

INCH-POUND

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

MILITARY SPECIFICATION

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

Inactive for new design after 18 April 1997.

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

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

1. SCOPE

1.1 Scope. This specification covers the detail requirements for monolithic silicon, low-power Schottky TTL, bus transceivers with three state outputs. Two product assurance classes and a choice of case outlines and lead finishes are provided for each type and are reflected in the complete part number. For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.3).

1.2 Part or Identifying Number (PIN). The PIN should be in accordance with MIL-PRF-38535, and as specified herein.

1.2.1 Device types. The device types should be as follows:

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

1.2.2 Device class. The device class should be the product assurance level as defined in MIL-PRF-38535.

1.2.3 Case outlines. The case outlines should be as designated in MIL-STD-1835 and as follows:

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

Comments, suggestions, or questions on this document should be addressed to: Commander, Defense Supply Center Columbus, ATTN: DSCC-VAS, 3990 East Broad St., Columbus, OH 43216-5000, or emailed to bipolar@dsccl.dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at www.dodssp.daps.mil.

1.3 Absolute maximum ratings.

Supply voltage range	-0.5 V dc to +7.0 V dc
Input voltage range	-1.5 V dc at -18 mA to +5.5 V dc
Storage temperature range	-65° to +150°C
Maximum power dissipation (P_D) <u>1/</u>	
Device type 01 and 02	297 mW dc
Device type 03	522.5 mW dc
Device type 04 and 05	907.5 mW dc
Lead temperature (soldering, 10 seconds)	+300°C
Thermal resistance, junction to case (θ_{JC}):	
Cases A, C, D, R, S, L, and 2	(See MIL-STD-1835)
Junction temperature (T_J) <u>2/</u>	+175°C

1.4 Recommended operating conditions.

Supply voltage (V_{CC})	4.5 V dc minimum to 5.5 V dc maximum
Minimum high level input voltage (V_{IH})	2.0 V
Maximum low level input voltage (V_{IL}):	
Device types 01, 02, and 03	0.7 V dc
Device types 04 and 05	0.5 V dc
Normalized fanout (each input) <u>3/</u>	20 maximum
Case operating temperature range (T_C)	-55°C to +125°C
Width of clock pulse (t_{CLK})	
Device types 04 and 05	20 ns
Setup time before clock (t_{SETUP})	
Device types 04 and 05	20 ns
Hold time (t_{HOLD})	
Device types 04 and 05	0 ns

2. APPLICABLE DOCUMENTS

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

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

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

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

2.2 Government documents.

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

DEPARTMENT OF DEFENSE SPECIFICATIONS

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

DEPARTMENT OF DEFENSE STANDARDS

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

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

2.3 Order of precedence. 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 Qualification. Microcircuits furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.3 and 6.4).

3.2 Item requirements. The individual item requirements shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.

3.3 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.

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

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

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

3.3.4 Case outlines. The case outlines shall be as specified in 1.2.3.

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

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

3.6 Electrical test requirements. The electrical test requirements for each device class shall be the subgroups specified in table II. The electrical tests for each subgroup are described in table III.

3.7 Marking. Marking shall be in accordance with MIL-PRF-38535.

3.8 Microcircuit group assignment. The devices covered by this specification shall be in microcircuit group number 9 (see MIL-PRF-38535, appendix A).

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not effect the form, fit, or function as described herein.

4.2 Screening. Screening shall be in accordance with MIL-PRF-38535 and shall be conducted on all devices prior to qualification and quality conformance inspection. The following additional criteria shall apply:

- a. The burn-in test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
- b. Interim and final electrical test parameters shall be as specified in table II, except interim electrical parameters test prior to burn-in is optional at the discretion of the manufacturer.
- c. Additional screening for space level product shall be as specified in MIL-PRF-38535, appendix B.

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

4.4 Technology Conformance inspection (TCI). Technology conformance inspection shall be in accordance with MIL-PRF-38535 and herein for groups A, B, C, and D inspections (see 4.4.1 through 4.4.4).

4.4.1 Group A inspection. Group A inspection shall be in accordance with table III of MIL-PRF-38535 and as follows:

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, and 6 shall be omitted.

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

4.4.3 Group C inspection. Group C inspection shall be in accordance with table IV of MIL-PRF-38535 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Subgroups 3 and 4 shall be added to the group C inspection parameters for class B devices and shall consist of the tests, conditions, and limits specified for subgroups 10 and 11 of group A.
- c. The steady-state life test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.

TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions -55°C ≤ T _C ≤ +125°C		Device type	Limits		Unit
					Min	Max	
High level output voltage	V _{OH1}	V _{CC} = 4.5 V, V _{IH} = 2.0 V, I _{OH} = -3 mA	V _{IL} = 0.7 V	01, 02, 03	2.4		V
			V _{IL} = 0.5 V	04, 05	2.4		"
	V _{OH2}	V _{CC} = 4.5 V, V _{IH} = 2.0 V, I _{OH} = -12 mA	V _{IL} = 0.5 V	01, 02, 03	2.0		"
			V _{IL} = 0.5 V	04, 05	2.0		"
High level output voltage	V _{OL}	V _{CC} = 4.5 V, V _{IH} = 2.0 V, I _{OL} = 12 mA	V _{IL} = 0.7 V	01, 02, 03		0.4	"
			V _{IL} = 0.5 V	04, 05		0.4	"
Input clamp voltage	V _{I C}	V _{CC} = 4.5 V, I _{IN} = -18 mA, T _C = +25°C		All		-1.5	"
High level input current	I _{IH1}	V _{CC} = 5.5 V, V _{IN} = 2.7 V		All		20	μA
High level input current	I _{IH2}	V _{CC} = 5.5 V, V _{IN} = 5.5 V		All		0.1	mA
Inhibited state output leakage current	I _{OZH}	V _{CC} = 5.5 V, V _{OUT} = 2.7 V	01, 02			40	μA
			03			20	
			04, 05			20	
	I _{OZL}	V _{CC} = 5.5 V, V _{OUT} = 0.4 V	01, 02, 03			-200	μA
			04, 05			-400	
Low level input current	I _{IL}	V _{CC} = 5.5 V, V _{IN} = 0.4 V	01, 02, 03		0	-240	μA
			04, 05		0	-200	
Short circuit output current	I _{OS}	V _{CC} = 5.5 V 1/		All	-40	-225	mA
Supply current	I _{CCH}	V _{CC} = 5.5 V	01, 02			38	mA
			03			70	
			04, 05			145	
	I _{CCL}	V _{CC} = 5.5 V	01, 02			50	mA
			03			90	
			04, 05			165	
	I _{CCZ}	V _{CC} = 5.5 V	01, 02			50	mA
			03			95	
			04, 05			165	
Propagation delay time, low to high clock to bus	t _{PLH1}	V _{CC} = 5.0 V, R _L = 110Ω, C _L = 50 pF	04, 05		2	39	ns
Propagation delay time, high to low clock to bus	t _{PHL1}		04		2	52	ns
			05		2	59	
Propagation delay time, low to high bus to bus	t _{PLH2}		01, 02		2	25	ns
			03		2	22	
			04, 05		2	30	

See footnote at end of table.

TABLE I. Electrical performance characteristics - Continued.

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

1/ Not more than one output should be shorted at one time.

TABLE II. Electrical test requirements.

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

*PDA applies to subgroup 1.

4.4.4 Group D inspection. Group D inspection shall be in accordance with table V of MIL-PRF-38535. End-point electrical parameters shall be as specified in table II herein.

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

4.5.1 Voltage and current. All voltages given are referenced to the microcircuit ground terminal. Currents given are conventional and positive when flowing into the referenced terminal.

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

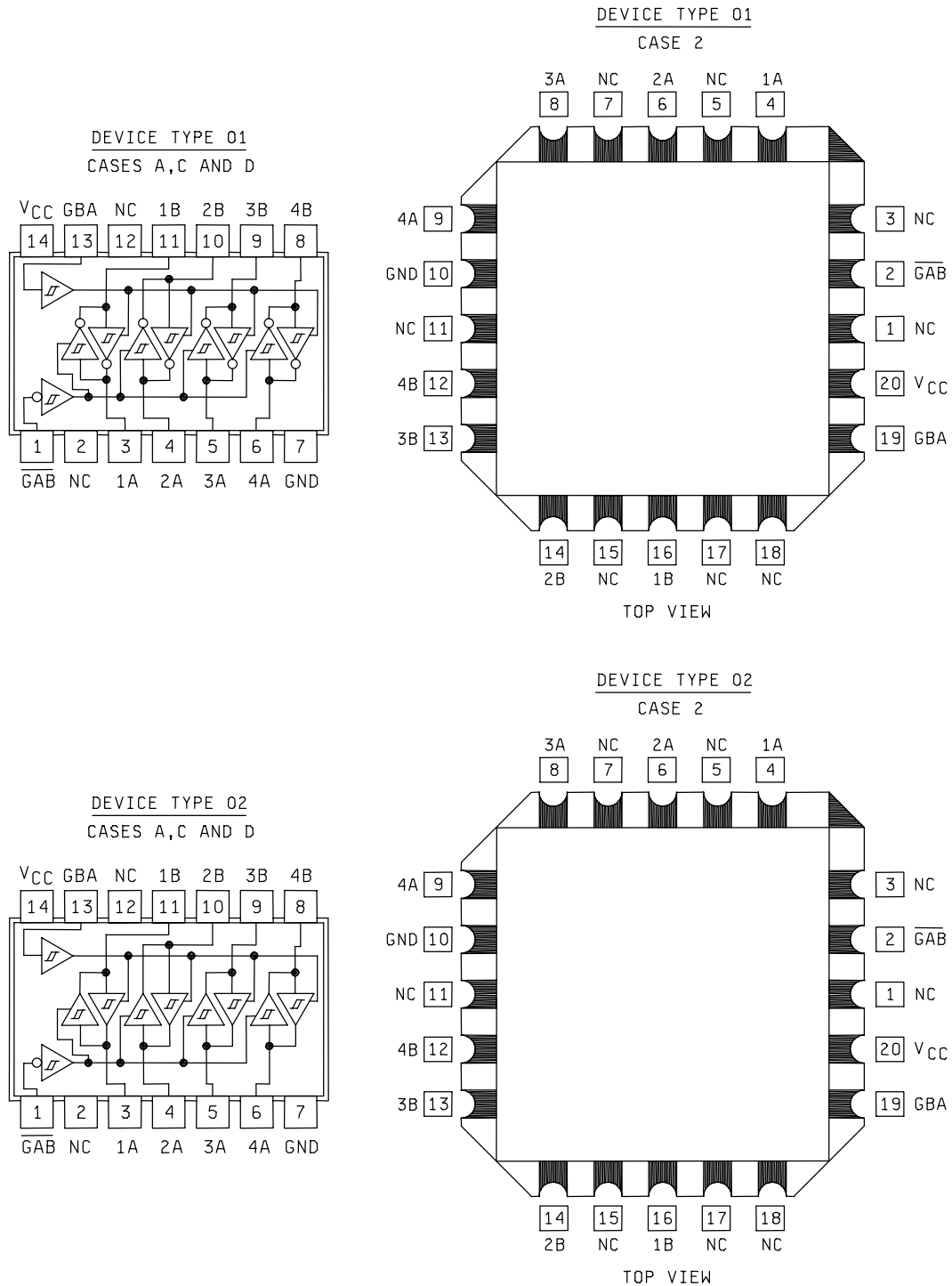


FIGURE 1. Logic diagrams and terminal connections.

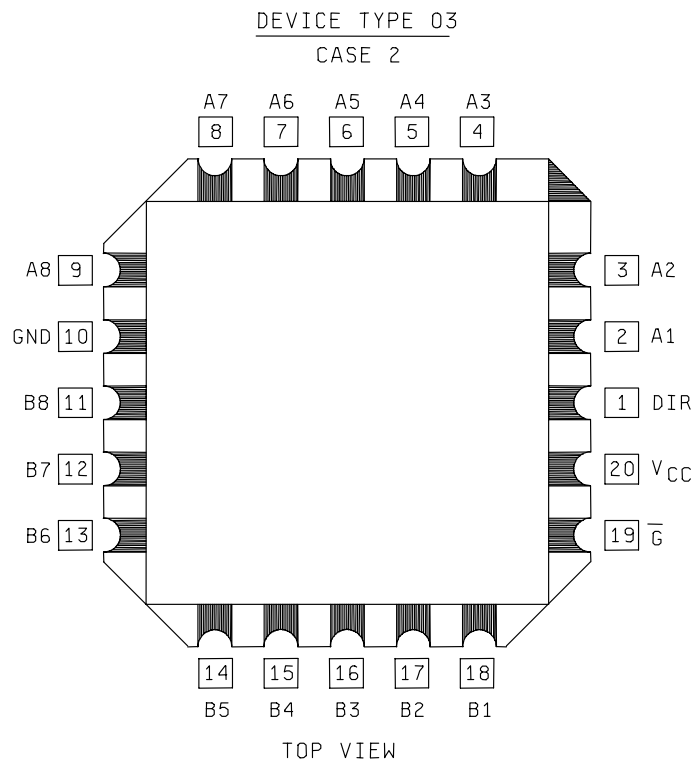
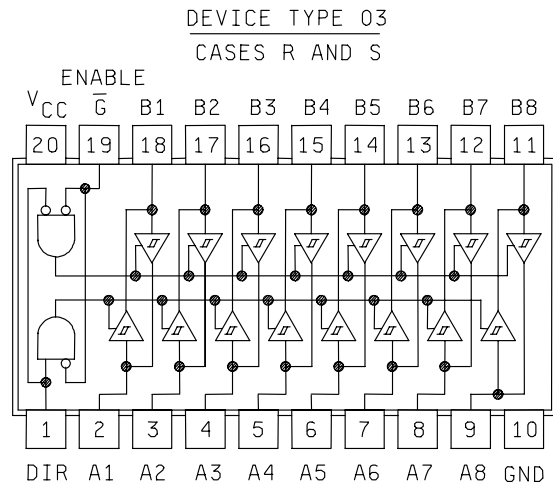


FIGURE 1. Logic diagrams and terminal connections - Continued.

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DEVICE TYPES 04 AND 05
TERMINAL CONNECTIONS
CASE L

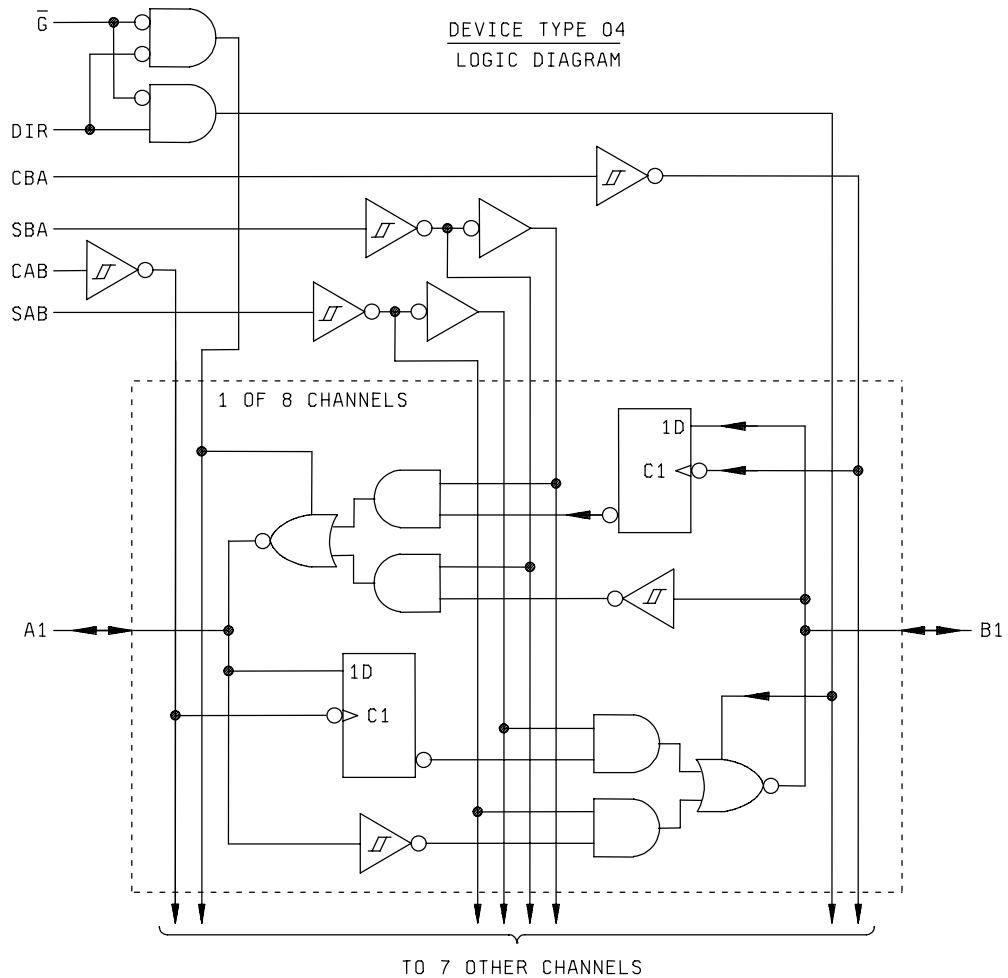
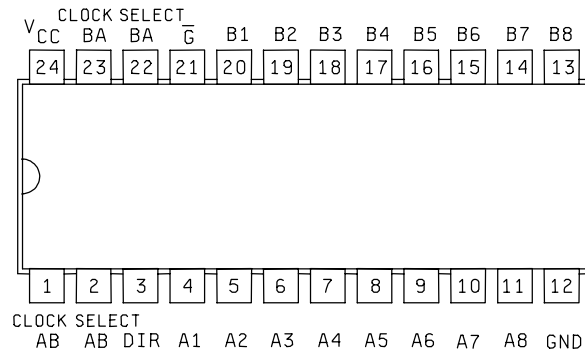


FIGURE 1. Logic diagrams and terminal connections - Continued.

DEVICE TYPE 05
LOGIC DIAGRAM

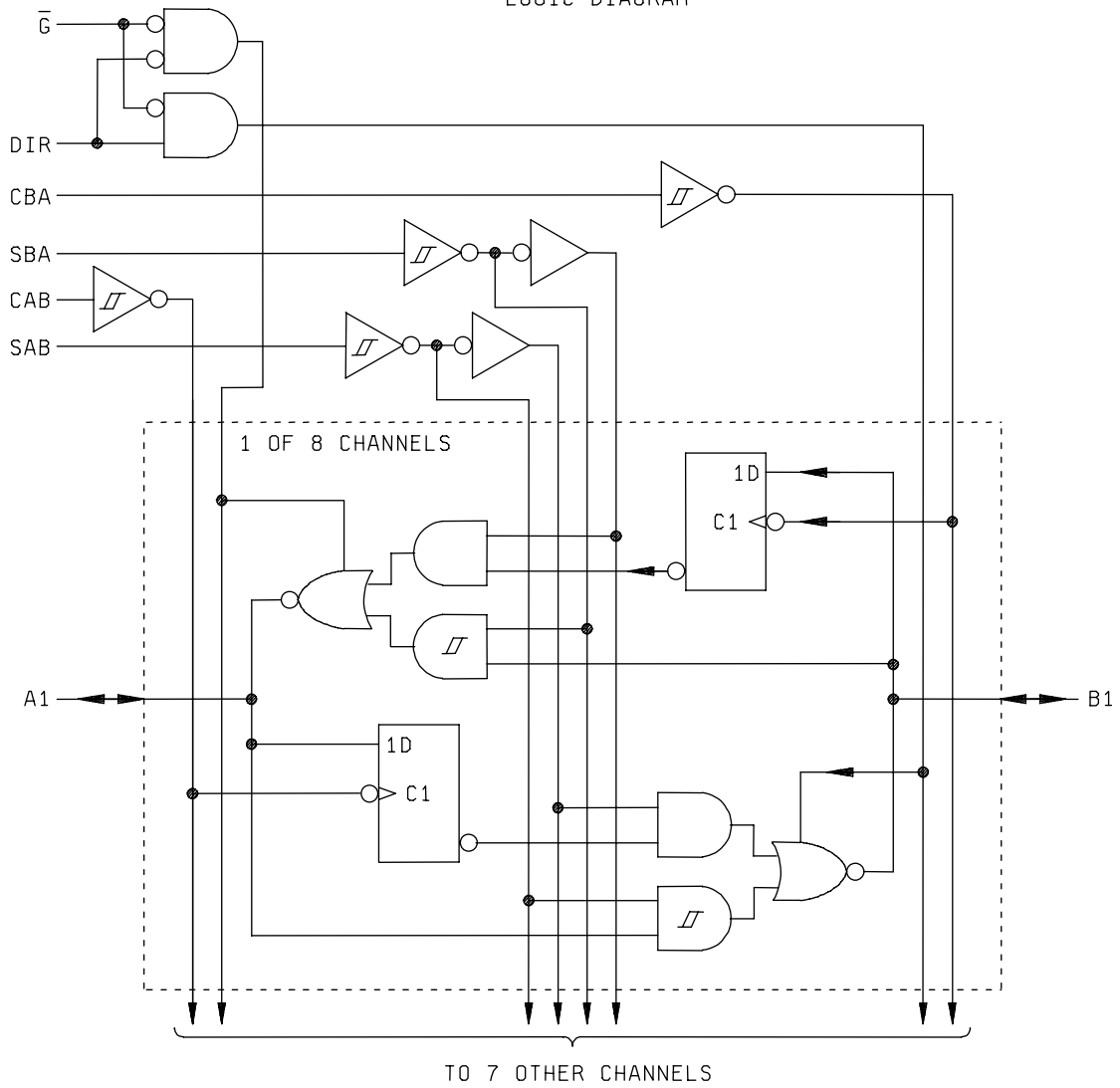


FIGURE 1. Logic diagrams and terminal connections - Continued.

Device type 01

CONTROL INPUTS		DATA PORT STATUS	
$\overline{\text{GAB}}$	GBA	A	B
H	H	$\overline{\text{O}}$	I
L	H	*	*
H	L	ISOLATED	
L	L	I	$\overline{\text{O}}$

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

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

Device type 02

CONTROL INPUTS		DATA PORT STATUS	
$\overline{\text{GAB}}$	GBA	A	B
H	H	O	I
L	H	*	*
H	L	ISOLATED	
L	L	I	O

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

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

Device type 03

ENABLE $\overline{\text{G}}$	DIRECTION CONTROL DIR	OPERATION
L	L	B data to A bus
L	H	A data to B bus
H	X	Isolation

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

FIGURE 2. Truth tables.

Device type 04

INPUTS						DATA I/O *		OPERATION OR FUNCTION
$\overline{G}$	DIR	CAB	CBA	SAB	SBA	A1 thru A8	B1 thru B8	
H	X	H or L	H or L	X	X	Input	Input	Isolation
H	X	$\uparrow$	$\uparrow$	X	X			Store A and B Data
L	L	X	X	X	L	Output	Input	Real Time B Data to A Bus
L	L	X	X	X	H			Stored B Data to A Bus
L	H	X	X	L	X	Input	Output	Real Time A Data to B Bus
L	H	H or L	X	H	X			Stored A Data to B Bus

H = High Level

L = Low Level

X = Irrelevant

 $\uparrow$ = Low to high level transition

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

Device type 05

INPUTS						DATA I/O *		OPERATION OR FUNCTION
$\overline{G}$	DIR	CAB	CBA	SAB	SBA	A1 thru A8	B1 thru B8	
H	X	H or L	H or L	X	X	Input	Input	Isolation
H	X	$\uparrow$	$\uparrow$	X	X			Store A and B Data
L	L	X	X	X	L	Output	Input	Real Time $\overline{B}$ Data to A Bus
L	L	X	X	X	H			Stored $\overline{B}$ Data to A Bus
L	H	X	X	L	X	Input	Output	Real Time $\overline{A}$ Data to B Bus
L	H	H or L	X	H	X			Stored $\overline{A}$ Data to B Bus

H = High Level

L = Low Level

X = Irrelevant

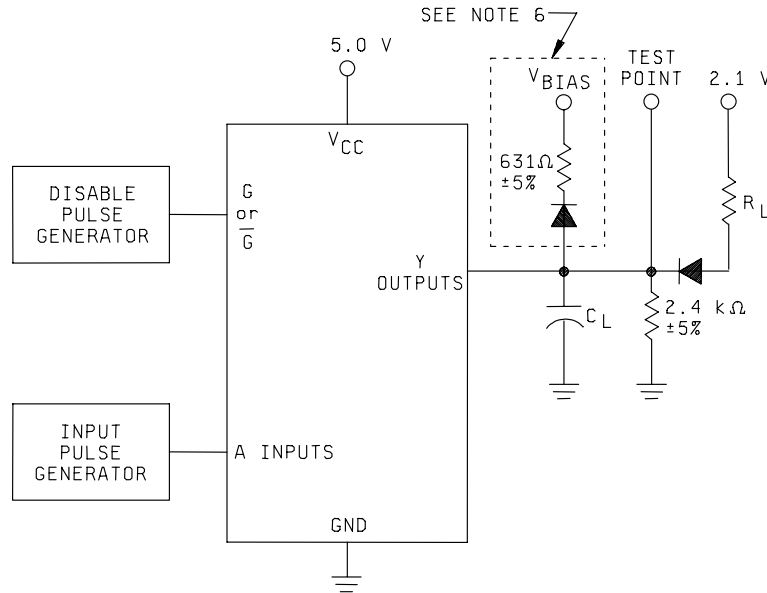
 $\uparrow$ = Low to high level transition

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

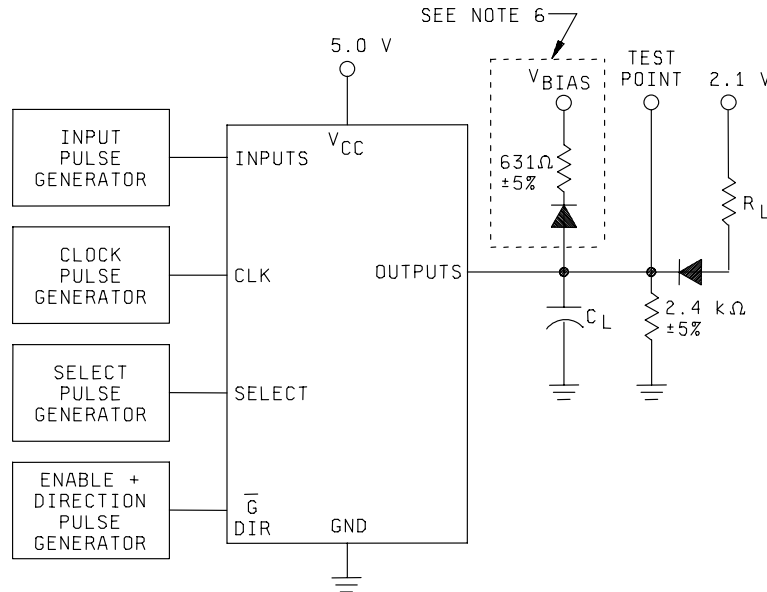
FIGURE 2. Truth tables - Continued.

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TEST CIRCUIT TYPES 01,02 AND 03



TEST CIRCUIT TYPES 04 AND 05



NOTES:

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

FIGURE 3. Switching time test circuit and waveforms.

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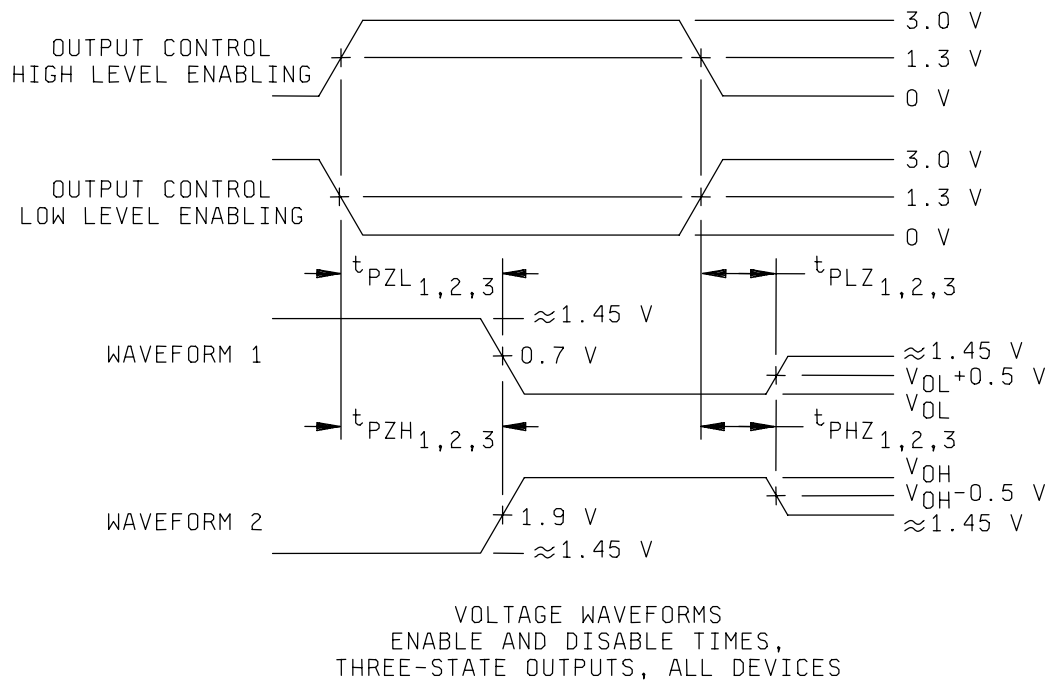
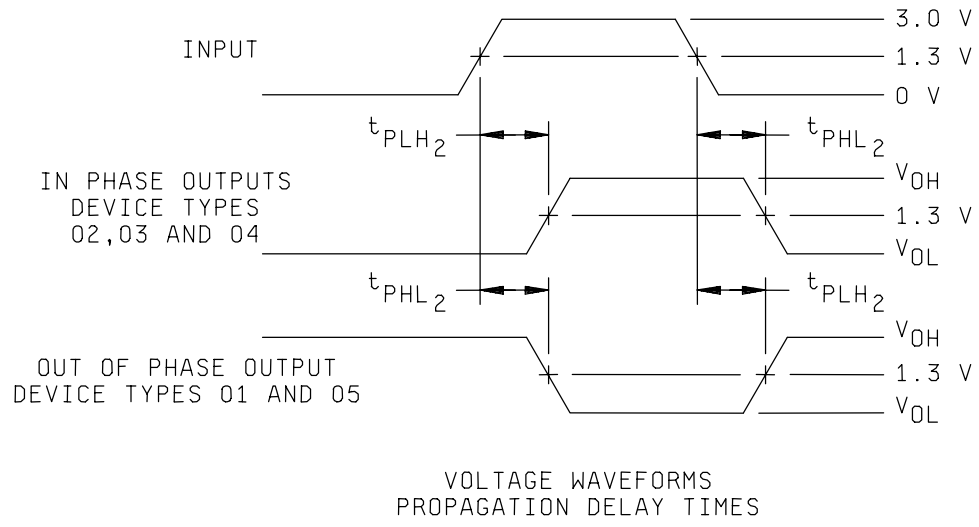
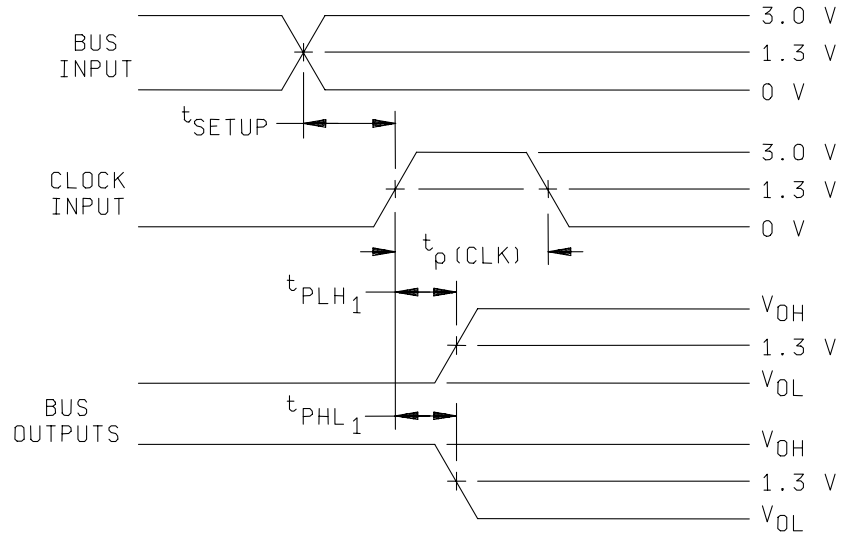
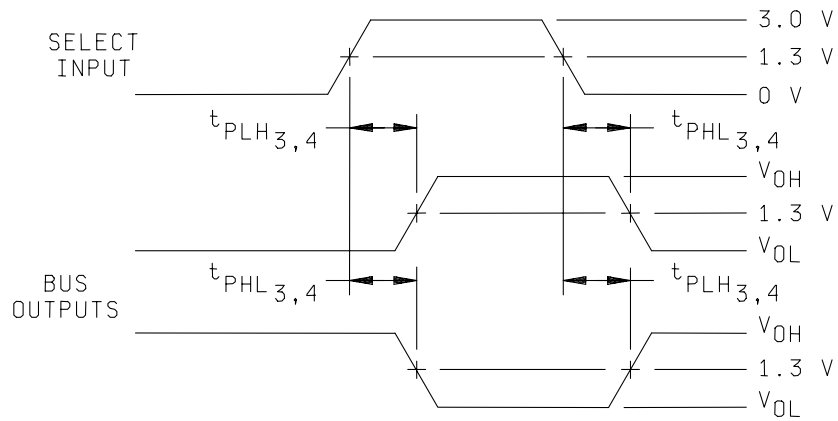


FIGURE 3. Switching time test circuit and waveforms - Continued.



CLOCK TO OUTPUT (TYPES 04 AND 05)



SELECT TO OUTPUT (TYPES 04 AND 05)

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

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D Case 2, 1/ Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit
				2	3	4	6	8	9	10	12	13	14	16	18	19	20		Min	Max	
1 Tc = 25°C	V _{OH1}	3006	GAB	GAB	NC	1A	2A	3A	4A	GND	4B	3B	2B	1B	NC	GAB	V _{CC}	1B	2.4		V
				0.7 V		0.7 V	0.7 V					-3 mA	-3 mA	-3 mA		0.7 V	4.5 V	2B			
									0.7 V									3B			
											-3 mA							4B			
				2.0 V		-3 mA								0.7 V		2.0 V		1A			
							-3 mA											2A			
								-3 mA				0.7 V						3A			
									-3 mA		0.7 V							4A			
	OH2			0.5 V		0.5 V			-3 mA							0.5 V		1B	2.0		
							0.5 V					-12 mA		-12 mA				2B			
								0.5 V			-12 mA							3B			
						-12 mA			0.5 V				2.0 V	2.0 V		2.0 V		4B			
							-12 mA							0.5 V				1A			
								-12 mA										2A			
									-12 mA			0.5 V						3A			
											0.5 V							4A			
	OL	3007		0.7 V		2.0 V	2.0 V							12 mA		0.7 V		1B		0.4	
													12 mA					2B			
												12 mA						3B			
								2.0 V										4B			
				2.0 V		12 mA							2.0 V	2.0 V		2.0 V		1A			
							12 mA											2A			
								12 mA				2.0 V						3A			
									12 mA									4A			
	OZH					2.7 V	2.7 V	2.7 V								0.7 V	5.5 V	1A	2/		
																		2A			
								2.7 V										3A			
											2.7 V							4A			
																		1B			
				2.0 V														2B			
																		3B			
														2.7 V				4B			
	OZL					0.4 V												1A		-200	μ A
							0.4 V											2A			
								0.4 V										3A			
									0.4 V									4A			
				2.0 V							0.4 V							1B			
												0.4 V						2B			
													0.4 V					3B			
														0.4 V				4B			
	IL	3009		0.4 V														GAB	3/		
						0.4 V										GND		1A			
							0.4 V											2A			
								0.4 V										3A			
									0.4 V									4A			
				5.5 V							0.4 V							4B			
																		3B			
														0.4 V				2B			
																0.4 V		GAB			
																		1A			
																		2A			
																		3A			
																		4A			
																		4B			
																		3B			
																		2B			
																0.4 V		GAB			
																		1B			
																		2B			
																		3B			
																		4B			
																		1A			
																		2A			
																		3A			

See footnotes at end of device type 01.

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D		1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit			
			Case 2 I/ Test no.	GAB	NC	1A	2A	3A	4A	GND	4B	3B	2B	1B	NC	GBA	V _{CC}	Min		Max					
1	I _{HH}	3010			51	2.7 V					GND							5.5 V	GAB		20	μA			
					52		2.7 V										GND	"		1A	"	"			
					53			2.7 V										"			2A	"	"		
					54				2.7 V									"			3A	"	"		
					55					2.7 V								"			4A	"	"		
					56	5.5 V								2.7 V				"			4B	"	"		
					57	"									2.7 V			"			3B	"	"		
					58	"										2.7 V		"			2B	"	"		
					59	"											2.7 V			1B	"	"			
					60	"												2.7 V			GBA	"	"		
					61	5.5 V															GAB	100	"	"	
					62			5.5 V													GND	1A	"	"	
					63				5.5 V												"	2A	"	"	
					64					5.5 V											"	3A	"	"	
					65						5.5 V										"	4A	"	"	
					66	5.5 V									5.5 V						"	4B	"	"	
					67	"										5.5 V					"	3B	"	"	
					68	"											5.5 V				"	2B	"	"	
					69	"												5.5 V			"	1B	"	"	
					70	"															5.5 V	GBA	"	"	"
					2	I _C				71	-18 mA												4.5 V	GAB	
72																				1A	"	"	"		
73			-18 mA																		GND	"	"	"	"
74				-18 mA																	"	2A	"	"	"
75											-18 mA										"	3A	"	"	"
76	5.5 V														-18 mA						"	4A	"	"	"
77	"																				"	4B	"	"	"
78	"																				"	3B	"	"	"
79	"																-18 mA				"	2B	"	"	"
80																			-18 mA		"	1B	"	"	"
81	GND			GND						GND											-18 mA	GBA	"	"	"
82	GND		5.5 V	5.5 V						5.5 V											GND	V _{CC}	38	mA	
83	5.5 V																				GND	V _{CC}	50	"	"
84	GND		GND																		GND	V _{CC}	50	"	"
85	"																				GND	1B	-40	"	"
86	"																				"	2B	"	"	"
87	"																				"	3B	"	"	"
88	4.5 V																				"	4B	"	"	"
89	"																				4.5 V	1A	"	"	"
90	"																				"	2A	"	"	"
91	"																				"	3A	"	"	"
91	"															"	4A	"	"	"	"				
2	Same tests, terminal conditions, and limits as for subgroup 1, except T _C = 125°C and V _{CC} tests are omitted.																								
3	Same tests, terminal conditions, and limits as for subgroup 1, except T _C = -55°C and V _{CC} tests are omitted.																								
7	Truth table tests	Test 96 optional	92	B	B	B	A	A	A	B	A	GND	L	H	L	H	L	H	5.0 V	5/					
7	Truth table tests	Test 96 optional	93	B	B	B	A	A	A	B	A	GND	L	H	L	H	L	H	5.0 V	5/					
7	Truth table tests	Test 96 optional	94	A	A	L	L	L	L	A	A	A	A	A	A	A	A	A	A	A	5/				
7	Truth table tests	Test 96 optional	95	A	A	H	H	H	H	H	H	B	B	B	B	B	B	B	B	A	5/				
7	Truth table tests	Test 96 optional	96	A	A	H	H	H	H	H	H	H	H	H	H	H	H	H	B	B	5/				
8	Same tests and terminal conditions as subgroup 7, except T _C = +125°C and -55°C.																								

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit		
				2	3	4	6	8	9	10	12	13	14	16	18	19	20		Min	Max			
9 Tc = 25°C	I _{PH} -H2	3003 See fig. 3	I _{PH} -H2	Test no.	GAB	1A	2A	3A	4A	GND	4B	3B	2B	1B	NC	GBA	V _{CC}						
				97	GND	IN	IN			GND					OUT	OUT		GND	5.0 V	1A to 1B	2	19	ns
				98	"					"						OUT			"	2A to 2B	"	"	"
				99	"				IN					OUT					"	3A to 2B	"	"	"
				100	"						IN		OUT						"	4A to 2B	"	"	"
				101	4.5 V	OUT	OUT									IN	IN		4.5 V	1B to 1A	"	"	"
				102	"				OUT										"	2B to 2A	"	"	"
				103	"					OUT				IN					"	3B to 3A	"	"	"
				104	"															4B to 4A	"	"	"
				105	GND	IN	IN			OUT				IN			OUT		GND	1A to 1B	"	23	"
				106	"			IN								OUT			"	2A to 2B	"	"	"
				107	"					IN					OUT				"	3A to 2B	"	"	"
				108	"							IN		OUT					"	4A to 2B	"	"	"
				109	4.5 V	OUT	OUT										IN	IN	4.5 V	1B to 1A	"	"	"
				110	"				OUT							IN			"	2B to 2A	"	"	"
10	P _{ZL1}	"	P _{ZL1}	111	"				OUT			IN				"	"	3B to 3A	"	"	"		
				112	"					OUT			IN					"	4B to 4A	"	"	"	
				113	IN	4.5 V										OUT		GND	GAB to 1B	"	35	"	
				114	"		4.5 V								OUT			"	GAB to 2B	"	"	"	
				115	"			4.5 V						OUT				"	GAB to 2B	"	"	"	
				116	"					4.5 V				OUT				"	GAB to 2B	"	"	"	
				117	4.5 V	OUT										4.5 V	4.5 V	IN	GBA to 1A	"	"	"	
				118	"		OUT									4.5 V		"	GBA to 2A	"	"	"	
				119	"			OUT							4.5 V			"	GBA to 3A	"	"	"	
				120	"					OUT				4.5 V				"	GBA to 4A	"	"	"	
				121	IN	GND											OUT	GND	GAB to 1B	"	28	"	
				122	"		GND									OUT		"	GAB to 2B	"	"	"	
				123	"						GND				OUT			"	GAB to 2B	"	"	"	
				124	"							GND		OUT				"	GAB to 2B	"	"	"	
				125	4.5 V	OUT	OUT										GND		IN	GBA to 1A	"	"	"
11	P _{ZH1}	"	P _{ZH1}	126	"											"	"	GBA to 2A	"	"	"		
				127	"			OUT									"	"	GBA to 3A	"	"	"	
				128	"					OUT				GND				"	GBA to 4A	"	"	"	
				129	IN	4.5 V											OUT	GND	GAB to 1B	"	30	"	
				130	"		4.5 V									OUT		"	GAB to 2B	"	"	"	
				131	"			4.5 V							OUT			"	GAB to 2B	"	"	"	
				132	"						4.5 V			OUT				"	GAB to 2B	"	"	"	
				133	4.5 V	OUT	OUT										4.5 V	IN	GBA to 1A	"	"	"	
				134	"											4.5 V		"	GBA to 2A	"	"	"	
				135	"		OUT	OUT							4.5 V			"	GBA to 3A	"	"	"	
				136	"						OUT			4.5 V				"	GBA to 4A	"	"	"	

See footnotes at end of device type 01.

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D		1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit
			Case 2, 1/	Test no.	GAB	IN	NC	1A	2A	3A	4A	GND	4B	3B	2B	1B	NC	GND	GAB to 1B	Min	Max	
9	I_{PHZL} Tc = 25°C	3003						GND							OUT			GND	GAB to 1B	2	35	ns
		See fig. 3							GND						OUT				GAB to 2B	"	"	"
		"								GND				OUT					GAB to 2B	"	"	"
		"									GND		OUT						GAB to 2B	"	"	"
		"					OUT								GND		IN		GAB to 1A	"	"	"
		"							OUT						GND				GAB to 2A	"	"	"
10	I_{PHZL} I_{PHL2} I_{PZL1} I_{PZH1} I_{PLZ1} I_{PHZL}	"								OUT				GND					GAB to 3A	"	"	"
		"									OUT								GAB to 4A	"	"	"
		Same tests and terminal conditions as subgroup 9, except Tc = +125°C.										OUT								"	25	"
																				"	30	"
																				"	46	"
11																				"	36	"
																				"	39	"
																				"	46	"
																				"	46	"

- 1/ Pins not referenced are N/C.
2/ The I_{OZH} limit for circuits D and E shall be 20 μ A maximum; the limit for circuits A, B, and C shall be 40 μ A maximum.
3/ The I_{IL} limits are as follows:

Test	Min/Max limits μ A for circuit:			
	A	B	C	D
I_{IL}	-5/-200	0/-100	0/-200	-10/-150
				E
				0/-150

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

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D Case 2, 1/	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Limits		Measured terminal	Unit
																		Min	Max		
1 Tc = 25°C	V _{OH1}	3006	Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1B	2.4	V	
				Case 2, 1/	1	2	3	4	5	6	7	8	9	10	11	12	13				
				1	0.7 V		2.0 V							-3 mA		0.7 V	4.5 V				
				2	"			2.0 V						-3 mA		"	"				
				3	"											"	"				
				4	"			2.0 V				-3 mA				"	"				
				5	2.0 V		-3 mA							2.0 V		2.0 V	"				
				6	"											"	"				
				7	"			-3 mA				2.0 V				"	"				
				8	"											"	"				
				9	0.5 V		2.0 V							-12 mA		0.5 V	"				
				10	"			2.0 V								"	"				
				11	"							-12 mA				"	"				
				12	"			2.0 V								"	"				
				13	2.0 V		-12 mA							2.0 V		2.0 V	"				
V	OH2	3007	Test no.	14	"			-12 mA								"	"	2A	"	"	"
				15	"							2.0 V				"	"				
				16	"			-12 mA								"	"				
				17	0.7 V		0.7 V							12 mA		0.7 V	"				
				18	"											"	"				
				19	"			0.7 V								"	"				
				20	"							12 mA				"	"				
				21	2.0 V		12 mA							0.7 V		2.0 V	"				
				22	"											"	"				
				23	"			12 mA								"	"				
				24	"											"	"				
				25	"		2.7 V					0.7 V				"	"				
				26												0.7 V	5.5 V				
				27				2.7 V								"	"				
I	OZ1		Test no.	28												"	"	2A	"	"	"
				29	2.0 V											"	"				
				30	"							2.7 V				"	"				
				31	"											"	"				
				32	"									2.7 V		"	"				
				33	"		0.4 V									0.7 V	"				
				34				0.4 V								"	"				
				35				0.4 V								"	"				
				36					0.4 V							"	"				
				37	2.0 V											"	"				
				38	"							0.4 V				"	"				
				39	"											"	"				
				40	"									0.4 V		"	"				
I	OZ2		Test no.	41	0.4 V											"	"	1B	"	"	"
				42												"	"				
				43			0.4 V									"	"				
				44				0.4 V								"	"				
				45					0.4 V							"	"				
				46	5.5 V							0.4 V				"	"				
				47	"											"	"				
				48	"									0.4 V		"	"				
				49	"											"	"				
				50	"									0.4 V		0.4 V	"				
																"	"				
																"	"				
																"	"				
																"	"				
																"	"				
I	IL	3009	Test no.	41	0.4 V									0.4 V			"	GAB	3/	"	"
				42	"											"	"				
				43	"											"	"				
				44	"			0.4 V								"	"				
				45	"											"	"				
				46	5.5 V							0.4 V				"	"				
				47	"											"	"				
				48	"											"	"				
				49	"											"	"				
				50	"									0.4 V		0.4 V	"				
																"	"				
																"	"				
																"	"				
																"	"				
																"	"				

See footnotes at end of device type 02.

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D		1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit	
			Case 2 J/ Test no.																		Min		Max
1	I _{HH1}	3010	51	GAB	2.7 V						GND								GAB		20	μA	
			52			2.7 V														1A			
			53				2.7 V														2A		
			54								2.7 V										3A		
			55																		4A		
			56		5.5 V									2.7 V							4B		
			57												2.7 V						3B		
			58													2.7 V					2B		
			59														2.7 V				1B		
			60																		GBA		
			61		5.5 V																GAB	100	
			62						5.5 V												1A		
			63						5.5 V												2A		
			64							5.5 V											3A		
			65								5.5 V										4A		
			66		5.5 V										5.5 V						4B		
			67													5.5 V					3B		
			68														5.5 V				2B		
			69															5.5 V			1B		
			70																		GBA		
2	I _C		71		-18 mA														GAB		-1.5	V	
			72																	1A			
			73						-18 mA											2A			
			74							-18 mA										3A			
			75								-18 mA									4A			
			76		5.5 V									-18 mA						4B			
			77												-18 mA					3B			
			78																	2B			
			79													-18 mA				1B			
			80																	GBA			
			81		GND			5.5 V	5.5 V	5.5 V										-18 mA	GND		38
3	G _{GH} G _{GL} OC _L OS		82																V _{CC}		50	mA	
			83		5.5 V															V _{CC}		50	"
			84		GND															GND		-40	-225
			85																	1B			"
			86																	2B			"
			87																	3B			"
			88		5.5 V															4B			"
			89																	1A			"
			90																	2A			"
			91																	3A			"
			92																		4A		
2	Same tests, terminal conditions, and limits as for subgroup 1, except T _C = 125°C and V _{IC} tests are omitted.																						
3	Same tests, terminal conditions, and limits as for subgroup 1, except T _C = 125°C and V _{IC} tests are omitted.																						
7	Truth table tests		92	B	B	A	A	A	A	GND	H	L	L	L	H	H	B				5/	5.0 V	
93			B	A	H	H	H	H	"	L	A	A	A	L				B				"	
94			A	A	H	H	H	H	"	L	A	A	A	A	L				A				"
95			A	A	L	L	L	L	"	B	B	B	B	B	B				A				"
8			96	A	A	H	H	H	H	"	H	H	H	H	H	H	B						
			Same tests and terminal conditions as subgroup 7, except T _C = +125°C and -55°C.																				

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D Case 2, 1/ Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Limits		Measured terminal	Unit
				2	3	4	6	8	9	10	12	13	14	16	18	19	20	Min	Max		
9 Tc = 25°C	PLH2	3003 See fig. 3	97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112	GAB	NC	1A	2A	3A	4A	GND	GND			OUT		GND	5.0 V	2	19	1A to 1B	ns
				GND		IN	IN							OUT						2A to 2B	"
				"				IN												3A to 3B	"
				"							OUT									4A to 4B	"
				4.5 V		OUT								IN		4.5 V				1B to 1A	"
				"			OUT													2B to 2A	"
				"				OUT			IN									3B to 3A	"
				"		IN														4B to 4A	"
				GND		IN	IN							OUT		GND				1A to 1B	23
				"			IN			OUT										2A to 2B	"
				"				IN			OUT									3A to 3B	"
				"										IN		4.5 V				4A to 4B	"
t	PZL1		111 112 113 114 115 116 117 118	"			OUT				IN									2B to 2A	"
				"				OUT												3B to 3A	"
				"		GND								OUT		GND				4B to 4A	"
				IN			GND							OUT						GAB to 1B	35
				"																GAB to 2B	"
				"																GAB to 3B	"
				"		4.5 V					OUT									GAB to 4B	"
				"										GND						GBA to 1A	"
				4.5 V		OUT														GBA to 2A	"
				"																GBA to 3A	"
				"			4.5 V							OUT						GBA to 4A	"
				"																GAB to 1B	30
				IN			GND							OUT						GAB to 2B	"
t	PLZ1		129 130 131 132 133 134 135 136	"																GAB to 3B	"
				"							OUT									GAB to 4B	"
				"										4.5 V						GBA to 1A	"
				4.5 V			OUT							4.5 V						GBA to 2A	"
				"																GBA to 3A	"
				"							4.5 V									GBA to 4A	"
				"		GND								OUT		GND				GAB to 1B	"
				IN			GND													GAB to 2B	"
				"																GAB to 3B	"
				"							OUT									GAB to 4B	"
				"																GBA to 1A	"
				4.5 V		OUT								GND						GBA to 2A	"
				"				OUT												GBA to 3A	"
				"							GND									GBA to 4A	"

See footnotes at end of device type 02.

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

Subgroup	Symbol	MIL-STD-883 method	Cases A, C, D		1	2	3	4	5	6	7	8	9	10	11	12	13	14	Measured terminal	Limits		Unit
			Case 2 J/ Test no.	GAB	NC	1A	2A	3A	4A	GND	4B	3B	2B	1B	NC	GBA	V _{CC}	Min		Max		
9	I _{PHZL} Tc = 25°C	3003																	GAB to 1B	2	35	ns
		See fig. 3																	GAB to 2B	"	"	"
		"																	GAB to 3B	"	"	"
		"																	GAB to 4B	"	"	"
		"																	GBA to 1A	"	"	"
		"																	GBA to 2A	"	"	"
10	I _{PHZL} PHL2 PZL1 PZH1 PLZ1 PHZL	"																	GBA to 3A	"	"	"
		Same tests and terminal conditions as subgroup 9, except Tc = +125°C.																	GBA to 4A	"	"	"
																				"	25	"
																				"	30	"
																				"	46	"
																				"	36	"
11																				"	39	"
																				"	46	"
Same tests, terminal conditions, and limits as for subgroup 10, except Tc = -55°C.																						

- 1/ Pins not referenced are N/C.
2/ The I_{OZH} limit for circuits D and E shall be 20 μ A maximum; the limit for circuits A, B, and C shall be 40 μ A maximum.
3/ The I_{IL} limits are as follows:

Test	Min/Max limits μ A for circuit:			
	A	B	C	D
I_{IL}	-5/-200	0/-100	0/-200	-10/-150
				E
				0/-150

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

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

Subgroup	Symbol	MIL-STD-883 method	Cases R, S, 2	Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits		Unit		
					DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	V _{CC}	Min	Max				
1 Tc = 25°C	V _{OH1}	3006	"	1	2.0 V	2.0 V								GND										B1	2.4		V			
				2	"		2.0 V							"											B2	"		"		
				3	"			2.0 V						"											B3	"		"		
				4	"				2.0 V					"											B4	"		"		
				5	"					2.0 V				"											B5	"		"		
				6	"						2.0 V														B6	"		"		
				7	"							2.0 V													B7	"		"		
				8	"								2.0 V												B8	"		"		
				9	0.7 V	-3mA																				A1	"		"	
				10	"																					A2	"		"	
				11	"																					A3	"		"	
				12	"																					A4	"		"	
				13	"																					A5	"		"	
				14	"																					A6	"		"	
				15	"																					A7	"		"	
				2 Tc = 25°C	OH2	"	"	16	"																			A8	"	
17	2.0 V	2.0 V																								B1	2.0		"	
18	"																									B2	"		"	
19	"																									B3	"		"	
20	"																									B4	"		"	
21	"																									B5	"		"	
22	"																									B6	"		"	
23	"																									B7	"		"	
24	"																									B8	"		"	
25	0.5 V	-12mA																									A1	"		"
26	"																										A2	"		"
27	"																										A3	"		"
28	"																										A4	"		"
29	"																										A5	"		"
30	"																										A6	"		"
3 Tc = 25°C	OL	3007	"					31	"																			A7	"	
				32	"																					A8	"		"	
				33	2.0 V	0.7 V																				B1	0.4		"	
				34	"																					B2	"		"	
				35	"																					B3	"		"	
				36	"																					B4	"		"	
				37	"																					B5	"		"	
				38	"																					B6	"		"	
				39	"																					B7	"		"	
				40	"																					B8	"		"	
				41	0.7 V	12 mA																					A1	"		"
				42	"																						A2	"		"
				43	"																						A3	"		"
				44	"																						A4	"		"
				45	"																						A5	"		"
				4 Tc = 25°C	IC	"	"	46	"																			A6	"	
47	"																									A7	"		"	
48	"																									A8	"		"	
49	-18 mA																									DIR	-1.5		"	
50		-18 mA																								A1	"		"	
51																										A2	"		"	
52																										A3	"		"	
53																														

See footnotes at end of device type 03.

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

Subgroup	Symbol	MIL-STD-883 method	Cases R, S, 2 Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits		Unit		
1 Tc = 25°C	V _{IC}		58	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	V _{CC}	B8	Min	Max	V		
			59														-18 mA						5.5 V	B7			"		
			60															-18 mA							B6		"		
			61																-18 mA							B5		"	
			62																	-18 mA							B4		"
			63																		-18 mA						B3		"
			64																							B2		"	
			65																							B1		"	
			66																							G		"	
			67		2.7 V																			2.0 V	5.5 V	A1	10 $\frac{1}{2}$	μA	
			68			2.7 V																				A2		"	
			69				2.7 V																				A3		"
	O _{2H}		70					2.7 V																		A4		"	
			71						2.7 V																	A5		"	
			72							2.7 V																A6		"	
			73								2.7 V															A7		"	
			74																							A8		"	
			75													2.7 V											B8		"
			76														2.7 V										B7		"
			77															2.7 V									B6		"
			78																2.7 V								B5		"
			79																	2.7 V							B4		"
			80																		2.7 V						B3		"
			81																			2.7 V					B2		"
	O _{2L}		82																							B1		"	
			83		0.4 V																					A1		-200	
			84			0.4 V																				A2		"	
			85				0.4 V																				A3		"
			86					0.4 V																			A4		"
			87						0.4 V																		A5		"
			88								0.4 V																A6		"
			89									0.4 V															A7		"
			90										0.4 V														A8		"
			91											0.4 V													B8		"
			92												0.4 V												B7		"
			93													0.4 V											B6		"
	IL	3009	94																							B5		"	
			95																							B4		"	
			96																								B3		"
			97																								B2		"
			98																								B1		"
			99	0.4 V																						DIR	-5	-200 $\frac{2}{2}$	
			100		0.4 V																					A1		"	
			101			0.4 V																					A2		"
			102				0.4 V																				A3		"
			103					0.4 V																			A4		"
			104						0.4 V																		A5		"
			105							0.4 V																	A6		"
106																								A7		"			
107																								A8		"			
108																								B8		"			
109																								B7		"			
110																													

See footnotes at end of device type 03.

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

Subgroup	Symbol	MIL-STD-883 method	Cases R, S, 2 Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits		Unit			
				DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	V _{CC}		5.5 V	DIR		Min	Max	
1	I _{HH}	3010	117	2.7 V									GND									5.5 V	5.5 V	DIR		20	μA			
			118																					A1						
			119																					A2						
			120																						A3					
			121				2.7 V																		A4					
			122					2.7 V																	A5					
			123						2.7 V																A6					
			124							2.7 V															A7					
			125												2.7 V										A8					
			126													2.7 V									B8					
			127														2.7 V								B7					
			128															2.7 V							B6					
			129																						B5					
			130																	2.7 V						B4				
			131																							B3				
			132																							B2				
			133																							B1				
			134																							G				
				I _{H2}		135	5.5 V																		2.7 V		DIR	100		
						136		5.5 V																		A1				
						137			5.5 V																	A2				
						138				5.5 V																A3				
						139					5.5 V															A4				
						140						5.5 V														A5				
						141							5.5 V													A6				
						142								5.5 V												A7				
						143									5.5 V											A8				
						144										5.5 V										B8				
						145											5.5 V									B7				
						146												5.5 V								B6				
						147														5.5 V						B5				
						148															5.5 V					B4				
						149																5.5 V				B3				
						150																	5.5 V			B2				
						151																		5.5 V		B1				
						152																				G				
05	OS	3011	153	5.5 V	5.5 V								GND											B1	-40	-225	nA			
			154			5.5 V																		B2						
			155				5.5 V																		B3					
			156					5.5 V																		B4				
			157						5.5 V																	B5				
			158							5.5 V																B6				
			159									5.5 V														B7				
			160										5.5 V													B8				
			161																							A1				
			162																							A2				
			163																							A3				
			164																							A4				
			165																							A5				
166																							A6							
167																							A7							
168																							A8							
3005	GCH	3005	169																					V _{CC}		70				
3005	CCL	3005	170																					V _{CC}		90				
3005	CCZ	3005	171																					V _{CC}		95				

See footnotes at end of device type 03.

Subgroup	Symbol	MIL-STD-883C, R, S, 2	Test no.	DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits		Unit	
					A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		A	A		A
2	Same tests, terminal conditions, and limits as for subgroup 1, except Tc = 125°C and V _{IC} tests are omitted.																												
3	Same tests, terminal conditions, and limits as for subgroup 1, except Tc = -55°C and V _{IC} tests are omitted.																												
7 3/ Tc = 25°C	Truth table tests		172	A	A	A	A	A	A	A	A	A	A	B	B	"	L	L	L	L	H	H	H	L	B	5.0 V	4/ 5/ (test 176 only)		
			173	A	B	B	B	B	B	B	B	B	B	B	B	"	"	A	A	A	A	A	A	A	B	"			
			174	B	H	H	H	H	H	H	H	H	H	H	H	"	"	A	A	A	A	A	A	A	B	"			
			175	B	L	L	L	L	L	L	L	L	L	L	L	"	"	B	B	B	B	B	B	B	B	"			
			176	B	H	H	H	H	H	H	H	H	H	H	H	"	"	H	H	H	H	H	H	A	"				
			177	GND	OUT												GND	H	H	H	H								
			178	"	"	OUT											"						IN						
9 Tc = 25°C	PLH2	See fig. 3	179	"			OUT							"							IN								
			180	"				OUT							"					IN									
			181	"					OUT						"				IN										
			182	"											"				IN										
			183	"											"														
			184	"												"													
			185	4.5 V	IN										OUT	"							OUT						
			186	"											"														
			187	"			IN								"					OUT									
			188	"				IN							"					OUT									
			189	"											"														
			190	"											"														
			191	"											"				OUT										
			192	"											IN	"													
			193	4.5 V	IN											"								OUT					
			194	"											"														
			195	"			IN								"						OUT								
			196	"				IN							"					OUT									
			197	"											"														
198	"											"					OUT												
199	"											IN	"																
200	"												IN	"															
201	GND	OUT																											

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

Subgroup	Symbol	MIL-STD-883 method	Cases R, S, 2 Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits		Unit
				DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B8	B7	B6	B5	B4	B3	B2	B1	G	V _{CC}		Min	Max	
9	Tc = 25°C	See fig. 3	217	4.5 V	GND								GND								OUT	IN	5.0 V	G to B1	2	45	ns
			218	"		GND							"						OUT	OUT		G	"	G to B2	"	"	"
			219	"			GND						"						OUT			"	"	G to B3	"	"	"
			220	"				GND					"				OUT					"	"	G to B4	"	"	"
			221	"					GND				"			OUT						"	"	G to B5	"	"	"
			222	"						GND			"		OUT							"	"	G to B6	"	"	"
			223	"							GND		"	OUT								"	"	G to B7	"	"	"
			224	"								GND	"	OUT							OUT	"	"	G to B8	"	"	"
			225	"	4.5 V								"									"	"	G to B1	"	"	"
			226	"		4.5 V							"					OUT		OUT		"	"	G to B2	"	"	"
			227	"			4.5 V						"						OUT			"	"	G to B3	"	"	"
			228	"				4.5 V					"					OUT				"	"	G to B4	"	"	"
			229	"					4.5 V				"				OUT					"	"	G to B5	"	"	"
			230	"						4.5 V			"		OUT							"	"	G to B6	"	"	"
			231	"							4.5 V		"	OUT								"	"	G to B7	"	"	"
			232	"								4.5 V	"	OUT								"	"	G to B8	"	"	"
			233	GND	OUT								"								4.5 V	"	"	G to A1	"	"	"
			234	"		OUT							"							4.5 V		"	"	G to A2	"	"	"
			235	"			OUT						"						4.5 V			"	"	G to A3	"	"	"
			236	"				OUT					"					4.5 V				"	"	G to A4	"	"	"
			237	"					OUT				"				4.5 V					"	"	G to A5	"	"	"
			238	"						OUT			"			4.5 V						"	"	G to A6	"	"	"
			239	"							OUT		"		4.5 V							"	"	G to A7	"	"	"
			240	"								OUT	"	4.5 V								"	"	G to A8	"	"	"
			241	"	OUT								"								GND	"	"	G to A1	"	30	"
			242	"		OUT							"							GND		"	"	G to A2	"	"	"
			243	"			OUT						"						GND			"	"	G to A3	"	"	"
			244	"				OUT					"				GND					"	"	G to A4	"	"	"
			245	"					OUT D				"									"	"	G to A5	"	"	"
			246	"						OUT			"			GND						"	"	G to A6	"	"	"
			247	"							OUT		"		GND							"	"	G to A7	"	"	"
			248	"								OUT	"	GND								"	"	G to A8	"	"	"

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

Subgroup	Symbol	MIL-STD-883 method	Cases R, S, 2 Test no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Test limits Min	Test limits Max	Unit	
9	t _{PLZ1} Tc = 25°C	3003	249	4.5 V	GND								GND										IN	5.0 V	2	30	ns	
		See fig. 3	250	"		GND								"							OUT			"	"	"	"	
			251	"			GND							"						OUT				"	"	"	"	
			252	"				GND						"				OUT						"	"	"	"	
			253	"					GND					"			OUT							"	"	"	"	
			254	"						GND				"			OUT							"	"	"	"	
			255	"							GND			"		OUT								"	"	"	"	
			256	"								GND		"	OUT									"	"	"	"	
			257	"	4.5 V									"								OUT			"	"	"	"
			258	"		4.5 V								"							OUT			"	"	"	"	"
			259	"			4.5 V							"							OUT			"	"	"	"	"
			260	"				4.5 V						"						OUT				"	"	"	"	"
			261	"					4.5 V					"					OUT					"	"	"	"	"
			262	"						4.5 V				"		OUT								"	"	"	"	"
			263	"							4.5 V			"			OUT							"	"	"	"	"
			264	"								4.5 V		"	4.5 V										"	"	"	"
265	GND	OUT									"									4.5 V	"	"	"	"	"			
10	t _{PHZ2}	266	"		OUT							"								4.5 V			"	"	"	"	"	
		267	"			OUT						"							4.5 V				"	"	"	"	"	
		268	"				OUT					"						4.5 V					"	"	"	"	"	
		269	"					OUT				"					4.5 V						"	"	"	"	"	
		270	"						OUT				"				4.5 V						"	"	"	"	"	
		271	"							OUT			"			4.5 V							"	"	"	"	"	"
11	t _{PHZ1}	272	"								OUT	"	4.5 V									"	"	"	"	"	"	
		Same tests, terminal conditions, and limits as for subgroup 9, except Tc = 125°C.																							"	22	"	
																									"	22	"	
																									"	58	"	
																									"	58	"	
																							"	39	"			
																							"	39	"			

1/ The I_{OZH} limits for circuit B and E are +20 μ A maximum.

2/ The I_{IL} limits for circuit E are -5 μ A minimum, -240 μ A maximum.

3/ A = 3.0 V minimum; B = 0.0 V or GND.

4/ H > 1.5 V; L < 1.5 V.

5/ Add resistor of 0.5 k Ω to 5 k Ω between V_{CC} and each output.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1 CLK AB	2 SEL AB	3 DIR	4 A1	5 A2	6 A3	7 A4	8 A5	9 A6	10 A7	11 A8	12 GND	Measured terminal	Test Limits Min	Test Limits Max	Unit
1 $T_c = 25^\circ\text{C}$	V_{OH1}	3006	1	0.5 V	0.5 V	2.0 V	2.0 V	2.0 V	2.0 V							B1	2.4		V
			2	"	"	"	"		2.0 V							B2	"		"
			3	"	"	"	"			2.0 V						B3	"		"
			4	"	"	"	"				2.0 V					B4	"		"
			5	"	"	"	"					2.0 V				B5	"		"
			6	"	"	"	"						2.0 V			B6	"		"
			7	"	"	"	"							2.0 V		B7	"		"
			8	"	"	"	"								2.0 V	B8	"		"
			9	"	"	0.5 V	-3 mA									A1	"		"
			10	"	"	"	"	-3 mA								A2	"		"
			11	"	"	"	"		-3 mA							A3	"		"
			12	"	"	"	"			-3 mA						A4	"		"
			13	"	"	"	"				-3 mA					A5	"		"
			14	"	"	"	"					-3 mA				A6	"		"
			15	"	"	"	"						-3 mA			A7	"		"
			16	"	"	"	"							-3 mA		A8	"		"
V_{OH2}			17	"	"	2.0 V	2.0 V									B1	2.0		"
			18	"	"	"	"	2.0 V								B2	"		"
			19	"	"	"	"		2.0 V							B3	"		"
			20	"	"	"	"			2.0 V						B4	"		"
			21	"	"	"	"				2.0 V					B5	"		"
			22	"	"	"	"					2.0 V				B6	"		"
			23	"	"	"	"						2.0 V			B7	"		"
			24	"	"	"	"							2.0 V		B8	"		"
			25	"	"	0.5 V	-12 mA									A1	"		"
			26	"	"	"	"	-12 mA								A2	"		"
			27	"	"	"	"		-12 mA							A3	"		"
			28	"	"	"	"			-12 mA						A4	"		"
			29	"	"	"	"				-12 mA					A5	"		"
			30	"	"	"	"					-12 mA				A6	"		"
			31	"	"	"	"						-12 mA			A7	"		"
			32	"	"	"	"							-12 mA		A8	"		"
V_{OL}			33	"	"	2.0 V	0.5 V									B1		0.4	"
			34	"	"	"	"	0.5 V								B2			"
			35	"	"	"	"		0.5 V							B3			"
			36	"	"	"	"			0.5 V						B4			"
			37	"	"	"	"				0.5 V					B5			"
			38	"	"	"	"					0.5 V				B6			"
			39	"	"	"	"						0.5 V			B7			"
			40	"	"	"	"							0.5 V		B8			"
			41	"	"	0.5 V	12 mA									A1			"
			42	"	"	"	"	12 mA								A2			"
			43	"	"	"	"		12 mA							A3			"
			44	"	"	"	"			12 mA						A4			"
			45	"	"	"	"				12 mA					A5			"
			46	"	"	"	"					12 mA				A6			"
			47	"	"	"	"						12 mA			A7			"
			48	"	"	"	"							12 mA		A8			"
V_{IC}			49	-18 mA												CAB		-1.5	"
			50		-18 mA											SAB			"
			51			-18 mA										DIR			"
			52				-18 mA									A1			"
			53					-18 mA								A2			"
			54						-18 mA							A3			"
			55							-18 mA						A4			"
			56								-18 mA					A5			"
			57									-18 mA				A6			"
			58										-18 mA			A7			"
			59											-18 mA		A8			"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13 B8	14 B7	15 B6	16 B5	17 B4	18 B3	19 B2	20 B1	21 $\bar{G}$	22 SEL BA	23 CLK BA	24 V_{CC}	Measured terminal	Test Limits Min	Test Limits Max	Unit
1 $T_C = 25^\circ\text{C}$	V_{OH1}	3006	1													B1	2.4		V
			2							-3 mA						B2			"
			3						-3 mA							B3			"
			4					-3 mA								B4			"
			5													B5			"
			6			-3 mA										B6			"
			7		-3 mA											B7			"
			8	-3 mA												B8			"
			9							2.0 V						A1			"
			10							2.0 V						A2			"
			11						2.0 V							A3			"
			12					2.0 V								A4			"
			13													A5			"
			14													A6			"
			15			2.0 V										A7			"
			16	2.0 V												A8			"
	O_{H2}		17								-12 mA					B1	2.0		"
			18							-12 mA						B2			"
			19						-12 mA							B3			"
			20					-12 mA								B4			"
			21			-12 mA										B5			"
			22													B6			"
			23		-12 mA											B7			"
			24	-12 mA												B8			"
			25							2.0 V						A1			"
			26							2.0 V						A2			"
			27						2.0 V							A3			"
			28					2.0 V								A4			"
			29				2.0 V									A5			"
			30			2.0 V										A6			"
			31		2.0 V											A7			"
			32	2.0 V												A8			"
	O_L		33								12 mA					B1	0.4		"
			34							12 mA						B2			"
			35						12 mA							B3			"
			36					12 mA								B4			"
			37				12 mA									B5			"
			38													B6			"
			39		12 mA											B7			"
			40	12 mA												B8			"
			41								0.5 V					A1			"
			42							0.5 V						A2			"
			43						0.5 V							A3			"
			44					0.5 V								A4			"
			45				0.5 V									A5			"
			46			0.5 V										A6			"
			47		0.5 V											A7			"
			48	0.5 V												A8			"
	I_C		49													CAB	-1.5		"
			50													SAB			"
			51													DIR			"
			52													A1			"
			53													A2			"
			54													A3			"
			55													A4			"
			56													A5			"
			57													A6			"
			58													A7			"
			59													A8			"

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
1 $T_c = 25^\circ\text{C}$	V_{IC}		60													B8		-1.5	V
			61													B7			"
			62													B6			"
			63													B5			"
			64													B4			"
			65													B3			"
			66													B2			"
			67													B1			"
			68													G			"
			69													SBA			"
			70													CBA			"
			71	0.4 V												CAB	0	-200	μA
			72		0.4 V											SAB			"
			73			0.4 V										DIR			"
			74				0.4 V									A1			"
			75					0.4 V								A2			"
			76						0.4 V							A3			"
			77							0.4 V						A4			"
			78								0.4 V					A5			"
			79									0.4 V				A6			"
			80										0.4 V			A7			"
			81											0.4 V		A8			"
			82													B8			"
			83													B7			"
			84													B6			"
			85													B5			"
			86													B4			"
			87													B3			"
			88													B2			"
			89													B1			"
			90													G			"
			91													SBA			"
			92													CBA			"
3010	IH1		93	2.7 V												CAB		20	"
			94		2.7 V											SAB			"
			95			2.7 V										DIR			"
			96				2.7 V									A1			"
			97					2.7 V								A2			"
			98						2.7 V							A3			"
			99							2.7 V						A4			"
			100								2.7 V					A5			"
			101									2.7 V				A6			"
			102										2.7 V			A7			"
			103											2.7 V		A8			"
			104													B8			"
			105													B7			"
			106													B6			"
			107													B5			"
			108													B4			"
			109													B3			"
			110													B2			"
			111													B1			"
			112													G			"
			113													SBA			"
			114													CBA			"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits	Unit
1 Tc = 25°C	V _c		60	-18 mA											4.5 V	B8	Min	-1.5 V
			61		-18 mA											B7	Max	"
			62			-18 mA										B6		"
			63				-18 mA									B5		"
			64					-18 mA								B4		"
			65						-18 mA							B3		"
			66							-18 mA						B2		"
			67								-18 mA					B1		"
			68									-18 mA				G		"
			69										-18 mA			SBA		"
			70											-18 mA		CBA		"
			71												5.5 V	CAB	0	-200 μ A
			72													SAB		"
			73													DIR		"
			74													A1		"
			75													A2		"
			76													A3		"
			77													A4		"
			78													A5		"
			79													A6		"
			80													A7		"
			81													A8		"
			82	0.4 V												B8		"
			83		0.4 V											B7		"
			84			0.4 V										B6		"
			85				0.4 V									B5		"
			86					0.4 V								B4		"
			87						0.4 V							B3		"
			88							0.4 V						B2		"
			89								0.4 V					B1		"
			90									0.4 V				G		"
	IH1	3010	91										0.4 V			SBA		"
			92											0.4 V		CBA		"
			93													CAB	20	"
			94													SAB		"
			95													DIR		"
			96													A1		"
			97													A2		"
			98													A3		"
			99													A4		"
			100													A5		"
			101													A6		"
			102													A7		"
			103													A8		"
			104	2.7 V												B8		"
			105		2.7 V											B7		"
			106			2.7 V										B6		"
			107				2.7 V									B5		"
			108					2.7 V								B4		"
			109						2.7 V							B3		"
			110							2.7 V						B2		"
			111								2.7 V					B1		"
			112									2.7 V				G		"
			113										2.7 V			SBA		"
			114											2.7 V		CBA		"

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8			Min	Max	
1 Tc = 25°C	I _{HE}	3010	115	5.5 V											GND	CAB		100	µA
			116													SAB		"	"
			117			5.5 V										DIR		"	"
			118				5.5 V									A1		"	"
			119					5.5 V								A2		"	"
			120						5.5 V							A3		"	"
			121							5.5 V						A4		"	"
			122								5.5 V					A5		"	"
			123									5.5 V				A6		"	"
			124										5.5 V			A7		"	"
			125											5.5 V		A8		"	"
			126													B8		"	"
			127													B7		"	"
			128													B6		"	"
			129													B5		"	"
			130													B4		"	"
			131													B3		"	"
			132													B2		"	"
			133													B1		"	"
			134													G		"	"
			135													SBA		"	"
			136													CBA		"	"
			137				0.4 V									A1		-400	"
			138					0.4 V								A2		"	"
			139						0.4 V							A3		"	"
			140							0.4 V						A4		"	"
			141								0.4 V					A5		"	"
			142									0.4 V				A6		"	"
			143										0.4 V			A7		"	"
			144											0.4 V		A8		"	"
			145													B8		"	"
			146													B7		"	"
			147													B6		"	"
			148													B5		"	"
			149													B4		"	"
			150													B3		"	"
			151													B2		"	"
			152													B1		"	"
			153				2.7 V									A1		20	"
			154					2.7 V								A2		"	"
			155						2.7 V							A3		"	"
			156							2.7 V						A4		"	"
			157								2.7 V					A5		"	"
			158									2.7 V				A6		"	"
			159										2.7 V			A7		"	"
			160											2.7 V		A8		"	"
			161													B8		"	"
			162													B7		"	"
			163													B6		"	"
			164													B5		"	"
			165													B4		"	"
			166													B3		"	"
			167													B2		"	"
			168													B1		"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
1 Tc = 25°C	I _{HE}	3010	115												5.5 V	CAB		100	µA
			116													SAB			"
			117													DIR			"
			118													A1			"
			119													A2			"
			120													A3			"
			121													A4			"
			122													A5			"
			123													A6			"
			124													A7			"
			125													A8			"
			126	5.5 V												B8			"
			127		5.5 V											B7			"
			128			5.5 V										B6			"
			129				5.5 V									B5			"
			130					5.5 V								B4			"
			131						5.5 V							B3			"
			132							5.5 V						B2			"
			133								5.5 V					B1			"
			134									5.5 V				G			"
			135										5.5 V			SBA			"
			136											5.5 V		CBA			"
			137									2.0 V				A1	-400		"
			138													A2			"
			139													A3			"
			140													A4			"
			141													A5			"
			142													A6			"
			143													A7			"
			144													A8			"
			145	0.4 V												B8			"
			146		0.4 V											B7			"
			147			0.4 V										B6			"
			148				0.4 V									B5			"
			149					0.4 V								B4			"
			150						0.4 V							B3			"
			151							0.4 V						B2			"
			152								0.4 V					B1			"
			153													A1	20		"
			154													A2			"
			155													A3			"
			156													A4			"
			157													A5			"
			158													A6			"
			159													A7			"
			160													A8			"
			161	2.7 V												B8			"
			162		2.7 V											B7			"
			163			2.7 V										B6			"
			164				2.7 V									B5			"
			165					2.7 V								B4			"
			166						2.7 V							B3			"
			167							2.7 V						B2			"
			168								2.7 V					B1			"

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits	Unit		
1 Tc = 25°C	Ios	3011	Test no.	CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B1	Min	Max		
			169	GND	GND	4.5 V	4.5 V											-40	-225	mA
			170	"	"	"	"	4.5 V	4.5 V										"	"
			171	"	"	"	"	"	"	4.5 V	4.5 V								"	"
			172	"	"	"	"	"	"	"	"	4.5 V	4.5 V						"	"
			173	"	"	"	"	"	"	"	"	"	"	4.5 V	4.5 V				"	"
			174	"	"	"	"	"	"	"	"	"	"	"	"	4.5 V	4.5 V		"	"
			175	"	"	"	"	"	"	"	"	"	"	"	"	"	"		"	"
			176	"	"	"	"	"	"	"	"	"	"	"	"	"	"		"	"
			177	"	"	"	"	GND	GND									A1	"	"
			178	"	"	"	"	"	"	GND	GND							A2	"	"
			179	"	"	"	"	"	"	"	"	GND	GND					A3	"	"
			180	"	"	"	"	"	"	"	"	"	"	GND	GND			A4	"	"
			181	"	"	"	"	"	"	"	"	"	GND	"	"			A5	"	"
			182	"	"	"	"	"	"	"	"	"	"	"	GND			A6	"	"
			183	"	"	"	"	"	"	"	"	"	"	"	"	"		A7	"	"
			2	CCH	3005	184	"	"	"	"	"	"	"	"	"	"	"	"	"	"
185	"	"				"	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	GND	"	A8	"	"	
186	"	"				"	4.5 V	GND	GND	GND	GND	GND	GND	GND	GND	"	Vcc	145	"	
187	"	"				"	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	"	Vcc	165	"	
3	Same tests, terminal conditions, and limits as subgroup 1, except Tc = +125°C and omit V _{IC} tests.																			
7	Same tests, terminal conditions, and limits as subgroup 1, except Tc = -55°C and omit V _{IC} tests.																			
7 Tc = 25°C	Truth table tests I _{F1H1}	3003 (fig. 3)	188	B	B	A	A	A	A	A	A	A	A	A	A	GND	2/, 3/			
			189	"	"	"	A	B	B	B	B	B	B	B	B	"				
			190	"	"	"	B	H	H	H	H	H	H	H	H	"				
			191	"	"	"	B	L	L	L	L	L	L	L	L	"				
			192	"	A	"	A	A	A	A	A	A	A	A	A	"				
			193	A	"	"	A	A	A	A	A	A	A	A	A	"				
			194	B	"	"	B	B	B	B	B	B	B	B	B	"				
			195	A	"	"	B	B	B	B	B	B	B	B	B	"				
			196	B	B	B	L	L	L	L	L	L	L	L	L	"				
			197	"	"	"	H	H	H	H	H	H	H	H	H	"				
			198	"	"	"	H	H	H	H	H	H	H	H	H	"				
			199	"	"	"	L	L	L	L	L	L	L	L	L	"				
			200	"	"	"	L	L	L	L	L	L	L	L	L	"				
			201	IN	4.5 V	4.5 V	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	GND	CAB to B1	2	30
			202	"	"	"	"	"	IN	IN	IN	IN	IN	IN	IN	"	"	CAB to B2	"	"
			203	"	"	"	"	"	"	"	IN	IN	IN	IN	IN	"	"	CAB to B3	"	"
			204	"	"	"	"	"	"	"	"	IN	IN	IN	IN	"	"	CAB to B4	"	"
			205	"	"	"	"	"	"	"	"	"	IN	IN	IN	"	"	CAB to B5	"	"
			206	"	"	"	"	"	"	"	"	"	"	IN	IN	"	"	CAB to B6	"	"
			207	"	"	"	"	"	"	"	"	"	"	"	IN	"	"	CAB to B7	"	"
			208	"	"	"	"	"	"	"	"	"	"	"	"	IN	"	CAB to B8	"	"
			209	GND	GND	GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	"	CBA to A1	"	"
			210	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A2	"	"
			211	"	"	"	"	"	"	"	"	OUT	OUT	OUT	OUT	"	"	CBA to A3	"	"
			212	"	"	"	"	"	"	"	"	"	OUT	OUT	OUT	"	"	CBA to A4	"	"
			213	"	"	"	"	"	"	"	"	"	"	OUT	OUT	"	"	CBA to A5	"	"
			214	"	"	"	"	"	"	"	"	"	"	"	OUT	"	"	CBA to A6	"	"
			215	"	"	"	"	"	"	"	"	"	"	"	"	OUT	"	CBA to A7	"	"
			216	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	CBA to A8	"
8	Same tests and terminal conditions as subgroup 7, except Tc = +125°C and Tc = -55°C.																			
9	I _{F1H1}		3003 (fig. 3)	Same tests, terminal conditions, and limits as subgroup 7, except Tc = +125°C and Tc = -55°C.																

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits	Unit				
			Test no.	B8	B7	B6	B5	B4	B3	B2	B1	$\overline{\text{G}}$	SEL BA	CLK BA	V _{CC}		Min	Max				
1 T _C = 25°C	I _{OS}	3011	169													B1	-40	-225	mA			
			170														B2	"	"	"		
			171														B3	"	"	"		
			172														B4	"	"	"		
			173														B5	"	"	"		
			174														B6	"	"	"		
			175														B7	"	"	"		
			176														B8	"	"	"		
			177														A1	"	"	"		
			178									0.5 V					A2	"	"	"		
			179														A3	"	"	"		
			180														A4	"	"	"		
			181														A5	"	"	"		
			182														A6	"	"	"		
			183														A7	"	"	"		
			184	0.5 V													A8	"	"	"		
	CCH	3005	185												V _{CC}		145	"				
			186												V _{CC}		165	"				
			187								4.5 V				V _{CC}		165	"				
2	Same tests, terminal conditions, and limits as subgroup 1, except T _C = +125°C and omit V _{I,C} tests.																					
3	Same tests, terminal conditions, and limits as subgroup 1, except T _C = -55°C and omit V _{I,C} tests.																					
7 T _C = 25°C	Truth table tests ↙		188	H	H	H	H	H	H	H	H	B	B	B	B	4.5 V	2/, 3/					
			189	L	L	L	L	L	L	L	L	L	"	"	"	"						
			190	A	A	A	A	A	A	A	A	A	"	"	"	"						
			191	B	B	B	B	B	B	B	B	B	"	"	"	"						
			192	L	L	L	L	L	L	L	L	L	"	"	"	"						
			193	H	H	H	H	H	H	H	H	H	"	"	"	"						
			194	H	H	H	H	H	H	H	H	H	"	"	"	"						
			195	L	L	L	L	L	L	L	L	L	"	"	"	"						
			196	A	A	A	A	A	A	A	A	A	"	"	"	"						
			197	A	A	A	A	A	A	A	A	A	"	"	"	"						
			198	B	B	B	B	B	B	B	B	B	"	"	"	"						
			199	"	"	"	"	"	"	"	"	"	"	"	"	"				"	"	"
			200	"	"	"	"	"	"	"	"	"	"	"	"	"				"	"	"
8 9 T _C = 25°C	Same tests and terminal conditions as subgroup 7, except T _C = +125°C and T _C = -55°C.	3003 (fig. 3)	201								OUT	GND	GND	GND	5.0 V	CAB to B1	2	30	ns			
			202								OUT						CAB to B2	"	"	"		
			203								OUT						CAB to B3	"	"	"		
			204						OUT								CAB to B4	"	"	"		
			205														CAB to B5	"	"	"		
			206				OUT										CAB to B6	"	"	"		
			207			OUT											CAB to B7	"	"	"		
			208	OUT													CAB to B8	"	"	"		
			209									IN		4.5 V	IN		CBA to A1	"	"	"		
			210								IN			"	"		CBA to A2	"	"	"		
			211											"	"		CBA to A3	"	"	"		
			212							IN				"	"		CBA to A4	"	"	"		
			213											"	"		CBA to A5	"	"	"		
			214				IN							"	"		CBA to A6	"	"	"		
			215			IN								"	"		CBA to A7	"	"	"		
			216	IN										"	"		CBA to A8	"	"	"		

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1 CLK AB	2 SEL AB 4.5 V	3 DIR 4.5 V	4 A1 IN	5 A2 IN	6 A3 IN	7 A4 IN	8 A5 IN	9 A6 IN	10 A7 IN	11 A8 IN	12 GND	Measured terminal	Test Limits		Unit
																	Min	Max	
9 Tc = 25°C	t _{PHL1}	3003 (fig. 3)	217	IN	4.5 V	4.5 V	IN	IN	IN							CAB to B1	2	40	ns
			218	"	"	"	"	"	"							CAB to B2	"	"	"
			219	"	"	"	"	"	IN							CAB to B3	"	"	"
			220	"	"	"	"	"		IN						CAB to B4	"	"	"
			221	"	"	"	"	"			IN					CAB to B5	"	"	"
			222	"	"	"	"	"				IN				CAB to B6	"	"	"
			223	"	"	"	"	"					IN			CAB to B7	"	"	"
			224	"	"	"	"	"						IN		CAB to B8	"	"	"
			225	GND	GND	GND	OUT	OUT						IN		CBA to A1	"	"	"
			226	"	"	"	"	OUT	OUT							CBA to A2	"	"	"
			227	"	"	"	"			OUT						CBA to A3	"	"	"
			228	"	"	"	"				OUT					CBA to A4	"	"	"
			229	"	"	"	"					OUT				CBA to A5	"	"	"
			230	"	"	"	"						OUT			CBA to A6	"	"	"
			231	"	"	"	"							OUT		CBA to A7	"	"	"
			232	"	"	"	"									CBA to A8	"	"	"
			233	"	"	4.5 V	IN									A1 to B1	"	23	"
			234	"	"	"	"	IN	IN							A2 to B2	"	"	"
			235	"	"	"	"			IN						A3 to B3	"	"	"
			236	"	"	"	"				IN					A4 to B4	"	"	"
			237	"	"	"	"					IN				A5 to B5	"	"	"
			238	"	"	"	"						IN			A6 to B6	"	"	"
			239	"	"	"	"							IN		A7 to B7	"	"	"
			240	"	"	"	"							IN		A8 to B8	"	"	"
			241	"	"	GND	OUT									B1 to A1	"	"	"
			242	"	"	"	"	OUT	OUT							B2 to A2	"	"	"
			243	"	"	"	"			OUT						B3 to A3	"	"	"
			244	"	"	"	"				OUT					B4 to A4	"	"	"
			245	"	"	"	"					OUT				B5 to A5	"	"	"
			246	"	"	"	"						OUT			B6 to A6	"	"	"
			247	"	"	"	"							OUT		B7 to A7	"	"	"
			248	"	"	"	"									B8 to A8	"	"	"
			249	"	"	4.5 V	IN							OUT		A1 to B1	"	25	"
			250	"	"	"	"	IN								A2 to B2	"	"	"
			251	"	"	"	"		IN							A3 to B3	"	"	"
			252	"	"	"	"			IN						A4 to B4	"	"	"
			253	"	"	"	"				IN					A5 to B5	"	"	"
			254	"	"	"	"					IN				A6 to B6	"	"	"
			255	"	"	"	"						IN			A7 to B7	"	"	"
			256	"	"	"	"							IN		A8 to B8	"	"	"
			257	"	"	GND	OUT	OUT								B1 to A1	"	"	"
			258	"	"	"	"									B2 to A2	"	"	"
			259	"	"	"	"		OUT							B3 to A3	"	"	"
			260	"	"	"	"			OUT						B4 to A4	"	"	"
			261	"	"	"	"				OUT					B5 to A5	"	"	"
			262	"	"	"	"					OUT				B6 to A6	"	"	"
			263	"	"	"	"						OUT			B7 to A7	"	"	"
			264	"	"	"	"							OUT		B8 to A8	"	"	"
			265	4/	IN	4.5 V	4/	4/								SAB to B1	"	45	"
			266	"	"	"	"		4/							SAB to B2	"	"	"
			267	"	"	"	"									SAB to B3	"	"	"
			268	"	"	"	"			4/						SAB to B4	"	"	"
			269	"	"	"	"				4/					SAB to B5	"	"	"
			270	"	"	"	"					4/				SAB to B6	"	"	"
			271	"	"	"	"						4/			SAB to B7	"	"	"
			272	"	"	"	"							4/		SAB to B8	"	"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit	
				B8	B7	B6	B5	B4	B3	B2	B1	GND	SEL BA	CLK BA	V _{CC}		Min	Max		
9 T _c = 25°C	I _{PHL1}	3003 (fig. 3)	217									GND	GND	GND	5.0 V	CAB to B1	2	40	ns	
			218								OUT					CAB to B2				
			219								OUT						CAB to B3			
			220														CAB to B4			
			221														CAB to B5			
			222				OUT										CAB to B6			
			223		OUT												CAB to B7			
			224	OUT													CAB to B8			
			225										IN	4.5 V	IN		CBA to A1			
			226									IN					CBA to A2			
			227								IN						CBA to A3			
			228							IN							CBA to A4			
			229				IN										CBA to A5			
			230														CBA to A6			
			231			IN											CBA to A7			
			232	IN										OUT	GND	GND	A1 to B1		23	
			233										OUT				A2 to B2			
			234									OUT					A3 to B3			
			235														A4 to B4			
			236								OUT						A5 to B5			
			237							OUT							A6 to B6			
			238						OUT								A7 to B7			
			239			OUT											A8 to B8			
			240														B1 to A1			
			241											IN			B2 to A2			
			242										IN				B3 to A3			
			243									IN					B4 to A4			
244								IN						B5 to A5						
245					IN									B6 to A6						
246					IN									B7 to A7						
247				IN										B8 to A8						
248			IN											A1 to B1						
249											OUT			A2 to B2			25			
250										OUT				A3 to B3						
251									OUT					A4 to B4						
252							OUT							A5 to B5						
253						OUT								A6 to B6						
254														A7 to B7						
255				OUT										A8 to B8						
256			OUT											B1 to A1						
257											IN			B2 to A2						
258										IN				B3 to A3						
259								IN						B4 to A4						
260														B5 to A5						
261						IN								B6 to A6						
262					IN									B7 to A7						
263					IN									B8 to A8						
264			IN											SAB to B1						
265											OUT			SAB to B2			45			
266														SAB to B3						
267								OUT						SAB to B4						
268														SAB to B5						
269							OUT							SAB to B6						
270						OUT								SAB to B7						
271					OUT									SAB to B8						
272			OUT																	

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB GND	SEL AB GND	DIR GND	A1 OUT	A2 OUT	A3 OUT	A4 OUT	A5 OUT	A6 OUT	A7 OUT	A8 OUT	GND		Min	Max	
9 Tc = 25°C	t _{PH3}	3003 (fig. 3)	273	GND	"	"	"	OUT	OUT	"	"	"	"	"	"	SBA to A1	2	45	ns
			274	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A2	"	"	"
			275	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A3	"	"	"
			276	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A4	"	"	"
			277	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			278	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			279	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			280	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"
			281	4/	IN	4.5 V	4/	4/	"	"	"	"	"	"	"	SAB to B1	"	40	"
			282	"	"	"	"	"	4/	"	"	"	"	"	"	SAB to B2	"	"	"
			283	"	"	"	"	"	"	4/	"	"	"	"	"	SAB to B3	"	"	"
			284	"	"	"	"	"	"	"	4/	"	"	"	"	SAB to B4	"	"	"
			285	"	"	"	"	"	"	"	"	4/	"	"	"	SAB to B5	"	"	"
			286	"	"	"	"	"	"	"	"	"	4/	"	"	SAB to B6	"	"	"
			287	"	"	"	"	"	"	"	"	"	"	4/	"	SAB to B7	"	"	"
			288	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B8	"	"	"
	t _{PH4}		289	GND	GND	GND	OUT	"	"	"	"	"	"	"	"	SBA to A1	"	"	"
			290	"	"	"	"	OUT	"	"	"	"	"	"	"	SBA to A2	"	"	"
			291	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A3	"	"	"
			292	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A4	"	"	"
			293	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			294	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			295	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			296	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A8	"	"	"
			297	5/	IN	4.5 V	5/	"	"	"	"	"	"	OUT	"	SAB to B1	"	55	"
			298	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B2	"	"	"
			299	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B3	"	"	"
			300	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B4	"	"	"
			301	"	"	"	"	"	"	5/	"	"	"	"	"	SAB to B5	"	"	"
			302	"	"	"	"	"	"	"	5/	"	"	"	"	SAB to B6	"	"	"
			303	"	"	"	"	"	"	"	"	"	5/	"	"	SAB to B7	"	"	"
	t _{PH4}		304	"	"	"	"	"	"	"	"	"	"	5/	"	SAB to B8	"	"	"
			305	GND	GND	GND	OUT	"	"	"	"	"	"	"	"	SBA to A1	"	"	"
			306	"	"	"	"	OUT	"	"	"	"	"	"	"	SBA to A2	"	"	"
			307	"	"	"	"	"	OUT	"	"	"	"	"	"	SBA to A3	"	"	"
			308	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A4	"	"	"
			309	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			310	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			311	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			312	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"
			313	5/	IN	4.5 V	5/	"	"	"	"	"	"	"	"	SAB to B1	"	30	"
			314	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B2	"	"	"
			315	"	"	"	"	"	5/	"	"	"	"	"	"	SAB to B3	"	"	"
			316	"	"	"	"	"	"	5/	"	"	"	"	"	SAB to B4	"	"	"
			317	"	"	"	"	"	"	"	5/	"	"	"	"	SAB to B5	"	"	"
			318	"	"	"	"	"	"	"	"	5/	"	"	"	SAB to B6	"	"	"
			319	"	"	"	"	"	"	"	"	"	5/	"	"	SAB to B7	"	"	"
			320	"	"	"	"	"	"	"	"	"	"	5/	"	SAB to B8	"	"	"
			321	GND	GND	GND	OUT	"	"	"	"	"	"	"	"	SBA to A1	"	"	"
			322	"	"	"	"	OUT	"	"	"	"	"	"	"	SBA to A2	"	"	"
			323	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A3	"	"	"
			324	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A4	"	"	"
			325	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A5	"	"	"
			326	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A6	"	"	"
			327	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A7	"	"	"
			328	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit		
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max			
9 T _c = 25°C	t _{PH3}	3003 (fig. 3)	273									4/	GND	IN	4/	5.0 V	SBA to A1	2	45	ns	
			274														SBA to A2			"	
			275								4/							SBA to A3			"
			276					4/										SBA to A4			"
			277															SBA to A5			"
			278			4/												SBA to A6			"
			279		4/													SBA to A7			"
			280	4/														SBA to A8			"
			281															SAB to B1		40	"
			282								OUT							SAB to B2			"
	PHL3		283							OUT								SAB to B3			"
			284						OUT									SAB to B4			"
			285				OUT											SAB to B5			"
			286			OUT												SAB to B6			"
			287		OUT													SAB to B7			"
			288	OUT														SAB to B8			"
			289								4/			IN	4/			SBA to A1			"
			290									4/						SBA to A2			"
			291							4/								SBA to A3			"
			292						4/									SBA to A4			"
PHL4	293				4/											SBA to A5			"		
	294			4/												SBA to A6			"		
	295		4/													SBA to A7			"		
	296	4/														SBA to A8			"		
	297									OUT		GND	GND			SAB to B1		55	"		
	298									OUT						SAB to B2			"		
	299							OUT								SAB to B3			"		
	300				OUT											SAB to B4			"		
	301															SAB to B5			"		
	302			OUT												SAB to B6			"		
PHL4	303		OUT													SAB to B7			"		
	304	OUT														SAB to B8			"		
	305											IN	5/			SBA to A1			"		
	306													5/		SBA to A2			"		
	307						5/									SBA to A3			"		
	308						5/									SBA to A4			"		
	309				5/											SBA to A5			"		
	310			5/												SBA to A6			"		
	311		5/													SBA to A7			"		
	312	5/														SBA to A8			"		
PHL4	313											GND	GND			SAB to B1		30	"		
	314									OUT						SAB to B2			"		
	315								OUT							SAB to B3			"		
	316						OUT									SAB to B4			"		
	317				OUT											SAB to B5			"		
	318			OUT												SAB to B6			"		
	319		OUT													SAB to B7			"		
	320	OUT														SAB to B8			"		
	321								5/			IN	5/			SBA to A1			"		
	322								5/							SBA to A2			"		
	323															SBA to A3			"		
	324						5/									SBA to A4			"		
	325				5/											SBA to A5			"		
	326				5/											SBA to A6			"		
	327		5/													SBA to A7			"		
	328	5/														SBA to A8			"		

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
9 Tc = 25°C	I _{p2H2}	3003 (fig. 3)	329		GND	GND	OUT									G to A1	2	60	ns
			330		"	"		OUT								G to A2	"	"	"
			331		"	"			OUT							G to A3	"	"	"
			332		"	"				OUT						G to A4	"	"	"
			333		"	"					OUT					G to A5	"	"	"
			334		"	"						OUT				G to A6	"	"	"
			335		"	"							OUT			G to A7	"	"	"
			336		"	"								OUT		G to A8	"	"	"
			337		"	4.5 V	4.5 V									G to B1	"	"	"
			338		"	"		4.5 V								G to B2	"	"	"
			339		"	"			4.5 V							G to B3	"	"	"
			340		"	"				4.5 V						G to B4	"	"	"
			341		"	"					4.5 V					G to B5	"	"	"
			342		"	"						4.5 V				G to B6	"	"	"
			343		"	"							4.5 V			G to B7	"	"	"
			344		"	"								4.5 V		G to B8	"	"	"
			345		"	GND	OUT									G to A1	"	70	"
			346		"	"		OUT								G to A2	"	"	"
			347		"	"			OUT							G to A3	"	"	"
			348		"	"				OUT						G to A4	"	"	"
			349		"	"					OUT					G to A5	"	"	"
			350		"	"						OUT				G to A6	"	"	"
			351		"	"							OUT			G to A7	"	"	"
			352		"	"								OUT		G to A8	"	"	"
			353		"	4.5 V	GND									G to B1	"	"	"
			354		"	"		GND								G to B2	"	"	"
			355		"	"			GND							G to B3	"	"	"
			356		"	"				GND						G to B4	"	"	"
			357		"	"					GND					G to B5	"	"	"
			358		"	"						GND				G to B6	"	"	"
			359		"	"							GND			G to B7	"	"	"
			360		"	"								GND		G to B8	"	"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	$\bar{G}$	SEL BA	CLK BA	V _{CC}		Min	Max	
9 Tc = 25°C	I_{PZL2}	3003 (fig. 3)	329								4.5 V	IN	GND		5.0 V	$\bar{G}$ to A1	2	60	ns
			330							4.5 V		"	"		"	$\bar{G}$ to A2	"	"	"
			331						4.5 V			"	"		"	$\bar{G}$ to A3	"	"	"
			332									"	"		"	$\bar{G}$ to A4	"	"	"
			333				4.5 V					"	"		"	$\bar{G}$ to A5	"	"	"
			334			4.5 V						"	"		"	$\bar{G}$ to A6	"	"	"
			335		4.5 V							"	"		"	$\bar{G}$ to A7	"	"	"
			336	4.5 V								"	"		"	$\bar{G}$ to A8	"	"	"
			337								OUT	"	"		"	$\bar{G}$ to B1	"	"	"
			338							OUT		"	"		"	$\bar{G}$ to B2	"	"	"
			339						OUT			"	"		"	$\bar{G}$ to B3	"	"	"
			340					OUT				"	"		"	$\bar{G}$ to B4	"	"	"
			341				OUT					"	"		"	$\bar{G}$ to B5	"	"	"
			342			OUT						"	"		"	$\bar{G}$ to B6	"	"	"
			343		OUT							"	"		"	$\bar{G}$ to B7	"	"	"
			344	OUT								"	"		"	$\bar{G}$ to B8	"	"	"
t	PZL2		345								GND	"	"		"	$\bar{G}$ to A1	"	70	"
			346							GND		"	"		"	$\bar{G}$ to A2	"	"	"
			347						GND			"	"		"	$\bar{G}$ to A3	"	"	"
			348					GND				"	"		"	$\bar{G}$ to A4	"	"	"
			349				GND					"	"		"	$\bar{G}$ to A5	"	"	"
			350			GND						"	"		"	$\bar{G}$ to A6	"	"	"
			351		GND							"	"		"	$\bar{G}$ to A7	"	"	"
			352	GND								"	"		"	$\bar{G}$ to A8	"	"	"
			353								OUT	"	"		"	$\bar{G}$ to B1	"	"	"
			354							OUT		"	"		"	$\bar{G}$ to B2	"	"	"
			355						OUT			"	"		"	$\bar{G}$ to B3	"	"	"
			356					OUT				"	"		"	$\bar{G}$ to B4	"	"	"
			357				OUT					"	"		"	$\bar{G}$ to B5	"	"	"
			358			OUT						"	"		"	$\bar{G}$ to B6	"	"	"
			359		OUT							"	"		"	$\bar{G}$ to B7	"	"	"
			360	OUT								"	"		"	$\bar{G}$ to B8	"	"	"

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1 CLK AB	2 SEL AB	3 DIR	4 A1	5 A2	6 A3	7 A4	8 A5	9 A6	10 A7	11 A8	12 GND	Measured terminal	Test Limits		Unit
																	Min	Max	
9 $T_c = 25^\circ\text{C}$	PZH3	3003 (fig. 3)	361		GND	IN	4.5 V	4.5 V	4.5 V						GND	DIR to B1	2	50	ns
			362		"	"	"	"	"	4.5 V					"	DIR to B2	"	"	"
			363		"	"	"	"	"	4.5 V					"	DIR to B3	"	"	"
			364		"	"	"	"	"	4.5 V					"	DIR to B4	"	"	"
			365		"	"	"	"	"		4.5 V				"	DIR to B5	"	"	"
			366		"	"	"	"	"			4.5 V			"	DIR to B6	"	"	"
			367		"	"	"	"	"				4.5 V		"	DIR to B7	"	"	"
			368		"	"	"	"	"					4.5 V	"	DIR to B8	"	"	"
			369		"	"	OUT								"	DIR to A1	"	"	"
			370		"	"		OUT							"	DIR to A2	"	"	"
			371		"	"			OUT						"	DIR to A3	"	"	"
			372		"	"				OUT					"	DIR to A4	"	"	"
			373		"	"					OUT				"	DIR to A5	"	"	"
			374		"	"						OUT			"	DIR to A6	"	"	"
			375		"	"							OUT		"	DIR to A7	"	"	"
			376		"	"								OUT	"	DIR to A8	"	"	"
PZL3			377		"	"	GND								"	DIR to B1	"	65	"
			378		"	"		GND							"	DIR to B2	"	"	"
			379		"	"			GND						"	DIR to B3	"	"	"
			380		"	"				GND					"	DIR to B4	"	"	"
			381		"	"					GND				"	DIR to B5	"	"	"
			382		"	"						GND			"	DIR to B6	"	"	"
			383		"	"							GND		"	DIR to B7	"	"	"
			384		"	"								GND	"	DIR to B8	"	"	"
			385		"	"									"	DIR to A1	"	"	"
			386		"	"									"	DIR to A2	"	"	"
			387		"	"			OUT						"	DIR to A3	"	"	"
			388		"	"				OUT					"	DIR to A4	"	"	"
			389		"	"					OUT				"	DIR to A5	"	"	"
			390		"	"						OUT			"	DIR to A6	"	"	"
			391		"	"							OUT		"	DIR to A7	"	"	"
			392		"	"								OUT	"	DIR to A8	"	"	"
PHZ2			393		GND	4.5 V	4.5 V							OUT	"	G to B1	"	40	"
			394		"	"		4.5 V							"	G to B2	"	"	"
			395		"	"			4.5 V						"	G to B3	"	"	"
			396		"	"				4.5 V					"	G to B4	"	"	"
			397		"	"					4.5 V				"	G to B5	"	"	"
			398		"	"						4.5 V			"	G to B6	"	"	"
			399		"	"							4.5 V		"	G to B7	"	"	"
			400		"	"								4.5 V	"	G to B8	"	"	"
			401		"	GND	OUT								"	G to A1	"	"	"
			402		"	"		OUT							"	G to A2	"	"	"
			403		"	"			OUT						"	G to A3	"	"	"
			404		"	"				OUT					"	G to A4	"	"	"
			405		"	"					OUT				"	G to A5	"	"	"
			406		"	"						OUT			"	G to A6	"	"	"
			407		"	"							OUT		"	G to A7	"	"	"
			408		"	"								OUT	"	G to A8	"	"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	GND	SEL BA	CLK BA	V _{CC}		Min	Max	
g T _c = 25°C	PZL3	3003 (fig. 3)	361							OUT	OUT	GND	GND		5.0 V	DIR to B1	2	50	ns
			362						OUT							DIR to B2			"
			363					OUT								DIR to B3			"
			364				OUT									DIR to B4			"
			365			OUT										DIR to B5			"
			366		OUT											DIR to B6			"
			367	OUT												DIR to B7			"
			368								4.5 V					DIR to B8			"
			369							4.5 V						DIR to A1			"
			370						4.5 V							DIR to A2			"
			371				4.5 V									DIR to A3			"
			372													DIR to A4			"
			373			4.5 V										DIR to A5			"
			374		4.5 V											DIR to A6			"
			375		4.5 V											DIR to A7			"
			376	4.5 V							OUT					DIR to A8			"
			377							OUT						DIR to B1		65	"
			378													DIR to B2			"
			379					OUT								DIR to B3			"
			380				OUT									DIR to B4			"
t	PHZ2		381			OUT										DIR to B5			"
			382		OUT											DIR to B6			"
			383		OUT											DIR to B7			"
			384	OUT												DIR to B8			"
			385							GND						DIR to A1			"
			386							GND						DIR to A2			"
			387						GND							DIR to A3			"
			388				GND									DIR to A4			"
			389			GND										DIR to A5			"
			390													DIR to A6			"
			391		GND											DIR to A7			"
			392	GND												DIR to A8			"
			393							OUT	IN					G to B1		40	"
			394							OUT						G to B2			"
			395						OUT							G to B3			"
			396					OUT								G to B4			"
			397			OUT										G to B5			"
			398			OUT										G to B6			"
			399		OUT											G to B7			"
			400	OUT												G to B8			"
			401								4.5 V					G to A1			"
			402							4.5 V						G to A2			"
			403						4.5 V							G to A3			"
			404					4.5 V								G to A4			"
			405				4.5 V									G to A5			"
			406			4.5 V										G to A6			"
			407		4.5 V											G to A7			"
			408	4.5 V												G to A8			"

See footnotes at end of device type 04.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
9 Tc = 25°C	PLZ2	3003 (fig. 3)	409		GND	4.5 V	GND									G to B1	2	40	ns
			410			"		GND								G to B2	"	"	"
			411			"			GND							G to B3	"	"	"
			412			"				GND						G to B4	"	"	"
			413			"					GND					G to B5	"	"	"
			414			"						GND				G to B6	"	"	"
			415			"							GND			G to B7	"	"	"
			416			"								GND		G to B8	"	"	"
			417			GND	OUT									G to A1	"	"	"
			418			"		OUT								G to A2	"	"	"
			419			"			OUT							G to A3	"	"	"
			420			"				OUT						G to A4	"	"	"
			421			"					OUT					G to A5	"	"	"
			422			"						OUT				G to A6	"	"	"
			423			"							OUT			G to A7	"	"	"
			424			"								OUT		G to A8	"	"	"
	PHZ3		425		GND	IN	4.5 V									DIR to B1	"	35	"
			426		"	"		4.5 V								DIR to B2	"	"	"
			427		"	"			4.5 V	4.5 V						DIR to B3	"	"	"
			428		"	"				4.5 V	4.5 V					DIR to B4	"	"	"
			429		"	"					4.5 V	4.5 V				DIR to B5	"	"	"
			430		"	"							4.5 V			DIR to B6	"	"	"
			431		"	"								4.5 V		DIR to B7	"	"	"
			432		"	"									4.5 V	DIR to B8	"	"	"
			433		"	"	OUT	OUT								DIR to A1	"	"	"
			434		"	"			OUT							DIR to A2	"	"	"
			435		"	"				OUT						DIR to A3	"	"	"
			436		"	"					OUT					DIR to A4	"	"	"
			437		"	"					OUT	OUT				DIR to A5	"	"	"
			438		"	"						OUT	OUT			DIR to A6	"	"	"
			439		"	"							OUT			DIR to A7	"	"	"
			440		"	"								OUT		DIR to A8	"	"	"
	PLZ3		441		"	"	GND									DIR to B1	"	"	"
			442		"	"		GND								DIR to B2	"	"	"
			443		"	"			GND							DIR to B3	"	"	"
			444		"	"				GND						DIR to B4	"	"	"
			445		"	"					GND					DIR to B5	"	"	"
			446		"	"						GND				DIR to B6	"	"	"
			447		"	"							GND			DIR to B7	"	"	"
			448		"	"								GND		DIR to B8	"	"	"
			449		"	"	OUT									DIR to A1	"	"	"
			450		"	"		OUT								DIR to A2	"	"	"
			451		"	"			OUT							DIR to A3	"	"	"
			452		"	"				OUT						DIR to A4	"	"	"
			453		"	"					OUT					DIR to A5	"	"	"
			454		"	"						OUT	OUT			DIR to A6	"	"	"
			455		"	"							OUT	OUT		DIR to A7	"	"	"
			456		"	"								OUT		DIR to A8	"	"	"

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
9 Tc = 25°C	I _{PI22}	3003 (fig. 3)	409							OUT	OUT	IN	GND		5.0 V	G to B1	2	40	ns
			410							OUT						G to B2			
			411						OUT							G to B3			
			412					OUT								G to B4			
			413				OUT									G to B5			
			414			OUT										G to B6			
			415		OUT											G to B7			
			416	OUT												G to B8			
			417								GND					G to A1			
			418							GND						G to A2			
			419						GND							G to A3			
			420					GND								G to A4			
			421				GND									G to A5			
			422			GND										G to A6			
			423		GND											G to A7			
			424	GND												G to A8			
			425								OUT	GND			5.0 V	DIR to B1		35	
			426							OUT						DIR to B2			
			427						OUT							DIR to B3			
			428					OUT								DIR to B4			
			429				OUT									DIR to B5			
			430			OUT										DIR to B6			
			431		OUT											DIR to B7			
			432	OUT												DIR to B8			
			433								4.5 V					DIR to A1			
			434							4.5 V						DIR to A2			
			435					4.5 V								DIR to A3			
			436													DIR to A4			
			437				4.5 V									DIR to A5			
			438			4.5 V										DIR to A6			
			439		4.5 V											DIR to A7			
			440	4.5 V												DIR to A8			
			441								OUT					DIR to B1			
			442							OUT						DIR to B2			
			443						OUT							DIR to B3			
			444					OUT								DIR to B4			
			445				OUT									DIR to B5			
			446			OUT										DIR to B6			
			447		OUT											DIR to B7			
			448	OUT												DIR to B8			
			449								GND					DIR to A1			
			450							GND						DIR to A2			
			451						GND							DIR to A3			
			452					GND								DIR to A4			
			453													DIR to A5			
			454			GND										DIR to A6			
			455		GND											DIR to A7			
			456	GND												DIR to A8			

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
10 $T_C = 125^\circ\text{C}$	t_{PH1}																2	39	ns
	$t_{\text{PH1.1}}$																"	52	"
	t_{PH2}																"	30	"
	$t_{\text{PH2.1}}$																"	33	"
	t_{PH3}																"	59	"
	$t_{\text{PH3.1}}$																"	52	"
	t_{PH4}																"	72	"
	$t_{\text{PH4.1}}$																"	39	"
	t_{PH5}																"	78	"
	$t_{\text{PH5.1}}$																"	91	"
	t_{PH6}																"	65	"
	$t_{\text{PH6.1}}$																"	85	"
	t_{PH7}																"	52	"
	$t_{\text{PH7.1}}$																"	52	"
	t_{PH8}																"	46	"
11 $T_C = -55^\circ\text{C}$	t_{PLZ3}																"	46	"
	Same tests, terminal conditions, and limits as subgroup 10, except $T_C = -55^\circ\text{C}$.																		

Same tests and terminal conditions as subgroup 9, except $T_C = +125^\circ\text{C}$.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
10 $T_C = 125^\circ\text{C}$	t_{PH1}																2	39	ns
	$t_{\text{PH1.1}}$																"	52	"
	t_{PH2}																"	30	"
	$t_{\text{PH2.1}}$																"	33	"
	t_{PH3}																"	59	"
	$t_{\text{PH3.1}}$																"	52	"
	t_{PH4}																"	72	"
	$t_{\text{PH4.1}}$																"	39	"
	t_{PH5}																"	78	"
	$t_{\text{PH5.1}}$																"	91	"
	t_{PH6}																"	65	"
	$t_{\text{PH6.1}}$																"	85	"
	t_{PH7}																"	52	"
	$t_{\text{PH7.1}}$																"	52	"
	t_{PH8}																"	46	"
11 $T_C = -55^\circ\text{C}$	t_{PLZ3}																"	46	"
	Same tests, terminal conditions, and limits as subgroup 10, except $T_C = -55^\circ\text{C}$.																		

Same tests and terminal conditions as subgroup 9, except $T_C = +125^\circ\text{C}$.

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

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB 0.5 V	SEL AB 0.5 V	DIR 2.0 V	A1 0.5 V	A2 0.5 V	A3 0.5 V	A4 0.5 V	A5 0.5 V	A6 0.5 V	A7 0.5 V	A8 0.5 V	GND		Min	Max	
1 Tc = 25°C	V _{OH1}	3006	1	"	"	"	"	0.5 V	0.5 V	"	"	"	"	"	"	B1	2.4	"	V
			2	"	"	"	"	"	0.5 V	"	"	"	"	"	"	B2	"	"	"
			3	"	"	"	"	"	"	0.5 V	"	"	"	"	"	B3	"	"	"
			4	"	"	"	"	"	"	"	0.5 V	"	"	"	"	B4	"	"	"
			5	"	"	"	"	"	"	"	"	0.5 V	"	"	"	B5	"	"	"
			6	"	"	"	"	"	"	"	"	"	0.5 V	"	"	B6	"	"	"
			7	"	"	"	"	"	"	"	"	"	"	"	"	B7	"	"	"
			8	"	"	"	"	"	"	"	"	"	"	0.5 V	"	B8	"	"	"
			9	"	"	"	0.5 V	-3 mA	"	"	"	"	"	"	"	A1	"	"	"
			10	"	"	"	"	"	-3 mA	"	"	"	"	"	"	A2	"	"	"
			11	"	"	"	"	"	"	-3 mA	"	"	"	"	"	A3	"	"	"
			12	"	"	"	"	"	"	"	-3 mA	"	"	"	"	A4	"	"	"
			13	"	"	"	"	"	"	"	"	-3 mA	"	"	"	A5	"	"	"
			14	"	"	"	"	"	"	"	"	"	-3 mA	"	"	A6	"	"	"
			15	"	"	"	"	"	"	"	"	"	"	-3 mA	"	A7	"	"	"
			16	"	"	"	"	"	"	"	"	"	"	"	-3 mA	A8	"	"	"
OH2			17	"	"	"	2.0 V	0.5 V	"	"	"	"	"	"	"	B1	2.0	"	"
			18	"	"	"	"	0.5 V	"	"	"	"	"	"	"	B2	"	"	"
			19	"	"	"	"	"	0.5 V	"	"	"	"	"	"	B3	"	"	"
			20	"	"	"	"	"	"	0.5 V	"	"	"	"	"	B4	"	"	"
			21	"	"	"	"	"	"	"	0.5 V	"	"	"	"	B5	"	"	"
			22	"	"	"	"	"	"	"	"	0.5 V	"	"	"	B6	"	"	"
			23	"	"	"	"	"	"	"	"	"	0.5 V	"	"	B7	"	"	"
			24	"	"	"	"	"	"	"	"	"	"	0.5 V	"	B8	"	"	"
			25	"	"	"	0.5 V	"	"	"	"	"	"	"	"	A1	"	"	"
			26	"	"	"	"	"	"	"	"	"	"	"	"	A2	"	"	"
			27	"	"	"	"	-12 mA	"	-12 mA	"	"	"	"	"	A3	"	"	"
			28	"	"	"	"	"	"	"	-12 mA	"	"	"	"	A4	"	"	"
			29	"	"	"	"	"	"	"	"	-12 mA	"	"	"	A5	"	"	"
			30	"	"	"	"	"	"	"	"	"	-12 mA	"	"	A6	"	"	"
			31	"	"	"	"	"	"	"	"	"	"	-12 mA	"	A7	"	"	"
			32	"	"	"	"	"	"	"	"	"	"	"	"	A8	"	"	"
OL			33	"	"	"	2.0 V	2.0 V	"	"	"	"	"	-12 mA	"	B1	"	0.4	"
			34	"	"	"	"	"	"	"	"	"	"	"	"	B2	"	"	"
			35	"	"	"	"	"	2.0 V	2.0 V	"	"	"	"	"	B3	"	"	"
			36	"	"	"	"	"	"	2.0 V	2.0 V	"	"	"	"	B4	"	"	"
			37	"	"	"	"	"	"	"	"	2.0 V	"	"	"	B5	"	"	"
			38	"	"	"	"	"	"	"	2.0 V	2.0 V	"	"	"	B6	"	"	"
			39	"	"	"	"	"	"	"	"	"	2.0 V	"	"	B7	"	"	"
			40	"	"	"	"	"	"	"	"	"	"	2.0 V	"	B8	"	"	"
			41	"	"	"	0.5 V	"	"	"	"	"	"	"	"	A1	"	"	"
			42	"	"	"	"	"	"	"	"	"	"	"	"	A2	"	"	"
			43	"	"	"	"	"	12 mA	"	"	"	"	"	"	A3	"	"	"
			44	"	"	"	"	"	"	12 mA	"	"	"	"	"	A4	"	"	"
			45	"	"	"	"	"	"	"	12 mA	"	"	"	"	A5	"	"	"
			46	"	"	"	"	"	"	"	"	12 mA	"	"	"	A6	"	"	"
			47	"	"	"	"	"	"	"	"	"	12 mA	"	"	A7	"	"	"
			48	"	"	"	"	"	"	"	"	"	"	"	"	A8	"	"	"
IC			49	-18 mA	"	"	"	"	"	"	"	"	"	"	"	CAB	"	-1.5	"
			50	"	-18 mA	"	"	"	"	"	"	"	"	"	"	SAB	"	"	"
			51	"	"	-18 mA	"	"	"	"	"	"	"	"	"	DIR	"	"	"
			52	"	"	"	-18 mA	"	"	"	"	"	"	"	"	A1	"	"	"
			53	"	"	"	"	-18 mA	"	"	"	"	"	"	"	A2	"	"	"
			54	"	"	"	"	"	-18 mA	"	"	"	"	"	"	A3	"	"	"
			55	"	"	"	"	"	"	-18 mA	"	"	"	"	"	A4	"	"	"
			56	"	"	"	"	"	"	"	-18 mA	"	"	"	"	A5	"	"	"
			57	"	"	"	"	"	"	"	"	-18 mA	"	"	"	A6	"	"	"
			58	"	"	"	"	"	"	"	"	"	-18 mA	"	"	A7	"	"	"
			59	"	"	"	"	"	"	"	"	"	"	-18 mA	"	A8	"	"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13 B8	14 B7	15 B6	16 B5	17 B4	18 B3	19 B2	20 B1	21 $\bar{G}$	22 SEL BA	23 CLK BA	24 V_{CC}	Measured terminal	Test Limits Min	Test Limits Max	Unit
1 $T_C = 25^\circ\text{C}$	V_{OH1}	3006	1													B1	2.4		V
			2							-3 mA						B2			
			3						-3 mA							B3			
			4					-3 mA								B4			
			5													B5			
			6													B6			
			7													B7			
			8													B8			
			9								0.5 V					A1			
			10							0.5 V						A2			
			11						0.5 V							A3			
			12					0.5 V								A4			
			13													A5			
			14													A6			
			15				0.5 V									A7			
			16													A8			
	O_{H2}		17								-12 mA					B1	2.0		
			18							-12 mA						B2			
			19													B3			
			20													B4			
			21													B5			
			22													B6			
			23													B7			
			24													B8			
			25								0.5 V					A1			
			26							0.5 V						A2			
			27													A3			
			28													A4			
			29				0.5 V									A5			
			30													A6			
			31													A7			
			32													A8			
	O_L		33													B1	0.4		
			34								12 mA					B2			
			35							12 mA						B3			
			36													B4			
			37													B5			
			38													B6			
			39													B7			
			40													B8			
			41													A1			
			42													A2			
			43							2.0 V						A3			
			44													A4			
			45													A5			
			46													A6			
			47													A7			
			48													A8			
	I_C		49													CAB	-1.5		
			50													SAB			
			51													DIR			
			52													A1			
			53													A2			
			54													A3			
			55													A4			
			56													A5			
			57													A6			
			58													A7			
			59													A8			

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
1 $T_c = 25^\circ\text{C}$	V_{IC}	3009	60													B8		-1.5	V
			61													B7			"
			62													B6			"
			63													B5			"
			64													B4			"
			65													B3			"
			66													B2			"
			67													B1			"
			68													G			"
			69													SBA			"
			70													CBA			"
			71	0.4 V												CAB	0	-200	μA
			72		0.4 V											SAB			"
			73			0.4 V										DIR			"
			74				0.4 V									A1			"
			75					0.4 V								A2			"
			76						0.4 V							A3			"
			77							0.4 V						A4			"
			78								0.4 V					A5			"
			79									0.4 V				A6			"
			80										0.4 V			A7			"
			81											0.4 V		A8			"
			82													B8			"
			83													B7			"
			84													B6			"
			85													B5			"
			86													B4			"
			87													B3			"
			88													B2			"
			89													B1			"
			90													G			"
			91													SBA			"
			92													CBA			"
1 $T_c = 25^\circ\text{C}$	I_{HI}	3010	93	2.7 V												CAB		20	"
			94		2.7 V											SAB			"
			95			2.7 V										DIR			"
			96				2.7 V									A1			"
			97					2.7 V								A2			"
			98						2.7 V							A3			"
			99							2.7 V						A4			"
			100								2.7 V					A5			"
			101									2.7 V				A6			"
			102										2.7 V			A7			"
			103											2.7 V		A8			"
			104													B8			"
			105													B7			"
			106													B6			"
			107													B5			"
			108													B4			"
			109													B3			"
			110													B2			"
			111													B1			"
			112													G			"
			113													SBA			"
			114													CBA			"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits	Unit
1 Tc = 25°C	V _C		60	-18 mA											GND	B8	Min	V
			61	-18 mA												B7	Max	-1.5
			62			-18 mA										B6		"
			63				-18 mA									B5		"
			64					-18 mA								B4		"
			65						-18 mA							B3		"
			66							-18 mA						B2		"
			67								-18 mA					B1		"
			68									-18 mA				G		"
			69										-18 mA			SBA		"
			70											-18 mA		CBA		"
			71													CAB	0	-200 μ A
			72													SAB		"
			73													DIR		"
			74													A1		"
			75													A2		"
			76													A3		"
			77													A4		"
			78													A5		"
			79													A6		"
			80													A7		"
			81													A8		"
			82	0.4 V												B8		"
			83		0.4 V											B7		"
			84			0.4 V										B6		"
			85				0.4 V									B5		"
			86					0.4 V								B4		"
			87						0.4 V							B3		"
			88							0.4 V						B2		"
			89								0.4 V					B1		"
			90									0.4 V				G		"
	IH1	3010	91										0.4 V			SBA		"
			92											0.4 V		CBA		"
			93													CAB		20
			94													SAB		"
			95													DIR		"
			96													A1		"
			97													A2		"
			98													A3		"
			99													A4		"
			100													A5		"
			101													A6		"
			102													A7		"
			103													A8		"
			104	2.7 V												B8		"
			105		2.7 V											B7		"
			106			2.7 V										B6		"
			107				2.7 V									B5		"
			108					2.7 V								B4		"
			109						2.7 V							B3		"
			110							2.7 V						B2		"
			111								2.7 V					B1		"
			112									2.7 V				G		"
			113										2.7 V			SBA		"
			114											2.7 V		CBA		"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8			Min	Max	
1 $T_c = 25^\circ\text{C}$	I_{H2}	3010	115	5.5 V											GND	CAB		100	μA
			116													SAB		"	"
			117			5.5 V										DIR		"	"
			118				5.5 V									A1		"	"
			119					5.5 V								A2		"	"
			120						5.5 V							A3		"	"
			121							5.5 V						A4		"	"
			122								5.5 V					A5		"	"
			123									5.5 V				A6		"	"
			124										5.5 V			A7		"	"
			125											5.5 V		A8		"	"
			126													B8		"	"
			127													B7		"	"
			128													B6		"	"
			129													B5		"	"
			130													B4		"	"
			131													B3		"	"
			132													B2		"	"
			133													B1		"	"
			134													$\bar{G}$		"	"
			135													SBA		"	"
			136													CBA		"	"
			137				0.4 V									A1		-400	"
			138					0.4 V								A2		"	"
			139						0.4 V							A3		"	"
			140							0.4 V						A4		"	"
			141								0.4 V					A5		"	"
			142									0.4 V				A6		"	"
			143										0.4 V			A7		"	"
			144											0.4 V		A8		"	"
			145													B8		"	"
			146													B7		"	"
			147													B6		"	"
			148													B5		"	"
			149													B4		"	"
			150													B3		"	"
			151													B2		"	"
			152													B1		"	"
			153				2.7 V									A1		20	"
			154					2.7 V								A2		"	"
			155						2.7 V							A3		"	"
			156							2.7 V						A4		"	"
			157								2.7 V					A5		"	"
			158									2.7 V				A6		"	"
			159										2.7 V			A7		"	"
			160											2.7 V		A8		"	"
			161													B8		"	"
			162													B7		"	"
			163													B6		"	"
			164													B5		"	"
			165													B4		"	"
			166													B3		"	"
			167													B2		"	"
			168													B1		"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
1 Tc = 25°C	I _{HE}	3010	115												5.5 V	CAB		100	µA
			116													SAB			"
			117													DIR			"
			118													A1			"
			119													A2			"
			120													A3			"
			121													A4			"
			122													A5			"
			123													A6			"
			124													A7			"
			125													A8			"
			126	5.5 V	5.5 V											B8			"
			127													B7			"
			128			5.5 V										B6			"
			129													B5			"
			130				5.5 V									B4			"
			131						5.5 V	5.5 V						B3			"
			132								5.5 V					B2			"
			133									5.5 V				B1			"
			134										5.5 V			G			"
			135										5.5 V			SBA			"
			136											5.5 V		CBA			"
			137									2.0 V				A1	-400		"
			138													A2			"
			139													A3			"
			140													A4			"
			141													A5			"
			142													A6			"
			143													A7			"
			144													A8			"
			145	0.4 V												B8			"
			146		0.4 V											B7			"
			147			0.4 V										B6			"
			148				0.4 V									B5			"
			149					0.4 V								B4			"
			150						0.4 V							B3			"
			151							0.4 V						B2			"
			152								0.4 V					B1			"
			153													A1	20		"
			154													A2			"
			155													A3			"
			156													A4			"
			157													A5			"
			158													A6			"
			159													A7			"
			160													A8			"
			161	2.7 V	2.7 V											B8			"
			162			2.7 V										B7			"
			163				2.7 V									B6			"
			164				2.7 V									B5			"
			165					2.7 V								B4			"
			166						2.7 V							B3			"
			167							2.7 V						B2			"
			168								2.7 V					B1			"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit							
1 Tc = 25°C	I _{OS}	3011	Test no.	CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND	B1	Min	Max	mA							
			169	GND	GND	4.5 V	GND											-40		-225						
			170	"	"	"	"	GND										B2		"						
			171	"	"	"	"	"										B3		"						
			172	"	"	"	"	"										B4		"						
			173	"	"	"	"	"										B5		"						
			174	"	"	"	"	"										B6		"						
			175	"	"	"	"	"										B7		"						
			176	"	"	"	"	"										B8		"						
			177	"	"	"	GND	GND										A1		"						
			178	"	"	"	"	"										A2		"						
			179	"	"	"	"	"										A3		"						
			180	"	"	"	"	"										A4		"						
			181	"	"	"	"	"										A5		"						
			182	"	"	"	"	"										A6		"						
			183	"	"	"	"	"										A7		"						
2	CCH	3005	184	"	"	"	"	"	"	"	"	"	"	"	"	A8	"	"	"							
			185	"	"	4.5 V	GND	GND	GND	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	GND	V _{CC}	145	"							
			186	"	"	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	4.5 V	V _{CC}	165	"								
2	CCZ	"	187	"	"	4.5 V	GND	GND	GND	GND	GND	GND	GND	GND	V _{CC}	165	"									
Same tests, terminal conditions, and limits as subgroup 1, except T _C = +125°C and omit V _{IC} tests.																										
Same tests, terminal conditions, and limits as subgroup 1, except T _C = -55°C and omit V _{IC} tests.																										
7 Tc = 25°C	Truth table tests 2/ 3/		188	B	B	A	B	B	B	B	B	B	B	B	B	GND										
			189	"	"	A	A	A	A	A	A	A	A	A	A	A				"						
			190	"	"	B	H	H	H	H	H	H	H	H	H	H				"						
			191	"	"	B	L	L	L	L	L	L	L	L	L	L				"						
			192	"	A	A	B	B	B	B	B	B	B	B	B	B				"						
			193	A	"	"	B	B	B	B	B	B	B	B	B	B				"						
			194	B	"	"	A	A	A	A	A	A	A	A	A	A				"						
			195	A	"	"	A	A	A	A	A	A	A	A	A	A				"						
			196	B	B	B	L	L	L	L	L	L	L	L	L	L				"						
			197	"	"	"	H	H	H	H	H	H	H	H	H	H				"						
			198	"	"	"	H	H	H	H	H	H	H	H	H	H				"						
			199	"	"	"	L	L	L	L	L	L	L	L	L	L				"						
			200	"	"	"	L	L	L	L	L	L	L	L	L	L				"						
			8	Same tests and terminal conditions as subgroup 7, except T _C = +125°C and T _C = -55°C.		201	IN	4.5 V	4.5 V	IN	IN	IN	IN	IN	IN	IN				IN	IN	CAB to B1	2	30	ns	
						202	"	"	"	"	"	"	"	"	"	"				"	"	"	"	"	"	"
						203	"	"	"	"	"	IN	IN	IN	IN	IN				IN	IN	IN	CAB to B2	"	"	"
204	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CAB to B3	"	"	"					
205	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CAB to B4	"	"	"					
206	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CAB to B5	"	"	"					
207	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CAB to B6	"	"	"					
208	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CAB to B7	"	"	"					
209	GND	GND				GND	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	"	CAB to B8	"	"	"					
210	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CBA to A1	"	"	"					
211	"	"				"	"	"	"	"	"	"	"	"	"	"	"	CBA to A2	"	"	"					
212	"	"				"	"	"	"	"	OUT	OUT	OUT	OUT	OUT	OUT	"	CBA to A3	"	"	"					
213	"	"				"	"	"	"	"	"	OUT	OUT	OUT	OUT	OUT	"	CBA to A4	"	"	"					
214	"	"				"	"	"	"	"	"	"	OUT	OUT	OUT	OUT	"	CBA to A5	"	"	"					
215	"	"				"	"	"	"	"	"	"	"	OUT	OUT	OUT	"	CBA to A6	"	"	"					
216	"	"				"	"	"	"	"	"	"	"	"	OUT	OUT	"	CBA to A7	"	"	"					
216	"	"	"	"	"	"	"	"	"	"	"	"	OUT	"	CBA to A8	"	"	"								

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits	Unit					
1 Tc = 25°C	I _{OS}	3011	Test no.	B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max					
			169														B1	-40	-225	mA			
			170									GND						B2					
			171								GND								B3				
			172							GND										B4			
			173																		B5		
			174						GND												B6		
			175																		B7		
			176																		B8		
			177																		A1		
			178										GND								A2		
			179									GND									A3		
			180																		A4		
			181																		A5		
182																		A6					
	CCH	3005	183																A7				
			184	GND															A8				
			185																V _{CC}	145			
			186																V _{CC}	165			
CCL																							
CCL																							
2	Same tests, terminal conditions, and limits as subgroup 1, except T _C = +125°C and omit V _{IC} tests.																						
3	Same tests, terminal conditions, and limits as subgroup 1, except T _C = -55°C and omit V _{IC} tests.																						
7 Tc = 25°C	Truth table tests ┌		188	H	H	H	H	H	H	H	H	B	B	B	B	4.5 V	2/, 3/						
			189	L	L	L	L	L	L	L	L	L											
			190	B	B	B	B	B	B	B	B	B											
			191	A	A	A	A	A	A	A	A	A											
			192	L	L	L	L	L	L	L	L	L											
			193	H	H	H	H	H	H	H	H	H											
			194	H	H	H	H	H	H	H	H	H											
			195	L	L	L	L	L	L	L	L	L											
			196	B	B	B	B	B	B	B	B	B											
			197	B	B	B	B	B	B	B	B	B											
			198	A	A	A	A	A	A	A	A	A											
			199	"	"	"	"	"	"	"	"	"											
			200	"	"	"	"	"	"	"	"	"											
			8 9 Tc = 25°C	Same tests and terminal conditions as subgroup 7, except T _C = +125°C and T _C = -55°C.	3003 (fig. 3)	201								OUT	GND	GND				GND	5.0 V	CAB to B1	2
202										OUT							CAB to B2	"	"	"			
203											OUT							CAB to B3	"	"	"		
204									OUT									CAB to B4	"	"	"		
205								OUT										CAB to B5	"	"	"		
206							OUT											CAB to B6	"	"	"		
207						OUT												CAB to B7	"	"	"		
208	OUT																	CAB to B8	"	"	"		
209												IN		4.5 V	IN			CBA to A1	"	"	"		
210											IN							CBA to A2	"	"	"		
211																		CBA to A3	"	"	"		
212									IN									CBA to A4	"	"	"		
213								IN										CBA to A5	"	"	"		
214							IN											CBA to A6	"	"	"		
215						IN												CBA to A7	"	"	"		
216	IN																	CBA to A8	"	"	"		

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1 CLK AB	2 SEL AB 4.5 V	3 DIR 4.5 V	4 A1 IN	5 A2 IN	6 A3 IN	7 A4 IN	8 A5 IN	9 A6 IN	10 A7 IN	11 A8 IN	12 GND	Measured terminal	Test Limits		Unit
																	Min	Max	
9 Tc = 25°C	t _{PHL1}	3003 (fig. 3)	217	IN	4.5 V	4.5 V	IN	IN	IN							CAB to B1	2	45	ns
			218	"	"	"	"	"	"							CAB to B2	"	"	"
			219	"	"	"	"	"	IN							CAB to B3	"	"	"
			220	"	"	"	"	"		IN						CAB to B4	"	"	"
			221	"	"	"	"	"			IN					CAB to B5	"	"	"
			222	"	"	"	"	"				IN				CAB to B6	"	"	"
			223	"	"	"	"	"					IN			CAB to B7	"	"	"
			224	"	"	"	"	"						IN		CAB to B8	"	"	"
			225	GND	GND	GND	OUT	OUT						IN		CBA to A1	"	"	"
			226	"	"	"	"	"	OUT							CBA to A2	"	"	"
			227	"	"	"	"	"		OUT						CBA to A3	"	"	"
			228	"	"	"	"	"			OUT					CBA to A4	"	"	"
			229	"	"	"	"	"				OUT				CBA to A5	"	"	"
			230	"	"	"	"	"					OUT			CBA to A6	"	"	"
			231	"	"	"	"	"						OUT		CBA to A7	"	"	"
			232	"	"	"	"	"								CBA to A8	"	"	"
			233	"	"	4.5 V	IN									A1 to B1	"	23	"
			234	"	"	"	"	IN	IN							A2 to B2	"	"	"
			235	"	"	"	"			IN						A3 to B3	"	"	"
			236	"	"	"	"				IN					A4 to B4	"	"	"
			237	"	"	"	"					IN				A5 to B5	"	"	"
			238	"	"	"	"	"					IN			A6 to B6	"	"	"
			239	"	"	"	"	"						IN		A7 to B7	"	"	"
			240	"	"	"	"	"						IN		A8 to B8	"	"	"
			241	"	"	GND	OUT									B1 to A1	"	"	"
			242	"	"	"	"	OUT	OUT							B2 to A2	"	"	"
			243	"	"	"	"			OUT						B3 to A3	"	"	"
			244	"	"	"	"				OUT					B4 to A4	"	"	"
			245	"	"	"	"					OUT				B5 to A5	"	"	"
			246	"	"	"	"						OUT			B6 to A6	"	"	"
			247	"	"	"	"							OUT		B7 to A7	"	"	"
			248	"	"	"	"									B8 to A8	"	"	"
			249	"	"	4.5 V	IN	IN						OUT		A1 to B1	"	30	"
			250	"	"	"	"									A2 to B2	"	"	"
			251	"	"	"	"		IN							A3 to B3	"	"	"
			252	"	"	"	"			IN						A4 to B4	"	"	"
			253	"	"	"	"				IN					A5 to B5	"	"	"
			254	"	"	"	"					IN				A6 to B6	"	"	"
			255	"	"	"	"						IN			A7 to B7	"	"	"
			256	"	"	"	"							IN		A8 to B8	"	"	"
			257	"	"	GND	OUT	OUT								B1 to A1	"	"	"
			258	"	"	"	"									B2 to A2	"	"	"
			259	"	"	"	"		OUT							B3 to A3	"	"	"
			260	"	"	"	"			OUT						B4 to A4	"	"	"
			261	"	"	"	"				OUT					B5 to A5	"	"	"
			262	"	"	"	"					OUT				B6 to A6	"	"	"
			263	"	"	"	"						OUT			B7 to A7	"	"	"
			264	"	"	"	"							OUT		B8 to A8	"	"	"
			265	4/	IN	4.5 V	4/	4/								SAB to B1	"	60	"
			266	"	"	"	"		4/							SAB to B2	"	"	"
			267	"	"	"	"									SAB to B3	"	"	"
			268	"	"	"	"			4/						SAB to B4	"	"	"
			269	"	"	"	"				4/					SAB to B5	"	"	"
			270	"	"	"	"					4/				SAB to B6	"	"	"
			271	"	"	"	"						4/			SAB to B7	"	"	"
			272	"	"	"	"							4/		SAB to B8	"	"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	GND	SEL BA	CLK BA	V _{CC}		Min	Max	
9 T _c = 25°C	I _{PH1}	3003 (fig. 3)	217							OUT		GND	GND	GND	5.0 V	CAB to B1	2	45	ns
			218						OUT							CAB to B2	"	"	"
			219					OUT								CAB to B3	"	"	"
			220													CAB to B4	"	"	"
			221			OUT										CAB to B5	"	"	"
			222		OUT											CAB to B6	"	"	"
			223		OUT											CAB to B7	"	"	"
			224	OUT												CAB to B8	"	"	"
			225							IN	IN		4.5 V	IN		CBA to A1	"	"	"
			226							IN						CBA to A2	"	"	"
			227					IN								CBA to A3	"	"	"
			228													CBA to A4	"	"	"
			229				IN									CBA to A5	"	"	"
			230			IN										CBA to A6	"	"	"
			231		IN											CBA to A7	"	"	"
			232	IN							OUT		GND	GND		CBA to A8	"	"	"
			233							OUT						A1 to B1	"	23	"
			234						OUT							A2 to B2	"	"	"
			235					OUT								A3 to B3	"	"	"
			236			OUT										A4 to B4	"	"	"
			237				OUT									A5 to B5	"	"	"
			238			OUT										A6 to B6	"	"	"
t	PH2		239		OUT											A7 to B7	"	"	"
			240	OUT												A8 to B8	"	"	"
			241								IN					B1 to A1	"	"	"
			242							IN						B2 to A2	"	"	"
			243						IN							B3 to A3	"	"	"
			244					IN								B4 to A4	"	"	"
			245				IN									B5 to A5	"	"	"
			246			IN										B6 to A6	"	"	"
			247		IN											B7 to A7	"	"	"
			248	IN												B8 to A8	"	"	"
			249								OUT					A1 to B1	"	30	"
			250							OUT						A2 to B2	"	"	"
			251						OUT							A3 to B3	"	"	"
			252					OUT								A4 to B4	"	"	"
			253			OUT										A5 to B5	"	"	"
			254													A6 to B6	"	"	"
			255		OUT											A7 to B7	"	"	"
			256	OUT												A8 to B8	"	"	"
			257								IN					B1 to A1	"	"	"
t	PH3		258													B2 to A2	"	"	"
			259						IN							B3 to A3	"	"	"
			260					IN								B4 to A4	"	"	"
			261			IN										B5 to A5	"	"	"
			262													B6 to A6	"	"	"
			263		IN											B7 to A7	"	"	"
			264	IN							OUT					B8 to A8	"	"	"
			265							OUT						SAB to B1	"	60	"
			266						OUT							SAB to B2	"	"	"
			267					OUT								SAB to B3	"	"	"
			268													SAB to B4	"	"	"
			269			OUT										SAB to B5	"	"	"
			270			OUT										SAB to B6	"	"	"
			271		OUT											SAB to B7	"	"	"
			272	OUT												SAB to B8	"	"	"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB GND	SEL AB GND	DIR GND	A1 OUT	A2 OUT	A3 OUT	A4 OUT	A5 OUT	A6 OUT	A7 OUT	A8 OUT	GND		Min	Max	
t ₉ T _c = 25°C	PH3	3003 (fig. 3)	273	GND	"	"	"	OUT	OUT	"	"	"	"	"	"	SBA to A1	2	60	ns
			274	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A2	"	"	"
			275	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A3	"	"	"
			276	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A4	"	"	"
			277	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			278	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			279	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			280	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"
			281	4/	IN	4.5 V	4/	4/	"	"	"	"	"	"	"	SAB to B1	"	45	"
			282	"	"	"	"	"	4/	"	"	"	"	"	"	SAB to B2	"	"	"
			283	"	"	"	"	"	"	4/	"	"	"	"	"	SAB to B3	"	"	"
			284	"	"	"	"	"	"	4/	"	"	"	"	"	SAB to B4	"	"	"
			285	"	"	"	"	"	"	"	4/	"	"	"	"	SAB to B5	"	"	"
			286	"	"	"	"	"	"	"	"	4/	"	"	"	SAB to B6	"	"	"
			287	"	"	"	"	"	"	"	"	"	4/	"	"	SAB to B7	"	"	"
			288	"	"	"	"	"	"	"	"	"	"	4/	"	SAB to B8	"	"	"
t	PH4	"	289	GND	GND	GND	OUT	OUT	"	"	"	"	"	"	"	SBA to A1	"	"	"
			290	"	"	"	"	"	OUT	"	"	"	"	"	"	SBA to A2	"	"	"
			291	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A3	"	"	"
			292	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A4	"	"	"
			293	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A5	"	"	"
			294	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A6	"	"	"
			295	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A7	"	"	"
			296	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A8	"	"	"
			297	5/	IN	4.5 V	5/	"	"	"	"	"	"	OUT	"	SAB to B1	"	"	"
			298	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B2	"	"	"
			299	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B3	"	"	"
			300	"	"	"	"	"	"	"	5/	"	"	"	"	SAB to B4	"	"	"
			301	"	"	"	"	"	"	"	5/	"	"	"	"	SAB to B5	"	"	"
			302	"	"	"	"	"	"	"	"	5/	"	"	"	SAB to B6	"	"	"
			303	"	"	"	"	"	"	"	"	"	5/	"	"	SAB to B7	"	"	"
			304	"	"	"	"	"	"	"	"	"	"	5/	"	SAB to B8	"	"	"
t	PH4	"	305	GND	GND	GND	OUT	OUT	"	"	"	"	"	"	"	SBA to A1	"	"	"
			306	"	"	"	"	"	OUT	"	"	"	"	"	"	SBA to A2	"	"	"
			307	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A3	"	"	"
			308	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A4	"	"	"
			309	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			310	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			311	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			312	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"
			313	5/	IN	4.5 V	5/	"	"	"	"	"	"	"	"	SAB to B1	"	"	"
			314	"	"	"	"	"	5/	"	"	"	"	"	"	SAB to B2	"	"	"
			315	"	"	"	"	"	"	5/	"	"	"	"	"	SAB to B3	"	"	"
			316	"	"	"	"	"	"	"	5/	"	"	"	"	SAB to B4	"	"	"
			317	"	"	"	"	"	"	"	"	5/	"	"	"	SAB to B5	"	"	"
			318	"	"	"	"	"	"	"	"	"	5/	"	"	SAB to B6	"	"	"
			319	"	"	"	"	"	"	"	"	"	"	5/	"	SAB to B7	"	"	"
			320	"	"	"	"	"	"	"	"	"	"	"	"	SAB to B8	"	"	"
			321	GND	GND	GND	OUT	OUT	"	"	"	"	"	"	"	SBA to A1	"	"	"
			322	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A2	"	"	"
			323	"	"	"	"	"	"	"	"	"	"	"	"	SBA to A3	"	"	"
			324	"	"	"	"	"	"	OUT	"	"	"	"	"	SBA to A4	"	"	"
			325	"	"	"	"	"	"	"	OUT	"	"	"	"	SBA to A5	"	"	"
			326	"	"	"	"	"	"	"	"	OUT	"	"	"	SBA to A6	"	"	"
			327	"	"	"	"	"	"	"	"	"	OUT	"	"	SBA to A7	"	"	"
			328	"	"	"	"	"	"	"	"	"	"	OUT	"	SBA to A8	"	"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
t ₉ T _C = 25°C	PLH3	3003 (fig. 3)	273							4/	4/	GND	IN	4/	5.0 V	SBA to A1	2	60	ns
			274						4/							SBA to A2			"
			275													SBA to A3			"
			276				4/									SBA to A4			"
			277													SBA to A5			"
			278			4/										SBA to A6			"
			279		4/											SBA to A7			"
			280	4/												SBA to A8			"
			281							OUT	OUT		GND	GND		SAB to B1		45	"
			282													SAB to B2			"
	PLH4	"	283					OUT	OUT							SAB to B3			"
			284													SAB to B4			"
			285				OUT									SAB to B5			"
			286			OUT										SAB to B6			"
			287		OUT											SAB to B7			"
			288	OUT							4/		IN	4/		SAB to B8			"
			289													SBA to A1			"
			290							4/						SBA to A2			"
			291						4/							SBA to A3			"
			292				4/									SBA to A4			"
t	PLH4	"	293			4/										SBA to A5			"
			294			4/										SBA to A6			"
			295		4/											SBA to A7			"
			296	4/												SBA to A8			"
			297							OUT	OUT		GND	GND		SAB to B1			"
			298													SAB to B2			"
			299						OUT							SAB to B3			"
			300					OUT								SAB to B4			"
			301				OUT									SAB to B5			"
			302			OUT										SAB to B6			"
	PLH4	"	303		OUT											SAB to B7			"
			304	OUT												SAB to B8			"
			305								5/		IN	5/		SBA to A1			"
			306							5/						SBA to A2			"
			307						5/							SBA to A3			"
			308				5/									SBA to A4			"
			309			5/										SBA to A5			"
			310		5/											SBA to A6			"
			311		5/											SBA to A7			"
			312	5/												SBA to A8			"
t	PLH4	"	313								OUT		GND	GND		SAB to B1			"
			314						OUT							SAB to B2			"
			315					OUT								SAB to B3			"
			316													SAB to B4			"
			317				OUT									SAB to B5			"
			318			OUT										SAB to B6			"
			319		OUT											SAB to B7			"
			320	OUT												SAB to B8			"
			321							5/	5/		IN	5/		SBA to A1			"
			322						5/							SBA to A2			"
			323					5/								SBA to A3			"
	"	"	324				5/									SBA to A4			"
			325			5/										SBA to A5			"
			326		5/											SBA to A6			"
			327		5/											SBA to A7			"
			328	5/												SBA to A8			"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
9 Tc = 25°C	I _{p2H2}	3003 (fig. 3)	329		GND	GND	OUT									G to A1	2	55	ns
			330		"	"		OUT								G to A2	"	"	"
			331		"	"			OUT							G to A3	"	"	"
			332		"	"				OUT						G to A4	"	"	"
			333		"	"					OUT					G to A5	"	"	"
			334		"	"						OUT				G to A6	"	"	"
			335		"	"							OUT			G to A7	"	"	"
			336		"	"								OUT		G to A8	"	"	"
			337		"	4.5 V	GND									G to B1	"	"	"
			338		"	"		GND								G to B2	"	"	"
			339		"	"			GND							G to B3	"	"	"
			340		"	"				GND						G to B4	"	"	"
			341		"	"					GND					G to B5	"	"	"
			342		"	"						GND				G to B6	"	"	"
			343		"	"							GND			G to B7	"	"	"
			344		"	"								GND		G to B8	"	"	"
t	PZL2	"	345		"	GND	OUT									G to A1	"	60	"
			346		"	"		OUT								G to A2	"	"	"
			347		"	"			OUT							G to A3	"	"	"
			348		"	"				OUT						G to A4	"	"	"
			349		"	"					OUT					G to A5	"	"	"
			350		"	"						OUT				G to A6	"	"	"
			351		"	"							OUT			G to A7	"	"	"
			352		"	"								OUT		G to A8	"	"	"
			353		"	4.5 V	4.5 V									G to B1	"	"	"
			354		"	"		4.5 V								G to B2	"	"	"
			355		"	"			4.5 V							G to B3	"	"	"
			356		"	"				4.5 V						G to B4	"	"	"
			357		"	"					4.5 V					G to B5	"	"	"
			358		"	"						4.5 V				G to B6	"	"	"
			359		"	"							4.5 V			G to B7	"	"	"
			360		"	"								4.5 V		G to B8	"	"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
9 Tc = 25°C	I _{PZL2}	3003 (fig. 3)	329							GND		IN	GND		5.0 V	G to A1	2	55	ns
			330													G to A2	"	"	"
			331						GND							G to A3	"	"	"
			332					GND								G to A4	"	"	"
			333				GND									G to A5	"	"	"
			334			GND										G to A6	"	"	"
			335		GND											G to A7	"	"	"
			336	GND												G to A8	"	"	"
			337								OUT					G to B1	"	"	"
			338							OUT						G to B2	"	"	"
			339						OUT							G to B3	"	"	"
			340					OUT								G to B4	"	"	"
			341				OUT									G to B5	"	"	"
			342			OUT										G to B6	"	"	"
			343		OUT											G to B7	"	"	"
			344	OUT												G to B8	"	"	"
			345								4.5 V					G to A1	"	60	"
			346							4.5 V						G to A2	"	"	"
			347						4.5 V							G to A3	"	"	"
			348					4.5 V								G to A4	"	"	"
			349				4.5 V									G to A5	"	"	"
			350			4.5 V										G to A6	"	"	"
			351		4.5 V											G to A7	"	"	"
			352	4.5 V												G to A8	"	"	"
			353								OUT					G to B1	"	"	"
			354							OUT						G to B2	"	"	"
			355						OUT							G to B3	"	"	"
			356					OUT								G to B4	"	"	"
			357				OUT									G to B5	"	"	"
			358			OUT										G to B6	"	"	"
			359		OUT											G to B7	"	"	"
			360	OUT												G to B8	"	"	"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1 CLK AB	2 SEL AB	3 DIR	4 A1	5 A2	6 A3	7 A4	8 A5	9 A6	10 A7	11 A8	12 GND	Measured terminal	Test Limits		Unit
																	Min	Max	
9 $T_c = 25^\circ\text{C}$	t_{p2H}	3003 (fig. 3)	361		GND	IN	GND									DIR to B1	2	45	ns
			362					GND								DIR to B2	"	"	"
			363													DIR to B3	"	"	"
			364													DIR to B4	"	"	"
			365								GND					DIR to B5	"	"	"
			366									GND				DIR to B6	"	"	"
			367													DIR to B7	"	"	"
			368											GND		DIR to B8	"	"	"
			369				OUT									DIR to A1	"	"	"
			370					OUT								DIR to A2	"	"	"
			371						OUT							DIR to A3	"	"	"
			372							OUT						DIR to A4	"	"	"
			373								OUT					DIR to A5	"	"	"
			374									OUT				DIR to A6	"	"	"
			375										OUT			DIR to A7	"	"	"
			376				4.5 V							OUT		DIR to A8	"	"	"
PZL3			377													DIR to B1	"	50	"
			378					4.5 V								DIR to B2	"	"	"
			379						4.5 V							DIR to B3	"	"	"
			380							4.5 V						DIR to B4	"	"	"
			381								4.5 V					DIR to B5	"	"	"
			382									4.5 V				DIR to B6	"	"	"
			383										4.5 V			DIR to B7	"	"	"
			384											4.5 V		DIR to B8	"	"	"
			385													DIR to A1	"	"	"
			386													DIR to A2	"	"	"
			387					OUT		OUT						DIR to A3	"	"	"
			388								OUT					DIR to A4	"	"	"
			389									OUT				DIR to A5	"	"	"
			390										OUT			DIR to A6	"	"	"
			391											OUT		DIR to A7	"	"	"
			392													DIR to A8	"	"	"
PHZ2			393		GND	4.5 V	GND							OUT		$\bar{G}$ to B1	"	"	"
			394					GND								$\bar{G}$ to B2	"	"	"
			395						GND							$\bar{G}$ to B3	"	"	"
			396							GND						$\bar{G}$ to B4	"	"	"
			397								GND					$\bar{G}$ to B5	"	"	"
			398									GND				$\bar{G}$ to B6	"	"	"
			399										GND			$\bar{G}$ to B7	"	"	"
			400											GND		$\bar{G}$ to B8	"	"	"
			401			GND	OUT									$\bar{G}$ to A1	"	"	"
			402					OUT								$\bar{G}$ to A2	"	"	"
			403						OUT							$\bar{G}$ to A3	"	"	"
			404							OUT						$\bar{G}$ to A4	"	"	"
			405								OUT					$\bar{G}$ to A5	"	"	"
			406									OUT				$\bar{G}$ to A6	"	"	"
			407										OUT			$\bar{G}$ to A7	"	"	"
			408											OUT		$\bar{G}$ to A8	"	"	"

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
g T _c = 25°C	I _{P213}	3003 (fig. 3)	361							OUT	OUT	GND	GND		5.0 V	DIR to B1	2	45	ns
			362						OUT							DIR to B2	"	"	"
			363					OUT								DIR to B3	"	"	"
			364				OUT									DIR to B4	"	"	"
			365			OUT										DIR to B5	"	"	"
			366		OUT											DIR to B6	"	"	"
			367	OUT												DIR to B7	"	"	"
			368													DIR to B8	"	"	"
			369							GND	GND					DIR to A1	"	"	"
			370						GND							DIR to A2	"	"	"
			371					GND								DIR to A3	"	"	"
			372				GND									DIR to A4	"	"	"
			373													DIR to A5	"	"	"
			374			GND										DIR to A6	"	"	"
			375		GND											DIR to A7	"	"	"
			376	GND							OUT					DIR to A8	"	"	"
			377							OUT						DIR to B1	"	50	"
			378													DIR to B2	"	"	"
			379					OUT								DIR to B3	"	"	"
			380				OUT									DIR to B4	"	"	"
t	PZL3		381			OUT										DIR to B5	"	"	"
			382		OUT											DIR to B6	"	"	"
			383		OUT											DIR to B7	"	"	"
			384	OUT												DIR to B8	"	"	"
			385								4.5 V					DIR to A1	"	"	"
			386							4.5 V						DIR to A2	"	"	"
			387						4.5 V							DIR to A3	"	"	"
			388				4.5 V									DIR to A4	"	"	"
			389				4.5 V									DIR to A5	"	"	"
			390													DIR to A6	"	"	"
			391		4.5 V											DIR to A7	"	"	"
			392	4.5 V												DIR to A8	"	"	"
			393							OUT	IN					G to B1	"	"	"
			394							OUT						G to B2	"	"	"
			395						OUT							G to B3	"	"	"
			396					OUT								G to B4	"	"	"
			397				OUT									G to B5	"	"	"
			398			OUT										G to B6	"	"	"
			399		OUT											G to B7	"	"	"
			400	OUT												G to B8	"	"	"
			401								GND					G to A1	"	"	"
			402							GND						G to A2	"	"	"
			403						GND							G to A3	"	"	"
			404					GND								G to A4	"	"	"
			405				GND									G to A5	"	"	"
			406			GND										G to A6	"	"	"
			407		GND											G to A7	"	"	"
			408	GND												G to A8	"	"	"

See footnotes at end of device type 05.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit					
				CLK/AB	SEL/AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max						
9 Tc = 25°C	t _{PI22}	3003 (fig. 3)	409		GND	4.5 V	4.5 V								GND	G to B1	2	40	ns					
			410		"	"	4.5 V									"	G to B2	"	"	"				
			411		"	"		4.5 V									"	G to B3	"	"	"			
			412		"	"			4.5 V								"	G to B4	"	"	"			
			413		"	"				4.5 V							"	G to B5	"	"	"			
			414		"	"							4.5 V				"	G to B6	"	"	"			
			415		"	"									4.5 V		"	G to B7	"	"	"			
			416		"	"										4.5 V	"	G to B8	"	"	"			
			417		"	GND	OUT										"	G to A1	"	"	"			
			418		"	"		OUT									"	G to A2	"	"	"			
			419		"	"			OUT								"	G to A3	"	"	"			
			420		"	"					OUT						"	G to A4	"	"	"			
			421		"	"						OUT					"	G to A5	"	"	"			
			422		"	"							OUT				"	G to A6	"	"	"			
			423		"	"								OUT			"	G to A7	"	"	"			
			424		"	"									OUT		"	G to A8	"	"	"			
			t	PI23	"	425		GND	IN	GND								GND	DIR to B1	"	"	"		
						426		"	"		GND								"	DIR to B2	"	"	"	
						427		"	"					GND						"	DIR to B3	"	"	"
						428		"	"						GND					"	DIR to B4	"	"	"
						429		"	"							GND				"	DIR to B5	"	"	"
						430		"	"								GND			"	DIR to B6	"	"	"
						431		"	"									GND		"	DIR to B7	"	"	"
						432		"	"										GND	"	DIR to B8	"	"	"
						433		"	"		OUT									"	DIR to A1	"	"	"
						434		"	"			OUT								"	DIR to A2	"	"	"
435		"				"											"	DIR to A3	"	"	"			
436		"				"						OUT					"	DIR to A4	"	"	"			
437		"				"							OUT				"	DIR to A5	"	"	"			
438		"				"								OUT			"	DIR to A6	"	"	"			
439		"				"									OUT		"	DIR to A7	"	"	"			
440		"				"										OUT	"	DIR to A8	"	"	"			
441		"				"			4.5 V								"	DIR to B1	"	35	"			
442		"				"				4.5 V							"	DIR to B2	"	"	"			
443		"				"					4.5 V						"	DIR to B3	"	"	"			
444		"				"						4.5 V					"	DIR to B4	"	"	"			
445		"				"							4.5 V				"	DIR to B5	"	"	"			
446		"				"								4.5 V			"	DIR to B6	"	"	"			
447		"				"									4.5 V		"	DIR to B7	"	"	"			
448		"				"										4.5 V	"	DIR to B8	"	"	"			
449		"				"				OUT							"	DIR to A1	"	"	"			
450		"				"					OUT						"	DIR to A2	"	"	"			
451		"	"						OUT					"	DIR to A3	"	"	"						
452		"	"							OUT				"	DIR to A4	"	"	"						
453		"	"								OUT			"	DIR to A5	"	"	"						
454		"	"									OUT		"	DIR to A6	"	"	"						
455		"	"										OUT	"	DIR to A7	"	"	"						
456		"	"											OUT	DIR to A8	"	"	"						

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
9 Tc = 25°C	I _{IN22}	3003 (fig. 3)	409							OUT	OUT	IN	GND		5.0 V	G to B1	2	40	ns
			410													G to B2			
			411						OUT							G to B3			
			412					OUT								G to B4			
			413				OUT									G to B5			
			414			OUT										G to B6			
			415		OUT											G to B7			
			416	OUT												G to B8			
			417								4.5 V					G to A1			
			418							4.5 V						G to A2			
			419					4.5 V								G to A3			
			420					4.5 V								G to A4			
			421				4.5 V									G to A5			
			422			4.5 V										G to A6			
			423		4.5 V											G to A7			
			424	4.5 V												G to A8			
			425								OUT	GND			5.0 V	DIR to B1			
			426							OUT						DIR to B2			
			427						OUT							DIR to B3			
			428					OUT								DIR to B4			
			429				OUT									DIR to B5			
			430			OUT										DIR to B6			
			431		OUT											DIR to B7			
			432	OUT												DIR to B8			
			433								GND					DIR to A1			
			434							GND						DIR to A2			
			435					GND								DIR to A3			
			436													DIR to A4			
			437				GND									DIR to A5			
			438			GND										DIR to A6			
			439		GND											DIR to A7			
			440	GND												DIR to A8			
t	PLZ3		441								OUT					DIR to B1		35	
			442							OUT						DIR to B2			
			443						OUT							DIR to B3			
			444					OUT								DIR to B4			
			445				OUT									DIR to B5			
			446			OUT										DIR to B6			
			447		OUT											DIR to B7			
			448								4.5 V					DIR to B8			
			449													DIR to A1			
			450						4.5 V							DIR to A2			
			451					4.5 V								DIR to A3			
			452													DIR to A4			
			453				4.5 V									DIR to A5			
			454			4.5 V										DIR to A6			
			455		4.5 V											DIR to A7			
			456	4.5 V												DIR to A8			

See footnotes at end of device type 05. Pins 13 thru 24 on next page.

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	1	2	3	4	5	6	7	8	9	10	11	12	Measured terminal	Test Limits		Unit
				CLK AB	SEL AB	DIR	A1	A2	A3	A4	A5	A6	A7	A8	GND		Min	Max	
10 T _C = 125°C	t _{PH1}															2	39	ns	
	t _{PH1.1}															"	59	"	
	PH2															"	30	"	
	PH2.2															"	39	"	
	PH3															"	78	"	
	PH3.3															"	59	"	
	PH4															"	59	"	
	PH4.4															"	59	"	
	PH5															"	72	"	
	PH5.2															"	78	"	
	PH6															"	59	"	
	PH6.2															"	65	"	
	PH7															"	52	"	
	PH7.2															"	52	"	
PH8															"	46	"		
11 T _C = -55°C	Same tests, terminal conditions, and limits as subgroup 10, except T _C = -55°C.																		

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

Subgroup	Symbol	MIL-STD-883 method	Case L Test no.	13	14	15	16	17	18	19	20	21	22	23	24	Measured terminal	Test Limits		Unit
				B8	B7	B6	B5	B4	B3	B2	B1	G	SEL BA	CLK BA	V _{CC}		Min	Max	
10 T _C = 125°C	t _{PH1}															2	39	ns	
	t _{PH1.1}															"	59	"	
	PH2															"	30	"	
	PH2.2															"	39	"	
	PH3															"	78	"	
	PH3.3															"	59	"	
	PH4															"	59	"	
	PH4.4															"	59	"	
	PH5															"	72	"	
	PH5.5															"	78	"	
	PH6															"	59	"	
	PH6.6															"	65	"	
	PH7															"	65	"	
	PH7.7															"	52	"	
	PH8															"	52	"	
	PH8.8															"	46	"	
11 T _C = -55°C	Same tests, terminal conditions, and limits as subgroup 10, except T _C = -55°C.																		

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

5. PACKAGING

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

6. NOTES

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

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

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of the specification.
- b. PIN and compliance identifier, if applicable (see 1.2).
- c. Requirements for delivery of one copy of the conformance inspection data pertinent to the device inspection lot to be supplied with each shipment by the device manufacturer, if applicable.
- d. Requirements for certificate of compliance, if applicable.
- e. Requirements for notification of change of product or process to contracting activity in addition to notification to the qualifying activity, if applicable.
- f. Requirements for failure analysis (including required test condition of method 5003 of MIL-STD-883), corrective action, and reporting of results, if applicable.
- g. Requirements for product assurance options.
- h. Requirements for special carriers, lead lengths, or lead forming, if applicable. These requirements should not affect the part number. Unless otherwise specified, these requirements will not apply to direct purchase by or direct shipment to the Government.
- i. Requirements for "JAN" marking.
- j. Packaging requirements (see 5.1).

6.3 Superseding information. The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.

6.4 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DSCC-VQ, 3990 E. Broad Street, Columbus, Ohio 43123-1199.

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

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

6.6 Logistic support. Lead materials and finishes (see 3.4) are interchangeable. Unless otherwise specified, microcircuits acquired for Government logistic support will be acquired to device class B (see 1.2.2), lead material and finish A (see 3.4). Longer length leads and lead forming should not affect the part number.

6.7 Substitutability. The cross-reference information below is presented for the convenience of users. Microcircuits covered by this specification will functionally replace the listed generic-industry type. Generic-industry microcircuit types may not have equivalent operational performance characteristics across military temperature ranges or reliability factors equivalent to MIL-M-38510 device types and may have slight physical variations in relation to case size. The presence of this information should not be deemed as permitting substitution of generic-industry types for MIL-M-38510 types or as a waiver of any of the provisions of MIL-PRF-38535.

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

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

TABLE IV. Manufacturer's designator.

Device types	Circuits				
	A	B	C	D	E
	Texas Instruments	Signetics Corp.	National Semiconductor	Raytheon Co.	Motorola Inc.
01	X	X	X	X	X
02	X	X	X	X	X
03	X	X			X
04	X				
05	X				

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

CONCLUDING MATERIAL

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

Preparing activity:
 DLA - CC
 (Project 5962-1997)

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

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