = | Same tests, terminal conditions, and limits as | erminal cond | Truth | 1 | 1 | | 1 | | | <u> </u> | | | | | | Same tests and terminal conditions as subground | 3003 |) ;; = | | | = | | = | | - | = | - | - | = | | = | of device |
| | Symbol | | sol | | | | | | | | | | | | | | | | HOO | CC | CCZ | Same tests, t | Same tests, t | Truth | table | tests | ` | I | | | | | | | | | Same tests a | PLH1 | | | | | | | | | | | | | | _ | tes at end |
| | Subgroup | | 1 | Tc = 25°C | | | | | | | | | | | | | | | 1 | | | 2 8 | | | Tc = 25°C | | | | | | | | | | | | | ກ | | | | | | | | | | | | | _ | | See footnotes at end of device type 04. |

TABLE III. Group A inspection for device type 04.

Unit mA " Max Test Limits 8 Min 2, CAB to B1
CAB to B2
CAB to B3
CAB to B4
CAB to B4
CAB to B6
CAB to B6
CAB to B7
CBA to A7
CBA to A7 Measured terminal 24 V_{CC} GND 23 CLK BA Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open) 22 SEL BA GND GND 21 G 5.5 V OUT GND 20 B4 0.5 V GND OUT 19 B2 z GND 0.5 V OUT 18 B3 Z GND OUT t 48 $^{\circ}$ C and T_{c} = -55 $^{\circ}$ C. OUT 16 B5 Z inal conditions as subgroup 7, except T_C = +125°C a

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214 15 B6 terminal conditions, and limits as subgroup 1, terminal conditions, and limits as subgroup 1, 188 H H 14 B7 z GND 13 B8 Case L Test no. 178 180 181 182 183 184 185 186 187 189 191 194 195 196 196 197 198 s and terminal or 3003 (fig. 3) MIL-STD-883 method 3011 Same tests, tr Same tests Symbol ССН t_{PUH1} 8 8 9 Tc = 25°C $Tc = 25^{\circ}C$ $Tc = 25^{\circ}C$ _ _ _

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See footnotes at end of device type 04.

| | Onit | | ns | . | | | | | | | | | | | = | | | _ | | | | | | _ | | | | | Ţ. | | | | = | _ | | | | | | | _ | | | | | _ | | | - | | | _ | | | | | | | | |
|--|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | - 1 | | _ | - | | | 1 | 1 | | - | | | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | ŀ | <u> </u> | Ļ | _ | - |
| | <u>-</u> | _ | 40 | | | | - | - | - | - | - | | = | | = | | | = | 23 | = | = | = | = | - | - | - | - | | <u>'</u> | | | = | = | = | | 25 | | н | | = | = | - | | - | = | = | - | = | - | | = | 15 | ? = | = | - | - | - | = | - | - |
| 1 | Les | ⊑ Wi | 2 : | . - | | | = | = | | = | | | = | = | = | = | | = | = | = | = | = | = | - | = | - | | | | | | = | = | = | = | = | = | | | = | = | = | - | - | = | = | - | = | - | = | = | = | = | = | = | = | = | = | = | |
| : | Measured | terminal | CAB to B1 | CAB to B2 | CAB to B3 | CAB to B4 | CAB to B5 | CAB 10 B0 | CAB 10 B/ | CAB to B8 | CDA IO A | CBA to A2 | CBA to A3 | CBA to A4 | CBA to A5 | CBA to A6 | CBA to A7 | CBA to A8 | A1 to B1 | A2 to B2 | A3 to B3 | A4 to B4 | A5 to B5 | A6 to B6 | 74 00 07 | A/ 10 B/ | A8 to B8 | B1 to A1 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | B8 to A8 | A1 to B1 | A2 to B2 | A3 to B3 | A4 to B4 | A5 to B5 | A6 to B6 | A7 to B7 | A8 to B8 | B1 to A1 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | BS to AS | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B7 | SAB to B8 | |
| | 12 | GND | GND | | : = | : = | | - | | : = | | - | = | - | = | | | = | - | | = | = | = | = | = | - | | | | | - | = | - | | | - | | | | = | = | = | - | - | = | = | - | - | = | = | - | - | - | - | = | = | = | = | = | |
| neil). | 11 | A8 | | | | | | | 4 | Z | | | | | | | | DOUT | | | | | | | | 4 | ≥ | | | | | | | | OUT | | | | | | | | Z | | | | | | | | E | 5 | | | | | | | /4 | 1 |
| , , oi o | 10 | A7 | | | | | | 2 | ≧ | | | | | | | | DUT | | | | | | | | 2 | ≧ | | | | | | | | DUT | | | | | | | | z | | | | | | | | Ē | 5 | | | | | | | /4 | 1 | |
| /I OW // | 6 | A6 | | | | | 2 | ≥ | | | | | | | | OUT | | | | | | | | Z | • | | | | | | | | OUT | | | | | | | | Z | | | | | | | | TIO | 5 | | | | | | | /4 | 1 | | |
| 7.0.7 | 8 | A5 | | | | 141 | 2 | | | | | | | | OUT | | | | | | | | Z | | | | | | | | | OUT | | | | | | | | Z | | | | | | | | TUO | | | | | | | | /4/ | ì | | | |
| ne ne | 7 | A4 | | | 4 | ≥ | | | | | | | | OUT | | | | | | | | Z | | | | | | | | | DOL | | | | | | | | Z | | | | | | | | OUT | | | | | | | | /7 | ÷į | | | | |
| d IIIay | 9 | A3 | | | Z | | | | | | | | OUT | | | | | | | | z | | | | | | | | į | - 00 | | | | | | | | N | | | | | | | | OUT | | | | | | | | 4/ | řΙ | | | | | |
| Terrinia colunions (pins not designated may be mign ≥ 2.0 v, low > 0.7 v, or open) | 2 | A2 | | Z | | | | | | | Ŀ | OUT | | | | | | | | Z | | | | | | | | ŀ | Inn | | | | | | | | Z | | | | | | | | TUO | | | | | | | | 4/ | i | | | | | | |
| | 4 | A1 | 2 | | | | | | | Ē | 3 | | | | | | | | Z | | | | | | | | ŀ | 00 | | | | | | | | Z | | | | | | | | TUO | | | | | | | | // | fi | | | | | | | page. |
| | က | DIR | 4.5 V | | | | = | = | | | والان والان | | = | - | = | | | - | 4.5 V | | = | = | = | = | - | | 2 | GIND. | | : | - | = | = | = | | 4.5 V | н | н | | = | - | = | = | GND | = | = | | = | | = | = | 757 | - - | | = | = | = | = | = | 3 thru 24 on next page. |
| [B] | 2 | SEL AB | 4.5 V | | | | - | = | - | | GIND. | = | = | | = | | = | = | = | | = | = | = | = | = | - | - | | | | = | = | = | = | = | = | | и | | = | = | = | = | = | = | = | = | = | = | = | = | 2 | = | = | = | = | = | = | = | thru 24 |
| Ē | 1 | CLK AB | ≥ : | | | : = | = | = | | | GIND. | | = | - | - | | | - | | | = | | - | - | = | | | | | | = | = | | | | | | | | = | - | = | | - | = | | - | | - | = | = | // | ři = | - | = | = | = | = | = | |
| | Case L | Test no. | 217 | 218 | 219 | 220 | 122 | 777 | 223 | 224 | 677 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 000 | 239 | 240 | 24.1 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 202 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | type 04. |
| MIL-STD- | 883 | method | 3003 | (fig. 3) | : = | | | - | | | | | = | - | = | = | | = | = | | = | - | - | - | - | | - | | | : : | = | = | = | = | | | = | = | | = | = | = | - | | - | = | | - | - | = | | | = | | | = | | = | = | of device |
| Symbol | | | tPHL1 | | | | | | | | | | | | | | | | CH II | 4 | | | | | | | | | | | | | | | | PHL2 | | | | | | | | | | | | | | | | | £ | | | | | | | es at end |
| Subgroup | | ď | 6 | Tc = 25°C | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | See footnotes at end of device type 04. Pins |

| TABLE III. Group A Terminal conditions (pins not designal | onditic |
|---|---------|
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| Unit | | Su | 2 = | | | . - | = | = | = | = | = | | | = | = | | . | - | = | = | = | = | = | = | = | = | - | = | | = | = | | . - | = | = | | = | = | = | = | | = | = | = | = | = : | | | | : = | . - | = | = | |
|---|----------|-----------|-----------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| imits | Max | 40 | 2 = | - | | . - | = | = | - | = | = | | | = | = | = 6 | 53 | | | - | - | - | - | - | = | = | - | - | | - | = | 25 | | - | - | . - | - | = | - | = | = | = | = | = | = | = ! | 45 | - - | | - | : = | = | - | 1 |
| Test Limits | Min | 0 | 1 = | | = : | | = | = | = | = | | | | = | = | | | | | - | = | = | = | = | = | = | = | = | | - | = | | | = | - | | = | = | = | = | | = | = | = | = | = : | = : | | | | | = | - | |
| Measured | terminal | CAB to B1 | CAB to B2 | CAB to B3 | CAB to B4 | CAB to B5 | CAB to B7 | CAB to B8 | CBA to A1 | CBA to A2 | CBA to A3 | CBA to A4 | CBA to A5 | CBA to A6 | CBA to A7 | CBA to A8 | A1 to B1 | AZ 10 BZ | A3 to B3 | A4 10 B4 | A5 to B5 | A0 10 B0 | AS to BS | B1 to A1 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | B8 to A8 | A1 to B1 | A2 to B2 | A3 to B3 | A4 10 B4 | A5 to B5 | A7 to B7 | A8 to B8 | B1 to A1 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | B8 to A8 | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to Bo | SAB to B8 | 3 3 3 |
| 24 | Voc | 507 | = | | | | " | | | | " | " | | = | = | | . | | | - | | | - | | | | | " | | | | | | | | : = | - | | - | | | | u u | = | = | | | | | . - | : = | | = | |
| 23 | CLK BA | GND | = | | | | = | = | Z | = | | н | | = | = | = (| ONS . | | | | | - | = | | = | | | - | н | | = | | | = | - | | = | = | = | = | | | = | - | = | = : | | | | | : = | = | = | |
| 22 | SEL BA | GND | = | | | | = | = | 4.5 V | = | | u | | = | | = (| GND | | | | | = | | = | = | = | = | | | | = | | | | | | | = | = | = | | | | | = | | | | | : = | : = | = | = | |
| 21 | ıc | O ONE | = | | = : | | = | = | = | = | | | | = : | - | | | | : = | | = | = | = | = | = | = | = | = | | = | = | | | = | | | = | = | = | = | | | | = | = | = : | = : | | | : = | : = | = | = | |
| 20 20 | B1 | LIC | | | | | | | Z | | | | | | | į | 00 | | | | | | | Z | | | | | | | | OUT | | | | | | | Z | | | | | | | ! | OUT | | | | | | | |
| 19 | B2 | | TUO | | | | | | | Z | | | | | | | į | 000 | | | | | | | z | | | | | | | ! | Ino | | | | | | | Z | | | | | | | ! | D01 | | | | | | |
| 18 | B3 | | | OUT | | | | | | | Z | | | | | | | Ē | 100 | | | | | | | Z | | | | | | | Ē | 000 | | | | | | | Z | | | | | | | į | 100 | | | | | |
| 14 15 16 17 18 19 20 21 22 23 | B4 | | | | OUT | | | | | | | Z | | | | | | | Ē | -00 | | | | | | | Z | | | | | | | Ė | 3 | | | | | | | Z | | | | | | | Ē | | | | | |
| 16 | B5 | | | | ! | -00 | | | | | | | Z | | | | | | | Ē | 00 | | | | | | | Z | | | | | | | Ē | 100 | | | | | | | Z | | | | | | | Ē | 100 | | Ť | |
| 15 | B6 | | | | | Ė | 3 | | | | | | | Z | | | | | | | E | 5 | | | | | | | N | | | | | | | Ė | 3 | | | | | | | Z | | | | | | | Ē | 5 | T | Ì |
| 2 4 | B7 | | | | | | Ę | 3 | | | | | | | Z | | | | | | | L | 3 | | | | | | | Z | | | | | | | Ė | 3 | | | | | | | Z | | | | | | | Ė | 3 | |
| 13 | B8 | | | | | | | TUO | | | | | | | | Z | | | | | | | Ė | 5 | | | | | | | Z | | | | | | | TUO | | | | | | | | z | | | | | | | Ė | - |
| Case L | Test no. | 217 | 218 | 219 | 220 | 221 | 222 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 230 | 738 | 230 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 107 | 727 | 253 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 797 | 897 | 520 | 271 | 27.0 | 1,1 |
| MIL-STD- 883 | _ | 3003 | (fig. 3) | <u> </u> | | | - | = | - | = | = | = | = | - 1 | = | | | | : = | - | - | - | = | - | - | = | - | - | - | = | - | _ | | - | | : = | = | - | = | = | - | - | = | = | = 1 | = | = : | | | | | - | _ | |
| Symbol | | | ļ | | | | | | | | | | | | | | PLH2 | | | | | | | | | | | | | | | PHL2 | | | | | | | | | | | | | | | PLH3 | | | | | | | |
| Subgroup | | σ | Tc = 25°C | | | | | | | | | | | | | l | | | | | | | | | | | | | | | 1 | + | | | | | | | | | | | | | | | + | | | | | | | 7/7 |

| TABLE III. Group A Terminal conditions (pins not designal | onditic |
|---|---------|
|---|---------|

| Unit | | us | = | = | | | = | = | | . | | = | = | = | = | = | = | = | | = | = | - | | | | | | | | = | = | = | | | | | | = | = | = | = | = | | = | = | = | | = | . | . | : = | = | = | |
|--|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| mits | Max | 45 | = | = | | | | = | = 5 | 40 | | - | = | = | = | = | = | = | | = | = | - | | . ; | 22 | | | = | | = | | = | | | | | | | 30 | 3 = | = | = | | - | = | = | | = | | | : = | - | | 1 |
| Test Limits | Min | 2 | = | = | н | | | = | | . | | = | = | = | = | = | = | = | н | = | = | | | . | | | | = | | = | | = | | н | | | | = | = | = | = | = | | - | = | = | | = | . | . | : = | = | | |
| Measured | terminal | SBA to A1 | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A7 | SBA to A8 | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B5 | SAB to B6 | SAB to B7 | SAB to B8 | SBA to A1 | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A7 | SBA to A8 | SAB to B1 | SAB 10 BZ | SAB to B3 | SAB 10 B4 | SAB to B6 | SAB to B7 | SAB to B8 | SBA to A1 | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A/ | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B7 | SAB to B8 | SBA to A1 | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A5 | SBA to Ab | SBA to A8 | טר או רעוט |
| 12 | GND | GND | | | | | | = | = : | | | - | | | = | = | = | | | = | = | = | | | | | | = | | | | = | = | | " | | | = | | | = | = | = | | | | " | | | | : = | = | | |
| 11 | A8 | | | | | | | | OUT | | | | | | | /4 | | | | | | | į | 100 | | | | | | | 2/ | | | | | | | Ē | 3 | | | | | | | 2/ | | | | | | Ì | TUO | - 2 2 |
| 10,5 | A7 | | | | | | | OUT | | | | | | | /4 | 1 | | | | | | | OUT | | | | | | | /5 | õi | | | | | | Ē | 100 | | | | | | | 2/ | | | | | | | TIO | | |
| 6 | A6 | | | | | | OUT | | | | | | | /4 | i | | | | | | | OUT | | | | | | | 2/ | õı | | | | | | ŀ | 5 | | | | | | | 2/ | | | | | | | Ē | - 3 | | |
| 8 | A5 | | | | | OUT | | | | | | | /7 | i | | | | | | | OUT | | | | | | | ٦/ | ÒΙ | | | | | | | OUT | | | | | | | 2/ | | | | | | | ŀ | 100 | | | 1 |
| 2 | A4 | | | | OUT | | | | | | | 4/ | Fi | | | | | | | OUT | | | | | | | /4 | òı | | | | | | | OUT | | | | | | | 2/ | • | | | | | | į | 100 | | | | |
| 9 | A3 | | | OUT | | | | | | | 41 | /4 | | | | | | | OUT | | | | | | | | /οι | | | | | | | OUT | | | | | | | 2/ | | | | | | | | OUT | | | | | |
| 2 3 4 5 6 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11 | A 2 | | TUO | | | | | | | | 4/ | | | | | | | OUT | | | | | | | ì | ام/ | | | | | | | OUT | | | | | | | 2/ | i | | | | | | | OUT | | | | | | |
| 4 | A1 | DO | | | | | | | | 4/ | | | | | | | OUT | | | | | | | 1 | ای/ | | | | | | | OUT | | | | | | | 2/ | ŝ i | | | | | | | OUT | | | | | | | page. |
| 3 8 | DIR | GND | = | = | н | | | = | = 1 | 4.5 V | | = | | = | = | = | GND | = | н | = | = | = | | | 4.5 V | | | = | | | | GND | | н | = | | | = | 457 | = | = | = | | - | = | = | GND | = | . | . | : = | = | = | on next |
| 2 | SEL AB | GND | = | = | | | | = | - 3 | Z: | | - | = | = | = | = | GND | = | | = | = | = | | | ≥ = | | : = | = | - | - | = | GND | = | | | | | = | Z | = | = | = | = | | = | = | GND | = | - - | | : = | = | - | 13 thru 24 on next page. |
| - | CLK AB | GND | = | = | н | | | = | = ; | /4 | | | | = | = | = | GND | = | н | = | = | | | : 1 | ÷۱۵/ | | | | | | н | GND | | | | | | = | ٦/ |) = | = | = | | | = | = | GND | | | | : = | = | | |
| Case L | Test no. | ╁ | | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 500 | 300 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 317 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 372 | 320 | 328 | type 04. |
| MIL-STD- 883 | method | 3003 | (fig. 3) | = | = | = | = | = | = | | : : | = | = | = | = | = | = | = | = | = | = | = | | | : : | | : = | = | = | - | = | = | = | - | - | | : = | = | = | = | = | = | = | - | = | = | - | = | | | | | | of device |
| Symbol | | физ | ! | | | | | | | PHL3 | | | | | | | | | | | | | | | PUH4 | | | | | | | | | | | | | | | ŧ. | | | | | | | | | | | | | | es at enc |
| Subgroup | | 6 | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | See footnotes at end of device type 04. Pins |

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|--|--|
| Group A inspection for device type 04. | To any control of the |
| TABLE III. | 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |

| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open). | B4 B3 B2 B1 \overline{G} SEL BA CLK BA V_{CC} terminal Min Max | 4/ G | = = | = | = | " " SBA to A6 " " " | " SBA to A7 " " | SBA to A8 | OUT " GND GND " SABto B1 " 40 " | OUT SAB to BS | = | = | - SAB 10 Bec | . SAB to B7 | | 4 " SBA to A1 " SBA to A1 " | | 4/ " " " SBA to A3 " " " " " | 44 " " SBA to A4 " " " " " " " " " " " " " " " " " " | | SBA to Add | SBA O A COLOR | SBO STATE ST | | OUT SAB to B3 | = | - | | " " SAB to B7 " " " " | = = | | 25/ 25 SBA 10 AZ | = | = | | SBA to A7 | SBA to A8 | GND GND : SABIOBT : 30 | = | = | - | " " SAB to B6 | " SAB to B7 " " " " " " " " " " " " " " " " " " | . SAB to B8 | 5/ " SBAtoA1 " " | = | = | = | = | | " SBA to A7 " " | |
|--|--|-------------------|----------|-----|-----|---------------------|-----------------|-----------|---------------------------------|---------------|-----|-----|--------------|-------------|-----|-------------------------------|-----|------------------------------|--|-----|------------|---------------|--|------|---------------|-----|-----|-----|-----------------------|-----|-----|------------------|-----|-----|-----|-----------|-----------|------------------------|-----|-----|-----|---------------|---|-------------|------------------|-----|-----|-----|-----|-----|-----------------|---|
| (pins not de | B5 | | | | 4/ | | | | | | | TIO | - | | | | | | | 4/ | | | | | | | TUO | | | | | | | 2/ | | | | | | | TUO | | | | | | | | 2/ | • | | |
| onditions 15 | B6 | | | | | 4/ | | | | | | | TUO |) | | | | | | | /4 | | | | | | | OUT | | | | | | | 2/ | | | | | | | TUO | | | | | | | | 2/ | i | |
| erminal co | B7 | | | | | | 4/ | | | | | | | OUT | | | | | | | | γ. | | | | | | | OUT | | | | | | | 2/ | | | | | | | DUT | | | | | | | | 2/ | i |
| 13 | .o. B8 | | | | | | | /4 | | | | | | | TUO | | | | | | | 1 | /4 | | | | | | | OUT | | 1 | | | | | 2/ | | | | | | | TUO | | | | | | | | |
| Case L | Test no. | 273 | 274 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 787 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 305 | 308 | 309 | 310 | 311 | 312 | 313 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 1 |
| MIL-STD- 883 | method | 3003 | (fig. 3) | - | - | - | = : | = | | | - | - | - | - | | - | | - | - | = | | | : : | = | - | - | - | = | - | - | | - | - | | | | . | | - | | - | = | - | - | | | | - | | | | |
| Symbol | | t _{РШ} з | | | | | | | PHL3 | | | | | | | | | | | | | | | PLH4 | | | | | | | | | | | | | | PHL4 | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 04. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

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See footnotes at end of device type 04. Pins 13 thru 24 on next page.

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| | 5 - | | 09 | = | = | = | = | = | = | = | = | = | = | = | = | = | - | = | 70 | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |
| ŀ | ë | Min | 2 | = | - | = | = | - | = | = | = | = | = | = | = | = | | - | = | = | = | = | = | | = | = | = | = | = | = | = | - | = | = |
| : | Measured | terminal | G to A1 | G to A2 | G to A3 | <u>G</u> to A4 | <u>G</u> to A5 | ☐ to A6 | <u>G</u> to A7 | G to A8 | G to B1 | G to B2 | G to B3 | G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | G to A1 | G to A2 | <u>G</u> to A3 | G to A4 | G to A5 | G to A6 | G to A7 | G to A8 | G to B1 | G to B2 | G to B3 | G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | <u>G</u> to B8 |
| 3 | 7 | Vcc | 5.0 V | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | | = | = | = | | = | = | = |
| operij. | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5, 6 | 77 | SEL BA | GND | = | = | = | = | = | = | = | = | = | | = | = | = | = | = | | = | = | = | = | = | | = | = | = | = | = | | = | = | = |
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| 0.2 | 02 | B1 | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | |
| | S 6 | B2 | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | |
| 150 IIIay | 81 | B3 | | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | |
| enimical conditions (principle and principle | - 1 | B4 | | | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | |
| Sillo i | 91 | B5 | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | |
| SI LINE | C | B6 | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | |
| 3 3 | 4- | B7 | | | | | | | 4.5 V | | | | | | | | TUO | | | | | | | | GND | | | | | | | | TUO | |
| _ | 13 | B8 | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT |
| - | Case L | Test no. | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 |
| MIL-STD- | . 883 | method | 3003 | (fig. 3) | - | | - | - | | | | | | | | | - | = | = | | | | | = | | | | | | | | | | |
| Symbol | | | t _{PZH2} | | | | | | | | | | | | | | | | PZL2 | | | | | | | | | | | | | | | |
| Subgroup | | | 6 | Tc = 25°C | | | | | | | | | | | | | | | +- | | | | | | | | | | | | | | | 360 |

TABLE III. Group A inspection for device type 04.

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| F | l est Limits | Min | 2 | | | . | | | | " | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | |
| Control | Measured | terminal | DIR to B1 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B5 | DIR to B6 | 710 to 90 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A3 | 4 4 4 4 | DIR to A5 | DIR to Ab | DIR to A/ | DIR to A8 | DIR to B1 | DIR to BZ | 20 01 AIO | DIR to B4 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to A8 | G to B1 | G to B2 | 10. | 2 | G to B4 | G to B5 | G to B6 | G to B7 | 1 10 | 0 0 0 | G to A1 | G to A2 | 10 A 3 | 2 . | G 10 A4 | G to A5 | G to A6 | G to A7 | G to A8 | = |
| 2 | 12 | GND | GND | - | = : | . | | : = | = | = | = | = | = | = | - | | | | : = | - | = | = | = | | = | | = | = | = | = | = | = | | - | = | - | = | | = | = | = | = | = | | = | = | = | - | : | = | = | = | |
| pen). | 11 | A8 | | | | | | | 7 2 7 | > 0. | | | | | | | Ė | 3 | | | | | | | CINC | 5 | | | | | | | OUT | | | | | | | | | 4.5 V | | | | | | | | | | OUT | |
| ./ V; or o | 01 | A7 | | | | | | 7 5 7 | > 0.4 | | | | | | | Ē | 00 | | | | | | | CNC | 5 | | | | | | | TUO | | | | | | | | | 4.5 V | | | | | | | | | | OUT | | |
| ow ≥ 0 | D) | A6 | | | | | | 4.5 V | | | | | | | Ē | - 30 | | | | | | | GND |) | | | | | | | OUT | | | | | | | | | 4.5 V | | | | | | | | | | OUT | | | |
| > 2.0 V | × | A5 | | | | , | 4.5 V | | | | | | | Ė | 3 | | | | | | | CIND | 5 | | | | | | | OUT | | | | | | | | | 4.5 \ | | | | | | | | | Ē | 5 | | | | |
| be high | , | A4 | | | | 4.5 V | | | | | | | Ę | - | | | | | | | | ONE ONE ONE ONE ONE ONE ONE ONE ONE ONE | | | | | | | TUO | | | | | | | | 457 | 4.5 V | | | | | | | | | TUO | | | | | | |
| ed may | 9 | A3 | | | 4.5 V | | | | | | | E | 3 | | | | | | | | OND OND | | | | | | | TUO | 5 | | | | | | | 4.5 V | | | | | | | | | | DUT | | | | | | | |
| erminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open) | သ | A2 | | 4.5 V | | | | | | | TIO | 5 | | | | | | | | GIND | | | | | | | TIO | | | | | | | | 4.5 V | | | | | | | | | | OUT | | | | | | | | |
| pins noi | 4 | A1 | 4.5 V | | | | | | | Ė | 5 | | | | | | | 2 | GND | | | | | | | Ė | 8 | | | | | | | 4.5 V | | | | | | | | | Ē | 100 | | | | | | | | | 0000 |
| ditions (| 3 | DIR | Z | - | | | | : = | - | = | = | | - | = | | | | | | - | = | - | | | = | = | - | = | = | - | = | = | | 4.5 V | | - | - | | | = | - | = | | GIND | | - | = | | | = | | = | 1 |
| inal con | 7 | SEL AB | GND | = | | | : | | = | = | = | = | | = | | | | | : : | | = | = | = | - | - | = | | | | - | - | - | | GND | | = | = | | | | | = | - | | | | | | | | = | = | 13 thru 24 op post page |
| lerm 1 | | CLK AB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Din |
| - | - | Test no. | 361 | 362 | 363 | 364 | 365 | 366 | 369 | 369 | 370 | 371 | 37.0 | 270 | 3/3 | 3/4 | 3/5 | 3/6 | 3// | 3/8 | 000 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 306 | 280 | 397 | 398 | 399 | 400 | 707 | 401 | 402 | 403 | 404 | 407 | 405 | 406 | 407 | 408 | 10000 |
| MIL-STD- | 883 | method | 3003 | (fig. 3) | = : | | | : = | = | - | - | - | - | = | - | | | : | : = | - | = | - | - | - | - | - | - | = | = | = | = | = | = | - | = | = | - | | - | = | = | = | - | | = | = | - | - | | = | = | = | Soo footpotos at and of downs than 04 |
| Symbol | | | t _{PZH3} | | | | | | | | | | | | | | | | PZL3 | | | | | | | | | | | | | | | PHZ2 | | | | | | | | | | | | | | | | | | | - 1000 |
| Subgroup | | | თ | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | I | | | | | | | | | | | | | | | | | | | - tootoot |

TABLE III. Group A inspection for device type 04. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

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| | mits | Мах | 20 | = | | | | = | = | = | | | = | | | = | 65 | 3 = | = | = | н | н | | = | = : | | | | = | | = | 40 | - | | = | | - | - | = | | = | = | = | | - | = | | | | = |
| | Test Limits | Min | 2 | = | | = | | = | = | = | | | = | | | | | = | = | = | н | | = | = | | | | | = | | = | | | | | | = | | | | = | | = | | | | | = | | |
| | Measured | terminal | DIR to B1 | DIR to B2 | DIR to B3 | DIK to B4 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A8 | DIR to B1 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A4 | DIR 10 A3 | DIR to A6 | DIR to A8 | 15 to B1 | 200 | G to B2 | G to B3 | G to B4 | G to B5 | G to B6 | G to B7 | G to B8 | G to A1 | | G 10 AZ | G to A3 | G to A4 | G to A5 | G to A6 | Ē to A7 | G to A8 | |
| | 24 | Vcc | 5.0 V | = | | | | = | | = | н | = | = | | | = | = | = | = | = | н | н | | = | | | = : | | = | | | | = | | | | | | | | = | | | | | | | | | |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| . / v; or | 22 | SEL BA | GND | | | | н | | | | | | = | | | | | | = | = | н | н | | | | | | | | | | | | | | | | | = | | | | | | | | | | | |
| Terminal conditions (pins flot designated may be fight ≥ ∠.∪ V; low ≤ ∪.7 V; of open). | 21 | ΙØ | GND | = | | | | = | = | = | " | = | = | | | = | = | = | = | = | | | = | | = | - | | | = | | = | Z | - | | | | = | | | | - | | | | | | | | | |
| V 0.2 ≤ I | 20 | B1 | OUT | | | | | | | 4.5 V | | | | | | | TUO | | | | | | | | GND | | | | | | | OUT | | | | | | | | | 4.5 V | | | | | | | | | |
| ne iiigi | 19 | B2 | | OUT | | | | | | | 4.5 V | | | | | | | TUO | | | | | | | | GND | | | | | | | Ē | 001 | | | | | | | | 4.5 V | | | | | | | | |
| ופט ווומא | 18 | B3 | | | OUT | | | | | | | 4.5 V | | | | | | | DUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 157 | 4.5 v | | | | | | |
| r designa | 17 | B4 | | | Ē | 00 | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | | 4.5 V | | | | | |
| on silid) | 16 | B5 | | | | Ē | 5 | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | OND O | | | | | | | | OUT | | | | | | | | | 4.5 V | | | | |
| | 15 | B6 | | | | | TUO | | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | | 4.5 V | | | |
| la la | 41 | B7 | | | | | | DOUT | | | | | | | 4 5 7 | v. 5. | | | | | | | OUT | | | | | | | CINC | GIND | | | | | | | | TUO | | | | | | | | | 4.5 V | | |
| - | 13 | B8 | | | | | | | OUT | | | | | | | 15.7 | 2 | | | | | | | OUT | | | | | | | GND | 5 | | | | | | | | OUT | | | | | | | | | 4.5 V | |
| | Case L | Test no. | 361 | 362 | 363 | 364 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 900 | 390 | 302 | 393 | 700 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 403 | 404 | 405 | 406 | 407 | 408 | 4.np 0.4 |
| MII -STD- | 883 | method | 3003 | (fig. 3) | : : | - | = | - | = | = | = | = | = | | | = | = | = | = | = | = | = | = | - | = : | = : | = : | | - | - | - | = | | : | = | = | = | = | | = | = | = | - | | = | = | = | = | = | 4 of device |
| Sympol | 6 | | t _{PZH3} | | | | | | | | | | | | | | 0213 | PZL3 | | | | | | | | | | | | | | PHZ2 | | | | | | | | | | | | | | | | | | no at on |
| Subdroin | 5 | | 6 | $Tc = 25^{\circ}C$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | See footpotes at end of device type 04 |

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| | Test Limits | Min | 7 | | - | - | | | | - | - | - | | - | | | = | = | | : = | | | | | - | | | | | | | = | | | : = | = | | = | | : = | = | | | = |
| • | Measured | terminal | G to B1 | G to B2 | G to B3 | _ G to B4 | <u>G</u> to B5 | G to B6 | <u>G</u> to B7 | G to B8 | G to A1 | G to A2 | G to A3 | G to A4 | G to A5 | G to A6 | <u>G</u> to A7 | G to A8 | DIR to B1 | DIR to B2 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to A8 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B5 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIK to A3 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to A8 |
| | 12 | GND | GND | = | = | = | = | = | = | = | | = | = | = | = | = | | = | | : = | | | | - | - | = | | | | | - | = | = | | : = | = | | = | | : = | = | - | | = |
| open). | 7 | A8 | | | | | | | | GND | | | | | | | | OUT | | | | | | 4.5 V | | | | | | ŀ | 100 | | | | | | GND | | | | | | | OUT |
| .7 V; or c | 10 | A7 | | | | | | | GND | | | | | | | | OUT | | | | | | 757 | > 0. | | | | | | OUT | | | | | | GND | 5 | | | | | | OUT | |
| low ≤ 0. | 6 | A6 | | | | | | GND | | | | | | | | OUT | | | | | | | 4.5 V | | | | | | OUT | | | | | | CINC | GIND | | | 1 | 1 | | DUT | | |
| ≥ 2.0 V; | 80 | A5 | | | | | GND | | | | | | | | OUT | | | | | | | 4.5 V | | | | | | TUO | | | | | | 2 | GND | | | | - | | TIO | | | |
| e high | 7 | A4 | | | | GND | | | | | | | | OUT | | | | | | | 4.5 V | | | | | | ! | TUO TUO | | | | | | GND | | | | | - | F | 3 | - | | |
| d may k | 9 | A3 | | | GND | | | | | | | | OUT | | | | | | | 457 | + | | | | | | OUT | | | | | | GND | | | | | | <u>+</u> | 5 | | | | |
| erminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 2 | A2 | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | OUT | | | | | | GND | | | | | | | DOUT | + | | | | |
| ins not | 4 | A1 | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | DUT | | | | | | | 9 | | | | | | OUT | - | - | | | | age. |
| itions (p | က | H | 4.5 V | - | - | = | - | - | = | = | GND | = | = | - | - | = | | = | Z= | | | | | - | - | | | | | | | = | = : | | | = | | = | | : = | = | - | = | next b |
| inal cond | 2 | SEL AB | | = | = | = | = | = | = | = | | = | = | = | = | = | | = | GND = | : = | | | = = | = | - | | | | | | = | = | = : | | | = | | = | | : = | = | - | = | 13 thru 24 on next page. |
| Term | - | CLK AB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | | | | Pins 13 t |
| | Case L | Test no. (| 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 428 | 429 | 430 | 432 | 433 | 434 | 435 | 436 | 438 | 439 | 440 | 442 | 443 | 444 | 445 | 440 | 448 | 449 | 450 | 451 | 453 | 454 | 455 | |
| | MIL-STD- 883 (| 70 | | (fig. 3) | | | | | | | | | | | | | | | | | _ | | | | | _ | | | = | | | | _ | | | | | _ | | | - | _ | _ | device t |
| ŀ | | | | <u></u> | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | • | | | | | | | _ | | | | | o pue |
| ŀ | Symbol | | tp.LZ2 | () | | | | | | | | | | | | | | | PHZ3 | | | | | | | | | | | | | PLKS | | | | | | | | | | | | Intes at |
| | Subgroup | | တ | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | See footnotes at end of device type 04. |

TABLE III. Group A inspection for device type 04. Terminal conditions (nins not designated may be high $\geq 2.0~\rm V$; low $\leq 0.7~\rm V$; or open).

| | Unit | | us | = | = | = | = | = | = | = | | | = | | | = | | = | = : | | | = | | = | = | | = | | | = | | | | = | | | | | : = | | = : | | = | |
|--|-----------------|----------|-------------------|-----------|---------|-----------|---------|---------|----------------|---------|----------------|---------|----------|----------------|----------------------|----------------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|---|
| | imits | Max | 40 | = | = | = | = | = | = | = | = | = | - | | | = | = | = | 35 | | = | | | = | = | | | = : | | = | | | | = | | | | | | | = | | = | |
| | Test Limits | Min | 2 | = | = | = | = | = | = | | | | | | | = | | = | = | | | | | | = | | | | | = | | | | = | | | | | : = | | | | = | |
| | Measured | terminal | <u>G</u> to B1 | G to B2 | G to B3 | _ G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | <u>G</u> to A1 | G to A2 | <u> </u> | <u>G</u> to A4 | \overline{G} to A5 | <u>G</u> to A6 | G to A7 | G to A8 | DIR to B1 | DIR to B2 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A8 | DIR to B1 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A8 | |
| | 24 | Voc | 5.0 V | | | | = | | | | | | | " | " | | | | 5.0 V | | | ш | | | н | | " | | | | | | | | | | | | | | | | - | |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| .7 V; or | 22 | SEL BA | GND | | | | | | | | | | | | | | | | | | | н | | = | | | " | = : | | | | | | | | | | | | | | | = | |
| ; low ≤ C | 21 | ΙØ | Z | = | = | = | = | = | = | = | = | = | | | - | | = | = | GND | | = | = | | = | = | | | | | = | | | | - | | = | | | | | = | | = | |
| ≥ 2.0 V | 20 | B1 | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | 4.5 V | | | | | | OUT | | | | | | į | GND | | | | 1 | Ī | - |
| be high | 19 | B2 | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | 4.5 V | | | | | | DUT | | | | | | 2 | GND | | | | Ī | |
| ted may | 18 | B3 | | | OUT | | | | | | | | GNĐ | | | | | | | Ė | 3 | | | | | 757 | ÷ | | | | | Ŀ | INO | | | | | | GND | 5 | | | | |
| erminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 17 | B4 | | | | OUT | | | | | | | | GND | | | | | | | OUT | | | | | | 4.5 V | | | | | | F | 001 | | | | | | GND | | | | |
| ou suid) | 16 | B5 | | | | | OUT | | | | | | | | GND | | | | | | | OUT | | | | | | 4.5 V | | | | | | LIC | | | | | | | GND | | | page. |
| ditions | 15 | B6 | | | | | | OUT | | | | | | | | GND | | | | | | | OUT | | | | | | 4.5 V | | | | | | OUT | | | | | | | GND | | on next |
| ninal cor | 14 | B7 | | | | | | | OUT | | | | | | | | GND | | | | | | F | 3 | | | | | 157 | > ? | | | | | | OUT | | | | | | CINC | פֿוּאַב | 13 thru 24 on next page. |
| Tern | 13 | B8 | | | | | | | | OUT | | | | | | | | GND | | | | | | TUO | | | | | | 4.5 V | | | | | | | OUT | | | | | | GND | Pins |
| | Case L | Test no. | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 429 | 430 | 432 | 433 | 434 | 436 | 437 | 438 | 440 | 441 | 442 | 443 | 444 | 446 | 447 | 448 | 449 | 450 451 | 452 | 453 | 454 | 456 | type 04. |
| | MIL-STD- 883 | method | 3003 | (fig. 3) | - | | = | - | | = | = | = | - | - | = | - | = | | = | | = | = | | - | - | | - | = : | | - | - | | | = | - | = | | | | = | = : | | - | of device |
| - | Symbol | | t _{PL22} | | | | | | | | | | | | | | | | PHZ3 | | | | | | | | | | | | PLZ3 | | | | | | | | | | | | | es at enc |
| | Subgroup | | 6 | Tc = 25°C | | | | | | | | | | | | | | | • | | | | | | | | | | | | 1 | | | | | | | | | | | | | See footnotes at end of device type 04. |

TABLE III. Group A inspection for device type 04. Terminal conditions (pins not designated may be high $\geq 2.0~V;$ low $\leq 0.7~V;$ or open).

| | | | | | 5 | 5 | OI IOI ID | 5 | crimical conditions (pins not designated may be might ≤ 2.0 V) tow ≤ 0.7 V, or openly. | ca may | 118111 20 | · v o v, | ין אמ | 5, | | | | | | |
|--------|------------------------------|-----------|--|-----------------|--------------|---------------|-------------------------|----------|--|--------|-----------|----------|----------|----|----|-----|----------|-------------|-------|------|
| ر آ | Subgroup Symbol | Symbol | MIL-STD- | | | | | | | | | | | | | | | | | |
| | | | 883 | Case L | - | 2 | က | 4 | 2 | 9 | 7 | 80 | 6 | 10 | 1 | 12 | Measured | Test Limits | imits | Unit |
| | | | method | Test no. | CLK AB | SEL AB | DIR | A1 | A2 | A3 | A4 | A5 | 9V | A7 | A8 | GND | terminal | Min | Max | |
| | 10 | thuq* | | | | | | | | | | | | | | | | 2 | 36 | ns |
| Tc | Tc = 125°C | t PHL1 | | | | | | | | | | | | | | | | | 25 | = |
| + | | PLH2 | | | | | | | | | | | | | | | | н | 30 | |
| + | | PHL2 | | | | | | | | | | | | | | | | н | 33 | |
| + | | EH14 | | | | | | | | | | | | | | | | | 69 | |
| + | | E/IHd | | | | | | | | | | | | | | | | и | 25 | |
| + | | PLH4 | | | | | | | | | | | | | | | | н | 72 | |
| + | | PHL4 | Concept T tages of augustication of anti-page leading the state of the Concept Transfer of the Concept of the C | logimus bay | o odcitibaco | diozedio o | - +00000 | 7 17250 | Ç | | | | | | | | | | 36 | |
| + | | ZHZd | Sallie tests o | alid (dillilla) | colliditions | dnoillane ex | a, except | 0 = +170 | j | | | | | | | | | и | 28 | |
| + | | PZL2 | | | | | | | | | | | | | | | | | 91 | = |
| + | | PZH3 | | | | | | | | | | | | | | | | | 9 | = |
| + | | 8TZ4 | | | | | | | | | | | | | | | | | 82 | = |
| + | | ZZH4 | | | | | | | | | | | | | | | | | 52 | |
| + | | PLZ2 | | | | | | | | | | | | | | | | | 25 | |
| + | | EZH4 | | | | | | | | | | | | | | | | | 46 | = |
| + | | EZ1d | | | | | | | | | | | | | | | | | 46 | = |
| ř | 11 T ₂ = -55°C | Same test | Same tests, terminal conditions, and limits as subgroup 10, except $T_{\rm C}$ = -55°C. | nditions, anc | limits as su | ıbgroup 10, € | except T _c : | = -55°C. | | | | | | | | | | | | |
| ر | 0 00 = | | | | | | | | | | | | | | | | | | | |

TABLE III. Group A inspection for device type 04.

| | Unit | × | Su 6 | = | | | | = | = | | | | | | = - | = 2 | | | |
|--|-----------------|----------|-------------------|-------------------|------|------|------|------|------|--------------------------------------|---------------|------|------|------|------|------|------|------|--|
| | Test Limits | Min Max | 2 39 | " 52 | 30 | 33 | 29 | " 52 | " 72 | 39 | 182 | 91 | 65 | | " 52 | " 52 | " 46 | 1 46 | |
| | Measured | terminal | | | | | | | | | | | | | | | | | |
| | 24 | Vcc | | | | | | | | | | | | | | | | | |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | |
| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open). | 22 | SEL BA | | | | | | | | | | | | | | | | | |
| /; low ≤ (| 21 | IO | | | | | | | | | | | | | | | | | |
| h ≥ 2.0 \ | 20 | B1 | | | | | | | | | | | | | | | | | |
| y be hig | 19 | B2 | | | | | | | | | | | | | | | | | |
| ated ma | 18 | B3 | | | | | | | | | | | | | | | | | |
| ot design | 17 | B4 | | | | | | | | ٥ | j | | | | | | | | |
| (pins no | 16 | B5 | | | | | | | | T+ | 1 I C = + 17. | | | | | | | | s = -55°C. |
| nditions | 15 | 98 | | | | | | | | 0 | p a, excep | | | | | | | | , except T _c |
| minal co | 14 | B7 | | | | | | | | 0.3001 - T taccoo O allogadile 20 | as subgrou | | | | | | | | ubgroup 10 |
| Ter | 13 | B8 | | | | | | | | | | | | | | | | | d limits as s. |
| | Case L | Test no. | | | | | | | | locionato bo | <u> </u> | | | | | | | | iditions, and |
| | MIL-STD- 883 | method | | | | | | | _ | Caciticaco locimanot bao otoot omo O | Salle lesis a | | _ | | | _ | | | Same tests, terminal conditions, and limits as subgroup 10, except $T_{\text{\tiny C}}$ = -55 $^{\circ}\text{C}$. |
| | Symbol | | t _{PUH1} | t _{PHL1} | PUH2 | PHL2 | PLH3 | PHL3 | PUH4 | PHL4 | PZH2 | PZL2 | PZH3 | PZL3 | PHZ2 | PLZ2 | PHZ3 | PLZ3 | Same test |
| | Subgroup Symbol | | 10 | Tc = 125°C | | | | | | | | | | | | | | | 11 T _C = -55°C |
| | | | <u> </u> | _ | t | t | + | + | + | t | + | + | + | t | + | t | + | t | |

Z.5 V/5.5 V);

2.5 V/5.5 V); · 0 V

| TABLE III. Group A inspection for device type 05. errorent conditions (nins not designated may be high > 2.0 V: low < 0.7 V: or onen) |
|---|
|---|

| Unit | | > | = | | = | = | = | = | = | = | = | = | | - | | | - | | | = | | | = | - | | | | = | | | н | = | | = | = | = | = | = | = | = | | = | = | = | = | = | = | | = | = | = | = | = | = | = | = : | | = | = | - | | = | |
|-----------------------|------------|------------------|-----------|-------|-------|-------|-------|-------|-------|-------|----------|-------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-----|-------|-------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| mits | Max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | = | = | = | = | | = | = | = | = | = | | | = | | = | -1.5 | = | = | = | - | | = | = | = | = | = | |
| Test Limits | Min | 2.4 | = | = | = | | = | = | = | = | = | = | | | | = | - | = | 2.0 | = | = | = | = | - | - | | = | = | - | = | н | = | - | = | = | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measured | terminal | B1 | B2 | B3 | B4 | R | Be | B7 | . B8 | 3 2 | 5 6 | 7 < | A3 | A4 | A5 | A6 | A7 | A8 | B1 | B3 | R3 | 88 | 5 2 | 8 8 | 3 8 | B/ | B8 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B4 | B2 | B3 | B4 | B5 | Be | B7 | B8 | HA | A 2 | A3 | 44 | A5 | A6 | A7 | A8 | CAB | SAB | DIR | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | |
| 12 | GND | GND | = | | = | = | - | = | = | = | = | = | | | | | = | | | = | = | = | - | - | | | | | | | н | | = | = | = | = | = | | = | = | = | = | = | = | = | = | | | - | | | | | | | = : | | = | = | = | | | |
| 11 | A8 | | | | | | | | 0.5 V | | | | | | | | | -3 mA | | | | | | | | | 0.5 V | | | | | | | | -12 mA | | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | | | | | -18 mA | |
| , 10 | A7 | | | | | | | 0.5 V | | | | | | | | | -3 mA | | | | | | | | | 0.5 V | | | | | | | | -12 mA | | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | | | | | -18 mA | | |
| 6 | A6 | | | | | | 0.5 V | | | | | | | | | -3 mA | | | | | | | | 2 | v c.0 | | | | | | | | -12 mA | | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | | | | | -18 mA | | | |
| 8 | A5 | | | | | 0.5 \ | | | | | | | | | -3 mA | | | | | | | | 7 | v c.u | | | | | | | | -12 mA | L | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | | | | | -18 mA | | | | |
| 2 | A4 | | | | 0.5 V | ╁ | | | | | | | | -3 mA | | | | | | | | 740 | + | | | | | | | | -12 mA | _ | | | | | | | 2.0 V | H | | | | | | | 12 mA | | | | | | | | | | | -18 mA | _ | | | | |
| 9 | A3 | | | 0.5 V | | | | | | | | V 500 | -3 IIIA | | | | | | | | 0.57 | 5 | | | | | | | | -12 mA | Н | | | | | | | 2.0 V | | | | | | | | 12 mA | _ | | | | | | | | | | -18 mA | | | | | | |
| 2 3 4 5 6 7 8 9 10 11 | A 2 | | 0.5 V | | | | | | | | 2 m | 5 | | | | | | | | 0.5 V | | | | | | | | | -12 mA | | | | | | | | 2.0 V | | | | | | | | 12 mA | l | | | | | | | | | | -18 mA | | | | | | | |
| 4 | A1 | 0.5 V | | | | | | | | 3 m | <u>{</u> | | | | | | | | 0.5 V | | | | | | | | | -12 mA | | | | | | | | 2.0 V | | | | | | | | 12 mA | | | | | | | | | | | -18 mA | | | | | | | | pade. |
| ဧ | DIR | 2.0 V | = | = | - | - | = | = | = | 0.5.7 | > = | = | | - | | | - | - | 2.0 V | : | = | - | - | | | | _ | 0.5 V | | | | | - | | | 2.0 V | = | | | | - | | | 0.5 V | = | = | | | = | | | | | -18 mA | | | | | | | | | on next |
| 2 | SEL AB | 0.5 V | = | | = | - | - | - | - | = | = | - | | | | | | | | - | = | = | - | | | | | | | - | | | | - | = | = | - | | = | - | | - | - | - | - | = | | | | | | | -18 mA | | | | | | | Ĭ | | | 13 thru 24 on next page. |
| 1 | CLK AB | 0.5 V | | | | | - | | - | | - | = | | | | | | - | | | = | | - | | | | | | | | | | | = | | = | = | | | = | | | = | | | = | | | | | | -18 mA | | | | | | | | | | | • |
| Case L | Test no. | - | 2 | e | 4 | ĸ | 9 | 2 | . α | 0 | 6 | 2 7 | _ ; | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 2 00 | 24 | - 6 | 77 6 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 26 | 22 | 58 | 69 | type 05 |
| MIL-STD- 883 | method | 3006 | - | | = | - | = | = | = | - | = | - | | | - | | = | - | | = | - | - | - | - | | | <u> </u> | = | = | = | - | | = | = | = | = | = | = | = | = | = | = | = | = | = | = | | = | = | = | | | = | | | = : | : : | = | | = | = | | d of device |
| Symbol | | V _{ОН1} | : | | | | | | | | | | | | | | | | Sign | Ž. | | | | | | | | | | | | | | | | ō | 3 | | | | | | | | | | | | | | | 0 | | | | | | | | | | | es at en |
| Subgroup | | - | Tc = 25°C | | | | | | | | | | | | | | | | > | | | | | | | | | | | | | | | | | > | | | | | | | | | | | | | | | | > | | | | | | | | | | | See footnotes at end of device type 05. Pins |

| Unit | | > | > = | н | = | = | = | - | | = | | = | = | | | = | н | = | = | - - | - | | = | = | = | = | | = | н | | | - - | | | н | н | - - | . - | = | = | = | = | = | - | - - | | н | = | | н | н | - - | |
|---|----------|-------|-----------|-------|-------|-------|-------|-------|----------|----------------|-------|------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|---------------|-------|-------|-------|-------|----------|-----|----|----|----|----|-----|------|----|
| imits | Max | | İ | | | | | | | | | j | | | | | | | | | | | | | | | | | İ | | 0.4 | | | = | | = | | | = | - | - | = | = | - ! | -1.5 | | - | = | = | | | | |
| Test Limits | Min | 2.4 | | | " | = | = | | | - | - | - | - | - | - | | 2.0 | = | | | | | | - | " | | | | - | - | | | | | | | | | | | | | | | | | | | | | | | |
| Measured | terminal | B1 | B2 | B3 | B4 | B2 | B6 | B7 | 88 54 | - c< | ¥ ç | ξ. V | 45 | A6 | A7 | A8 | B1 | B2 | B3 | 8 k | 82 | 87 | 88 | A1 | A2 | A3 | A4 | 94 | Α7 | Y8 | B1 | B2 | 8 83 | 83 4 | 8 8 8 | B7 | B8 | A1 | A2 A3 | ¥ \$ | A5 | A6 | A7 | A8 | CAB | SAB | A1 | A2 | A3 | A4 | A5 | A6 | ¥ |
| 24 | Vcc | 4.5 V | · = | | | | = | | : = | | | = | | | = | | | = | | | | = | = | = | | | | | = | = | = | | | = | | | | | = | = | = | = | = : | | | | = | | = | | н | | |
| 23 | CLK BA | 0.5 V | · = | = | | = | = | | | = | = | = | = | = | = | = | | = | = | | | = | = | = | | = | | = | = | = | - | | | = | = | = | | | | = | = | = | = | - | | | | | | | | | |
| 22 7 | SEL BA | 0.5 V | · = | | н | | = | | : = | = | - | | = | | = | | = | = | = | | : = | = | | = | | = | | | = | = | = | | | = | = | | | | = | = | = | = | = | = | | | | | | | | | |
| 21 | ١٣ | 0.5 V | <u> </u> | = | | = | = | - - | : - | = | : = | = | = | = | = | = | - | = | = | - - | : = | = | = | = | | = | | = | = | = | | | | = | = | - | - - | | = | | = | | = | = | | | | | | | | | |
| 20 20 | B1 | -3 mA | | | | | | | 7 | 0.0 | | | | | | | -12 mA | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | 2 | 2.0 V | | | | | | | | | | | | | | | |
| 19 | B2 | | -3 mA | | | | | | | 7 4 | 0.5 V | | | | | | | -12 mA | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | 2.0 v | | | | | | | | | | | | | | |
| 18 | B3 | | | -3 mA | | | | | | | 7.30 | 0.0 | | | | | | | -12 mA | | | | | | | 0.5 V | | | | | | 4 | 12 mA | | | | | | 207 | 7 .0.4 | | | | | | | | | | | | | |
| 3 14 15 16 17 18 19 20 21 22 23 | B4 | | | | -3 mA | | | | | | | 05.7 | 200 | | | | | | | -12 mA | | | | | | | 0.5 V | | | | | | 10 00 | HI 71 | | | | | | 2.0 V | | | | | | | | | | | | | |
| 16 | B5 | | | | | -3 mA | | | | | | | 0.5.0 | | | | | | | | -12 mA | | | | | | 7 4 0 | v 0.0 | | | | | | 12 mA | | | | | | | 2.0 V | | | | | | | | | | | | |
| 15 | B6 | | | | | | -3 mA | | | | | | | 0.5 V | | | | | | | 12 m | VIII 71 - | | | | | | 7 4 0 | | | | | | | 12 mA | | | | | | | 2.0 V | | | | | | | | | | | |
| 4 | B7 | | | | | | | -3 mA | | | | | | | 0.5 V | | | | | | | -12 mA | | | | | | | 0.5 V | | | | | | | 12 mA | | | | | | | 2.0 V | | | | | | | | | | |
| 13 | 88 | | l | | | | | | -3 mA | 1 | | | | l | | 0.5 V | | | | | | | -12 mA | | | | | | l | 0.5 V | | | | | | | 12 mA | | | | | | | 2.0 V | | | | | | | | | |
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| • | Measured | terminal | B8 | B7 | B6 | 82 | B3 | B2 | B1 | 10 | SBA | CBA | CAB | SAB | JIK S | A1 | ¥ ç | AS A4 | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B5 | B 4 | B3 | B2 | ا ۵ | O | SBA | CBA | CAB | SAB | DIR | A1 | AZ | A3 | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B3 | B 2 | B2 | B1 | ΙØ | SBA | CBA | |
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| open). | 1 | A8 | | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | |
| .7 V; or | 10 | A7 | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | |
| ; low ≤ C | 6 | A6 | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | |
| ∨ 2.0 √ | œ | A5 | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | |
| / be high | 7 | A4 | | | | | | | | | | | | | | | | 0.4.V | ÷ | | | | | | | | | | | | | | | | | | | | 7.47 | ۲., ۷ | | | | | | | | | | | | | | |
| ted may | 9 | A3 | | | | | | | | | | | | | | | 7 7 | V.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | |
| Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open) | 2 | A2 | | | | | | | | | | | | | | | 0.4 v | | | | | | | | | | | | | | | | | | | | 1 | 2.7 \ | | | | | | | | | | | | | | | | |
| (pins no | 4 | A1 | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | t page. |
| nditions | 3 | DIR | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | | on nex |
| ninal cor | 2 | SEL AB | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | | | 13 thru 24 on next page. |
| Terr | - | CLK AB | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | | | | | | | 2.7 V | | | | | | | | | | | | | | | | | | | | Pins |
| | Case L | Test no. | 09 | 61 | 62 | 64 | 65 | 99 | 29 | 89 | 69 | 20 | 71 | 72 | 73 | 4 7 | 0,2 | 0/2 | 78 | 62 | 80 | 81 | 82 | 83 | 84 | 82 | 86 | 87 | 88 | 8 6 | 2 | 91 | 92 | 93 | 94 | 92 | 36 | 76 | 86 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 100 | 110 | 111 | 112 | 113 | 114 | type 05. |
| • | MIL-STD- 883 | method | | | | | | | | | 1 | 1 | 3009 | | | | | - | - | - | = | | - | = | = | | - | = : | | - | | | = | 3010 | | = | | | | - | = | | = | - | = | | - | | - | - | _ | = | - | of device |
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| ŀ | Subgroup | | 1 | Tc = 25°C | | | | | | | | | <u> </u> | | | | | | | | | | | | | | | | | | | | | <u> </u> | | | | | | | | | | | | | | | | | | | | See footnotes at end of device type 05. |

Unit Αų. Test Limits
Min Max Measured terminal 24 V_{CC} 23 CLK BA -18 mA TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open) 22 SEL BA -18 mA -18 mA 0.4 V 2.7 V 12 -18 mA 20 B4 19 B2 0.4 V 18 B3 -18 mA t 48 -18 mA 0.4 V 16 B5 15 B6 14 B7 13 B8 See footnotes at end of device type 05. Case L Test no. 60 61 62 63 63 64 65 66 67 68 882 883 886 888 888 888 889 90 MIL-STD-883 method 3010 Symbol Ξ 1 Tc = 25°C

TABLE III. Group A inspection for device type 05.

| MIL-STD- method Test no. CLK 116 5.5 method Test no. CLK 116 117 method Test no. CLK 118 119 method Test no. CLK 120 met | ssignated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open). | 5 6 7 8 9 10 11 12 Measured Test Limits Unit | Min Max | CAB | SAB | NIN DIN | - TA A 2 | 5.5 V | 5.5 V | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | | = | A8 | B8 | | Be | | | = D0 | . 8 | = | | | | - A2 | " " " | = | = = | > = | | = | | " B6 " | | | B3 | | | | 2.7 \ | 2.7 V | 2.7 V A5 | " A6 | " A7 | A8 | | /0 | 000000000000000000000000000000000000000 | - BA - BA | l | |
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| MIL-STD- method Test no. CLK 116 5.5 method Test no. CLK 116 117 method Test no. CLK 118 119 method Test no. CLK 120 method Test no. CLK 120 method Test no. CLK 120 method Test no. CLK 130 met | nay be hi | 7 | | | | 1 | | > | - | | | | | | | | | 1 | | | | 1 | | | | Н | 0.4 V | | | | | | | | | | | | | ╁ | H | | | | | | | | | | |
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| MIL-STD 883 Case L 883 Online 116 117 117 118 119 119 119 119 119 | Termina | ., | + | _ | 5.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
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| TABLE III. | |
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| | Measured | terminal | CAB | SAB | DIR | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B5 | B4 | B3 | B2 | B1 | IΘ | SBA | Z B C | A1 | A2 | A3 | * | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B5 | B4 | B3 | B2 | M1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | B8 | B7 | B6 | B5 | B4 | BS PS | D4 | - - | |
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| r open) - | | CLK BA | | | | | | | | | | | | | | | | | | | | | | 7.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | _ | | | |
| 0.7 V; 0 | 22 | SEL BA | | | | | | | | | | | | | | | | | | | | | 25.7 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| be nigr | 19 | B2 | | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | , , , | 0.4 V | | | | | | | | | | | | | | 27.7 | ۷., ۷ | | |
| ed may | 18 | B3 | | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | , , , | 0.4 V | | | | | | | | | | | | | | 27.7 | 7.7 v | | | |
| Firminal conditions (pins not designated may be $nign \ge 2.0 \text{ V}$; low $\le 0.7 \text{ V}$; or open). | 17 | B4 | | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | 2.7 V | | | | |
| ou suid | 16 | B5 | | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | 0.4 \ | | | | | | | | | | | | | | | 2.7 V | | Ī | | = | |
| ditions | 15 | B6 | | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | 2.7 V | | | | | | |
| | 14 | B7 | | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | 2.7 V | | | | | | | |
| lern | 13 | B8 | | | | | | | | | | | | 5.5 V | | | | | | | | | | | | | | | | | | | 0.4 V | | | | | | | | | | | | | | | 2.7 V | | | | | | | | |
| | Case L | Test no. | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 167 | 160 | type 05. | ; |
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| Subgroup | | | - | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | See footnotes at end of device type 05. | |

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| | Measured | terminal | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | N | NGG | Vcc | | | | | | | | | | | | | | | | | CAB to B1 | CAB to B2 | CAB to B3 | CAB to B4 | CAB to B5 | CAB to B6 | CAB 10 B/ | CAB 10 Bo | CBA 10 A | CDA 10 AZ | CBA 10 A3 | CBA to A5 | CBA to A6 | CBA to A7 | CBA to A8 | |
| | 12 | GND | GND | " | н | н | | н | | | | = | = | | | | = | | | = | = | | | GND | = | = | = | = | = | | = | = | | | " | ш | | GND | = : | = : | | | | = | = | = | = | = | | = | = | = | |
| Johan J. | 7 | A8 | | | | | | | | GND | | | | | | | | GND | GND | 4.5 V | GND | | | 8 | Α. | I | 7 | В | В | ٧ | ٧ | 7 | I | I | 7 | _ | - | | | | | | | 2 | ≧ | | | | | | | OUT | |
| | 10 | A7 | | | | | | | GND | | | | | | | | GND | | GND | 4.5 V | GND | | | æ | Α | I | _ | В | В | ۷ | A | _ | I | I | 7 | 7 | - | | | | | | 4 | ≧ | | | | | | | OUT | | |
| /I | б | A6 | | | | | | GND | | | | | | | | GND | | | GND | 4.5 V | GND | | | ď | Α | I | _ | В | В | ∢ | A | _ | I | I | 7 | 7 | - | | | | | | z | | | | | | | TUO | | | - |
|) | 00 | A5 | | | | | GND | | | | | | | | GND | | | | GND | 4.5 V | GND | ! | | ď | < | I | _ | В | В | 4 | ∢ | _ | I | I | 7 | 7 | - | | | | | Z | | | | | | | Ē | ; | - | - | - |
| | 7 | A4 | | | | GND | | | | | | | | GND | | | | | GND | 4.5 V | GND | | | ď | < | I | _ | В | В | A | A | _ | I | I | ٦ - | 7 | - | | | | Z | | | | | | | F | 5 | | | | |
| ad IIIay | 9 | A3 | | | GND | | | | | | | | GND | | | | | | GND | 4.5 V | GND | sts. | | - m | < | I | _ | В | В | ٧ | ٧ | 7 | I | I | 7 | 7 | - | | | Z | | | | | | | Ē | 5 | | | | | |
| | 2 | A2 | | GND | | | | | | | | GND | | | | | | | GND | 4.5 V | GND | and omit V. c tests. | omit V ~ test | B | 4 | I | _ | В | В | 4 | V | _ | I | I | ٦ | _ | = -55°C. | | z | | | | | | | F | 500 | | | | | | |
| S - | 4 | A1 | GND | | | | | | | | GND | | | | | | | | GND | 4.5 V | GND | +125°C an | -55°C and | - C | Α | I | 7 | В | В | A | ۷ | 7 | I | I | _ | _ | and T _c = | Z | | | | | | | Ē | 3 | | | | | | | page. |
| | က | DIR | 4.5 V | | н | | | | = | = | GND | = | = | = | = | = | = | = | 4.5 V | 4.5 V | 4.5 V | 1. except T _c = +125°C | cent To = | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | < | а | В | ٧ | = | = | = | В | = | = | | | except $T_c = +125$ °C and T_c | 4.5 V | = | = : | | | . - | - | | פואם | = | - | = | = | = | = | on next |
| 8 | 7 | SEL AB | GND | - | | | | - | - | - | = | = | = | - | - | = | = | - | - | = | = | ubaroup 1. ex | iroin 1 ex | - C | = | - | - | A | = | - | - | В | = | = | | | , except T _c | 4.5 V | = : | | - | | | - | | פואם | = | - | = | = | = | = | 3 thru 24 on next page. |
| 5 | | CLK AB | GND | - | | | | - | | - | | - | = | | - | | = | | - | = | = | nits as subc | dus se stin | B | = | - | - | - | ∢ | В | ∢ | В | = | = | | | subgroup 7 | Z | = | | - - | | | - | | OND = | = | - | = | - | = | - | $\overline{}$ |
| | Case L | o. | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | itions, and lir | itions and lin | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | onditions as | 201 | 202 | 203 | 204 | 205 | 206 | 707 | 200 | 240 | 211 | 212 | 213 | 214 | 215 | 216 | type 05. |
| MIL-STD- | 883 | method | 3011 | | = | | | - | | | - | | = | - | | - | - | - | 3005 | | = | Same tests, terminal conditions, and limits as s | Same tests ferminal conditions and limits as subdroup 1 except T _c = -55°C and omit V _c , fests | 8 | 1 | 1 | 1 | 1 | 1 | l | 1 | <u> </u> | l | l | I | | Same tests and terminal conditions as subgroup | 3003 | (fig. 3) | = : | | | | | | | - | | - | | _ | = | of device |
| Symbol | | | sol | | | | | | | | | | | | | | | | HJJ | 100 | CCZ | Same tests. t | Same tests 1 | Truth | table | tests | _ | I | | | | | | | | | Same tests a | tPLH1 | | | | | | | | | | | | | | | tes at end |
| Subgroup | | | 1 | $Tc = 25^{\circ}C$ | | | | | | | | | | | | | | | | _ | | 2 | | | Tc = 25°C | | | | | | | | | | | | 8 | | | | | | | | | | | | | | | | See footnotes at end of device type 05. Pins |

| | < 0.7 V: or onen) |
|---------------------------------------|---|
| Group A inspection for device type 0! | wol. \\ 0 C < doing on you have high > 0 U. Low |
| TABLE III. | Tarminal conditions (nine n |

| Ĕ | 883 | Case L | 13 | 4 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Measured | Test Limits | ts |
|--|------------|--------------|---------------|--------------------------|-------------------------|--------------------|--|-------|-----|-----|-------|--------|--------|-------|-----------------|-------------|------|
| | method | Test no. | B8 | B7 | B6 | B5 | B 4 | B3 | B2 | B1 | lΩ | SEL BA | CLK BA | Vcc | terminal | Min | Мах |
| E sol | 3011 | 169 | | | | | | | | GND | GND | GND | GND | 5.5 V | B1 | | -225 |
| | - | 170 | | | | | | | GND | | - | - | - | | B2 | | - |
| | - | 171 | | | | | | GND | | | | = | = | = | B3 | = | = |
| | | 172 | | | | 2 | GND | | | | | | | | B4 | | |
| | - | 177 | | | CNC | O O | | | | | = | = | = | = | Be | - | - |
| | - | 175 | | CND |) D | | | | | | | = | = | = | B7 | = | - |
| | - | 176 | CINC | 9 | | | | | | | = | = | | | 3 8 | | = |
| | _ | 177 | Š | | | | | | | GND | = | = | = | = | A S | - | - |
| | - | 178 | | | | | | | GND | 9 | = | = | = | | ¥2 | = | = |
| | _ | 179 | | | | | | GND | | | = | | | | A3 | | = |
| | _ | 180 | | | | | GND | | | | = | | - | | A4 | | = |
| | _ | 181 | | | | GND | | | | | = | = | = | | A5 | = | = |
| | - | 182 | | | CINC | 9 | | | | | | = | | | 97 | | |
| | - | 183 | | CINC |) D | | | | | | = | = | = | = | 07 4 | = | |
| | | 107 | CINC | GIND | | | | | | | = | - | = | = | 200 | = | = |
| | 100 | 101 | GIND | | | | | | | | ŀ | | | ŀ | 8 | | .,, |
| | 3005 | 185 | Ī | | Ī | | | | | | | | | | N _{CC} | | 145 |
| CCL | | 186 | | | Ţ | | | | | | | | | | Vcc | ` | 165 |
| CCZ | = | 187 | | | | | | | | | 4.5 V | | | | Vcc | ` | 165 |
| Same tests, terminal conditions, and | ninal conc | litions, and | limits as sul | bgroup 1, | except T _c = | : +125°C a | except T _C = +125°C and omit V _{IC} tests. | ests. | | | | | | | | | |
| Same tests, tern | ninal conc | litions, and | limits as su | ogroup 1, | except T _c = | : -55°C and | except T _C = -55°C and omit V _{IC} tests | sts. | | | | | | | | | |
| Truth 188 H | | 188 | I | I | I | I | I | I | I | I | В | В | В | 4.5 V | | | |
| table | | 189 | 7 | | _ | _ | _ | _ | _ | 7 | = | | = | = | | | |
| tests | 1 | 190 | В | В | В | В | В | В | В | В | = | = | = | = | | | |
| | 1 | 191 | ٧ | V | ٨ | ٨ | ⋖ | A | ٧ | 4 | - | = | | | | | |
| 1 | | 192 | _ | | _ | _ | | _ | _ | | = | = | = | = | | | |
| | 1 | 193 | I | I | I | I | I | I | I | I | = | = | = | = | | | |
| | | 194 | I | I | I | I | н | I | I | н | | | = | | | [/ હ/ | |
| | | 195 | 7 | _ | ٦ | ٦ | ٦ | ٦ | ٦ | 7 | | = | | | | | |
| | | 196 | В | В | В | В | В | В | В | В | = | ∢ | - | | | | |
| | 1 | 197 | В | Ф | В | В | В | В | В | В | = | = | ۷ | | | | |
| | 1 | 198 | ٧ | ۷ | A | ٧ | 4 | ∢ | ∢ | 4 | | | В | | | | |
| | 1 | 199 | | | = | = | = | | = | = | = | = | ∢ | | | | |
| | 1 | 200 | = | = | = | = | = | = | = | = | = | = | В | = | | | |
| Same tests and terminal conditions as subgroup | terminal c | conditions a | s subgroup | 7, except T _c | T _C = +125°C | and T _c | = -55°C. | | | | | | | | | | |
| t _{PUH1} 3 | 3003 | 201 | | | , | • | | | | TUO | GND | GND | GND | 5.0 V | CAB to B1 | 2 | 30 |
| | ig. 3) | 202 | | | | | | | TUO | | = | = | = | = | CAB to B2 | | |
| | . = | 203 | | | | | | TUO | | | - | = | | | CAB to B3 | | |
| | = | 204 | | | | | OUT | | | | = | = | | | CAB to B4 | | _ |
| | - | 205 | | | | TUO | | | | | - | = | | | CAB to B5 | | _ |
| | _ | 206 | | | OUT | | | | | | = | | = | | CAB to B6 | | = |
| | _ | 207 | | TUO | | | | | | | = | = | | = | CAB to B7 | = | |
| | - | 208 | OUT | | | | | | | | | = | | | CAB to B8 | = | = |
| | _ | 209 | | | | | | | | Z | = | 4.5 V | z | | CBA to A1 | | = |
| | = | 210 | | | | | | | Z | | - | = | | | CBA to A2 | | = |
| | - | 211 | | | | | | Z | | | = | = | = | = | CBA to A3 | = | = |
| | _ | 212 | | | | | Z | | | | = | = | = | | CBA to A4 | = | = |
| | _ | 213 | | | | Z | | | | | - | = | - | | CBA to A5 | - | = |
| | - | 213 | | | 2 | | | | | | = | | | | CBA to A6 | | |
| | | 215 | | Z | - | | | | | | = | = | = | = | CBA to A7 | = | - |
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| | | 216 | Z | | | | | | | | | | | | TA TO AX | | |

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| TABLE III. | |
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| = | nits | Max | 45 | = | | - | = | - | = | | | | | = | | | | 23 | | н | | | | = | | | | | н | н | | | = | 30 | | | | | | - | - | - | | = | | | = | = | 90 | 3 = | | = | = | = | = , | 2 |
| | Test Limits | Min | 2 | | | - | = | = | = | " | | | | = | | | | | | н | = | | | - | | | | | н | н | | | = | = | | . | | | | - | - | - | = | = | - | - | = | = | = | = | = | = | = | - | | |
| | Measured | terminal | CAB to B1 | CAB to B2 | CAB to B3 | CAB to B4 | CAB to B6 | CAB to B7 | CAB to B8 | CBA to A1 | CBA to A2 | CBA to A3 | CBA to A4 | CBA to A5 | CBA to A6 | CBA to A7 | CBA to A8 | A1 to B1 | A2 to B2 | A3 to B3 | A4 to B4 | A5 to B5 | A6 to B6 | A7 to B7 | A8 to B8 | B1 to A1 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | B8 to A8 | A1 to B1 | A2 to B2 | A3 to B3 | A4 to B4 | A5 to B5 | A6 to B6 | A/ to B/ | A8 to B8 | B2 to A2 | B3 to A3 | B4 to A4 | B5 to A5 | B6 to A6 | B7 to A7 | B8 to A8 | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B7 | SAB to BB |
| | 12 | GND | GND | | | - | = | | = | = | | = | = | = | = | | | | | н | = | | | | | | = | | | | | | | = | | | | | | - | | - | = | = | = | | | = | | - | | = | = | = | | : |
| pen). | 7 | A8 | | | | | | | z | | | | | | | | OUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | 2 | ≥ | | | | | | | μio | | | | | Ī | | : | 4 |
| 7 V; or c | 10 | A7 | | | | | | Z | | | | | | | | OUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | 2 | 2 | | | | | | | Ē | 5 | | | | | | | 4/ | |
| $low \leq 0$. | о | A6 | | | | | z | | | | | | | | OUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | | z | | | | | | | TIIO | 3 | | | | | | | /4 | | |
| > 2.0 V; | 80 | A5 | | | | Z | 1 | | | | | | | OUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | | z | | | | | | | OUT | H | | | | | | | /4 | | | 1 |
| se high | 7 | A4 | | | 2 | 2 | | | | | | | OUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | - | z | | | | | | | TIIO | | | | | | | | /4 | i | | | |
| ed may l | 9 | A3 | | | z | | | | | | | OUT | | | | | | | | N | | | | | | | | OUT | | | | | | | - | z | | | | | | | ΞŌ | 3 | | | | | | | 4/ | Fi | T | | | - |
| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open). | 2 | A2 | | Z | | | | | | | DUT | | | | | | | | Z | | | | | | | | OUT | | | | | | | | z | | | | | | | Ė | 5 | | | | | | | /7/ | i | | | | | |
| pins not | 4 | A1 | Z | | | | | | | OUT | | | | | | | | N | | | | | | | | OUT | | | | | | | | Z | | | | | | | Ē | 3 | | | | | | | /7 | FI | | | Ī | | - | - |
| ditions (| က | DIR | 4.5 V | = | | = | = | = | = | GND | - | = | - | = | = | = | | 4.5 V | | | = | = | = | - | = | GND | - | = | | | - | - | = | 4.5 V | | | | | = = | - | | <u> </u> | = | = | = | = | = | = | 457 | > - - | = | = | = | = | | , roct |
| inal con | 2 | SEL AB | 4.5 V | = | | - | = | = | - | GND | - | = | - | = | = | = | = | | | | - | - | - | - | - | - | - | = | | | = | - | = | = | | | | | | - | - | - | = | - | = | - | = | - | Z | = | = | = | = | = | | 170 ::4+ |
| Term | - | CLK AB | Z | = | | - | = | | = | GND | = | = | | = | - | - | | | | | = | - | - | | - | - | - | = | | | | - | | = | | | | | - - | - | - | - | = | = | = | - | = | = | /7 | Fi = | = | = | = | = | | Pine 13 thru 24 on to and |
| - | Case L | Test no. | Н | 218 | 219 | 227 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 722 | 720 | 257 | 259 | 260 | 261 | 262 | 202 | 264 | 265 | 266 | 262 | 268 | 269 | 270 | 271 | 272 |
| | MIL-STD- 883 | <u> </u> | | (fig. 3) | | | = | - | | | | | - | - | | | | = | - | - | = | - | | = | - | - | - | | - | - | | = | = | = | | | | | | - | | | - | = | = | - | = | | = | = | | | - | - | | of dolling |
| - | ogwago | | tPHL1 | | | | | | | | | | | | | | | PLH2 | | | | | | | | | | | | | | | | PHL2 | | | | | | | | | | | | | | | 9 | E | | | | | | |
| | Subgroup | | 6 | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | _ | | | See footpotes at end of device type 05 |

TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high \geq 2.0 V; low \leq 0.7 V; or open)

Unit SI = Max Test Limits Min CAB to B1
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B8 t terminal 24 V_{CC} GND 22 SEL BA 21 G OUT OUT 20 B4 Z Z 19 B2 z OUT z Z OUT OUT TUO 18 B3 OUT Z OUT t 48 OUT 16 B5 OUT OUT 15 B6 OUT OUT OUT 14 B7 Z z OUT OUT OUT OUT 13 B8 z 266 | 267 | 268 | 268 | 270 | 271 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | 272 | Case L Test no. MIL-STD-883 method 3003 (fig. 3) Symbol PHL2 PLH3 PLH2 t_{PHL1} 9 Tc = 25°C

| | mits | Max | 90 = | | | = | - | = 1, | 45 | | | | | | | = | | | = | - | | = | | - | | | - | | | : = | - | - | | | | | | | | | | - | | - | = | = | - | - | = | - | |
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| | Test Limits | Min | 7 = | | | | | | | | | | | | | = | | | = | - | | = | | | | | | | | : = | | | | | | | | | | н | | = | | | = | = | | | | = | |
| | Measured | terminal | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A6 | SBA to A7 | SBA to A8 | SAB to B1 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B7 | SRA to A1 | SBA to A2 | SBA to A3 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A7 | SAR to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B7 | SAB to B8 | SBA to A1 | SBA to A2 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A7 | SAB to B1 | SAB to B2 | SAB to B3 | SAB to B4 | SAB to B5 | SAB to B6 | SAB to B/ | SAB to B8 | SBA to Al | SBA to A3 | SBA to A4 | SBA to A5 | SBA to A6 | SBA to A7 | SBA to A8 | |
| | 12 | GND | בוס = | - | | | = | = = | : : | = | = | | | | | = | | | = | | | | | - | | | | | : = | : = | = | | - | | : : | | = | | | | | | . = | - | = | = | - | = | = | | |
| open). | 7 | A8 | | | | | | TUO | | | | | | , , | 1 1 | | | | | | Ī | 5 | | | | | | ì | اک | | | | | | Ē | 3 | | | | | | ì | ام | | | | | | | OUT | |
| .7 V; or (| 10 | A7 | | | | | OUT | | | | | | | /4∎ | | | | | | | OUT | | | | | | | 2/ | | | | | | ! | INO | | | | | | ì | ΩI | | | | | | | OUT | | |
| e 05. low ≤ 0 | 6 | A6 | | | | OUT | | | | | | | 4/ | | | | | | | DO | | | | | | | 2/ | | | | | | | OUT | | | | | | | 2/ | | | | | | | OUT | | | |
| <pre>≥ 2.0 V;</pre> | 80 | A5 | | | TIO | - | | | | | | /4 | | | | | | | OUT | | | | | | | 2/ | | | | | | | OUT | | | | | | | 2/ | | | | | | | OUT | | | | |
| on for de be high | 7 | A4 | | | OUT | | | | | | /4/ | 1 | | | | | | OUT | | | | | | | 2/ | | | | | | | OUT | | | | | | | /5 | | | | | | | TUO | | | | | |
| nspectic ed may | 9 | A3 | | OUT | | | | | | /7 | È | | | | | | OUT | | | | | | | 2/ | I | | | | | | DUT | | | | | | | 2/ | | | | | | | E | 3 | | | | | |
| TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$, low $\leq 0.7 \text{ V}$; or open) | 2 | A2 | OUT | | | | | | // | Ť | | | | | | TUO | | | | | | | 2/ | i | | | | | | Ţ | 000 | | | | | | 2/ | | | | | | | Ē | 5 | | | | | | |
| BLE III. (pins no | 4 | 14 S | 5 | | | | | | ∕4। | | | | | | L | 5 | | | | | | 2/ | òι | | | | | | Ē | 100 | | | | | | /5 | i | | | | | | Ē | 100 | | | | | | 9560 | |
| TAI | က | DIR | <u> </u> | = | | | | = 1 | 4.5 V | = | = | | | | CIND | <u> </u> | | | = | - | | 457 | | - | | | | | | GND END | | = | | | : : | 457 | = | | = | | | = | - 2 | פואם | = | = | - | = | = | " uo | ; |
| ninal cor | 2 | SEL AB | <u> </u> | = | | = | - | = 2 | _ = | = | = | | | | CINC | 5 = | = | н | = | | | Z | ≥ = | = | | | = : | | | ON = | - | = | | = : | | Z | = | н | | | | - | | GIND E | = | = | = | = | = | # thrii 24 | 1 |
| Term | - | CLK AB | בַּוֹאַם = | = | | | = | = , | / 1 = | = | = | = | = : | | CIND | 5 = | | | = | | | 2/ | ÒI= | - | | | = : | | | GND " | = | = | | = : | : : | 2/ | i = | | | | | | 2 | GIND END | = | | - | = | = | Pins 13 thru 24 on axt page | |
| | Case L | Test no. | 274 | 275 | 276 | 278 | 279 | 280 | 281 | 283 | 284 | 285 | 286 | 287 | 280 | 290 | 291 | 292 | 293 | 294 | 295 | 292 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 307 | 308 | 309 | 310 | 311 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 324 | 325 | 326 | 327 | 328 tvne 05 | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| -STD- | 883 | method | (fig. 3) | = | | = | = | | : : | - | = | = | = | | = | = | = | = | = | - 1 | | = | = | - | = | = | = 1 | | : = | : = | - | = | | = : | : : | - | = | - | = | = | | - | : = | = | - | = | - | - | = | a of yaviva | 5 |
| lodmyS | | | PLH3 | | | | | | PHL3 | | | | | | | | | | | | | | PLH4 | | | | | | | | | | | | | | Ė | | | | | | | | | | | | | oc at poo | ; |
| Subdroup | | • | Tc = 25°C | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | See footpotes at end of device type (| |

TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

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| | Measured | terminal | SBA to A1 | SBA to A: | SBA to A: | SBA to A | SBA to A | SBA to A6 | SBA to A | SBA to A | SAB to B | SAB to B; | SAB to B | SAB to B | SABTOR | SAB to Be | SAB to B | SAB to B | SBA to A | SBA to A | SBA to A | 2000 | SBA to A | C C C C C C C C C C C C C C C C C C C | A 11 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | SBA to A | SBA to A | SAB to B | SAB to B2 | SAB to B | SAB to B | SAB to B | SAB TO BR | SAB to B | SAB to B | SBA to A | SBA to A | SBA to A: | SBA to A | SBA to A | SBA to A6 | SBA to A | SBA to A8 | SAB to B | SAB to B; | SAB to B: | SAB to B | SAB to B | SAB to Be | SAB to B | SAB to B | SBA to A | SBA to A | SBA to A | A OT ABO | SDA 10 A | SBA to A | SBA to A6 | SBA to A | SBA to A |
| 3 | | | 5.0 V | = | = | | н | | | = | = | - | = | = | - | = | | = | = | | = | = | = | = | | : | | | - | | - | | | . - | : : | | | = | = | н | = | | | | н | = | = | = | = | = | | = | = | = | = | = | - | | | - |
| | 23 | CLK BA | /4 | | | = | н | | | = | GND | = | = | | = | = | = | = | /4 | : | = | = | = | = | | : | = 2 | ON5 | = | | | | | | · | 2/ | | = | = | н | | = | | GND | н | = | = | = | = | = | = | /5 | òi= | = | = | = | - | | : : | = |
| 5 8 | 22 | SEL BA | Z | | | | н | | | = | GND | | = | = | = | = | = | = | Z | | = | = | = | | | : | = [| GND | | | - | . | | | | ≥ . | | = | = | н | н | | | GND | н | = | = | = | = | | | Z | = | = | = | = | = | | | |
| | 21 | ΙØ | GND | | | | н | | | = | = | | = | = | | = | | = | = | | = | = | = | | | : | | | | | | | | | : : | | | = | - | ш | ш | | | | н | = | = | - | = | | | = | = | = | = | - | = | | | |
| 2 8 | 20 | <u>B</u> | /4/ | | | | | | | | OUT | | | | | | | | /4/ | | | | | | Ì | | į | -00 | | | | | | | i | 2/ | | | | | | | | OUT | | | | | | | | 2/ | òı | | | | | | | |
| 9 | 19 | B2 | | /₹ | | | | | | | | DOUT | | | | | | | | // | FI | | | | | | | | OUT | | | | | | | | 2/ | | | | | | | | TUO | | | | | | | | 2/ | õI | | | | | | |
| (g) (g) | 18 | B3 | | | /4/ | | | | | | | | TUO | | | | | | | | /7 | Fi | | | | | | | | OUT | | | | | | | i | 2/ | | | | | | | | DOUT | | | | | | | | <u>'</u> | òı | | | | | |
| | 17 | 8 | | | | /₹ | | | | | | | | TUO | - | | | | | | | 14/ | ři | | | | | | | | OUT | | | | | | | | 2/ | | | | | | | | TUO | | | | | | | | /4 | (OI | | | | |
| 2 4 | 16 | B5 | | | | | 4/ | | | | | | | | L | 0 | | | | | | | // | řı | | | | | | | | OUT | | | | | | | | 2/ | | | | | | | | TUO | | | | | | | | /2 | Ω | | | |
| | 15 | B6 | | | | | | /4/ | | | | | | | | ΔIC | | | | | | | | // | Ť | | | | | | | į | IOO | | | | | | | | 2/ | | | | | | | | OUT | | | | | | | | / 3 | ام/ | | |
| 3 | 14 | B7 | | | | | | | /4 | | | | | | | | LIC | 0 | | | | | | | , , | / † I | | | | | | | ŀ | INO | | | | | | | | /5 | | | | | | | | LNO | | | | | | | | / 3 | اد/ | |
| - 4 | 13 | B8 | | | | | | | | 4/ | • | | | | | | | TUO | 5 | | | | | | | | 4/ | | Ī | | | | Ī | Ē | 100 | Ī | | Ī | | | | | 2/ | | | | | | | | DIT | - | | | | | | | | 5/ |
| | Case L | Test no. | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 282 | 288 | 289 | 200 | 291 | 200 | 203 | 200 | 734 | 282 | 296 | 787 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 327 | 324 | 325 | 326 | 327 | 328 |
| MIL-STD- | 883 | method | 3003 | (fig. 3) | | | | | = | | = | - | | | | | | | | | | | | | | | | | | | | | | | : : | | | = | | | | | | = | | | | | | | | | | | - | | | | | |
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| TABLE III. | 200 ditions (nine not decident of men be bigh > 2 0 1/1 10 / 0 7 1/1 0 |
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| | Measured | terminal | G to A1 | <u>G</u> to A2 | <u>G</u> to A3 | G to A4 | G to A5 | G to A6 | G to A7 | G to A8 | <u>G</u> to B1 | G to B2 | G to B3 | <u>G</u> to B4 | <u>G</u> to B5 | G to B6 | G to B7 | <u>G</u> to B8 | G to A1 | G to A2 | G to A3 | G to A4 | G to A5 | G to A6 | G to A7 | G to A8 | G to B1 | G to B2 | G to B3 | G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | |
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| open). | 1 | A8 | | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | |
| . / V; or (| 10 | A7 | | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | |
| o ∨ wol | 6 | A6 | | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | |
| ≥ 2.0 V; - | 80 | A5 | | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | |
| ngu ag | 7 | A4 | | | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | |
| ed may | 9 | A3 | | | DUT | | | | | | | | GND | | | | | | | | DUT | | | | | | | | 4.5 V | | | | | | |
| erminal conditions (pins not designated may be nign ≥ ∠.∪ V; low ≤ ∪./ V; or open) | 2 | A2 | | OUT | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | |
| oins not | 4 | A1 | TUO | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | age. |
|) Suoilik | ဇ | DIR | GND | | = | - | = | - | = | | 4.5 V | - | = | = | | = | = | | GND | = | | = | = | = | = | | 4.5 V | = | = | | = | = | = | = | n next p |
| inal cond | 2 | SEL AB | GND | = | | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | - | - | | = | = | = | Pins 13 thru 24 on next page. |
| l erm | | CLK AB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Pins 13 |
| | | Ċ. | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | type 05. |
| MIL-STD- | | ╣ | 3003 | (fig. 3) | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | - | of device |
| Symbol | | | фгнг | | | | | | | | | | | | | | | | PZL2 | | | | | | | | | | | | | | | | es at end |
| Subaroup | | | თ | Tc = 25°C | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | See footnotes at end of device type 05. |

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| | Measured | terminal | G to A1 | G to A2 | G to A3 | G to A4 | G to A5 | G to A6 | G to A7 | G to A8 | <u>G</u> to B1 | <u>G</u> to B2 | G to B3 | <u>G</u> to B4 | <u>G</u> to B5 | G to B6 | <u>G</u> to B7 | <u>G</u> to B8 | <u>G</u> to A1 | G to A2 | <u>G</u> to A3 | G to A4 | G to A5 | G to A6 | <u>G</u> to A7 | G to A8 | <u>G</u> to B1 | <u>G</u> to B2 | G to B3 | _ G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | |
| | 24 | Vcc | 5.0 V | = | | = | | = | | | = | | | = | | | | = | = | = | | | " | = | | | = | = | = | = | = | | | = | |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| .7 V; or | 22 | SEL BA | GND | | | | | | | = | | | | | | = | | | | | | = | | | | | | | | | | | | | |
| 0 ≥ wol | 21 | ΙØ | Z | = | = | = | = | = | = | = | - | = | - | = | = | = | | - | = | = | = | = | | - | - | = | - | = | = | = | = | = | = | - | |
| ≥ 2.0 V; | 20 | B4 | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | | |
| be high | 19 | B2 | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | | |
| ed may | 18 | B3 | | | GND | | | | | | | | TUO | | | | | | | | 4.5 V | | | | | | | | DOUT | | | | | | |
| erminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 17 | B4 | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | |
| oins not | 16 | B5 | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | | |
| ditions (| 15 | B6 | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | |
| inal con | 4 | B7 | | | | | | | GND | | | | | | | | DUT | | | | | | | | 4.5 V | | | | | | | | OUT | | |
| Term | 13 | B8 | | | | | | | | GND | | | | | | | | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | |
| - | Case L | Test no. | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | | | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | /pe 05. |
| i i | 883 C | _ | 3003 | (fig. 3) | - | = | = | - | - | = | = | = | = | = | = | = | | = | = | = | = | = | - | = | = | = | = | = | | = | - | - | = | = | of device ty |
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| | dnoubans | | 6 | Tc = 25°C | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | See footnotes at end of device type 05 |

| e type 05. | |
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| Test Limits | Max | | - | | | | | | | Ī | Ī | Ī | - | | | _ | | | 4 | 0 - | | _ | | - | | - | _ | 1 | | | _ | | | ľ | 1 | | 1 | _ | _ | | | - | | | - | | _ | | 1 | | | 1 | | | _ | | | | | - |
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| Measured | terminal | DIR to B1 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | 20 210 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to A8 | 2000 | 9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | DIR to BZ | DIR to B3 | DIR to B4 | DIR to B5 | DIR to Be | DIR to B7 | 90 00 010 | 2 2 2 2 2 2 | DIR to AT | DIR to AZ | DIR to A3 | DIR to A4 | DIR to A5 | DIR to A6 | 20,010 | UIR to A/ | UIK to A8 | G to B1 | . 1 | G to B2 | G to B3 | 21 22 1 | G to B4 | G to B5 | 2 | G to B6 | \overline{G} to B7 | 10 | 0 00 00 | G to A1 | G to A2 | 1 | G to A3 | G to A4 | G to A5 | 2 : | G to A6 | G to A7 | G to A8 | |
| 12 | CINE | GND | = | | | = | | | | = | = | | = | | | = | | | - | | | = | | = | = | | - | | | | = | | | = | | | | - | = | | | = | | = | = | | = | = | | | = | = | | = | = | = | | = | = | |
| 11 | ΔA | 2 | | | | | | | GND | 9 | | | | | | | | TIO | 5 | | | | | | | | 7 5 7 | , , | | | | | | | | ŀ | Inn | | | | | | | | | | | GND | | | | | | | | | | | OUT | |
| 10 | Δ7 | č | | | | | | GND | | | | | | | | | TUO | | | | | | | | | 157 | 2 | | | | | | | | Ē | 100 | | | | | | | | | | | GND | | | | | | | | | | | OUT | | |
| 6 | ΔA | 2 | | | | | GND | ! | | | | | | | | DUT | | | | | | | | | 457 | 2 | | | | | | | | Ė | 3 | | | | | | | | | | CINC | פואס | | | | | | | | | | TUO | | | | |
| 80 | ΔΕ | 2 | | | | GND | | | | | | | | į | INO | | | | | | | | | 45 \ | | | | | | | | | TUO | | | | | | | | | | | GND | | | | | | | | | | | OUT | | | | | |
| | Δ4 | ţ | | | GND | | | | | | | | E | 00 | | | | | | | | | 4.5 V | | | | | | | | | TUO | | | | | | | | | | | ON S | | | | | | | | | | | OUT | | | | | | |
| 9 | ٤٧ | 2 | | GND | | | | | | | | F | 00 | | | | | | | | | 4.5 V | | | | | | | | | DOL | | | | | | | | | | GND | | | | | | | | | | | TUO | - | | | | | | | |
| 2 3 4 5 6 7 8 9 10 11 | Δ2 | 7.5 | GND | | | | | | | | OUT | 0 | | | | | | | | 4 5 7 7 | 4.5 V | | | | | | | | F | UUI | | | | | | | | | CND | GIND | | | | | | | | | | | OUT | | | | | | | | | |
| 4 | Δ1 | GND | 9 | | | | | | | TIO | | | | | | | | | 757 | v C.4 | | | | | | | | Ē | 5 | | | | | | 1 | | ! | GND | | | | | | | | | | | ŀ | | | | | | | | | | | nade. |
| 3 | DIR | źΖ | | = | | = | = | | | | | = | = | | | = | | | | - | | = | | = | | | | | | : | | | = | | | | : ! | 4.5 \ | = | | | = | | = | | | = | = | į | ON S | = | | | = | = | | | = | = | on next |
| 2 | AA IAS | GND | = | | = | | | = | | " | | | | | | = | | | | | | = | | = | | | | | | | = | | | | | | | GND | | | | | | | | | = | = | | | | | | - | | н | | = | | 13 thru 24 on next page. |
| 1 | CIKAR | OEL AD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Pins |
| Case L | Test no | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 97.0 | 3/2 | 373 | 374 | 375 | 376 | 27.0 | 37.7 | 3/8 | 379 | 380 | 381 | 382 | 383 | 200 | 2004 | 385 | 386 | 387 | 388 | 389 | 390 | 390 | 391 | 392 | 393 | 200 | 480 | 395 | 306 | 396 | 397 | 308 | 020 | 399 | 400 | i, | 401 | 402 | 403 | 20- | 404 | 405 | 406 | 2 | 407 | 408 | type 05. |
| MIL-STD- 883 | pottan | 3003 | (fig. 3) | · • | | | | | - | - | - | | - | | | = | | - | = | | | = | = | - | | | - | | | | - | = | | | | | | = | | | | - | | - | - | | = | - | | | - | | | | = | | | | | See footnotes at end of device type 05. |
| Symbol | | t _{P2H3} | 217 | | | | | | | | | | | | | | | | l | PZL3 | | | | | | | | | | | | | | | | | | PHZ2 | | | | | | | | | | | | | | | | | | | | | | es at end |
| Subgroup | | 6 | Tc = 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | footnot |

TABLE III. Group A inspection for device type 05. Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open).

| | Unit | | ns | = | | : = | = | | = | = | - | | = | = | | | = | = | - | = | | = | = | | = | = | | | = | = | = | = | | = | = | | = | - | = | = | = | = | | | | = | = | = | = | |
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| | mits | Max | 45 | | | : = | = | = | = | = | = | | = | = | | | 0 | 00 = | = | = | = | = | = | | | = | | | - | = | = | | | = | - | | | | | = | = | | | = | : | = | | = | = | |
| | Test Limits | Min | 2 | | | : = | = | = | = | | = | " | = | = | | | | | = | | | | = | | | | | | = | | | | | = | | | | | = | = | = | | | | | | | = | = | • |
| | Measured | terminal | DIR to B1 | DIR to B2 | DIR to B3 | DIK to B4 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A/ | 10 40 AIO | 19 0) AIO | 20 00 010 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A3 | DIR to A4 | DIN 10 AS | DIR to A7 | DIR to A8 | G to B1 | G to B2 | 10 C C C C C C C C C C C C C C C C C C C | | G to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | G to A1 | CA 05 | 2 2 | G to A3 | G to A4 | <u>G</u> to A5 | <u>G</u> to A6 | G to A7 | G to A8 | |
| | 24 | Voc | 5.0 V | = | | : = | = | = | = | = | = | | = | = : | | | = | = | = | = | = | = | = | | | = | | | = | = | = | = | = | = | = | | | | | | | = | | | : | | | | | |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ./ V; or (| 22 | SEL BA | GND | - | | : = | = | - | = | = | = | | = | = | | | - | - | - | = | = | = | = | | = | - | | | - | = | = | | | | = | | | | | = | | | | - | | | | | | |
| o ≤ wol | 21 | IO | GND | = | | : = | = | = | = | = | = | | = | = | | | = | = | - | - | = | = | - | | - | = | | | - | - | = | Z | - | = | - | | | | - | = | | = | | - | | | | | | |
| ≥ 2.0 V; | 20 | B1 | OUT | | | | | | | GND | | | | | | | Ē | 5 | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | | GND | | | | | | | | | |
| pe nign | 19 | B2 | | OUT | | | | | | | GND | | | | | | | Ę | 3 | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | | GND | | | | | | | | |
| ed may | 18 | B3 | | | OUT | | | | | | | GND | | | | | | | Ē | 3 | | | | | | | 4.5 V | | | | | | | OUT | | | | | | | | | GND | | | | | | | |
| l erminal conditions (pins not designated may be nigh ≥ 2.0 V; low ≤ 0.7 V; or open) | 17 | B4 | | | į | 00 | | | | | | | GND | | | | | | | TUO | | | | | | | | 4.5 V | | | | | | | TIO | 100 | | | | | | | | 2 | GND | | | | | • |
| ou suid) | 16 | B5 | | | | Ē | 5 | | | | | | | GND | | | | | | | TUO | | | | | | | 7 5 7 | v. C. | | | | | | | | OUT | | | | | | | | | GND | | | | |
| nditions | 15 | B6 | | | | | OUT | | | | | | | | GND | | | | | | | DOT | | | | | | | 457 | , , | | | | | | | | OUT | | | | | | | | | GND | | | |
| ninai cor | 14 | B7 | | | | | | OUT | | | | | | | 9 | GND | | | | | | | OUT | | | | | | | 4.5 V | 2 | | | | | | | | OUT | | | | | | | | | GND | | |
| ler | 13 | B8 | | | | | | | OUT | | | | | | | | GIND | | | | | | | OUT | | | | | | | 4.5 V | | | | | | | | | OUT | | | | | | | | | GND | • |
| | Case L | Test no. | 361 | 362 | 363 | 364 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 3/5 | 377 | 370 | 370 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 300 | 391 | 392 | 393 | 394 | 395 | 306 | 380 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 100 | 404 | 405 | 406 | 407 | 408 | type 05. |
| CTO | 883 | method | 3003 | (fig. 3) | | : = | = | - | = | = | | = | = : | = : | | : : | = | = | - | = | = | = | | = | = | | = : | | = | = | | = | = | = | = | | = | = | = | = | - | - | = | - | | - | = | = | - | d of device |
| o desired | | | t _{PZH3} | | | | | | | | | | | | | | | PZL3 | | | | | | | | | | | | | | t _{PHZ2} | | | | | | | | | | | | | | | | | | es at en |
| 9 | ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה | | 6 | Tc = 25°C | | | | | | | | | | | | | + | - | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | See footnotes at end of device type 05 |

TABLE III. Group A inspection for device type 05.

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| | Unit | | SU | = | = | = | = | = | = | - | = | = | = | = | - | - | = | - | - - | - - | = | = | - - | - | = | - - | = | = | = : | | - | = | - - | | - | - | = | = | - - | - | - | - - | - | |
| | Test Limits | Max | 40 | = | = | = | = | = | = | = | = | = | = | = | - | | = | = | | | = | = | | = | = | | = | = | | | 35 | = | | | = | = | = | | | = | | | : = | |
| | Test | Min | 2 | = | = | = | = | = | = | = | = | = | = | = | | | = | = | | | = | = | | = | = | | | = | | | = | = | | | = | = | = | | | = | | | : = | |
| | Measured | terminal | Ē to B1 | G to B2 | G to B3 | <u>G</u> to B4 | G to B5 | G to B6 | <u>G</u> to B7 | G to B8 | <u>G</u> to A1 | G to A2 | <u>G</u> to A3 | ☐ to A4 | <u>G</u> to A5 | G to A6 | ⊡ to A7 | G to A8 | DIR to B1 | DIR to B2 | DIR to B4 | DIR to B5 | DIR to B6 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to B1 | DIR to B2 | DIR to B3 | DIR to B4 | DIR to B6 | DIR to B7 | DIR to B8 | DIR to A1 | DIR to A2 | DIR to A4 | DIR to A5 | DIR to A6 | DIR to A7 | DIR to Ao |
| | 24 | Vcc | 5.0 V | | | | | | | = | | | | | | | | = | 5.0 V | | = | = | | = | = | | = | = | | | = | = | | | = | = | = | = | | = | | | | = |
| open). | 23 | CLK BA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Ì | |
| .7 V; or o | 22 | SEL BA | GND | | = | = | = | = | = | = | = | = | = | = | = | = | = | | | | | = | | | = | | | = | | | = | = | | | - | = | = | | | = | | | | |
| $low \le 0$ | 21 | ΙØ | Z | = | = | = | = | = | = | = | = | = | = | = | - | = | = | = | GND | | = | | | | = | | - | | | | | | | | = | | | | | | | | | - |
| ≥ 2.0 V; | 20 | B1 | OUT | | | | | | | | 4.5 V | | | | | | | | OUT | | | | | | GND | | | | | | TUO | | | | | | | 4.5 V | | | | | 1 | |
| e high | 19 | B2 | | OUT | | | | | | | | 4.5 V | | | | | | | H | | | | | | | GND | | | | | | OUT | | | | | | \dashv | 4.5 V | | | | 1 | |
| d may k | 18 | B3 | | | TUO | | | | | | | | 4.5 V | | | | | | | F | 3 | | | | | 2 | GIND | | | | | | OUT | | | | | | 4 5 7 | > 0. | | | + | |
| Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$; low $\leq 0.7 \text{ V}$; or open) | 17 | B4 | | | | OUT | | | | | | | | 4.5 V | | | | | | | OUT | | | | | | GND | | | | | | į | 100 | | | | | | 4.5 V | | | | |
| ins not | 16 | B5 | | | | | OUT | | | | | | | | 4.5 V | | | | | | | OUT | | | | | | GND | | | | | | F | 5 | | | | 1 | | 4.5 V | | + | ade. |
| itions (p | 15 | B6 | | | | | | OUT | | | | | | | | 4.5 V | | | | | | H | 100 | | | | | | GND | | | | | | TUO | | | | | | H | 4.5 V | _ | next pa |
| ial cond | 41 | B7 | | | | | | | OUT | | | | | | | , | 4.5 V | | | | | | Ē | - 00 | | | | | | GND | | | | | | DUT | | | | | | | 4.5 V | 3 thru 24 on next page. |
| Termir | 13 | B8 | | | | | | | | OUT | | | | | | | 7 | 4.5 V | | | | | | TITO | | | | | | טאט | 2 | | | | | | OUT | | 1 | | | | 7 | $\overline{}$ |
| - | | | _ | | | | | | | | | | | | | | | | | | | | | - | H | | | | | + | | | | | | | | | _ | | _ | | | |
| | | ř | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 428 | 426 | 430 | 437 | 433 | 434 | 436 | 437 | 438 | 436 | 44 | 442 | 443 | 444 | 446 | 447 | 448 | 446 | 450 | 452 | 453 | 454 | 455 | ice type |
| CHO CHO | WIL-51 D- 883 | method | 3003 | (fig. 3) | = | = | - | = | = | - | = | = | = | = | = | = | = | | | | - | = | | = | - | | - | = | | | = | = | | | = | = | = | = | | - | - | | | d of devi |
| 1 | ey mbol | | t _{PL22} | | | | | | | | | | | | | | | | PHZ3 | | | | | | | | | | | | PL73 | | | | | | | | | | | | | tes at en |
| 1 | dnoubane | | 6 | Tc = 25°C | | | | | | | | | | | | | | | • | | | | | | | | | | | | + | | | | | | | | | | | | | See footnotes at end of device type 05. |

Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$: low $\leq 0.7 \text{ V}$: or open). TABLE III. Group A inspection for device type 05.

| | | Unit | | us | | | | | | | | | | | | | | | | | |
|--|-----------------|-------------|----------|-------------------|-------------------|------|------|------|------|------|--|----------------|------|------|------|------|------|------|------|--|------------------------|
| | | ō | | | | | | | | | | | | | | | | | | | |
| | | Test Limits | Max | 39 | 69 | 30 | 39 | 28 | 69 | 69 | 69 | 72 | 28 | 69 | 9 | 9 | 25 | 52 | 46 | | |
| | | Test | Min | 7 | = | = | = | | = | = | = | | = | = | = | | = | ш | | | |
| | | Measured | terminal | | | | | | | | | | | | | | | | | | |
| | | 12 | GND | | | | | | | | | | | | | | | | | | |
| 7 | | 1 | A8 | | | | | | | | | | | | | | | | | | |
| 5 , 5 | | 10 | A7 | | | | | | | | | | | | | | | | | | |
| , IOW // | | 6 | A6 | | | | | | | | | | | | | | | | | | |
| 0.1 | | 8 | A5 | | | | | | | | | | | | | | | | | | |
| | | 7 | 44 | | | | | | | | | | | | | | | | | | |
| מת בומא | | 9 | A3 | | | | | | | | | | | | | | | | | | |
| ellillia collations (pins not designated may be ingn ≥ 2.0 V, low ≥ 0.1 V, or open). | | 2 | A2 | | | | | | | | (| j | | | | | | | | | |
| | | 4 | A1 | | | | | | | | - 11050 | C= + 173 | | | | | | | | : -55°C. | |
| | | က | DIR | | | | | | | | L tacovo | י, פאכפטו י | | | | | | | | x cept T_c = | |
| | | 2 | SEL AB | | | | | | | | diorpaio | dnoifians s | | | | | | | | ogroup 10, e | |
| E D | | - | CLK AB | | | | | | | | odcition of | JOHNING AS | | | | | | | | limits as suk | |
| | | Case L | Test no. | | | | | | | | Logical Co | 10 (d) | | | | | | | | iditions, and | |
| | MIL-STD- | 883 | method | | | | | | | | Coacts — T tacovo O augustina so ancitibado locimatot bao atact amos | Sallie lesis a | | | | | | | | Same tests, terminal conditions, and limits as subgroup 10, except $T_C = -55$ °C. | |
| | | | | t _{PUH1} | t _{PHL1} | PLH2 | PHL2 | PLH3 | PHL3 | PUH4 | PHL4 | PZH2 | PZL2 | PZH3 | PZL3 | PHZ2 | PLZ2 | PHZ3 | PLZ3 | Same tests | |
| | Subgroup Symbol | | | 10 | Tc = 125°C | | | | | | | | | | | | | | | 11 | T _c = -55°C |
| | | | | _ | - | + | ţ | ţ | ţ | ţ | ţ | + | ţ | + | + | + | ţ | + | + | | |

TABLE III. Group A inspection for device type 05.

| | lodmyS | | MI -STD- | | Terr | minal cor | nditions | ou suid) | Terminal conditions (pins not designated may be high ≥ 2.0 V; low ≤ 0.7 V; or open). | ed may | be high | ≥ 2.0 V | ; low ≤ 0 | .7 V; or | open). | | | | | |
|---|------------------------|-------------------|---|---|--------------|-------------|-----------------------|-----------|--|--------|---------|---------|-----------|----------|--------|-----|----------|-------------|------|------|
| | di Silano | | | Case L | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Measured | Test Limits | mits | Unit |
| | | | method | Test no. | B8 | B7 | B6 | B5 | P4 | 83 | B2 | B4 | lΩ | SEL BA | CLK BA | Vcc | terminal | Min | Max | |
| | 10 | t _{PLH1} | | | | | | | | | | | | | | | | 2 | 39 | ns |
| | Tc = 125°C | t _{PHL1} | | | | | | | | | | | | | | | | | 26 | |
| + | | PLH2 | | | | | | | | | | | | | | | | н | 30 | |
| + | | PHL2 | | | | | | | | | | | | | | | | н | 38 | |
| + | | PLH3 | | | | | | | | | | | | | | | | | 28 | |
| + | | PHL3 | | | | | | | | | | | | | | | | | 26 | |
| + | | PLH4 | | | | | | | | | | | | | | | | н | 26 | |
| + | | PHL4 | Concept T tanged to another production of another production of the concept T = 1.40000 | Locicarot box | o odcitio | di oroquo | +00000 | T 125 | ر | | | | | | | | | | 26 | |
| + | | PZH2 | Sallie tests o | E C C C C C C C C C C C C C C C C C C C | conditions | as subgioup | a, except | 0 = + 173 | j | | | | | | | | | | 72 | |
| + | | PZL2 | | | | | | | | | | | | | | | | | 28 | |
| + | | PZH3 | | | | | | | | | | | | | | | | н | 69 | = |
| + | | PZL3 | | | | | | | | | | | | | | | | | 92 | = |
| + | | PHZ2 | | | | | | | | | | | | | | | | | 92 | |
| + | | PLZ2 | | | | | | | | | | | | | | | | | 52 | |
| + | | PHZ3 | | | | | | | | | | | | | | | | | 25 | = |
| + | | PLZ3 | | | | | | | | | | | | | | | | н | 46 | н |
| | 11 | Same test: | Same tests, terminal conditions, and limits as subgroup 10, except $T_C = -55$ °C. | nditions, and | limits as su | ubgroup 10, | except T _c | = -55°C. | | | | | | | | | | | | |
| _ | T _c = -55°C | | | | | | | | | | | | | | | | | | | |

2.5 V/5.5 V); 0 V 1/ Tests shall be performed in sequence, attributes data only.
 2/ H > 1.5 V; L < 1.5 V.
 3/ A = 3.0 V minimum; B = 0.0 V or GND.
 4/ Prior to test, bus registers are loaded high by placing 4.5 V on bus data and applying one clock pulse (The bus is then placed at GND for the duration of the test.

2.5 V/5.5 V); · 0 V Prior to test, bus registers are loaded low by placing GND on bus data and applying one clock pulse (the bus is then placed at $4.5 \, \text{V}$ for the duration of the test. 2/

5. PACKAGING

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

6. NOTES

(This section contains information of a general or explanatory nature which may be helpful, but is 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. Requirements for certificate of compliance, if applicable.
 - e. Requirements for notification of change of product or process to contracting activity in addition to notification to the qualifying activity, if applicable.
 - f. Requirements for failure analysis (including required test condition of method 5003 of MIL-STD-883), corrective action, and reporting of results, if applicable.
 - g. Requirements for product assurance options.
 - h. Requirements for special carriers, lead lengths, or lead forming, if applicable. These requirements should not affect the part number. Unless otherwise specified, these requirements will not apply to direct purchase by or direct shipment to the Government.
 - i. Requirements for "JAN" marking.
 - j. Packaging requirements (see 5.1).

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- 6.3 <u>Superseding information.</u> The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.
- 6.4 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DSCC-VQ, 3990 E. Broad Street, Columbus, Ohio 43123-1199.
- 6.5 <u>Abbreviations, symbols, and definitions.</u> The abbreviations, symbols, and definitions used herein are defined in MIL-PRF-38535, MIL-HDBK-1331, and as follows:

| | Ground zero voltage potential. Voltage level at an input terminal. Current flowing into an input terminal. |
|------------------|--|
| t _{PHZ} | |
| t _{PLZ} | Output disable time (of a three state output) from low level. The time between the specified reference points on the input and output voltage waveforms with the three state output changing from the defined low level to a high impedance (off) state. |
| t _{РZH} | Output enable time (of a three state output) to high level. The time between the specified reference points on the input and output voltage waveforms with the three state output changing from a high impedance (off) state to the defined high level. |
| t _{PZL} | Output enable time (of a three state output) to low level. The time between the specified reference points on the input and output voltage waveforms with the three state output changing from a high impedance (off) state to the defined low level. |

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

| Military device | Generic-industry |
|-----------------|------------------|
| type | type |
| 01 | 54LS242 |
| 02 | 54LS243 |
| 03 | 54LS245 |
| 04 | 54LS646 |
| 05 | 54LS648 |

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

TABLE IV. Manufacturer's designator.

| | | | Circuits | | |
|-----------------|----------------------|-----------------|---------------------------|--------------|---------------|
| | Α | В | С | D | E |
| Device types | Texas Instruments | Signetics Corp. | National Semiconductor | Raytheon Co. | Motorola Inc. |
| 01 | Х | X | X | X | X |
| 02 | Х | X | Χ | Χ | Χ |
| 03 | Χ | X | | | Χ |
| 04 | Χ | | | | |
| 05 | Χ | | | | |

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

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC
(Project 5962-1997)

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 www.dodsp.daps.mil.