INCH-POUND

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

MILITARY SPECIFICATION

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

Inactive for new design after 7 September 1995.

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

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

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 For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.4).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

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

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

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

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

AMSC N/A FSC 5962

1.3 Absolute maximum ratings.

Supply voltage rangeInput voltage range	-1.5 V at -12 mA to +5.5 V
Storage temperature range	-65°C to +150°C
Maximum power dissipation per gate, (P_D) $\underline{1}$ /	
Device type 01	
Device types 02 and 06	268 mW
Device type 03	286 mW
Device type 04	
Device type 05	275 mW
Lead temperature (soldering 10 seconds)	300°C
Thermal resistance, junction-to-case (θ _{JC})	(See MIL-STD-1835)
Junction temperature (T _J) <u>2</u> /	175°C

1.4 Recommended operating conditions.

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

2.0 APPLICABLE DOCUMENT

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

2.2 Government documents.

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

DEPARTMENT OF DEFENSE SPECIFICATIONS

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

DEPARTMENT OF DEFENSE STANDARDS

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

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

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

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

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

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

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

3. REQUIREMENTS

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

TABLE I. Electrical performance characteristics.

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

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

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

		Conditions	Device	Lin	nits	
Test	Symbol	-55°C ≤ T _C ≤ +125°C	type	Min	Max	Unit
	1	unless otherwise specified	J ,			
Propagation delay time, high-to-low	t _{PHL1}	$R_{I} = 390\Omega \pm 5\%$	02	6	40	ns
level output from A, B, or C to W	11121		06	6	48	
Propagation delay time, low-to-high	tPLH1	C _L = 50 pF minimum	02	6	38	ns
level output from A, B, or C to W		(figure 4)	06	6	43	
Propagation delay time, high-to-low	t _{PHL2}		02	8	49	ns
level output from A, B, or C to Y			06	8	60	
Propagation delay time, low-to-high	t _{PLH2}		02	8	45	ns
level output from A, B, or C to Y			06	8	58	
Propagation delay time, high-to-low	tPHL3		02	6	37	ns
level output from strobe to W			06	6	38	
Propagation delay time, low-to-high level output from strobe to W	^t PLH3		02, 06	6	35	ns
Propagation delay time, high-to-low	tPHL4		02	8	46	ns
level output from strobe to Y			06	8	52	
Propagation delay time, low-to-high	t _{PLH4}		02	8	42	ns
level output from strobe to Y			06	8	52	
Propagation delay time, high-to-low	t _{PHL5}		02, 06	3	32	ns
level output from D ₀ -D ₇ to W						
Propagation delay time, low-to-high	t _{PLH5}		02, 06	3	26	ns
level output from D ₀ -D ₇ to W						
Propagation delay time, high-to-low	tPHL6		02	6	41	ns
level output from D ₀ -D ₇ to Y			06	6	44	
Propagation delay time, low-to-high	tPLH6		02	6	33	ns
level output from D ₀ -D ₇ to Y			06	6	36	
Propagation delay time, high-to-low level output from data to Y	^t PHL1	$R_L = 390\Omega \pm 5\%,$	03	3	29	ns
Propagation delay time, low-to-high level output from data to Y	t _{PLH1}	C _L = 50 pF minimum (figure 5)	03	3	28	ns
Propagation delay time, high-to-low level output from A or B to Y	t _{PHL2}		03	6	44	ns
Propagation delay time, low-to-high level output from A or B to Y	tPLH2		03	6	42	ns
Propagation delay time, high-to-low level output from strobe to Y	t _{PHL3}		03	6	32	ns
Propagation delay time, low-to-high level output from strobe to Y	t _{PLH3}		03	6	42	ns

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

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

TABLE II. Electrical test requirements.

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

^{*}PDA applies to subgroup 1.

4. VERIFICATION

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

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

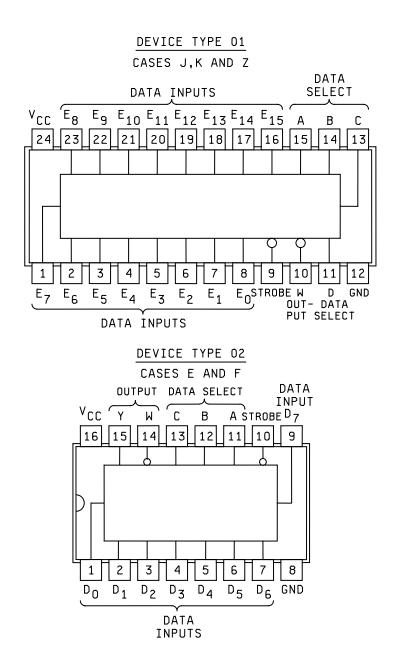
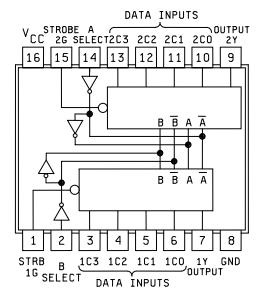


Figure 1. <u>Terminal connections (top view).</u>

DEVICE TYPE 03 CASES E AND F



DEVICE TYPE 04 CASES E AND F

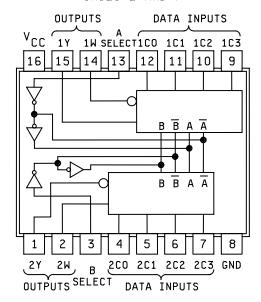
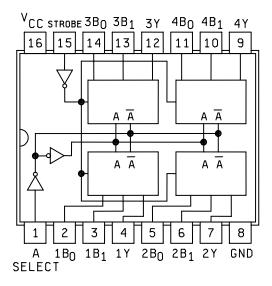


Figure 1. Terminal connections (top view) - Continued.

DEVICE TYPE 05 CASES E AND F



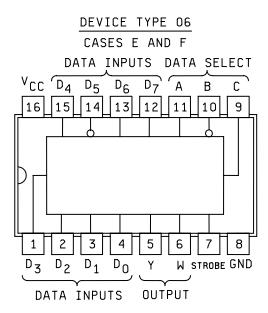


Figure 1. <u>Terminal connections (top view)</u> - Continued.

DEVICE TYPE 01 STROBE (ENABLE) E₀ -E₁ -E2 -E3 -E₅ -DATA A O— OUTPUT W E10-E₁₁-E₁₂-E₁₄ DATA SELECT (BINARY)

Figure 2. Logic diagrams.

DEVICE TYPES 02 AND 06

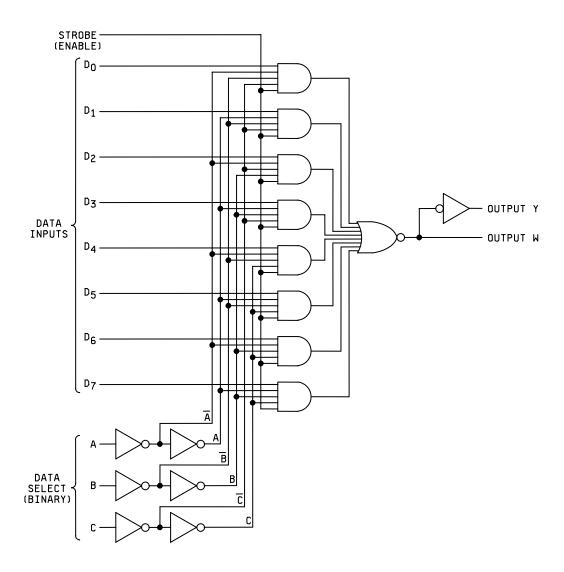


Figure 2. <u>Logic diagrams</u> – Continued.

DEVICE TYPE 03

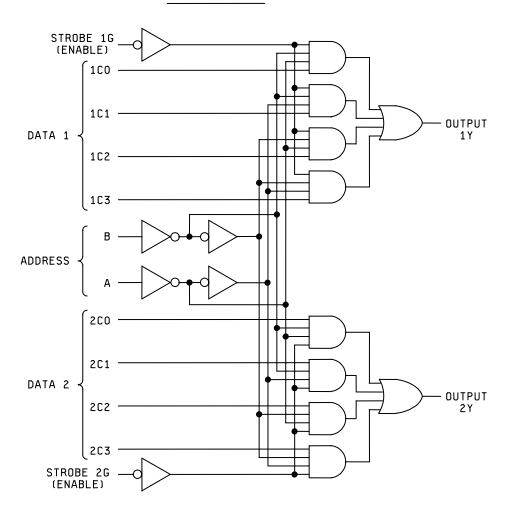


Figure 2. <u>Logic diagrams</u> – Continued.

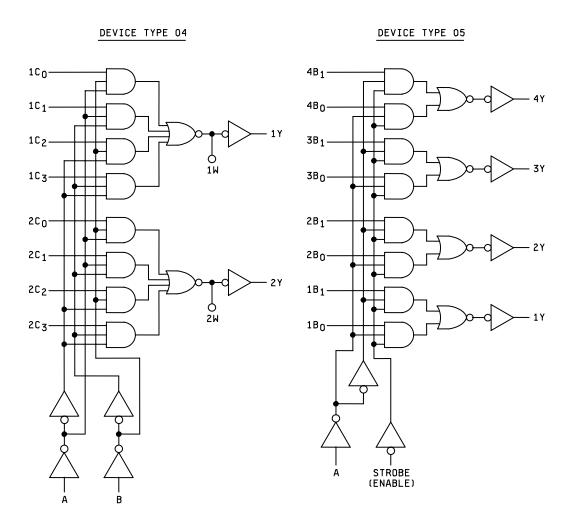


Figure 2. <u>Logic diagrams</u> – Continued.

Device type 01

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

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

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

Device types 02 and 06

				11	NPUT:	S						OUTI	PUTS
С	В	Α	STROBE	D ₀	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	Υ	W
Х	Х	Χ	Н	Х	Х	Х	Х	Х	Х	Х	Х	L	Н
L	L	L	L	L	Х	Х	Х	Х	Х	Х	Х	L	Н
L	L	L	L	Н	Х	Х	Х	Х	Х	Х	Х	Н	L
L	L	Н	L	Х	L	Х	Х	Х	Х	Х	Х	L	Τ
L	L	Н	L	Х	Н	Х	Х	Х	Х	Х	Х	Н	L
L	Н	L	L	Х	Х	L	Х	Х	Х	Х	Х	L	Н
L	Н	L	L	Х	Х	Н	Х	Х	Х	Х	Х	Н	L
L	Н	Н	L	Х	Х	Х	L	Х	Х	Х	Х	L	Н
L	Н	Н	L	Х	Х	Х	Н	Х	Х	Х	Х	Н	L
Н	L	L	L	Х	Х	Х	Х	L	Х	Х	Х	L	Н
Н	L	L	L	Х	Х	Х	Х	Н	Х	Х	Х	Н	L
Н	L	Н	L	Х	Х	Х	Х	Х	L	Х	Х	L	Н
Н	L	Н	L	Х	Х	Х	Х	Х	Н	Х	Х	Н	L
Н	Н	L	L	Х	Х	Х	Х	Х	Х	L	Х	L	Н
Н	Н	L	L	Х	Х	Х	Х	Х	Х	Н	Х	Н	L
Н	Н	Н	L	Х	Х	Х	Х	Х	Х	Х	Ĺ	L	Н
Н	Н	Н	L	Х	Х	Х	Х	Х	Х	Х	Н	Н	L

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

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

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

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

Device type 04

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

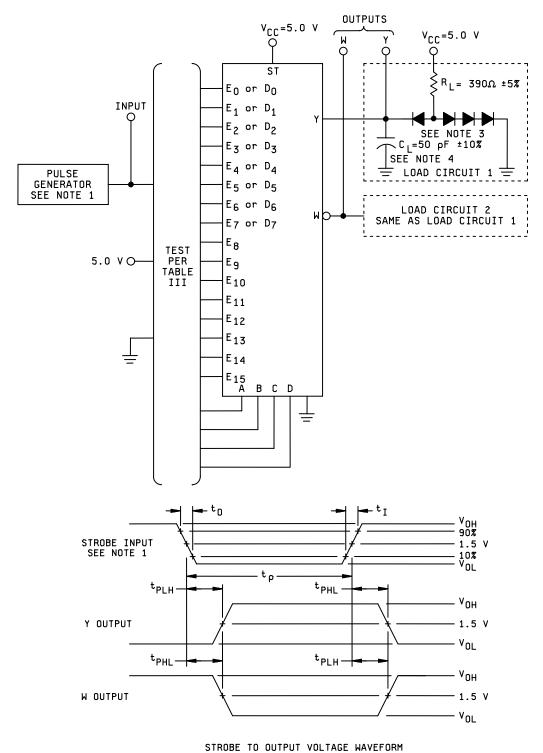
Address inputs A and B are common to both sections. H = High level, L = Low level, X = Irrelevant.

Device type 05

Strobe (enable)	Select input	Da inp		Output
G	Α	B ₀	B ₁	Υ
Н	Х	Х	Х	L
L	Н	Х	L	L
L	Н	Х	Н	Н
L	L	L	Х	L
L	L	Η	Χ	Н

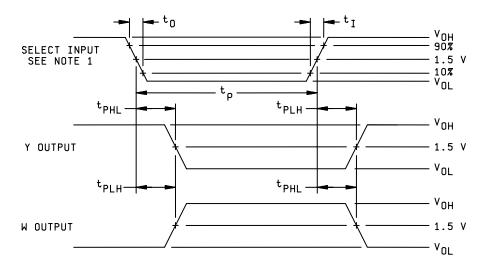
Address A and strobe G are common to all sections. H = High level, L = Low level, X = Irrelevant.

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

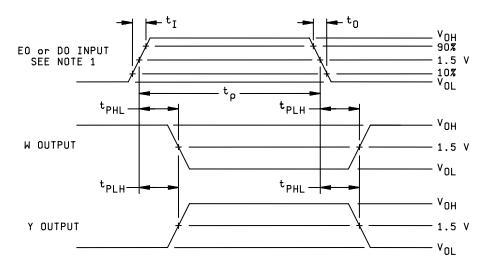


STRUBE TO OUTPUT VOLTAGE WAVEFURP

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



SELECT INPUT TO OUTPUT VOLTAGE WAVEFORM

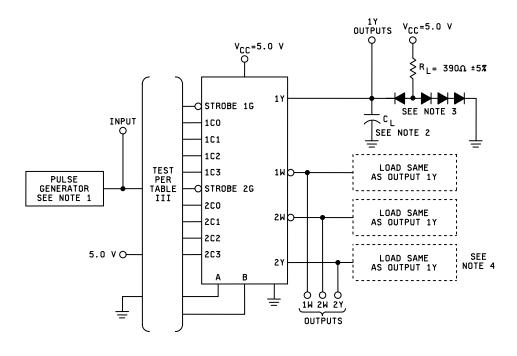


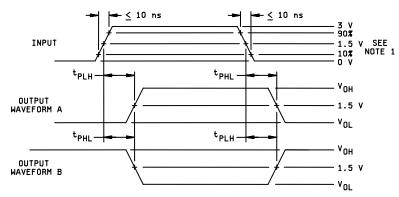
DATA INPUT TO OUTPUT VOLTAGE WAVEFORM

NOTES:

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

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





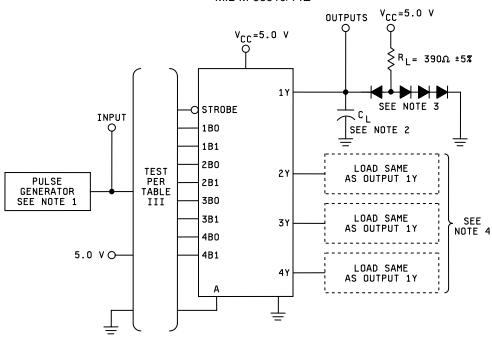
VOLTAGE WAVEFORMS

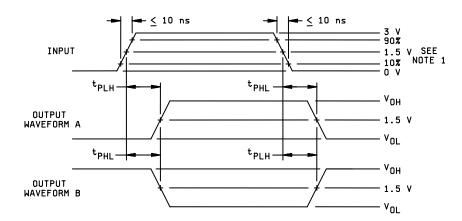
Switching time	Output waveform
CN to Y (types 03 and 04)	Α
CN to W (type 04 only)	В
A or B to Y (types 03 and 04)	А
A or B to W (type 04 only)	В
G to Y (type 03 only)	В

NOTES:

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

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





VOLTAGE WAVEFORMS

Input	Output waveform
A to Y	Α
B to Y	А
S to Y	В

NOTES:

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

FIGURE 6. Switching test for device type 05.

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

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	1	2	3	4	5	6	7	8	9	10	11	12	Meas.		Test limit	s
Cabgroup	Cymbol	method	Test No.	E ₇	E ₆	E ₅	E ₄	E ₃	E ₂	E ₁	E ₀	G	W	D	GND	terminal	Min	Max	Unit
1	V _{OH}	3006	1									2.0 V	8mA		GND	W	2.4		V
T _C = 25°C	V _{OL}	3007	2								2.0 V	0.8 V	16mA	GND	"	W		0.4	V
и	V _{IC}		3												"	Α		-1.5	V
и	"		4												"	В		"	"
"	u		5											40 4	"	С		u	"
и	"		6 7									-12mA		-12mA	"	D G		"	"
и	"		8								-12mA	12			"	E ₀		"	"
и	ш		9							-12mA					"	E ₁		"	"
и	"		10						-12mA						"	E ₂		"	**
и	"		11					-12mA							"	E ₃		"	**
ш	и		12				-12mA								"	E ₄		ш	"
	"		13		40. 4	-12mA										E ₅		"	
и	u		14 15	-12mA	-12mA										"	E ₆			"
"	"		16	-12111A											"	E ₇		"	"
и	"		17												"	E ₈ E ₉		"	"
и	ш		18												"	E ₁₀		"	"
и	"		19												"	E ₁₁		"	"
и	"		20												"	E ₁₂		"	"
ш	"		21												"	E ₁₃		"	"
"	ш		22												"	E ₁₄		"	"
=	ű		23												"	E ₁₅		ш	и
и	IIL	3009	24								0.4 V	GND		GND	"	E ₀	-0.7	-1.6	mA
и	ш	и	25							0.4 V		и		"	"	E ₁	<u>1</u> /	"	u
	u	и	26						0.4 V			u		"	"	E ₂	"	"	"
			27					0.4 V								E ₃			
	"		28 29			0.4 V	0.4 V							"	"	E4			"
и	"	44	30		0.4 V	0.4 V						"		"	"	E ₅	"	"	"
u	ш	ш	31	0.4 V	U. ~ V							ш		"	"	E ₆ E ₇	"	ш	u
ш	u	44	32	", "								и		5.5 V	"	E ₈	"	44	"
u	ш	66	33									66		"	"	E9	и	"	u
ш	и	ш	34									и		u	44	E ₁₀	"	"	"
ш	и	ш	35									и		"	44	E ₁₁	"	"	"
и	"	44	36									ш		"	"	E ₁₂	"	"	"
и	u	ш	37									ш		"	"	E ₁₃	"	**	ш
и	u	66	38									и		"	44	E ₁₄	"	44	"
ш	u	66	39									и		"	44	E ₁₅	"	"	"
и	"	u	40									0.4 V			"	G	"	"	"
	"	66	41 42												"	A B	"	"	"
ш	"	ш	43												"	C	"	"	"
ш	"	66	44											0.4 V	"	D	"	"	"

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

Subgroup	Symbol	MIL- STD-883	Cases J, K,	13	14	15	16	17	18	19	20	21	22	23	24	Meas.		Test limit	ts
Cubgroup	Cymbol	method	Test No.	С	В	Α	E ₁₅	E ₁₄	E ₁₃	E ₁₂	E ₁₁	E ₁₀	E ₉	E ₈	Vcc	terminal	Min	Max	Unit
1	V _{OH}	3006	1												4.5 V	W	2.4		V
T _C = 25°C	V _{OL}	3007	2	GND	GND	GND									"	W		0.4	V
"	V _{IC}		3			-12mA									"	Α		-1.5	V
ш	"		4		-12mA										"	В		"	44
"	"		5	-12mA											"	С		"	"
	"		6 7												"	D G		"	
"	"		8												44	E ₀		"	44
66	ш		9												"	E ₁		"	"
44	ű		10												"	E ₂		"	44
44	"		11												"	E ₃		"	"
44	ű		12												"	E ₄		"	"
u	"		13												"	E ₅		"	"
66	u		14												"	E ₆		"	"
44	"		15												"	E ₇		"	"
			16											-12mA		E ₈			
			17									404	-12mA			E9			
ш	ш		18 19								-12mA	-12mA			"	E ₁₀		"	"
44	"		20							-12mA	-12IIIA				"	E ₁₁		"	"
44	"		21						-12mA	-1211/4					"	E ₁₂ E ₁₃		"	"
"	ű		22					-12mA	12.1.0						"	E ₁₄		"	"
"	ш		23				-12mA								"	E ₁₅		"	44
и	I _{IL}	3009	24	GND	GND	GND									5.5 V	E ₀	-0.7	-1.6	mA
"	"	и	25	"	GND	5.5 V									"	E ₁	<u>1</u> /	"	"
66	"	ш	26	ш	5.5 V	GND									"	E ₂	ш	"	"
44	ű	ш	27	44	5.5 V	5.5 V									"	E ₃	ш	"	"
ш	ш	ш	28	5.5 V	GND	GND									"	E ₄	ш	"	"
44	"	66	29	"	GND	5.5 V									"	E ₅	es	"	"
"	"	a	30	44	5.5 V	GND									44	E ₆	**	"	44
"	"	ш	31	"	5.5 V	5.5 V									"	E ₇	и	"	"
	"	4	32	GND "	GND	GND							0.437	0.4 V	"	E ₈	"	"	"
			33	"	GND	5.5 V						0.41/	0.4 V			E ₉			l
			34	"	5.5 V	GND					0.437	0.4 V				E ₁₀			
			35		5.5 V	5.5 V				0.4 V	0.4 V					E ₁₁			"
44	"		36 37	5.5 V	GND GND	GND 5.5 V			0.4 V	U.4 V					"	E ₁₂		"	"
64	"	44	38	и	5.5 V	GND		0.4 V	U.4 V						44	E ₁₃		"	"
66	и	u	39	44	5.5 V 5.5 V	5.5 V	0.4 V	U.4 V							44	E ₁₄	ш	"	44
и	"	u	40		J.J V	J.J V	U.4 V								"	E ₁₅ G	ш	"	44
ш	ű	44	41			0.4 V									44	A	**	"	"
66	"	44	42		0.4 V										"	В	**	"	"
66	"	ш	43	0.4 V											44	С	"	"	u
.4	_ "		44													D			

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

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	1	2	3	4	5	6	7	8	9	10	11	12	Meas.		Test limit	ts
Subgroup	Syllibol	method	Test No.	E ₇	E ₆	E ₅	E ₄	E ₃	E ₂	E ₁	E ₀	G	W	D	GND	terminal	Min	Max	Ur
1	I _{IH1}	3010	45									2.4 V			GND	G		40	μ
T _C = 25°C	"	"	46											GND	"	Α		ш	'
.0	и	ш	47											GND	"	В		и	
ш	"	"	48											GND	"	Ċ		и	
ш	**	44	49									5.5 V		2.4 V	44	D		и	
ш	и	"	50								2.4 V			5.5 V	"	E ₀		44	
ш	"	44	51							2.4 V		и		u	44	E ₁		ш	
"	"	"	52						2.4 V			и		"	"	E ₂		и	
44	44	44	53					2.4 V				и		"	44	E ₃		ш	
ш	и	ш	54				2.4 V					и		"	u	E ₄		и	
"	"	"	55			2.4 V						и		u	"			и	
"	"	"			0.414	2.7 V									44	E ₅			
	-		56		2.4 V							-		_	"	E ₆		_	
"	"	"	57	2.4 V								"		"		E ₇			
44	**	44	58									"		GND	"	E ₈		и	
**	"	"	59									и		"	"	E9		и	
u	и	ш	60									и		"	u	E ₁₀		и	
44	"	44	61									"		"	"			и	
44	44	44	62									и		"	и	E ₁₁		и	
	"	"										"				E ₁₂			
	-		63													E ₁₃		_	
"	"	"	64									"		"	44	E ₁₄			
44	и	ш	65									ű		и	44	E ₁₅		и	
	I _{IH2}		66									"				G		100	
	44	44	67									и		GND	"	Α		ш	
44	44	44	68									"		GND	"	В		44	
44	44	44	69									"		GND	"	C		44	
"	"	"	70									и		5.5 V	"	D		и	
4	"	"									E E \ /	4		3.5 V	"			4	
u	"	"	71							551	5.5 V	"		"	"	E ₀			
	"	"	72							5.5 V					"	E ₁			
			73					5.51	5.5 V							E ₂			
		-	74					5.5 V								E ₃		-	
			75				5.5 V									E ₄			
	_	-	75			5.5 V										E ₅			
			77		5.5 V	1			1	1				l ",	"	E ₆	1		1
			78	5.5 V												E ₇			1
			79											GND	"	E ₈			1
u	и	44	80			1			1	1		u		"	"	E ₉	1	"	1
u	и	44	81									ш		"	"	E ₁₀		ш	
"	и	ш	82									и		"	"	E ₁₁		**	
44	и	ш	83									и		"	"	E ₁₂		**	
u	и	44	84			1			1	1		ш		"	"	E ₁₃	1	ш	
ш	и	44	85									и		"	"	E ₁₄		ш	1
и	ш	и	86						<u> </u>			и		и	44	E ₁₅		**	L
ш	Ios	3011	87								GND	GND	GND	GND	u	W	-20	-55	1
и	Icc	3005	88									5.5 V		5.5 V	u	V _{CC}		68	r
2		torminal condi	itions and limits a	o oubarou	n 1 avaar	ot To = 12	ond \/		4 - 4										

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

	1	N ALL	0 1 1/			(1-			ited may	,	1		.,	- -			1		
Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	13	14	15	16	17	18	19	20	21	22	23	24	Meas.		Test limit	:s
3		method	Test No.	С	В	Α	E ₁₅	E ₁₄	E ₁₃	E ₁₂	E ₁₁	E ₁₀	E ₉	E ₈	V _{CC}	terminal	Min	Max	Unit
1	l _{IH1}	3010	45												5.5 V	G		40	μA
T _C = 25°C	и	u	46	GND	GND	2.4 V									"	Α		"	44
.0 200	"	u	47	GND	2.4 V	GND									u	В		"	ш
и	"	"	48	2.4 V	GND	GND									"	С		"	44
и	"	ш	49	GND	GND	GND									"	D		"	44
ш	u	u	50	5.5 V	5.5 V	5.5 V									u	E ₀		"	ш
и	44	ű	51	"	5.5 V	GND									"	E ₁		"	44
и	"	44	52	и	GND	5.5 V									"	E ₂		"	ш
и	и	и	53	и	GND	GND									u	E ₃		"	ш
и	и	и	54	GND	5.5 V	5.5 V									ш	E ₄		u	ш
и	ш	u	55	ш	5.5 V	GND									44	E ₅		ш	44
ш	"	u	56	"	GND	5.5 V									"	E ₆		"	"
и	ш	и	57	"	GND	GND									ш			"	и
и		"												0.41/	"	E ₇		"	"
_	_	_	58	5.5 V	5.5 V	5.5 V								2.4 V	"	E ₈			
			59		5.5 V	GND							2.4 V			E ₉			
и	"	ű	60	ш	GND	5.5 V						2.4 V				E ₁₀		"	
и	a	u	61	и	GND	GND					2.4 V				44	E ₁₁		"	"
и	44	ű	62	GND	5.5 V	5.5 V				2.4 V					"	E ₁₂		"	"
и	и	и	63	и	5.5 V	GND			2.4 V						u	E ₁₃		"	"
и	"	u	64	"	GND	5.5 V		2.4 V							"	E ₁₄		"	"
и	"	u	65	"	GND	GND	2.4 V								"	E ₁₅		"	"
	I _{IH2}	"	66	GND	GND										"	G		100	"
	"וחב	u	67	GND	GND	5.5 V									44	A		"	"
и	ш	и	68	GND	5.5 V	GND									ш	В		"	"
ш	"	и	69	5.5 V	GND	GND									"	C		"	"
и	ш	и	70	GND	GND	GND									ш	D		ш	"
и		"													"			"	"
ш	"	u	71	5.5 V	5.5 V	5.5 V									44	E ₀		"	"
ш	"	u	72	ш	5.5 V GND	GND 5.5 V									44	E ₁		"	44
ш	и	и	73 74	ш	GND	GND									и	E ₂		"	"
ш	и	и	74 75	GND	5.5 V	5.5 V									и	E ₃		"	и
и	ш	и	75 75	GIVD "	5.5 V	GND									ш	E ₄		"	ш
ш	"	и	77	"	GND	5.5 V									"	E ₅		"	"
ш	"	и	78	"	GND	GND									"	E ₆		"	"
ш	"	и	76 79	5.5 V	5.5 V	5.5 V								5.5 V	"	E ₇		"	"
ш	**	"	80	3.3 V	5.5 V	GND							5.5 V	J.J V	"	E8		"	"
и	"	u	81	ш	GND	5.5 V						5.5 V	3.5 V		ш	E ₉		ш	ш
и	44	u	82	и	GND	GND					5.5 V	3.5 V			44	E ₁₀		"	66
ш	u	u	83	GND	5.5 V	5.5 V				5.5 V	J.J V				ш	E ₁₁		"	44
ш	ш	u	84	GIND "	5.5 V 5.5 V	GND			5.5 V	J.J V					"	E ₁₂		"	**
ш	и	u	85	ш	GND	5.5 V		5.5 V	J.J V						ш	E ₁₃		"	ш
ш	u	ш	86	ш	GND	GND	5.5 V	J.J V							"	E14		"	44
ш		3011	87	CND		GND	J.J V								"	E ₁₅	20	55	m A
и	los			GND	GND										и		-20	-55	mA
	I _{CC}	3005	88	5.5 V	5.5 V	5.5 V	L	L		l			<u> </u>			V _{CC}		68	mA
2			litions and limits																
3	Same tests	, terminal cond	litions and limits	as subgro	up 1, exce	$pt T_C = -55$	5°C and V	IC are omi	tted.										

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

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	1	2	3	4	5	6	7	8	9	10	11	12	Meas.		Test limit	s
	-,	method	Test No.	E ₇	E ₆	E ₅	E ₄	E ₃	E ₂	E ₁	E ₀	G	W	D	GND	terminal	Min	Max	Unit
7 TC = 25°C	Truth table test	3014	89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119	B A	B A	B A	B A	B A	B A	B A	B A	A 2/B """ """ """ """ """ """ """	H 3/ H L H L H L H L H L H L H L H L H L H L	B			3/	Wax	
и	ű	и	121									и	L	u	и	L '			
8			= 125°C and T _C	; = -55°C.		ı		1		50)/	ONE	ONE	OUT	ONE	ONE	A 4- 18'		0.7	I
9	t _{PHL1}	3003	122 123						5.0 V	5.0 V	GND "	GND "	OUT "	GND "	GND "	A to W	8	37	ns "
T _C = 25°C	"	(Fig 4)					5.0 V		5.0 V		и	и	ш	u	44	B to W C to W	"	и	"
и	"	ш	124 125				5.0 V				и	и	ш	IN	44	D to W	"	и	"
		"					-		-	5.01/				1		-			
	t _{PLH1}		126						5.037	5.0 V	GND "	GND "	OUT	GND "	GND "	A to W	8	39	ns "
			127				5011		5.0 V						"	B to W			
		"	128				5.0 V						"		"	C to W			
		u	129					-						IN	"	D to W			
	t _{PHL2}		130								5.0 V	IN	OUT	GND		G to W	6	34	ns
	tpLH2	l "	131	l		l	I		I	I	5.0 V	IN	OUT	GND	l "	G to W	6	28	ns

 $\label{eq:table_equation} \begin{array}{ll} \text{TABLE III.} & \underline{\text{Group A inspection for device type 01}} - \text{Continued.} \\ \text{Terminal conditions (pins not designated may be H} \geq 2.0 \text{ V, or L} \leq 0.8 \text{ V, or open).} \end{array}$

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	13	14	15	16	17	18	19	20	21	22	23	24	Meas.		Test limits	s
- Cabgroup	Cy50.	method	Test No.	С	В	Α	E ₁₅	E ₁₄	E ₁₃	E ₁₂	E ₁₁	E ₁₀	E ₉	E ₈	V _{CC}	terminal	Min	Max	Unit
7	Truth	3014	89												4.5 V	1			
T _C = 25°C	table	ű	90	В	В	В									"				
ш	test	ш	91	"	"	В									"				
	"	u	92	ш	"	Α									u				
			93			Α													
			94		A "	В													
			95			В													
			96		4	A													
			97			A													
			98	Α "	В	В													
			99	"	4	В													
			100		"	A													
и	"	и	101 102	44	Α	A B									ш				
и	ш	u	102	ш		В									u				
"	ш	"	103	ш	и	A									"	\ \	<u>3</u> /		
ш	ш	u	105	ш	и	A									и)	<u> 5</u> /		
и	"	ш	106	В	В	В								В	"				
и	и	u	107	"	ű	В								A	u				
ш	"	u	108	"	ш	Α							В		"				
u	44	44	109	и	"	Α							Α		и				
и	"	u	110	"	Α	В						В			"				
и	ш	u	111	и	"	В						Α			u				
u	"	ec.	112	"	и	Α					В				"				
и	ш	ű	113	44	"	Α					Α				u				
u	44	u	114	Α "	В	В				В					"				
	"		115			В			_	Α									
		"	116		и	A			В										
и	ш	u	117 118	ш	_	A B		В	Α						u				
"	ш	"	119	ш	Α "	В		A							"				
ш	ш	и	120	44	44	A	В								ш	l <i>1</i>			
64	ш	u	121	44	ш	A	A								44	/			
8	Repeat sub	group 7 at To	c = 125°C and T ₀	_C = -55°C.	•	•	•				•	•	•	•	•	•			
9	t _{PHL1}	3003	122	GND	GND	IN									5.0 V	A to W	8	37	ns
T _C = 25°C	"	(Fig 4)	123	GND	IN	GND									и	B to W	и	и	44
"	"	"	124	IN	GND	"									"	C to W	ш	и	"
64	и	и	125	GND	GND	и								5.0 V	и	D to W	ш	ш	ш
	t _{PLH1}	"	126	GND	GND	IN									5.0 V	A to W	8	39	ns
"	"	"	127	GND	IN	GND									ш	B to W	и	ш	**
и	ш	и	128	IN	GND	u									ш	C to W	и	ш	44
44	"	u	129	GND	GND	"								5.0 V	"	D to W	u	и	44
ш	t _{PHL2}	и	130	GND	GND	GND									и	G to W	6	34	ns
ш	tPLH2	u	131	GND	GND	GND									и	G to W	6	28	ns

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 $\label{eq:table_equation} \begin{array}{ll} \text{TABLE III.} & \underline{\text{Group A inspection for device type 01}} - \text{Continued.} \\ \text{Terminal conditions (pins not designated may be H} \geq 2.0 \text{ V, or L} \leq 0.8 \text{ V, or open).} \end{array}$

Subgroup	Symbol	MIL- STD-883	Cases J, K,	1	2	3	4	5	6	7	8	9	10	11	12	Meas.		Test limits	s
Subgroup	Syllibol	method	Test No.	E ₇	E ₆	E ₅	E ₄	E ₃	E ₂	E ₁	E ₀	G	W	D	GND	terminal	Min	Max	Unit
9	t _{PHL3}	3003	132								IN	GND	OUT	GND	GND	E ₀ to W	3	18	ns
T _C = 25°C	"	(Fig 4)	133							IN		"	"	44	"	E ₁ to W	"	"	u
"	"	44	134						IN			"	"	"	"	E ₂ to W	"	"	"
и	"	66	135					IN				ш	"	"	"	E ₃ to W	"	"	"
и	"	66	136				IN					ш	"	"	"	E ₄ to W	"	"	"
ш	"	44	137			IN						"	"	"	"	E ₅ to W	"	"	"
ш	u	и	138		IN							ш	"	44	"	E ₆ to W	"	"	"
u	"	u	139	IN								"	"	44	"	E ₇ to W	"	"	"
		"	140											5.0 V		E ₈ to W	"		
			141													E ₉ to W			
			142 143										4			E ₁₀ to W	"		
и	и	es	143									ш	4	"	u	E ₁₁ to W	"	"	"
ш	"	44	145									"	"	"	"	E ₁₂ to W E ₁₃ to W	"	"	"
ш	"	44	145									"	"	"	"	E ₁₃ to W	"	"	"
ш	"	44	147									"	"	"	"	E ₁₅ to W	"	"	"
ш		ш	148								IN	и	OUT	GND	"	E ₀ to W	3	24	ns
"	t _{PLH3}	44	149							IN	IIN	"	"	"	"	E ₁ to W	"	"	"
"	"	44	150						IN	IIN		ш	"	ш	u	E ₂ to W	"	"	"
и	"	44	151					IN				"	"	"	"	E ₃ to W	"	"	"
u	ű	44	152				IN					ш	м	44	"	E ₄ to W	"	44	"
"	"	66	153			IN						u	"	u	"	E ₅ to W	"	"	"
"	"	4	154		IN							"	"	"	"	E ₆ to W	"	"	"
и	u	66	155	IN								ш	44	44	"	E ₇ to W	"	"	"
и	u	66	156									ш	44	5.0 V	"	E ₈ to W	"	"	"
"	u	66	157									ш	44	44	"	E ₉ to W	"	"	"
"	"	ш	158									"	"	"	"	E ₁₀ to W	"	"	"
44	u	44	159									"	"	44	"	E ₁₁ to W	"	"	"
"	"	44	160									"	"	"	"	E ₁₂ to W	"	"	"
"	"	44	161									"	"	"	"	E ₁₃ to W	"	"	"
"	"	44	162									ш	44	44	"	E ₁₄ to W	"	44	"
ш	и	и	163									и	66	44	"	E ₁₅ to W	"	"	"
10	t _{PHL1}	и	164							5.0 V	GND	GND	OUT	GND	"	A to W	8	40	ns
T _C = 125°C	"	"	165						5.0 V		"	"	"	"	"	B to W	"	"	"
"	"	"	166				5.0 V				"	"	"	"	"	C to W	"	"	"
"	u u	и	167								ű	и	и	IN	и	D to W	"	и	"
"	t _{PLH1}	и	168								ш	ш	66	GND	"	A to W	"	43	"
"	и	и	169						5.0 V		ш	ш	66	44	"	B to W	"	44	"
"	"	и	170				5.0 V					"	"	"	"	C to W	"	"	"
	ű		171											IN		D to W		"	
"	t _{PHL2}	ш	172								5.0 V	IN	OUT	GND	"	G to W	6	37	ns
ш	t _{PLH2}	66	173								5.0 V	IN	OUT	GND	"	G to W	6	32	ns

 $\label{eq:table_equation} \begin{array}{ll} \text{TABLE III.} & \underline{\text{Group A inspection for device type 01}} - \text{Continued.} \\ \text{Terminal conditions (pins not designated may be H} \geq 2.0 \text{ V, or L} \leq 0.8 \text{ V, or open).} \end{array}$

Subgroup	Symbol	MIL- STD-883	Cases J, K,	13	14	15	16	17	18	19	20	21	22	23	24	Meas.		Test limits	s
Cabgroup	Cymbol	method	Test No.	С	В	Α	E ₁₅	E ₁₄	E ₁₃	E ₁₂	E ₁₁	E ₁₀	E ₉	E ₈	V _{CC}	terminal	Min	Max	Unit
9	t _{PHL3}	3003	132	GND	GND	GND									5.0 V	E ₀ to W	3	18	ns
T _C = 25°C	"	(Fig 4)	133	u	GND	5.0 V									"	E ₁ to W	"	"	"
u	u	44	134	"	5.0 V	GND									"	E ₂ to W	"	u	"
"	"	u	135	u	5.0 V	5.0 V									"	E ₃ to W	"	"	"
"	"	u	136	5.0 V	GND	GND									"	E4 to W	"	"	"
и	u	"	137	"	GND	5.0 V									"	E ₅ to W	"	u	"
"	"	и	138	"	5.0 V	GND									44	E ₆ to W	"	"	"
"	"	и	139	"	5.0 V	5.0 V									"	E ₇ to W	"	"	"
u	u	u	140	GND	GND	GND								IN	"	E ₈ to W	u	"	"
"	"	u	141	"	GND	5.0 V							IN		"	E ₉ to W	"		"
			142	"	5.0 V	GND						IN			l	E ₁₀ to W			
"		"	143		5.0 V	5.0 V				INI	IN				"	E ₁₁ to W	"		
"	44	"	144 145	5.0 V	GND GND	GND 5.0 V			IN	IN					44	E ₁₂ to W	"	"	4
и	"	и	145	"	5.0 V	GND		IN	IIN						"	E ₁₃ to W	ш	"	"
"	44	"	146	"	5.0 V 5.0 V	5.0 V	IN	IIN							44	E ₁₄ to W	"	"	"
"		u	147				IIN								"	E ₁₅ to W	3	24	
	t _{PLH3}	"		GND "	GND	GND 5.0 V										E ₀ to W	3	24	ns "
и	u	u	149 150	"	GND 5.0 V	GND									"	E ₁ to W E ₂ to W		и	ш
u	44	"	151	"	5.0 V	5.0 V									44	E ₂ to W	"	"	44
u	44	"	152	5.0 V	GND	GND									44	E ₃ to W	"	"	44
и	"	ш	153	"	GND	5.0 V									"	E ₅ to W	"	"	"
и	"	ш	154	"	5.0 V	GND									"	E ₆ to W	"	"	"
ш	44	44	155	"	5.0 V	5.0 V									"	E ₇ to W	"	"	44
ш	44	44	156	GND	GND	GND								IN	44	E ₈ to W	"	"	44
u	"	u	157	"	GND	5.0 V							IN		"	E ₉ to W	"	"	"
и	u	u	158	"	5.0 V	GND						IN			"	E ₁₀ to W	"	"	"
"	"	u	159	"	5.0 V	5.0 V					IN				"	E ₁₁ to W	"	"	"
ш	u	и	160	5.0 V	GND	GND				IN					"	E ₁₂ to W	u	u	ш
и	u	и	161	"	GND	5.0 V			IN						"	E ₁₃ to W	u	u	ш
и	u	и	162	"	5.0 V	GND		IN							"	E ₁₄ to W	u	u	"
"	u	и	163	u	5.0 V	5.0 V	IN					<u> </u>	<u> </u>		44	E ₁₅ to W	и	44	66
10	t _{PHL1}	и	164	GND	GND	IN									ш	A to W	8	40	ns
T _C = 125°C	"	и	165	GND	IN	GND									44	B to W	u	"	44
"	и	и	166	IN	GND	GND									44	C to W	u	44	44
u	"	u	167	GND	GND	GND								5.0 V	"	D to W	"	"	"
и	t _{PLH1}	и	168	GND	GND	IN									ш	A to W	ш	43	ш
ш	"	и	169	GND	IN	GND									"	B to W	ш	"	"
u	"	u	170	IN	GND	GND									"	C to W	"	"	"
и	u	и	171	GND	GND	GND								5.0 V	ш	D to W	"	"	и
"	t _{PHL2}	u	172	GND	GND	GND									44	G to W	6	37	ns
u	t _{PLH2}	u	173	GND	GND	GND									"	G to W	6	32	ns

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 $\label{eq:table_equation} \begin{array}{ll} \text{TABLE III.} & \underline{\text{Group A inspection for device type 01}} - \text{Continued.} \\ \text{Terminal conditions (pins not designated may be H} \geq 2.0 \text{ V, or L} \leq 0.8 \text{ V, or open).} \end{array}$

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	1	2	3	4	5	6	7	8	9	10	11	12	Meas.		Test limits	s
9	- J	method	Test No.	E ₇	E ₆	E ₅	E ₄	E ₃	E ₂	E ₁	E ₀	G	W	D	GND	terminal	Min	Max	Unit
10	t _{PHL3}	3003	174								IN	GND	OUT	GND	GND	E ₀ to W	3	23	ns
T _C = 125°C	"	(Fig 4)	175							IN		ш	и	"	"	E ₁ to W	"	"	u
и	"	ш	176						IN			"	"	"	"	E ₂ to W	"	"	"
ш	"	ш	177					IN				ш	"	"	"	E ₃ to W	"	ш	**
ш	"	ш	178				IN					"	"	"	"	E ₄ to W	"	"	"
u	"	ш	179			IN						ш	и	"	"	E ₅ to W	"	"	u
u	"	u	180		IN							"	"	"	"	E ₆ to W	"	"	"
u	"	ш	181	IN								ш	и	"	"	E ₇ to W	"	"	44
u	"	u	182									"	"	5.0 V	"	E ₈ to W	"	"	"
u	"	ш	183									ш	и	"	"	E ₉ to W	"	"	"
u	"	ш	184									ш	и	"	"	E ₁₀ to W	"	"	"
u	"	ш	185									ш	и	"	"	E ₁₁ to W	"	"	"
u	"	ш	186									ш	и	"	"	E ₁₂ to W	"	"	"
u	"	ш	187									ш	и	"	"	E ₁₃ to W	"	"	"
ш	44	ш	188									ш	u	u	"	E ₁₄ to W	"	u	"
ш	"	u	189									ш	**	"	"	E ₁₅ to W	"	и	"
	t _{PLH3}		190								IN	"	"	GND	"	E ₀ to W	3	30	ns
	"	"	191							IN		ш	"	"	"	E ₁ to W	"	ш	"
ш	44	ш	192						IN			u	"	"	"	E ₂ to W	"	"	"
ш	44	ш	193					IN				u	"	"	"	E ₃ to W	"	"	"
"	44	ш	194				IN					u	"	"	"	E ₄ to W	"	"	"
ш	"	ш	195			IN						и	и	u	"	E ₅ to W	"	и	"
ш	"	ш	196		IN							и	и	u	"	E ₆ to W	"	и	"
ш	44	ш	197	IN								"	"	"	"	E ₇ to W	"	"	"
и	"	и	198									"	и	5.0 V	"	E ₈ to W	"	"	"
ш	и	ш	199									ш	"	"	"	E ₉ to W	"	и	"
ш	и	ш	200									ш	"	"	"	E ₁₀ to W	"	и	"
ш	"	ш	201									ш	"	"	"	E ₁₁ to W	"	и	и
ш	и	ш	202									ш	м	"	"	E ₁₂ to W	"	и	"
ш	"	ш	203									u	44	"	"	E ₁₃ to W	"	и	"
ш	и	ш	204									ш	м	"	"	E ₁₄ to W	"	и	"
и	"	ш	205									"	и	"	"	E ₁₅ to W	"	и	"

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

Subgroup	Symbol	MIL- STD-883	Cases J, K, Z	13	14	15	16	17	18	19	20	21	22	23	24	Meas.		Test limits	s
Cabgroup	Cymbol	method	Test No.	С	В	Α	E ₁₅	E ₁₄	E ₁₃	E ₁₂	E ₁₁	E ₁₀	E ₉	E ₈	V _{CC}	terminal	Min	Max	Unit
10	t _{PHL3}	3003	174	GND	GND	GND									5.0 V	E ₀ to W	3	23	ns
T _C = 125°C	"	(Fig 4)	175	"	GND	5.0 V									"	E ₁ to W	"	"	"
"	u	"	176	и	5.0 V	GND									u	E ₂ to W	"	u	44
"	u	44	177	и	5.0 V	5.0 V									u	E ₃ to W	"	u	44
u	"	u	178	5.0 V	GND	GND									"	E ₄ to W	"	"	"
u	"	u	179	"	GND	5.0 V									"	E ₅ to W	"	"	"
"	"	u	180	"	5.0 V	GND									"	E ₆ to W	"	"	"
"	"	"	181	"	5.0 V	5.0 V									"	E ₇ to W	"	"	"
u	"	u	182	GND	GND	GND								IN	"	E ₈ to W	"	"	"
"	"	"	183	"	GND	5.0 V							IN		"	E ₉ to W	"	"	"
u	"	u	184	"	5.0 V	GND						IN			"	E ₁₀ to W	"	"	"
u	"	u	185	"	5.0 V	5.0 V					IN				"	E ₁₁ to W	"	"	"
u	"	u	186	5.0 V	GND	GND				IN					"	E ₁₂ to W	"	"	"
u	"	u	187	"	GND	5.0 V			IN						"	E ₁₃ to W	"	"	"
u	"	u	188	"	5.0 V	GND		IN							"	E ₁₄ to W	"	"	"
u	"	u	189	"	5.0 V	5.0 V	IN								"	E ₁₅ to W	**	"	и
	t _{PLH3}	"	190	GND	GND	GND										E ₀ to W	3	30	ns
	"		191	и	GND	5.0 V									"	E ₁ to W	"	"	66
"	"	u	192	"	5.0 V	GND									"	E ₂ to W	"	"	**
"	"	u	193	"	5.0 V	5.0 V									"	E ₃ to W	"	"	**
44	"	u	194	5.0 V	GND	GND									"	E ₄ to W	"	"	66
u	u	u	195	и	GND	5.0 V									"	E ₅ to W	"	u	"
"	"	u	196	"	5.0 V	GND									"	E ₆ to W	"	"	"
"	"	u	197	"	5.0 V	5.0 V									"	E ₇ to W	"	"	"
"	"	44	198	GND	GND	GND								IN	"	E ₈ to W	"	"	"
"	"	44	199	"	GND	5.0 V							IN		"	E ₉ to W	"	"	44
"	"	u	200	u	5.0 V	GND						IN			"	E ₁₀ to W	"	"	"
u	u	u	201	и	5.0 V	5.0 V					IN	",			ш	E ₁₁ to W	"	"	"
и	"	ш	202	5.0 V	GND	GND				IN					"	E ₁₂ to W	"	"	ш
и	"	ш	203	3.0 V	GND	5.0 V			IN						"	E ₁₂ to W	"	"	ш
u	u	u	204	и	5.0 V	GND		IN							"	E ₁₃ to W	"	"	"
u	"	u	205	u	5.0 V	5.0 V	IN								"	E ₁₅ to W	**	"	ш
11			nditions and limit												1	-15 to W			

 $\begin{array}{ll} \underline{1}/ & \text{I}_{\text{IL}} \text{ minimum limit for CKT E is -0.6 mA.} \\ \underline{2}/ & \text{A} = 3.0 \text{ V minimum, B} = 0.0 \text{ V or GND.} \\ \underline{3}/ & \text{H} > 1.5 \text{ V; L} < 1.5 \text{ V.} \\ & \text{Only attributes data is required for subgroups 7 and 8.} \end{array}$

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

	Terminal conditions (pins not designated may be $H \ge 2.0 \text{ V}$, or $L \le 0.8 \text{ V}$, or open). MIL- Cases E, F 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Test limits																						
		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est lim	nits
Subgroup	Symbol	STD-883 method	Test No.	D ₀	D ₁	D ₂	D ₃	D4	D ₅	D ₆	GND	D ₇	G	Α	В	С	W	Υ	Vcc	Meas. terminal	Min	Max	Unit
1	VoH	3006	1	2.0 V							GND		0.8 V	0.8 V	0.8 V	0.8 V		-0.8 mA	4.5 V	Υ	2.4		V
T _C = 25°C	Vон	3006	2								"		2.0 V	2.0 V	2.0 V	2.0 V	-0.8 mA		**	W	2.4		"
ű	Vol	3007	3								u		2.0 V	2.0 V	2.0 V	2.0 V		16 mA	"	Υ		0.4	"
ű	Vol	3007	4	2.0 V							u		0.8 V	0.8 V	0.8 V	0.8 V	16 mA		"	W		0.4	"
"	V _{IC}		5	-12 mA							"								**	D ₀		-1.5	"
66	"		6		-12 mA						"								"	D_1		"	"
u	"		7			-12 mA					"								"	D ₂		"	"
66	"		8				-12 mA				"								"	D_3		"	44
66	"		9					-12 mA			"								"	D ₄		"	44
66	"		10						-12 mA		"								"	D_5		"	"
66	"		11							-12 mA	"								"	D ₆		"	"
u	u		12								"	-12 mA							**	D ₇		"	"
и	u		13								"		-12 mA						**	G		"	"
ш	"		14								"			-12 mA					"	Α		"	"
ш	"		15								"				-12 mA				"	В		"	"
"	"		16								"					-12 mA			"	С		ű	"
66	Ιμ	3009	17								u		0.4 V	5.5 V	5.5 V	5.5 V			5.5 V	G	-0.7	-1.6	mA
и	"	ű	18								"		GND	0.4 V	5.5 V	"			"	Α	u	"	"
ű	"	u	19								"		"	5.5 V	0.4 V	u			**	В	u	"	44
ű	"	u	20								"		"	5.5 V	5.5 V	0.4 V			**	С	u	"	44
ű	"	u	21	0.4 V							"		44	GND	GND	GND			**	D ₀	u	"	44
ű	"	u	22		0.4 V						"		"	5.5 V	GND	u			**	D_1	u	"	44
"	"	u	23			0.4 V					"		"	GND	5.5 V	и			"	D ₂	"	"	"
"	"	u	24				0.4 V				"		"	5.5 V	5.5 V	и			"	D ₃	"	"	"
"	"	u	25					0.4 V			"		"	GND	GND	5.5 V			"	D_4	"	"	"
"	"	u	26						0.4 V		"		"	5.5 V	GND	и			"	D ₅	"	"	"
"	"	u	27							0.4 V	"		"	GND	5.5 V	и			"	D ₆	"	"	"
"	"	u	28								"	0.4 V	"	5.5 V	5.5 V	и			ш	D ₇	u	"	"
"	I _{IH1}	3010	29								"		2.4 V	GND	GND	GND			"	G		40	μΑ
"	"	ű	30								"		5.5 V	2.4 V	GND	GND			"	Α		"	u
ű	"	u	31								"		66	GND	2.4 V	GND			66	В		**	"
"	"	ű	32								"		44	GND	GND	2.4 V			"	С		"	ш
ű	"	u	33	2.4 V							"		66	5.5 V	5.5 V	5.5 V			66	D ₀		"	"
"	"	ű	34		2.4 V						"		"	GND	5.5 V	"			"	D ₁		**	и
"	"	ű	35			2.4 V					"		"	5.5 V	GND	"			"	D ₂		**	ш
"	"	ű	36				2.4 V				"		"	GND	GND	"			"	D ₃		**	ш
"	"	и	37					2.4 V			"		"	5.5 V	5.5 V	GND			"	D ₄		"	"
"	"	и	38						2.4 V		"		"	GND	5.5 V	ш			"	D ₅		"	"
"	"	и	39							2.4 V	"		"	5.5 V	GND	ш			"	D ₆		"	"
u	u	tt	40								u	2.4 V	66	GND	GND	££			"	D ₇		"	u

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

Subgroup		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est limit	ts
	Symbol	STD-883 method	Test No.	D ₀	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	GND	D ₇	G	Α	В	С	W	Υ	Vcc	Meas. terminal	Min	Max	Unit
1	I _{IH2}	3010	41								GND		5.5 V	GND	GND	GND			5.5 V	G		100	μА
T _C = 25°C	"	"	42								"		GND	5.5 V	GND	u			"	Α		ш	"
"	u	"	43								"		"	GND	5.5 V	u			"	В		ш	"
u	u	"	44								"		"	GND	GND	5.5 V			"	С		ш	"
"	и	u	45	5.5 V							"		ш	5.5 V	5.5 V	u			"	D ₀		"	"
"	"	"	46		5.5 V						"		"	GND	5.5 V	"			"	D ₁		"	"
"	"	"	47			5.5 V					"		"	5.5 V	GND	"			"	D ₂		"	"
"	"	"	48				5.5 V				"		"	GND	GND	"			"	D ₃		"	"
ű	"	u	49					5.5 V			"		"	5.5 V	5.5 V	GND			"	D ₄		"	u
ű	"	u	50						5.5 V		"		"	GND	5.5 V	"			"	D ₅		"	u
ű	"	u	51							5.5 V	"		"	5.5 V	GND	"			"	D ₆		"	u
u	"	66	52								u	5.5 V	"	GND	"	u			u	D ₇		"	"
"	los	3011	53	GND		GND	5.5 V	"		"	GND		"	Υ	-20	-120	mA						
"	los	3011	54	5.5 V	"	"	"	"	"	"	"		GND	"	"	"		GND	"	W	-20	-120	mA
"	Icc	3005	55	5.5 V	"	"	"	"	"	"	"	"	GND	"	"	"			u	V _{CC}		48	mA
2	Same tests, terminal conditions and limits as subgroup 1, except T _C = 125°C and V _{IC} tests are omitted.																						
3	Same tests, terminal conditions and limits as subgroup 1, except $T_C = 125$ C and V_{IC} tests are omitted. Same tests, terminal conditions and limits as subgroup 1, except $T_C = -55^{\circ}$ C and V_{IC} tests are omitted.																						
7	Truth		56								GND		A <u>1</u> /				H <u>2</u> /	L	4.5 V	1		ĺ	
T _C = 25°C	table		57	В							"		В	В	В	В	Н	L	"	l \		1	
"	test		58	Α							"		u	В	и	u	L	Н	"			1	
u	"		59		В						u		"	Α	"	"	Н	L	"			1	
и	u		60		Α						"		u	Α	u	u	L	Н	u				
u	и		61			В					"		"	В	Α	u	Н	L	"			1	
u	"		62			Α					u		"	В	"	u	L	Н	"			1	
ű	"		63				В				"		"	Α	"	"	Н	L	"			1	
u	66		64				Α				"		44	Α	44	"	L	Н	u		<u>2</u> /	1	
"	66		65					В			"		u	В	В	Α	Н	L	"		_		
и	"		66					A			"		"	В	u	"	L	н	"			1	
ű	"		67						В		"		"	A	u	u	Н	L	"				
и	"		68						Α		u		"	Α	u	u	L	Н	u				
и	"		69							В	u		"	В	Α	u	Н	L	u				
u	66		70							Α	"		u	В	u	u	L	Н	u				
и	"		71								"	В	u	Α	и	u	Н	L	u				
"	"		72								"	Α	u	Α	ű	u	L	Н	"]			
8	Repeat	subgroup 7	7 at T _C = 125	°C and T	C = -55°	°C.													•				

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est lim	nits
Subgroup	Symbol	STD-883 method	Test No.	D ₀	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	GND	D ₇	G	Α	В	С	W	Υ	V _C C	Meas. terminal	Min	Max	Unit
9	t _{PHL1}	3003	73	GND	5.0 V						GND		GND	IN	GND	GND	OUT		5.0 V	A to W	6	32	ns
T _C = 25°C	"	(Fig 4)	74	"		5.0 V					и		"	GND	IN	GND	"		"	B to W	"	"	u
66	"	u	75	"				5.0 V			и		"	GND	GND	IN	"		"	C to W	"	"	u
44	t _{PLH1}	"	76	u	5.0 V						"		"	IN	GND	GND	ű		u	A to W	u	29	"
44	66	u	77	"		5.0 V					u		"	GND	IN	GND	u		ee	B to W	u	"	u
66	"	u	78	"				5.0 V			и		"	GND	GND	IN	"		"	C to W	"	"	u
"	tPHL2	"	79	u	5.0 V						"		"	IN	GND	GND		OUT	u	A to Y	u	40	"
66	"	u	80	"		5.0 V					и		"	GND	IN	GND		и	"	B to Y	"	"	u
u	"	u	81	"				5.0 V			и		"	GND	GND	IN		и	"	C to Y	"	"	и
"	t _{PLH2}	"	82	u	5.0 V						"		"	IN	GND	GND		"	u	A to Y	u	39	и
44	"	"	83	u		5.0 V					"		"	GND	IN	GND		"	u	B to Y	u	"	"
44	44	"	84	u				5.0 V			"		"	GND	GND	IN		"	u	C to Y	u	"	"
"	t _{PHL3}	"	85	5.0 V							"		IN	GND	GND	GND	OUT		ű	G to W	6	28	и
44	t _{PLH3}	"	86	u							"		"	"	66	"	OUT		u	G to W	6	24	"
44	tPHL4	"	87	u							"		"	"	66	"		OUT	u	G to Y	8	37	"
44	tpLH4	"	88	u							"		"	"	66	"		OUT	u	G to Y	8	35	"
u	tPHL5	u	89	IN							u		GND	GND	GND	GND	OUT		u	Do to W	3	20	и
66	"	u	90		IN						"		"	5.0 V	GND	"	"		"	D ₁ to W	"	"	u
44	44	"	91			IN					"		"	GND	5.0 V	"	"		u	D ₂ to W	u	"	"
44	44	"	92				IN				"		"	5.0 V	5.0 V	"	"		u	D ₃ to W	u	"	"
"	44	"	93					IN			"		"	GND	GND	5.0 V	"		u	D ₄ to W	u	"	"
44	66	u	94						IN		u		"	5.0 V	GND	"	u		ee	D ₅ to W	u	"	u
"	u	"	95							IN	u		"	GND	5.0 V	"	"		ű	D ₆ to W	u	"	"
"	u	"	96								"	IN	"	5.0 V	5.0 V	"	"		ű	D ₇ to W	u	"	"
"	tPLH5		97	IN									"	GND	GND	GND	"		"	Do to W	"	17	"
"	ш	"	98		IN						"		"	5.0 V	GND	"	"		ű	D ₁ to W	u	"	"
u	u	ű	99			IN					и		"	GND	5.0 V	"	"		u	D ₂ to W	"	"	"
"	66	u	100				IN				и		"	5.0 V	5.0 V	44	"		"	D ₃ to W	и	"	"
"	"	u	101					IN			u		"	GND	GND	5.0 V	"		u	D ₄ to W	"	"	"
"	"	u	102						IN		"		"	5.0 V	GND	"	"		"	D ₅ to W	"	"	"
"	"	u	103							IN	,,			GND	5.0 V	"	"		"	D ₆ to W	"	"	"
	**		104								"	IN		5.0 V	5.0 V	**				D ₇ to W			

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

					ermina		ILIOIIS		iot acs	_	umay		_ Z.O V	, OI L :	≤ 0.8 V	, or op	C11).						
Subgroup	0	MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T	est lim	its
	Symbol	STD-883 method	Test No.	D ₀	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	GND	D ₇	G	Α	В	С	W	Υ	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PHL6}	3003	105	IN							GND		GND	GND	GND	GND		OUT	5.0 V	Do to Y	6	29	ns
T _C = 25°C	u	(Fig 4)	106		IN						44		"	5.0 V	GND	u		"	**	D ₁ to Y	u	u	"
"	er er	"	107			IN					44		"	GND	5.0 V	u		"	**	D ₂ to Y	u	u	"
u	"	"	108				IN				"		"	5.0 V	5.0 V	и		"	"	D ₃ to Y	"	"	"
"	"	u	109					IN			"		"	GND	GND	5.0 V		"	"	D ₄ to Y	"	"	"
u	44	и	110						IN		"		u	5.0 V	GND	u		"	"	D ₅ to Y	"	"	u
u	"	"	111							IN	"		"	GND	5.0 V	и		"	"	D ₆ to Y	"	"	"
"	"	u	112								"	IN	"	5.0 V	5.0 V	и		"	"	D ₇ to Y	"	"	"
"	t _{PLH6}	и	113	IN							"		"	GND	GND	GND		и	"	D _o to Y	6	29	cc .
и	"	"	114		IN						"		"	5.0 V	GND	"		"	"	D ₁ to Y	"	"	"
и	"	"	115			IN					"		"	GND	5.0 V	"		"	"	D ₂ to Y	"	"	"
и	"	"	116				IN				"		"	5.0 V	5.0 V	ű		"	"	D ₃ to Y	"	"	"
"	"	"	117					IN			"		"	GND	GND	5.0 V		"	"	D ₄ to Y	"	"	"
и	"	"	118						IN		"		"	5.0 V	GND	"		"	"	D ₅ to Y	"	"	"
"	"	"	119							IN	"		"	GND	5.0 V	"		"	"	D ₆ to Y	"	"	"
44	u	u	120								44	IN	"	5.0 V	5.0 V	u		"	44	D ₇ to Y	"	"	"
10	t _{PHL1}	u	121	GND	5.0 V						u		u	IN	GND	GND	OUT		"	A to W	6	40	"
T _C = 125°C	"	u	122	ш		5.0 V					"		ee	GND	IN	GND	u		"	B to W	"	"	ee
44	"	u	123	и				5.0 V			"		66	GND	GND	IN	"		u	C to W	"	"	cc .
44	t _{PLH1}	u	124	и	5.0 V						"		"	IN	GND	GND	"		"	A to W	u	38	cc cc
44	"	u	125	ш		5.0 V					"		"	GND	IN	GND	"		"	B to W	"	"	"
"	"	u	126	u				5.0 V			"		"	GND	GND	IN	"		"	C to W	u	u	"
"	t _{PHL2}	u	127	"	5.0 V						"		"	IN	GND	GND		OUT	44	A to Y	8	49	"
"	44	u	128	"		5.0 V					"		"	GND	IN	GND		u	"	B to Y	"	"	ee .
44	"	u	129	u				5.0 V			"		"	GND	GND	IN		и	"	C to Y	"	u	"
"	t _{PLH2}	u	130	"	5.0 V						"		"	IN	GND	GND		44	44	A to Y	"	45	"
"	44	"	131	"		5.0 V					"		"	GND	IN	GND		"	"	B to Y	"	"	"
44	"	u	132	u				5.0 V			"		u	GND	GND	IN		ш	u	C to Y	и	u	"
и	tPHL3	"	133	5.0 V							"		IN	GND	GND	GND	OUT		"	G to W	6	37	"
44	t _{PLH3}	"	134	u							"		44		"	££	OUT		"	G to W	6	35	"
"	t _{PHL4}	ш	135	u							"		"	"	"	44		OUT	"	G to Y	8	46	"
"	t _{PLH4}	"	136	u							"		ű	u	"	u		OUT	"	G to Y	8	42	ii .
"	t _{PHL5}	"	137	IN							"		GND	GND	GND	GND	OUT		"	D_{o} to W	3	32	er.
44	44	"	138		IN						"		ee	5.0 V	GND	££	ш		"	D ₁ to W	"	"	ee
44	44	и	139			IN					"		44	GND	5.0 V	"	ш		"	D ₂ to W	"	"	"
44	44	"	140				IN				"		er.	5.0 V	5.0 V	44	"		"	D ₃ to W	"	u	"
"	u	"	141					IN			"		"	GND	GND	5.0 V	"		"	D ₄ to W	"	"	"
"	u	"	142						IN		"		"	5.0 V	GND	"	"		"	D ₅ to W	"	"	"
"	"	ш	143							IN	"		"	GND	5.0 V	u	"		"	D ₆ to W	"	"	"
"	"	"	144								"	IN	"	5.0 V	5.0 V	"	"		"	D ₇ to W	"	"	"

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

Subgroup S	Symbol	STD-883			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		l	est lim	iits
10		method	Test No.	D ₀	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	GND	D ₇	G	Α	В	С	W	Υ	V _{CC}	Meas. terminal	Min	Max	Unit
	t _{PLH5}	3003	145	IN							GND		GND	GND	GND	GND	OUT		5.0 V	D_{o} to W	3	26	ns
T _C = 125°C	u	(Fig 4)	146		IN						u		"	5.0 V	GND	"	u		u	D ₁ to W	"	"	"
u	u	u	147			IN					"		"	GND	5.0 V	"	u		u	D ₂ to W	"	"	"
u	u	u	148				IN				"		"	5.0 V	5.0 V	"	u		u	D ₃ to W	"	"	"
"	"	"	149					IN			"		"	GND	GND	5.0 V	"		"	D ₄ to W	u	u	"
u	u	u	150						IN		"		"	5.0 V	GND	"	u		u	D ₅ to W	"	"	"
"	"	"	151							IN	"		"	GND	5.0 V	"	"		"	D ₆ to W	u	u	"
и	"	"	152								"	IN	44	5.0 V	5.0 V	"	u		u	D ₇ to W	"	"	u
u	tPHL6	u	153	IN							"		"	GND	GND	GND		OUT	"	Do to Y	6	41	ű
u	"	u	154		IN						и		"	5.0 V	GND	"		"	"	D ₁ to Y	"	u	"
u	"	u	155			IN					и		"	GND	5.0 V	"		"	"	D ₂ to Y	"	u	"
u	"	u	156				IN				и		"	5.0 V	5.0 V	"		"	"	D ₃ to Y	"	u	"
u	"	u	157					IN			и		"	GND	GND	5.0 V		"	"	D ₄ to Y	"	u	"
u	"	u	158						IN		и		"	5.0 V	GND	"		"	"	D ₅ to Y	"	u	"
"	u	u	159							IN	"		"	GND	5.0 V	"		"	"	D ₆ to Y	u	u	"
"	"	"	160								"	IN	"	5.0 V	5.0 V	"		u	"	D ₇ to Y	u	u	"
u	t _{PLH6}	u	161	IN							"		"	GND	GND	GND		"	"	D _o to Y	"	33	ű
u	"	u	162		IN						u		"	5.0 V	GND	"		"	u	D ₁ to Y	"	"	"
"	u	"	163			IN					u		"	GND	5.0 V	"		"	"	D ₂ to Y	"	"	"
u	"	ű	164				IN				u		"	5.0 V	5.0 V	"		"	"	D ₃ to Y	"	"	"
u	"	ű	165					IN			u		"	GND	GND	5.0 V		"	"	D ₄ to Y	"	"	"
u	"	ű	166						IN		u		"	5.0 V	GND	"		"	"	D ₅ to Y	"	"	"
u	"	ű	167							IN	u		"	GND	5.0 V	"		"	"	D ₆ to Y	"	"	"
u	"	ű	168								u	IN	"	5.0 V	5.0 V	"		"	"	D ₇ to Y	"	"	"

 $\underline{1}/$ A = 3.0 V minimum, B = 0.0 V or GND. $\underline{2}/$ H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

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

					ı ermir					_							ociij.						
		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est lim	iits
Subgroup	Symbol	STD-883 method	Test No.	1G	В	1C ₃	1C ₂	1C ₁	1C ₀	1Y	GND	2Y	2C ₀	2C ₁	2C ₂	2C ₃	Α	2G	Vcc	Meas. terminal	Min	Max	Unit
1	VoH	3006	1	0.8 V	0.8 V				2.0 V	8 mA	GND						0.8 V		4.5 V	1Y	2.4		V
T _C = 25°C		3006	2		0.8 V						"	8 mA	2.0 V				0.8 V	0.8 V	66	2Y	2.4		"
"	V _{OL}	3007	3	2.0 V						16 mA	u								"	1Y		0.4	"
"	Vol	3007	4								"	16 mA						2.0 V	"	2Y		0.4	"
"	V _{IC}		5								u						-12 mA		"	Α		-1.5	ш
"	"		6		-12 mA						"								"	В		"	"
"	"		7						-12 mA		"								"	1C ₀		"	"
"	"		8					-12 mA			"								"	1C ₁		"	"
"	"		9				-12 mA				"								"	1C ₂		"	"
ш	"		10			-12 mA					"								"	1C ₃		u	"
"	"		11	-12mA							"								"	1G		u	"
ш	"		12								"		-12 mA						"	2C ₀		u	"
"	"		13								"			-12 mA					"	2C ₁		u	"
"	"		14								"				-12 mA				"	2C ₂		u	"
"	"		15								"					-12 mA			"	2C ₃		u	"
"	"		16								"							-12 mA	"	2G		"	"
"	Ι _Ι L	3009	17								u						0.4 V		5.5 V	Α	-0.7	-1.6	mA
u	"	u	18		0.4 V						ee								66	В	"	"	u
"	"	u	19	0.4 V							"								"	1G	u	u	"
u	"	и	20								es .							0.4 V	66	2G	"	"	"
u	"	u	21	GND	GND				0.4 V		ee						GND		66	1C ₀	"	"	u
"	"	u	22	"	GND			0.4 V			"						5.5 V		"	1C ₁	u	u	"
"	"	u	23	"	5.5 V		0.4 V				"						GND		"	1C ₂	u	u	"
"	"	u	24	"	5.5 V	0.4 V					"						5.5 V		"	1C ₃	u	u	"
"	"	u	25		GND						"		0.4 V				GND	GND	"	2C ₀	u	"	"
"	"	u	26		GND						"			0.4 V			5.5 V	"	"	2C ₁	u	u	"
"	"	u	27		5.5 V						"				0.4 V		GND	"	"	2C ₂	u	u	"
"	"	u	28		5.5 V						"					0.4 V	5.5 V	"	"	2C ₃	u	u	"
"	I _{IH1}	3010	29								"						2.4 V		ű	Α		40	μΑ
"	u	и	30		2.4 V						"								u	В		"	"
ш	"	ű	31	2.4 V							"								u	1G		"	"
u	u	и	32								"							2.4 V	"	2G		"	"
"	"	ű	33	5.5 V	5.5 V				2.4 V		"						5.5 V		"	1C ₀		"	"
"	"	ű	34	"	5.5 V			2.4 V			"						GND		"	1C ₁		"	"
"	"	ű	35	44	GND		2.4 V				"						5.5 V		"	1C ₂		"	"
"	"	ű	36	44	GND	2.4 V					"						GND		"	1C ₃		"	"
"	"	ű	37		5.5 V						"		2.4 V				5.5 V	5.5 V	"	2C ₀		"	"
"	u	и	38		5.5 V						"			2.4 V			GND	u	u	2C ₁		"	"
"	u	и	39		GND						"				2.4 V		5.5 V	u	u	2C ₂		"	"
"	"	и	40		GND						"					2.4 V	GND	"	"	2C ₃		u	"

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		1	Γest limit	ts
Subgroup	Symbol	STD-883 method	Test No.	1G	В	1C ₃	1C ₂	1C ₁	1C ₀	1Y	GND	2Y	2C ₀	2C ₁	2C ₂	2C ₃	Α	2G	V _{CC}	Meas. terminal	Min	Max	Unit
1	I _{IH2}	3010	41								GND						5.5 V		5.5 V	Α		100	μA
$T_C = 25^{\circ}C$		u	42		5.5 V						"								"	В		"	"
"	u	u	43	5.5 V							и								"	1G		"	"
"	"	u	44								"							5.5 V	"	2G		"	"
"	"	u	45	5.5 V	5.5 V				5.5 V		"						5.5 V		"	1C ₀		"	"
"	"	u	46	"	5.5 V			5.5 V			"						GND		"	1C ₁		"	"
"	"	u	47	"	GND		5.5 V				"						5.5 V		"	1C ₂		"	"
u	u	u	48	ш	GND	5.5 V					u						GND		"	1C ₃		"	"
"	"	u	49		5.5 V						"		5.5 V				5.5 V	5.5 V	"	2C ₀		"	"
"	"	u	50		5.5 V						"			5.5 V			GND	"	"	2C ₁		"	"
"	"	u	51		GND						"				5.5 V		5.5 V	"	"	2C ₂		"	"
"	"	u	52		"						"					5.5 V	GND	"	**	2C ₃		"	"
"	los	3011	53	GND	"	GND	GND	GND	5.5 V	GND	u						"		"	1Y	-20	-55	mA
"	los	3011	54	"	"						"	GND	5.5 V	GND	GND	GND	"	GND	"	2Y	-20	-55	mA
"	Icc	3005	55	"	"	GND	GND	GND	GND		u		GND	GND	GND	GND	"	GND	"	Vcc		52	mA
2		ests, termi	nal conditions	and lim	its as su	bgroup	1, except	t T _C = 12	25°C and	d V _{IC} tes	ts are or	nitted.				U U			U		i i		
3	Same t	tests, termi	nal conditions	s and lim	nits as su	bgroup	1, excep	t T _C = -	55°C and	d V _{IC} tes	ts are or	nitted.											
7	Truth		56	A <u>1</u> /						L <u>2</u> /	GND	L						Α	4.5 V				
$T_C = 25^{\circ}C$	table		57	В	В				В	L	"	L	В				В	В	ш)		l l	
"	test		58	"	В				Α	Н	"	Н	Α				В	"	"			l l	
"	"		59	"	В			В		L	"	L		В			Α	"	**			l l	
"	"		60	"	В			Α		Н	"	Н		Α			Α	"	**	>	<u>2</u> /	l l	
"	"		61	"	Α		В			L	"	L			В		В	"	"			l l	
"	"		62	"	Α		Α			Н	"	Н			Α		В	"	**			l l	
"	"		63	66	Α	В				L	"	L				В	Α	"	"	J		l l	
u	"		64	66	Α	Α				Н	"	Н				Α	Α	"	"			l l	
8	Repeat	subgroup	7 at T _C = 125	5°C and	T _C = -55	°C.																	
9	tPHL1	3003	65	GND	GND				IN	OUT	GND						GND		5.0 V	1C ₀ to 1Y	3	25	ns
$T_C = 25^{\circ}C$		(Fig 5)	66	66	GND			IN		66	44						5.0 V		"	1C ₁ to 1Y	"	u	"
u	44	66	67	66	5.0 V		IN			66	44						GND		"	1C ₂ to 1Y	"	"	ű
u	44	66	68	66	5.0 V	IN				66	44						5.0 V		"	1C ₃ to 1Y	"	"	u
"	и	"	69		GND						"	OUT	IN				GND	GND	u	2C ₀ to 2Y	u	"	u
"	и	"	70		GND						"	44		IN			5.0 V	"	u	2C ₁ to 2Y	u	"	u
"	и	"	71		5.0 V						"	"			IN		GND	"	u	2C ₂ to 2Y	u	"	u
u	u	"	72		5.0 V						"	"				IN	5.0 V	"	"	2C ₃ to 2Y	u	"	"

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Test limi	its
Subgroup	Symbol	method	Test No.	1G	В	1C ₃	1C ₂	1C ₁	1C ₀	1Y	GND	2Y	2C ₀	2C ₁	2C ₂	2C ₃	Α	2G	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PLH1}	3003	73	GND	GND				IN	OUT	GND						GND		5.0 V	1C ₀ to 1Y	3	24	ns
T _C = 25°C	"	(Fig 5)	74	"	GND			IN		"	"						5.0 V		"	1C ₁ to 1Y	u	"	"
"	"	"	75	"	5.0 V		IN			"	"						GND		"	1C ₂ to 1Y	u	"	"
"	"	"	76	"	5.0 V	IN				44	"						5.0 V		**	1C ₃ to 1Y	u	"	"
u	"	u	77		GND						"	OUT	IN				GND	GND	"	2C ₀ to 2Y	u	"	"
u	"	u	78		GND						"	"		IN			5.0 V	"	"	2C ₁ to 2Y	u	"	"
u	"	u	79		5.0 V						"	"			IN		GND	"	"	2C ₂ to 2Y	u	"	"
66	и	"	80		5.0 V						66	66				IN	5.0 V	66	"	2C ₃ to 2Y	ű	66	"
66	t _{PHL2}	cc .	81	GND	GND			5.0 V	GND	OUT	ee						IN		"	A to 1Y	6	36	**
"	"	"	82	GND	IN		5.0 V		GND	OUT	"						GND		"	B to 1Y	u	"	"
"	"	"	83		GND						"	OUT	GND	5.0 V			IN	GND	"	A to 2Y	u	"	"
"	"	"	84		IN						"	OUT	GND		5.0 V		GND	GND	"	B to 2Y	u	"	"
"	tPLH2	"	85	GND	GND			5.0 V	GND	OUT	GND						IN		5.0 V	A to 1Y	6	34	"
"	и	"	86	GND	IN		5.0 V		GND	OUT	66						GND		**	B to 1Y	и	66	66
66	и	66	87		GND						66	OUT	GND	5.0 V			IN	GND	**	A to 2Y	и	66	66
"	u	u	88		IN						"	OUT	GND		5.0 V		GND	GND	"	B to 2Y	и	"	"
"	t _{PHL3}	66	89	IN	GND				5.0 V	OUT	"						GND		"	1G to 1Y	u	28	"
	t _{PHL3}	"	90		GND							OUT	5.0 V				GND	IN	"	2G to 2Y	"	28	"
	t _{PLH3}	"	91	IN	GND				5.0 V	OUT	"						GND		"	1G to 1Y	"	38	"
	t _{PLH3}	"	92		GND						"	OUT	5.0 V				GND	IN		2G to 2Y	- "	38	"
10	t _{PHL1}		93	GND	GND				IN	OUT							GND			1C ₀ to 1Y	3	29	
T _C = 125°C	"		94	"	GND		l	IN			"						5.0 V			1C ₁ to 1Y		"	
"	"	"	95	"	5.0 V	INI	IN				"						GND		"	1C ₂ to 1Y	"		"
"	"	"	96		5.0 V	IN					"	OUT	INI				5.0 V	OND	"	1C ₃ to 1Y	"	"	"
u	"	"	97 98		GND GND						"	OUT	IN	IN			GND 5.0 V	GND "	"	2C ₀ to 2Y	u	"	"
"	"	66	96 99		5.0 V						66	66		IIN	IN		GND	66	"	2C ₁ to 2Y	и	66	66
66	и	66	100		5.0 V						"	"			IIN	IN	5.0 V	66	"	2C ₂ to 2Y	и	66	66
66	4	"	100	GND	GND				IN	OUT	"					IIN	GND		"	2C ₃ to 2Y	и	28	"
"	tPLH1	"	101	"	GND			IN	IIN	"	u						5.0 V		"	1C ₀ to 1Y 1C ₁ to 1Y	u	20 "	"
"	"	"	102	"	5.0 V		IN	111		"	"						GND		"	-	ш	"	u
"	"	"	103	"	5.0 V	IN	"			"	"						5.0 V		**	1C ₂ to 1Y	ш	"	u
u	"	"	104		GND	IIN					"	OUT	IN				GND	GND	"	1C ₃ to 1Y 2C ₀ to 2Y	u	"	"
"	"	"	106		GND						u	"	IIV	IN			5.0 V	"	u	2C ₀ to 2Y 2C ₁ to 2Y	u	u	"
44	"	66	107		5.0 V						66	66		113	IN		GND	u	"	2C ₁ to 2Y	и	66	"
44	ш	66	107		5.0 V						u	u			''`	IN	5.0 V	u	"	2C ₂ to 21 2C ₃ to 2Y	u	u	"

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

			Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est limit	is
Subgroup	Symbol	STD-883 method	Test No.	1G	В	1C ₃	1C ₂	1C ₁	1C ₀	1Y	GND	2Y	2C ₀	2C ₁	2C ₂	2C ₃	Α	2G	V _C C	Meas. terminal	Min	Max	Unit
10	t _{PHL2}	3003	109	GND	GND			5.0 V	GND	OUT	GND						IN		5.0 V	A to 1Y	6	44	ns
T _C = 125°C	"	(Fig 5)	110	GND	IN		5.0 V		GND	OUT	"						GND		"	B to 1Y	u	"	"
и	"	u	111		GND						"	OUT	GND	5.0 V			IN	GND	"	A to 2Y	"	"	"
u	"	"	112		IN						"	OUT	GND		5.0 V		GND	GND	"	B to 2Y	"	"	"
u	t _{PLH2}	u	113	GND	GND			5.0 V	GND	OUT	и						IN		и	A to 1Y	"	42	ш
u	"	"	114	GND	IN		5.0 V		GND	OUT	"						GND		"	B to 1Y	"	"	"
u	"	u	115		GND						"	OUT	GND	5.0 V			IN	GND	"	A to 2Y	"	"	"
u	u	u	116		IN						"	OUT	GND		5.0 V		GND	GND	"	B to 2Y	"	"	"
u	t _{PHL3}	u	117	IN	GND				5.0 V	OUT	и						GND		и	1G to 1Y	u	32	ш
и	tPHL3	u	118		GND						"	OUT	5.0 V				GND	IN	"	2G to 2Y	u	32	"
u	t _{PLH3}	"	119	IN	GND				5.0 V	OUT	"						GND		"	1G to 1Y	u	42	"
и	t _{PLH3}	"	120		GND						"	OUT	5.0 V				GND	IN	"	2G to 2Y	u	42	"
11	Same te	sts, termir	nal conditions	and lim	its as su	bgroup	10, exce	pt T _C = -	-55°C.														

 $\underline{1}/$ A = 3.0 V minimum, B = 0.0 V or GND. $\underline{2}/$ H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		-	Test limi	ts
Subgroup	Symbol	STD-883 method	Test No.	2Y	2W	В	2C ₀	2C ₁	2C ₂	2C ₃	GND	1C ₃	1C ₂	1C ₁	1C ₀	Α	1W	1Y	V _C C	Meas. terminal	Min	Max	Unit
1	V _{OH}	3006	1			0.8 V					GND				2.0 V	0.8 V		-0.8 mA	4.5 V	1Y	2.4		V
T _C = 25°C	*ОП	u	2			"					"				0.8 V	"	-0.8 mA		"	1W	"		**
200	"	u	3	-0.8 mA		u	2.0 V				"					"			"	2Y	"		"
"	44	u	4		-0.8 mA	"	0.8 V				"					"			"	2W	"		"
"	V _{OL}	3007	5			"					"				2.0 V	"	16 mA		u	1W		0.4	íí.
"	"	ű	6			"					"				0.8 V	"		16 mA	"	1Y		"	"
"	"	u	7		16 mA	u	2.0 V				u					u			"	2W		"	66
"	44	u	8	16 mA		"	0.8 V				"					"			"	2Y		"	"
и	V _{IC}		9		1						u					-12 mA			"	Α		-1.5	££
"	"		10			-12 mA					u								"	В		"	66
и	"		11								"				-12 mA				"	1C ₀		"	66
u	44		12								"			-12 mA					"	1C ₁		"	"
и	44		13								44		-12 mA						"	1C ₂		44	"
"	"		14								u	-12 mA							"	1C ₃		"	"
	"		15				-12 mA				"								"	2C ₀		"	"
"	"		16					-12 mA	40. 4		"								"	2C ₁		"	"
"			17						-12 mA		"								"	2C ₂		"	"
"	-	0000	18	\longmapsto	\vdash					-12 mA	"					0.41/				2C ₃	L		
"	I _{IL}	3009	19			0.41/					"					0.4 V			5.5 V	A	-0.7	-1.6	mA "
"	44	и	20 21			0.4 V GND					"				0.4 V	GND			"	В	44	44	"
"	"	u	22			GND					"			0.4 V	0.4 V	5.5 V			"	1C ₀	и	"	66
и	"	и	23			5.5 V					"		0.4 V	0.4 V		GND			"	1C ₁	"	"	"
и	"	u	24			5.5 V					"	0.4 V	0. 4 V			5.5 V			"	1C ₂ 1C ₃	"	"	66
"	"	u	25			GND	0.4 V				"	0.1 0				GND			"	2C ₀	"	"	66
и	"	u	26			GND		0.4 V			u					5.5 V			ш	2C ₁	"	"	66
"	"	u	27		, ,	5.5 V			0.4 V		"					GND			"	2C ₂	u	"	"
ű	44	u	28		, ,	5.5 V				0.4 V	"					5.5 V			"	2C ₃	u	"	66
u	liH1	3010	29								и					2.4 V			ec .	A		40	μA
"	"	u	30		, ,	2.4 V					"								"	В		"	"
"	"	u	31		, ,	5.5 V					"				2.4 V	5.5 V			ш	1C ₀		"	66
ш	44	и	32		, ,	5.5 V					"			2.4 V		GND			"	1C ₁		"	"
ű	"	u	33		, ,	GND					"		2.4 V			5.5 V			"	1C ₂		"	66
u	"	u	34		, ,	GND					u	2.4 V				GND			66	1C ₃		"	66
u	"	u	35		, ,	5.5 V	2.4 V				"					5.5 V			"	2C ₀		"	66
"	"	u	36		, ,	5.5 V		2.4 V			"					GND			"	2C ₁		"	"
"	44	и	37		, ,	GND			2.4 V		"					5.5 V			"	2C ₂		44	"
и	и	и	38			GND				2.4 V	"					GND			"	2C ₃		"	"

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Test limi	ts
Subgroup	Symbol	method	Test No.	2Y	2W	В	2C ₀	2C ₁	2C ₂	2C ₃	GND	1C ₃	1C ₂	1C ₁	1C ₀	Α	1W	1Y	Vcc	Meas. terminal	Min	Max	Unit
1	I _{IH2}	3010	39								GND					5.5 V			5.5 V	Α		100	ns
T _C = 25°C	u	"	40			5.5 V					"								"	В		"	"
44	"	u	41			"					"				5.5 V				"	1C ₀		"	"
44	"	u	42			"					"			5.5 V		GND			"	1C ₁		"	"
66	"	"	43			GND					"		5.5 V			5.5 V			"	1C ₂		"	"
66	u	"	44			GND					"	5.5 V				GND			"	1C ₃		"	"
"	"	"	45			5.5 V	5.5 V				"					5.5 V			"	2C ₀		"	"
	"	u	46			5.5 V		5.5 V			"					GND			"	2C ₁		"	"
	"	u	47			GND "			5.5 V		"					5.5 V			"	2C ₂		"	"
"	"		48							5.5 V						GND				2C ₃			
	los	3011	49			"					"	GND	GND	GND	GND	"	GND		"	1W	-20	-120	mA
22	u	u	50			u					"	GND	GND	GND	5.5 V	u		GND	"	1Y	"	"	"
"	"	"	51		GND	"	GND	GND	GND	GND "	"					"			"	2W	"	"	"
			52	GND		"	5.5 V	"	"	"	"					"			"	2Y			"
	Icc	3005	53				5.5 V					GND	GND	GND	5.5 V					V_{CC}		45	
2			minal condition				•																
3		tests, ter	minal condition					cept T _C :	= -55°C a	and V _{IC}		omitted											
7	Truth		54	L <u>2</u> /	Н	B <u>1</u> /	В				GND				В	В	Н	L	4.5 V)			
$T_C = 25^{\circ}C$	table		55	Н	L	66	Α				"				Α	В	L	Н	"				
44	test		56	L	Н	"		В			"			В		Α	Н	L	"				
"	u		57	Н	L	"		Α			"			Α		Α	L	Н	u		<u>2</u> /		
66	"		58	L	Н	Α			В		u		В			В	Н	L	"				
u	"		59	Н	L	ш			Α		"		Α			В	L	Н	"				
u	u		60	L	н	"				В	"	В				Α	н	L	"				
u	u		61	Н	L	"				Α	"	Α				Α	L	Н	"				
8	Repea	at subgrou	up 7 at T _C = 1	I25°C ar	nd T _C =	-55°C.			<u> </u>		l .		l				I						
9	t _{PHL1}	3003	62			GND					GND				IN	GND		OUT	5.0 V	1C ₀ to 1Y	3	29	ns
T _C = 25°C	"	(Fig 5)	63			GND					"			IN		5.0 V		"	"	1C ₁ to 1Y	"	"	"
.0 200	"	(1 19 0)	64			5.0 V					"		IN			GND		"	"	1C ₂ to 1Y	u	u	66
u	"	u	65			5.0 V					ш	IN	''`			5.0 V		"	"		и	"	"
u	"	"		OUT							"	IIN							"	1C ₃ to 1Y	"	и	"
<u> </u>			66	OUT		GND	IN									GND			-	2C ₀ to 2Y			
"	"	u	67	u		GND		IN			"					5.0 V			44	2C ₁ to 2Y	"	"	"
u	"	и	68	"		5.0 V			IN		"					GND			44	2C ₂ to 2Y	"	44	"
u	"	и	69	и		5.0 V				IN	ш					5.0 V			"	2C ₃ to 2Y	"	u	**

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Test limi	ts
Subgroup	Symbol	STD-883 method	Test No.	2Y	2W	В	2C ₀	2C ₁	2C ₂	2C ₃	GND	1C ₃	1C ₂	1C ₁	1C ₀	Α	1W	1Y	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PLH1}	3003	70			GND					GND				IN	GND		OUT	5.0 V	1C ₀ to 1Y	3	29	ns
T _C = 25°C	"	(Fig 5)	71			GND					"			IN		5.0 V		u	"	1C ₁ to 1Y	u	"	и
u	"	u	72			5.0 V					66		IN			GND		"	"	1C ₂ to 1Y	"	"	u
u	"	u	73			5.0 V					"	IN				5.0 V		"	"	1C ₃ to 1Y	"	u	и
u	"	u	74	OUT		GND	IN				"					GND			"	2C ₀ to 2Y	**	"	и
u	"	"	75	u		GND		IN			"					5.0 V			"	2C ₁ to 2Y	u	"	и
u	"	"	76	u		5.0 V			IN		"					GND			"	2C ₂ to 2Y	u	"	и
и	u	и	77	u		5.0 V				IN	ш					5.0 V			"	2C ₃ to 2Y	"	"	u
u	t _{PHL2}	"	78			GND					"				IN	GND	OUT		"	1C ₀ to 1W	u	18	и
и	u	и	79			GND					"			IN		5.0 V	u		"	1C ₁ to 1W	"	"	u
и	u	и	80			5.0 V					"		IN			GND	u		"	1C ₂ to 1W	"	"	u
u	"	u	81			5.0 V					"	IN				5.0 V	u		"	1C ₃ to 1W	"	"	u
и	u	и	82		OUT	GND	IN				**					GND			"	2C ₀ to 2W	**	и	u
и	"	и	83		44	GND		IN			**					5.0 V			"	2C ₁ to 2W	u	и	и
u	"	и	84		"	5.0 V			IN		"					GND			"	2C ₂ to 2W	"	"	"
u	u	и	85		и	5.0 V				IN	"					5.0 V			"	2C ₃ to 2W	"	u	и
u	t _{PLH2}	и	86			GND					"				IN	GND	OUT		"	1C ₀ to 1W	"	17	
"	"	ű	87			GND					"			IN		5.0 V	u		"	1C ₁ to 1W	"	"	и
	"		88			5.0 V					"		IN			GND	"		"	1C ₂ to 1W	"		"
	"		89			5.0 V						IN				5.0 V	ű		"	1C ₃ to 1W	"		u
	"		90		OUT	GND	IN									GND			"	2C ₀ to 2W	"		"
	"	"	91			GND		IN			"					5.0 V				2C ₁ to 2W			"
	"	"	92		ű	5.0 V			IN	IN						GND			"	2C ₂ to 2W			
			93			5.0 V					- "					5.0 V		a		2C ₃ to 2W			
	tphl3		94	OUT		GND	ONE	5011						5.0 V	GND	IN		OUT	"	A to 1Y	6	37	ns "
	"	"	95	OUT		GND	GND	5.0 V					5.0 V		ONE	IN		OUT	"	A to 2Y	"		
u	"	и	96 97	OUT		IN IN	GND		5.0 V		"		5.0 V		GND	GND GND		OUT	"	B to 1Y B to 2Y	"	"	"
u		и		001			GND		5.0 V		и			F 0 \/	CND			OUT	"		"	27	и
"	tPLH3	и	98 99	OUT		GND GND	GND	5.0 V			44			5.0 V	GND	IN IN		001	"	A to 1Y A to 2Y	u	37	"
"	"	u	99 100	001		IN	GND	5.0 V			"		5.0 V		GND	GND		OUT	"	B to 1Y	"	"	"
"	u	и	100	OUT		IN	GND		5.0 V		44		5.0 V		GIND	GND		001	"	B to 1Y	u	"	"
u	4	и	101	001		GND	GND		5.0 V		и			5.0 V	GND	IN	OUT		"	A to 1W	"	28	и
и	tpHL4	u	102		OUT	GND	GND	5.0 V			"			3.0 V	מאט	IN	001		"	A to 1W	"	<u>"</u>	"
и	"	и	103		001	IN	GIND	3.0 V			"		5.0 V		GND	GND	OUT		"	B to 1W	"	"	"
и	"	и	104		OUT	IN	GND		5.0 V		"		3.0 V		טאט	GND	001		"	B to 2W	"	"	"
			105		001	IIN	טויוט		J.U V							GIND				D 10 2 VV			

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

					rem	<u>ınaı c</u> o	naitior	is (pin	s not c	esigna	ated ma	ay be r	1 ≥ Z.U	V, Of I	_ <u>≤ U.</u> 8	v, or 0	pen).						
Oubsii	0	MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Mari		Test limi	ts
Subgroup	Symbol	STD-883 method	Test No.	2Y	2W	В	2C ₀	2C ₁	2C ₂	2C ₃	GND	1C ₃	1C ₂	1C ₁	1C ₀	Α	1W	1Y	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PLH4}	3003	106			GND					GND			5.0 V	GND	IN	OUT		5.0 V	A to 1W	6	26	ns
T _C = 25°C	u	(Fig 5)	107		OUT	GND	GND	5.0 V			66					IN			и	A to 2W	"	66	"
и	"	"	108			IN					u		5.0 V		GND	GND	OUT		u	B to 1W	u	"	"
"	"	"	109		OUT	IN	GND		5.0 V		ű					GND			u	B to 2W	"	"	"
10	t _{PHL1}	"	110			GND					ű				IN	GND		OUT	"	1C ₀ to 1Y	3	41	u
T _C = 125°C	u	u	111			GND					44			IN		5.0 V		"	"	1C ₁ to 1Y	u	"	"
и	"	"	112			5.0 V					"		IN			GND		"	"	1C ₂ to 1Y	u	"	"
u	"	"	113			5.0 V					"	IN				5.0 V		"	"	1C ₃ to 1Y	u	"	"
"	"	"	114	OUT		GND	IN				ű					GND			"	2C ₀ to 2Y	"	"	"
u	"	"	115	"		GND		IN			и					5.0 V			u	2C ₁ to 2Y	"	и	"
"	"	"	116	"		5.0 V			IN		"					GND			"	2C ₂ to 2Y	"	"	"
"	"	"	117	"		5.0 V				IN	ű					5.0 V			"	2C ₃ to 2Y	"	"	"
ű	tpLH1	и	118			GND					u				IN	GND		OUT	и	1C ₀ to 1Y	u	39	íí.
"	"	"	119			GND					ű			IN		5.0 V		"	"	1C ₁ to 1Y	"	"	"
"	"	"	120			5.0 V					"		IN			GND		"	"	1C ₂ to 1Y	"	"	"
u	"	"	121			5.0 V					"	IN				5.0 V		"	"	1C ₃ to 1Y	u	"	"
ш	"	"	122	OUT		GND	IN				ű					GND			"	2C ₀ to 2Y	"	"	"
"	"	u	123	"		GND		IN			ш					5.0 V			u	2C ₁ to 2Y	u	ш	ш
"	"	u	124	"		5.0 V			IN		ш					GND			u	2C ₂ to 2Y	u	ш	ш
"	"	"	125	"		5.0 V				IN	ű					5.0 V			"	2C ₃ to 2Y	"	"	"
"	t _{PHL2}	и	126			GND					и				IN	GND	OUT		u	1C ₀ to 1W	"	25	ш
u	"	"	127			GND					"			IN		5.0 V	u		"	1C ₁ to 1W	u	"	"
"	"	"	128			5.0 V					"		IN			GND	u		"	1C ₂ to 1W	"	"	"
"	"	u	129			5.0 V					ш	IN				5.0 V	u		u	1C ₃ to 1W	u	ш	ш
44	u	u	130		OUT	GND	IN				"					GND			u	2C ₀ to 2W	u	"	u
u	"	"	131		"	GND		IN			и					5.0 V			u	2C ₁ to 2W	"	и	и
"	"	u	132		44	5.0 V			IN		ш					GND			u	2C ₂ to 2W	u	ш	ш
"	"	u	133		44	5.0 V				IN	ш					5.0 V			u	2C ₃ to 2W	u	ш	ш
"	t _{PLH2}	и	134			GND					u				IN	GND	OUT		ш	1C ₀ to 1W	и	24	u
"	"	и	135			GND					í,			IN		5.0 V	u		и	1C ₁ to 1W	и	u	u
"	"	и	136			5.0 V					"		IN			GND	"		"	1C ₂ to 1W	u	u	u
"	"	и	137			5.0 V					и	IN				5.0 V	"		"	1C ₃ to 1W	u	u	u
"	"	и	138		OUT	GND	IN				í,					GND			и	2C ₀ to 2W	и	u	u
66	"	u	139		66	GND		IN			44					5.0 V			"	2C ₁ to 2W	u	u	u
"	u	"	140		u	5.0 V			IN		"					GND			"	2C ₂ to 2W	u	u	u
u	u	"	141		u	5.0 V				IN	44					5.0 V			44	2C ₃ to 2W	u	u	u

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			Γest limi	ts
Subgroup	Symbol	method	Test No.	2Y	2W	В	2C ₀	2C ₁	2C ₂	2C ₃	GND	1C ₃	1C ₂	1C ₁	1C ₀	Α	1W	1Y	VCC	Meas. terminal	Min	Max	Unit
10	t _{PHL3}	3003	142			GND					GND			5.0 V	GND	IN		OUT	5.0 V	A to 1Y	6	51	ns
Γ _C = 125°C	"	(Fig 5)	143	OUT		GND	GND	5.0 V			"					IN			"	A to 2Y	"	"	"
u	"	"	144			IN					и		5.0 V		GND	GND		OUT	"	B to 1Y	"	и	"
и	"	u	145	OUT		IN	GND		5.0 V		66					GND			u	B to 2Y	u	u	u
u	tpLH3	"	146			GND					"			5.0 V	GND	IN		OUT	"	A to 1Y	u	u	u
и	"	u	147	OUT		GND	GND	5.0 V			66					IN			"	A to 2Y	u	"	u
u	44	"	148			IN					"		5.0 V		GND	GND		OUT	"	B to 1Y	"	u	u
u	u	и	149	OUT		IN	GND		5.0 V		66					GND			u	B to 2Y	"	u	и
и	t _{PHL4}	u	150			GND					66			5.0 V	GND	IN	OUT		u	A to 1W	u	39	u
и	"	u	151		OUT	GND	GND	5.0 V			66					IN			"	A to 2W	u	"	u
u	44	"	152			IN					"		5.0 V		GND	GND	OUT		"	B to 1W	"	u	u
u	44	"	153		OUT	IN	GND		5.0 V		66					GND			"	B to 2W	"	u	u
и	t _{PLH4}	u	154			GND					66			5.0 V	GND	IN	OUT		u	A to 1W	u	34	u
u	"	"	155		OUT	GND	GND	5.0 V			"					IN			"	A to 2W	u	"	u
u	44	"	156			IN					"		5.0 V		GND	GND	OUT		"	B to 1W	44	u	u
u	u	"	157		OUT	IN	GND		5.0 V		66					GND			"	B to 2W	"	u	"

 $\frac{1}{2}$ / A = 3.0 V minimum, B = 0.0 V or GND. $\frac{2}{2}$ / H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		-	Test limi	ts
Subgroup	Symbol	STD-883 method	Test No.	Α	1B ₀	1B ₁	1Y	2B ₀	2B ₁	2Y	GND	4Y	4B ₁	4B ₀	3Y	3B ₁	3B ₀	G	Vcc	Meas. terminal	Min	Max	Unit
1	VoH	3006	1	2.0 V	150	· ·	8 mA	200	201		GND		101	120		OBT	000	0.8 V	4.5 V	1Y	2.4		V
T _C = 25°C	VOH "	"	2	2.0 V		2.0 V	.0 1117 (20 V	8 mA	"							"	4.5 V	2Y	"		"
"	66	u	3	"					2.0	.0	"				8 mA	20V		и	"	3Y	и		"
ű	"	"	4	"							u	8 mA	2.0 V			2.0		"	u	4Y	"		"
и	V _{OL}	3007	5				16 mA				ű							2.0 V	u	1Y		0.4	"
"	"	"	6							16 mA	"							"	u	2Y		"	"
u	"	и	7								u				16 mA			"	"	3Y		"	44
и	66	u	8								"	16 mA						"	u	4Y		u	"
u	V _{IC}		9	-12 mA							"								u	Α		-1.5	"
"	"		10		-12 mA						"								"	1B ₀		"	"
u	"		11			-12 mA					u								u	1B ₁		"	66
u	"		12					-12 mA			u								u	2B ₀		"	"
u	"		13						-12 mA		u								u	2B ₁		"	**
u	"		14								u		-12 mA						u	4B ₁		"	**
u	"		15								u			-12 mA					u	4B ₀		"	**
и	es .		16								66					-12 mA			"	3B ₁		"	66
и	es .		17								66						-12 mA		"	3B ₀		"	"
u	66		18								u							-12 mA	u	G		"	**
ш	I _{IL}	3009	19								"							0.4 V	5.5 V	G	-0.7	-1.6	mA
ш	66	"	20	0.4 V							"							GND	"	Α	44	"	"
"	"	"	21	GND	0.4 V						"							"	"	1B ₀	ш	"	"
ű	"	"	22	5.5 V		0.4 V					u							"	u	1B ₁	ш	"	"
и	"	"	23	GND				0.4 V			"							"	44	2B ₀	"	"	"
и	"	"	24	5.5 V					0.4 V		44							"	"	2B ₁	"	"	**
и	"	"	25	5.5 V							u		0.4 V					"	"	4B ₁	"	"	**
и	66	и	26	GND							u			0.4 V				и	"	4B ₀	44	"	"
и	66	и	27	5.5 V							u					0.4 V		и	и	3B ₁	44	"	ee .
и	"	и	28	GND							u						0.4 V	"	"	3B ₀	u	"	"
u	I _{IH1}	3010	29								"							2.4 V	u	G		40	μΑ
u	66	и	30	2.4 V							u							5.5 V	u	Α		"	"
"	66	и	31	5.5 V	2.4 V						ű							"	"	1B ₀		"	"
ee	66	и	32	GND			2.4 V				u							"	"	1B ₁		"	"
ee	66	и	33	5.5 V				2.4 V			tt							и	"	2B ₀		"	"
u	66	и	34	GND					2.4 V		"							"	"	2B ₁		"	"
u	66	и	35	GND							"		2.4 V					"	"	4B ₁		"	"
ee	66	ш	36	5.5 V							u			2.4 V				и	"	4B ₀		"	"
ee	66	ш	37	GND							"					2.4 V		и	"	3B ₁		"	"
	es .	и	38	5.5 V							u						2.4 V	и	u	3B ₀		"	ш

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		T	est limi	ts
Subgroup	Symbol	STD-883 method	Test No.	Α	1B ₀	1B ₁	1Y	2B ₀	2B ₁	2Y	GND	4Y	4B ₁	4B ₀	3Y	3B ₁	3B ₀	G	V _C C	Meas. terminal	Min	Max	Unit
1	I _{IH2}	3010	39								GND							5.5 V	5.5 V	G		100	μA
T _C = 25°C	"	"	40	5.5 V							"							"	"	Α		"	"
и	"	"	41	5.5 V	5.5 V						"							"	"	1B ₀		"	"
u	"	u	42	GND		5.5 V					и							"	"	1B ₁		"	"
u	"	u	43	5.5 V				5.5 V			"							"	ш	2B ₀		"	"
и	"	u	44	GND					5.5 V		и							66	66	2B ₁		"	"
"	"	"	45	GND							"		5.5 V					44	66	4B ₁		u	"
и	u	u	46	5.5 V							"			5.5 V				44	"	4B ₀		"	"
"	"	"	47	GND							"					5.5 V		44	66	3B ₁		u	"
"	"	"	48	5.5 V							"						5.5 V	44	"	3B ₀		u	"
и	los	3011	49	5.5 V	5.5 V	5.5 V	GND				"							GND	u	1Y	-20	-120	mA
и	u	u	50	и				5.5 V	5.5 V	GND	"							44	"	2Y	"	"	"
и	"	u	51	и							"	GND	5.5 V	5.5 V				66	66	4Y	"	"	"
и	"	u	52	и							"				GND	5.5 V	5.5 V	66	66	3Y	"	"	"
и	Icc	3005	53	GND	GND	GND		GND	GND		u		GND	GND		GND	GND	GND	u	Vcc		50	"
2	Same t	ests, term	inal condition	ns and li	mits as su	ubgroup	1, excep	ot T _C = 1	125°C ar	nd V _{IC} te	ests are	mitted.											
3	Same t	ests, term	inal condition	ons and li	mits as s	ubgroup	1, exce	pt T _C =	-55°C ar	nd V _{IC} te	sts are o	mitted.											
7	Truth		54				L <u>2</u> /			L	GND	L			L			Α	4.5 V	_			
T _C = 25°C	table		55	A <u>1</u> /		В	L		В	L	"	L	В		L	В		В	66)			
u	test		56	Α		Α	Н		Α	Н	"	Н	Α		Н	Α		44	66	}	<u>2</u> /		
"	"		57	В	В		L	В		L	"	L		В	L		В	44	66				
и	u		58	В	Α		Н	Α		Н	u	Н		Α	Н		Α	66	u)			
8	Repeat	subgroup	7 at T _C = 1	25°C and	d T _C = -58	5°C.																	
9	tpHL1	3003	59	IN	GND	5.0 V	OUT				GND							GND	5.0 V	A to 1Y	6	30	ns
T _C = 25°C	u	(Fig 6)	60	и				GND	5.0 V	OUT	u							ш	66	A to 2Y	"	u	"
и	u	u	61	и							"				OUT	5.0 V	GND	44	66	A to 3Y	"	u	"
"	"	"	62	"							u	OUT	5.0 V	GND				66	ec .	A to 4Y	"	"	u
"	t _{PLH1}	"	63	"	GND	5.0 V	OUT				u							44	u	A to 1Y	u	27	u
"	"	"	64	"				GND	5.0 V	OUT	u							66	ec .	A to 2Y	"	"	u
"	"	"	65	"							u				OUT	5.0 V	GND	66	ec .	A to 3Y	"	"	u
u	u	u	66	u							"	OUT	5.0 V	GND				66	66	A to 4Y	ű	"	"

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

					Termir	nal con	ditions	(pins	not de	esignat	ed ma	y be H	≥ 2.0	V, or L	≤ 0.8	V, or o	pen).						
Cubara	Cumb -1	MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Mass	-	Test limi	ts
Subgroup	Symbol	STD-883 method	Test No.	Α	1B ₀	1B ₁	1Y	2B ₀	2B ₁	2Y	GND	4Y	4B ₁	4B ₀	3Y	3B ₁	3B ₀	G	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PHL2}	3003	67	5.0 V		5.0 V	OUT				GND							IN	5.0 V	G to 1Y	3	28	ns
T _C = 25°C	"	(Fig 6)	68	"					5.0 V	OUT	"							"	"	G to 2Y	"	u	44
"	"	"	69	"							"				OUT	5.0 V		"	"	G to 3Y	"	"	"
"	"	"	70	"							"	OUT	5.0 V					"	"	G to 4Y	"	u	44
u	t _{PLH2}	ű	71	ű		5.0 V	OUT				u							"	"	G to 1Y	u	23	"
ш	66	44	72	44					5.0 V	OUT	"							"	"	G to 2Y	"	66	"
ш	66	44	73	44							"				OUT	5.0 V		"	"	G to 3Y	"	66	"
"	"	u	74	u							44	OUT	5.0 V					"	u	G to 4Y	"	u	"
u	t _{PHL3}	"	75	GND	IN		OUT				"							GND	u	1B ₀ to 1Y	"	20	"
u	ű	"	76	5.0 V		IN	OUT				"							"	u	1B ₁ to 1Y	"	"	u
u	66	44	77	GND				IN		OUT	"							"	"	2B ₀ to 2Y	"	66	"
u	66	44	78	5.0 V					IN	OUT	"							"	"	2B ₁ to 2Y	"	66	"
u	66	44	79	GND							"				OUT		IN	"	"	3B ₀ to 3Y	"	66	"
u	66	44	80	5.0 V							"				OUT	IN		"	"	3B ₁ to 3Y	"	66	"
u	66	44	81	GND							"	OUT		IN				"	"	4B ₀ to 4Y	"	66	"
u	u	"	82	5.0 V							u	OUT	IN					и	ű	4B ₁ to 4Y	"	66	"
u	t _{PLH3}	"	83	GND	IN		OUT				u							"	u	1B ₀ to 1Y	"	20	"
u	cc cc	"	84	5.0 V		IN	OUT				и							и	"	1B ₁ to 1Y	"	66	"
"	"	"	85	GND				IN		OUT	и							и	"	2B ₀ to 2Y	"	u	66
"	cc cc	"	86	5.0 V					IN	OUT	и							и	"	2B ₁ to 2Y	"	66	44
ш	"	"	87	GND							"				OUT		IN	"	u	3B ₀ to 3Y	"	"	u
ш	"	"	88	5.0 V							"				OUT	IN		"	u	3B ₁ to 3Y	"	"	u
ш	"	"	89	GND							"	OUT		IN				"	u	4B ₀ to 4Y	"	"	u
и	"	"	90	5.0 V							"	OUT	IN					"	u	4B ₁ to 4Y	u	"	u
10	t _{PHL1}	3003	91	IN	GND	5.0 V	OUT				u							"	"	A to1Y	6	49	"
T _C = 125°C		(Fig 6)	92	u				GND	5.0 V	OUT	u							u	u	A to 2Y	u	u	"
ű	u	ű	93	u							"				OUT	5.0 V	GND	"	u	A to 3Y	u	u	"
ű	u u	ű	94	u							u	OUT	5.0 V	GND				"	u	A to 4Y	"	u	"
ű	t _{PLH1}	u u	95	u	GND	5.0 V	OUT				u							"	"	A to1Y	"	41	"
ű	ű	ű	96	u				GND	5.0 V	OUT	u							"	u	A to 2Y	u	u	"
ű	u	ű	97	u							u				OUT	5.0 V	GND	"	u	A to 3Y	u	u	"
ű	ű	ű	98	u							u	OUT	5.0 V	GND				"	"	A to 4Y	u	u	"
и	tPHL2	44	99	5.0 V		5.0 V	OUT				u							IN	"	G to 1Y	3	39	"
"	"	"	100	"					5.0 V	OUT	u							u	"	G to 2Y	u	"	"
"	"	"	101	"							"				OUT	5.0 V		u	"	G to 3Y	u	"	44
"	"	"	102	"							"	OUT	5.0 V					u	"	G to 4Y	er.	"	44

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		-	Γest limi	its
Subgroup	Symbol	method	Test No.	Α	1B ₀	1B ₁	1Y	2B ₀	2B ₁	2Y	GND	4Y	4B ₁	4B ₀	3Y	3B ₁	3B ₀	G	Vcc	Meas. terminal	Min	Max	Unit
10	t _{PLH2}	3003	103	5.0 V		5.0 V	OUT				GND							IN	5.0 V	G to 1Y	3	33	ns
T _C = 125°C	"	(Fig 6)	104	u					5.0 V	OUT	u							"	"	G to 2Y	"	"	"
"	"	££	105	ű							66				OUT	5.0 V		"	44	G to 3Y	"	66	"
u	"	"	106	u							"	OUT	5.0 V					"	"	G to 4Y	"	44	"
u	tpHL3	"	107	GND	IN		OUT				66							GND	u	1B ₀ to 1Y	"	25	"
u	"	"	108	5.0 V		IN	OUT				"							и	"	1B ₁ to 1Y	"	"	"
u	"	"	109	GND				IN		OUT	"							и	"	2B ₀ to 2Y	"	"	"
u	"	"	110	5.0 V					IN	OUT	"							"	u	2B ₁ to 2Y	"	"	**
u	"	"	111	GND							"				OUT		IN	и	"	3B ₀ to 3Y	"	"	"
u	u	"	112	5.0 V							66				OUT	IN		ш	u	3B ₁ to 3Y	"	66	"
u	u	ee	113	GND							ee	OUT		IN				"	**	4B ₀ to 4Y	"	66	"
u	"	44	114	5.0 V							66	OUT	IN					"	u	4B ₁ to 4Y		u	"
"	t _{PLH3}	"	115	GND	IN		OUT				"								"	1B ₀ to 1Y	"	35	"
"	"		116	5.0 V		IN	OUT				"							и	"	1B ₁ to 1Y	"	"	"
u	"	"	117	GND				IN		OUT	"							и	"	2B ₀ to 2Y	"	"	"
u	u	"	118	5.0 V					IN	OUT	"							ш	u	2B ₁ to 2Y	"	66	"
u	"	44	119	GND							66				OUT		IN	"	u	3B ₀ to 3Y	"	u	"
u	"	44	120	5.0 V							66				OUT	IN		"	u	3B ₁ to 3Y		u	"
"	"	44	121	GND							44	OUT		IN				"	u	4B ₀ to 4Y		66	"
u	"	u	122	5.0 V							"	OUT	IN					"	u	4B ₁ to 4Y		u	"

 $\underline{1}/$ A = 3.0 V minimum, B = 0.0 V or GND. $\underline{2}/$ H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

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

					1 011111	nai co	Idition	s (pins	HOL GC	oigilat	Ja illa j	2011		·, · -	_ 0.0 \	, o. o	JOI1).						
		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est lim	its
Subgroup	Symbol	STD-883 method	Test No.	D ₃	D ₂	D ₁	D ₀	Υ	W	G	GND	С	В	Α	D ₇	D ₆	D ₅	D4	Vcc	Meas. terminal	Min	Max	Unit
1	.,	3006	1	D3	D2	Di			**	0.8 V	GND	0.8 V	0.8 V	0.8 V	D/	D6	Do	D4	4.5 V	Y	2.4	WIGH	V
	VoH						2.0 V	-0.8 mA	0 0 4		GND								4.5 V	W			, v
T _C = 25°C		3006	2						-0.8 mA	2.0 V	u	2.0 V	2.0 V	2.0 V					u	Y	2.4	0.4	и
"	V _{OL}	3007	3				001/	16 mA	404	-	"	2.0 V	2.0 V	2.0 V					"			0.4	"
	VoL	3007	4				2.0 V		16 mA	V 8.0		0.8 V	0.8 V	0.8 V					u	W		0.4	u
	V _{IC}		5				-12 mA				"								"	D ₀		-1.5	
	"		6			-12 mA													"	D ₁		"	
	"		7		-12 mA															D ₂		"	l
"			8	-12 mA							"									D ₃			l "
ű	"		9								u							-12 mA	"	D ₄		"	"
"	"		10								"						-12 mA		"	D ₅		"	"
u	"		11								"					-12 mA			"	D ₆		"	"
"	"		12								"				-12 mA				"	D ₇		"	"
"	"		13							-12 mA	"								"	G		"	"
44	"		14								u			-12 mA					**	Α		"	"
ű	"		15								"		-12 mA						"	В		"	"
ű	"		16								"	-12 mA							"	С		"	"
"	Ι _Ι L	3009	17							0.4 V	"	5.5 V	5.5 V	5.5 V					5.5 V	G	-0.7	-1.6	mA
ű	"	"	18							GND	"	5.5 V	5.5 V	0.4 V					"	Α	u	"	"
"	"	"	19							"	"	5.5 V	0.4 V	5.5 V					"	В	"	"	"
ű	"	u	20							"	u	0.4 V	5.5 V	5.5 V					"	С	"	"	"
44	"	u	21				0.4 V			"	u	GND	GND	GND					"	D ₀	u	"	u
ű	"	"	22			0.4 V				"	"	"	GND	5.5 V					"	D ₁	"	"	"
ű	"	"	23		0.4 V					"	"	"	5.5 V	GND					"	D ₂	"	"	"
44	"	"	24	0.4 V						"	u	"	5.5 V	5.5 V					"	D ₃	u	"	u
44	u	и	25							"	u	5.5 V	GND	GND				0.4 V	66	D ₄	u	"	u
и	"	"	26							"	"	"	GND	5.5 V			0.4 V		"	D ₅	"	"	"
"	"	"	27							"	"	"	5.5 V	GND		0.4 V			"	D ₆	"	"	"
ű	"	"	28							"	"	"	5.5 V	5.5 V	0.4 V	,			"	D ₀	"	"	"
ű	I _{IH1}	3010	29							2.4 V	"	GND	GND	GND					"	G G		40	μA
"	"HI"	"	30							5.5 V	"	GND	GND	2.4 V					"	A		"	"
ű	"	"	31							"	"	GND	2.4 V	GND					"	В		"	"
и	"	ш	32							"	u	2.4 V	GND	GND					66	C		"	u
и	"	ш	33				2.4 V			"	u	5.5 V	5.5 V	5.5 V					66	D ₀		"	u
и	"	44	34			2.4 V	¬ V			"	"	3.5 V	5.5 V	GND					66	D ₀		"	u
ű	"	и	35		2.4 V	27 V				44	"	44	GND	5.5 V					"			"	u
"	"	"	36	2.4 V	2.7 V					"	"	"	GND	GND				2.4 V	"	D ₂		"	"
u	"	"	37	2.4 V						"	"	GND	5.5 V	5.5 V				∠. + ∨	66	D ₃		"	u
и	"	"								44	"	GND "					2.4 V		66	D ₄		"	и
"	"	"	38							"	"	"	5.5 V	GND		0.41/	2.4 V			D ₅		"	"
			39									"	GND "	5.5 V	0.437	2.4 V				D ₆		"	
	"	l "	40											GND	2.4 V			l	l "	D_7			ı

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

Subgroup		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		Т	est limi	its
	Symbol	STD-883 method	Test No.	D ₃	D ₂	D ₁	D ₀	Υ	W	G	GND	С	В	Α	D ₇	D ₆	D ₅	D ₄	V _C C	Meas. terminal	Min	Max	Unit
1	I _{IH2}	3010	41							5.5 V	GND	GND	GND	GND					5.5 V	G		100	μА
T _C = 25°C	"	"	42							"	66	"	GND	5.5 V					66	Α		u	"
"	"	"	43							"	66	"	5.5 V	GND					66	В		u	"
"	"	u	44							"	"	5.5 V	GND	GND					"	С		"	"
"	"	u	45				5.5 V			"	"	"	5.5 V	5.5 V					"	D ₀		"	"
ш	"	u	46			5.5 V				"	"	"	5.5 V	GND					"	D ₁		"	"
ш	"	u	47		5.5 V					"	"	"	GND	5.5 V					"	D ₂		"	"
ш	"	u	48	5.5 V						"	"	"	GND	GND					"	D ₃		"	"
"	u	"	49							"	"	GND	5.5 V	5.5 V				5.5 V	"	D ₄		u	"
и	"	"	50							"	"	"	5.5 V	GND			5.5 V		"	D ₅		u	"
"	"	"	51								"	"	GND	5.5 V		5.5 V			"	D ₆		"	"
"	"		52								"	u	es .	GND	5.5 V				66	D ₇		"	"
"	los	3011	53	GND	GND	GND	GND		GND	"	"	"	66	"	GND	GND	GND	GND	66	W	-20	-55	mA
"	los	3011	54	"	"	"	5.5 V	GND		GND	66	"	66	"	"	"	"	"	66	Υ	-20	-55	mA
и	Icc	3005	55	"	"	"	5.5 V			GND	"	"	"	"	"		"	"	"	Vcc		48	mA
2	Same to	ests, termir	nal conditions	and limi	ts as su	bgroup	1, excep	t T _C = 12	5°C and	V _{IC} test	s are on	nitted.											
3	Same t	ests, termir	nal conditions	and lim	its as su	bgroup	1, excep	ot T _C = -5	5°C and	V _{IC} tests	s are or	nitted.											
7	Truth		56				<u>1</u> /	L <u>2</u> /	Н	Α	GND								4.5 V	1			
T _C = 25°C	table		57				В	L	Н	В	"	В	В	В					"	<u> </u>			
"	test		58				Α	Н	L	"	"	"	"	В					"				
"	"		59			В		L	Н	"	"	"	"	Α					"				
"	"		60			Α		Н	L	"	66	"	66	Α					66				
"	"		61		В			L	Н	"	"	"	Α	В					"				
ш	"		62		Α			Н	L	"	"	"	66	В					"				
u	44		63	В				L	Н	u	66	44	66	Α					66				
u	44		64	Α				Н	L	u	66	44	66	Α					66	\	<u>2</u> /		
"	u		65					L	Н	66	"	Α	В	В				В	44	[_		
"	u		66					Н	L	66	"	44	"	В				Α	44				
u	44		67					L	Н	"	u	"	u	A			В		u				
"	"		68					Н	L	"	"	"	"	Α			A		"				
u	u		69					L	Н	"	u	"	Α	В		В			u				
u	66		70					Н	L	"	u	"	"	В		A			u				
u	"		71					L	Н	"	u	"	u	A	В				u				
u	66		72					Н	L	u	"	и	u	Α	Α				44	/			
8	Repeat	subgroup :	7 at T _C = 125	°C and 1	r _C = -55	°C.		1				1	l			l			l	1			

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

		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		1	Γest lim	its
Subgroup	Symbol	method	Test No.	D ₃	D ₂	D ₁	D ₀	Υ	W	G	GND	С	В	Α	D ₇	D ₆	D ₅	D ₄	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PHL1}	3003	73			5.0 V	GND		OUT	GND	GND	GND	GND	IN					5.0 V	A to W	6	32	ns
T _C = 25°C	"	(Fig 4)	74		5.0 V		"		"	"	ű	GND	IN	GND					"	B to W	"	"	"
u	"	"	75				"		"	"	"	IN	GND	GND				5.0 V	"	C to W	"	u	"
u	t _{PLH1}	ee	76			5.0 V	66		66	"	££	GND	GND	IN					"	A to W	"	29	66
u	"	"	77		5.0 V		"		"	"	ű	GND	IN	GND					"	B to W	"	"	"
u	"	"	78				"		"	"	ű	IN	GND	GND				5.0 V	"	C to W	"	"	"
u	t _{PHL2}	ee	79			5.0 V	66	OUT		"	££	GND	GND	IN					"	A to Y	8	40	66
u	"	"	80		5.0 V		"	"		"	ű	GND	IN	GND					"	B to Y	"	"	"
u	"	"	81				"	"		"	ű	IN	GND	GND				5.0 V	"	C to Y	"	"	"
u	tPLH2	ee	82			5.0 V	66	"		"	££	GND	GND	IN					"	A to Y	"	39	66
u	"	"	83		5.0 V		"	"		"	ű	GND	IN	GND					"	B to Y	"	"	"
u	"	"	84				"	"		"	ű	IN	GND	"				5.0 V	"	C to Y	"	"	"
u	t _{PHL3}	u	85				5.0 V		OUT	IN	ш	GND	и	"					"	G to W	6	28	"
"	tpLH3	"	86				"		OUT	44	u	"	"	"					"	G to W	6	26	"
u	tPHL4	u	87				"	OUT		"	u	"	и	"					"	G to Y	8	37	"
u	t _{PLH4}	"	88				"	OUT		44	u	"	"	"					"	G to Y	8	35	"
u	t _{PHL5}	**	89				IN		OUT	GND	"	"	u	"					"	D_0 to W	3	20	66
u	"	u	90			IN			"	"	"	"	"	5.0 V					"	D_1 to W	"	"	"
u	44	66	91		IN				44	66	66	"	5.0 V	GND					"	D ₂ to W	"	"	66
u	44	66	92	IN					44	66	66	"	5.0 V	5.0 V					"	D ₃ to W	"	"	66
"	t _{PHL5}	"	93						OUT	GND	"	5.0 V	GND	GND				IN	"	D ₄ to W	"	"	
"	44	"	94						44	66	66	"	GND	5.0 V			IN		"	D ₅ to W	"	"	66
и	66	u	95						"	"	u	"	5.0 V	GND		IN			"	D ₆ to W	"	"	"
и	66	u	96						"	"	u	"	5.0 V	5.0 V	IN				"	D ₇ to W	"	"	"
"	tPLH5	"	97	,			IN		u	"	u	GND	GND	GND					"	D ₀ to W	"	17	"
u	44	ii .	98			IN			66	66	"	"	GND	5.0 V					"	D_1 to W	"	"	"
u	44	ii .	99		IN				66	66	44	"	5.0 V	GND					"	D ₂ to W	"	"	"
и	66	u	100	IN					"	"	u	"	5.0 V	5.0 V					"	D ₃ to W	"	"	"
u	44	u	101						66	66	44	5.0 V	GND	GND				IN	"	D ₄ to W	"	"	"
"	44	"	102						u	"	и	u	GND	5.0 V			IN		"	D ₅ to W	"	"	"
и	"	"	103						u	u	u	u	5.0 V	GND		IN			u	D ₆ to W	u	u	u
u	"	"	104						"	"	"	ű	5.0 V	5.0 V	IN				"	D ₇ to W	u	"	u

					I ermi	nal co	ndition	s (pins	not de	signate	ed may	/ be H	≥ 2.0	V, or L	≤ 0.8 \	/, or o	oen).						
Cubaraun	Cumbal	MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Mass	T	Test limi	its
Subgroup	Symbol	method	Test No.	D ₃	D ₂	D ₁	D ₀	Υ	W	G	GND	С	В	Α	D ₇	D ₆	D ₅	D ₄	Vcc	Meas. terminal	Min	Max	Unit
9	t _{PHL6}	3003	105				IN	OUT		GND	GND	GND	GND	GND					5.0 V	D ₀ to Y	6	29	ns
T _C = 25°C	"	(Fig 4)	106			IN		u		"	44	"	GND	5.0 V					44	D ₁ to Y	"	u	u
"	"	"	107		IN			и		"	"	"	5.0 V	GND					"	D ₂ to Y	"	"	"
"	"	"	108	IN				и		"	"	"	5.0 V	5.0 V					"	D ₃ to Y	"	"	"
"	"	"	109					и		и	"	5.0 V	GND	GND				IN	"	D ₄ to Y	"	"	ш
u	"	"	110					u		"	"	"	GND	5.0 V			IN		44	D ₅ to Y	"	ű	u
"	"	"	111					и		"	"	"	5.0 V	GND		IN			"	D ₆ to Y	"	"	"
"	"	"	112					и		"	"	"	5.0 V	5.0 V	IN				"	D ₇ to Y	"	"	"
"	t _{PLH6}	ű	113				IN	и		ш	"	GND	GND	GND					"	D ₀ to Y	"	33	"
"	"	"	114			IN		и		"	"	"	GND	5.0 V					"	D ₁ to Y	"	"	"
"	"	"	115		IN			и		"	"	"	5.0 V	GND					"	D ₂ to Y	"	"	"
"	"	"	116	IN				и		"	"	"	5.0 V	5.0 V				IN	"	D ₃ to Y	"	"	"
"	66	"	117					и		"	"	5.0 V	GND	GND			IN		"	D ₄ to Y	"	"	"
"	66	и	118					и		"	u	u	GND	5.0 V					"	D ₅ to Y	"	"	u
"	"	"	119					и		"	"	"	5.0 V	GND		IN			"	D ₆ to Y	"	"	"
"	"	ű	120					u		"	44	"	5.0 V	5.0 V	IN				44	D ₇ to Y	"	u	u
10	t _{PHL1}	u	121			5.0 V	GND		OUT	"	"	GND	GND	IN					44	A to W	"	48	u
T _C = 125°C	"	ű	122		5.0 V		"		"	"	44	GND	IN	GND					44	B to W	"	u	u
u	66	íí.	123				u		66	u	u	IN	GND	GND				5.0 V	«	C to W	u	"	и
"	t _{PLH1}	"	124			5.0 V	"		"	"	"	GND	GND	IN					"	A to W	**	43	"
"	"	"	125		5.0 V		"		"	"	"	GND	IN	GND					"	B to W	"	u	"
"	66	и	126				ű		66	ш	"	IN	GND	GND				5.0 V	u	C to W	"	u	ű
"	tPHL2	"	127			5.0 V	"	OUT		"	"	GND	GND	IN					"	A to Y	8	60	"
"	"	"	128		5.0 V		"	ű		"	"	GND	IN	GND					44	B to Y	"	u	"
"	"	"	129				"	ű		"	"	IN	GND	GND				5.0 V	"	C to Y	"	u	ш
"	t _{PLH2}	"	130			5.0 V	"	ű		"	"	GND	GND	IN					44	A to Y	"	58	u
"	"	"	131		5.0 V		"	ű		"	"	GND	IN	GND					44	B to Y	"	u	u
"	"	"	132				"	ű		"	"	IN	GND	"				5.0 V	"	C to Y	u	u	u
"	t _{PHL3}	ű	133				5.0 V		OUT	IN	"	GND	u	"					u	G to W	6	38	"
"	t _{PLH3}	и	134				u		OUT	u	u	u	ű	"					u	G to W	6	35	íí.
"	t _{PHL4}	u	135				u	OUT		u	u	u	u	"					u	G to Y	8	52	"
"	tPLH4	и	136				u	OUT		u	u	u	ű	u					u	G to Y	8	52	"
"	tPHL5	u	137				IN		OUT	GND	u	u	u	"					"	D_0 to W	3	32	u
"	"	u	138			IN			"	"	u	и	u	5.0 V					ш	D_1 to W	"	"	"
"	66	ű	139		IN				"	"	"	"	5.0 V	GND					u	D_2 to W	"	u.	"
"	66	u	140	IN					"	ш	и	и	5.0 V	5.0 V					"	D ₃ to W	"	"	"

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

0.1		MIL-	Cases E, F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		1	est lim	its
Subgroup	Symbol	method	Test No.	D ₃	D ₂	D ₁	D ₀	Υ	W	G	GND	С	В	Α	D ₇	D ₆	D ₅	D ₄	Vcc	Meas. terminal	Min	Max	Unit
10	t _{PHL5}	3003	141						OUT	GND	GND	5.0 V	GND	GND				IN	5.0 V	D ₄ to W	3	32	ns
T _C = 125°C	"	(Fig 4)	142						"	"	"	ш	GND	5.0 V			IN		u	D ₅ to W	"	u	"
"	"	u	143						"	"	"	"	5.0 V	GND		IN			"	D ₆ to W	"	и	"
"	"	"	144						"	"	"	u	5.0 V	5.0 V	IN				"	D ₇ to W	u	u	"
"	tPLH5	u	145				IN		и	"	u	GND	GND	GND					"	D ₀ to W	"	26	"
u	"	u	146			IN			"	"	44	"	GND	5.0 V					**	D ₁ to W	**	u	"
"	"	u	147		IN				"	"	"	"	5.0 V	GND					"	D ₂ to W	"	и	"
u	"	u	148	IN					"	"	44	"	5.0 V	5.0 V					**	D ₃ to W	**	u	"
"	"	u	149						"	"	"	5.0 V	GND	GND				IN	"	D ₄ to W	"	u	"
"	"	u	150						"	"	"	"	GND	5.0 V			IN		"	D ₅ to W	"	и	"
"	"	u	151						"	"	"	"	5.0 V	GND		IN			"	D ₆ to W	"	и	"
"	"	u	152						"	"	"	"	5.0 V	5.0 V	IN				"	D ₇ to W	"	и	"
"	t _{PHL6}	u	153				IN	OUT		"	"	GND	GND	GND					"	D ₀ to Y	6	44	"
u	"	u	154			IN		"		"	44	"	GND	5.0 V					**	D ₁ to Y	**	u	"
u	"	u	155		IN			"		"	44	"	5.0 V	GND					**	D ₂ to Y	**	u	"
"	"	u	156	IN				"		"	44	"	5.0 V	5.0 V				IN	**	D ₃ to Y	**	u	"
u	"	u	157					"		"	44	5.0 V	GND	GND					**	D ₄ to Y	**	u	"
u	44	66	158					"		"	**	66	GND	5.0 V			IN		"	D ₅ to Y	"	"	"
u	"	u	159					"		"	44	"	5.0 V	GND		IN			**	D ₆ to Y	**	u	"
"	44	"	160					"		"	66	u	5.0 V	5.0 V	IN				"	D ₇ to Y	u	"	"
u	t _{PLH6}	u	161				IN	"		"	44	GND	GND	GND					"	D ₀ to Y	**	36	"
u	44	66	162			IN		"		"	**	66	GND	5.0 V					"	D ₁ to Y	"	"	"
u	44	66	163		IN			"		"	**	66	5.0 V	GND					**	D ₂ to Y	"	"	"
"	44	44	164	IN				"		"	u	u	5.0 V	5.0 V					"	D ₃ to Y	u	"	"
"	44	"	165					"		"	66	5.0 V	GND	GND				IN	"	D ₄ to Y	"	"	ш
u	"	u	166					"		u	u	u	GND	5.0 V			IN		u	D ₅ to Y	"	u	"
"	"	"	167					"		"	"	u	5.0 V	GND		IN			"	D ₆ to Y	u	u	"
u	"	u	168					"		"	"	"	5.0 V	5.0 V	IN				"	D ₇ to Y	u	u	"

 $[\]underline{1}/$ A = 3.0 V minimum, B = 0.0 V or GND. $\underline{2}/$ H > 1.5 V; L < 1.5 V. Only attributes data is required for subgroups 7 and 8.

5. PACKAGING

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

6. NOTES

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

- 6.1 <u>Intended use.</u> Microcircuits conforming to this specification are intended for original equipment design applications and logistic support of existing equipment.
 - 6.2 Acquisition requirements. Acquisition documents should specify the following:
 - a. Title, number, and date of the specification.
 - b. PIN and compliance identifier, if applicable (see 1.2).
 - c. Requirements for delivery of one copy of the conformance inspection data pertinent to the device inspection lot to be supplied with each shipment by the device manufacturer, if applicable.
 - d. Requirement for certificate of compliance, if applicable.
 - e. Requirements for notification of change of product or process to acquiring activity in addition to notification to the qualifying activity, if applicable.
 - f. Requirements for failure analysis (including required test condition of method 5003), corrective action and reporting of results, if applicable.
 - g. Requirements for product assurance options.
 - h. Requirements for carriers, special lead lengths or lead forming, if applicable. These requirements shall not affect the part number. Unless otherwise specified, these requirements will not apply to direct purchase by or direct shipment to the Government.
 - i. Requirements for "JAN" marking.
 - j. Packaging requirements (see 5.1).
- 6.3 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DSCC-VQ, 3990 E. Broad Street, Columbus, Ohio 43123-1199.
- 6.4 <u>Superseding information.</u> The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.

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

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

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

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

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

TABLE IV. Substitutability and manufacturers designator.

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

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

Custodians:

DLA - CC

Army - CR Navy - EC Air Force - 11

(Project 5962-2103)

Preparing activity:

DLA - CC

Review activities:

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

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

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