

MIL-M-38510/300D
15 JULY 1987
~~SUPERSEDING~~
MIL-M-38510/300C
9 August 1983

MILITARY SPECIFICATION

MICROCIRCUITS, DIGITAL, BIPOLAR, LOW-POWER SCHOTTKY, TTL,
NAND GATES, MONOLITHIC SILICON

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

1. SCOPE

1.1 Scope. This specification covers the detail requirements for monolithic silicon, low power Schottky, TTL, positive NAND logic gate microcircuits. 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.

1.2 Part number. The part number shall be in accordance with MIL-M-38510.

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

<u>Device type</u>	<u>Circuit</u>
01	Quadruple, 2-input positive NAND gate
02	Quadruple, 2-input positive NAND gate (open collector output)
03	Hex, 1-input inverter gate
04	Hex, 1-input inverter gate (open collector output)
05	Triple, 3-input positive NAND gate
06	Triple, 3-input positive NAND gate (open collector output)
07	Dual, 4-input positive NAND gate.
08	Dual, 4-input positive NAND gate (open collector output)
09	Single, 8-input positive NAND gate

1.2.2 Device class. The device class shall be the product assurance level as defined in MIL-M-38510.

1.2.3 Case outlines. The case outlines shall be designated as follows:

<u>Letter</u>	<u>Case outline (see MIL-M-38510, appendix C)</u>
A	F-1 (14-lead, 1/4" x 1/4"), flat package
B	F-3 (14-lead, 3/16" x 1/4"), flat package
C	D-1 (14-lead, 1/4" x 3/4"), dual-in-line package
D	F-2 (14-lead, 1/4" x 3/8"), flat package
2	C-2 (20-terminal, .350" x .350"), square chip carrier package)

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Rome Air Development Center, (RBE-2) Griffiss AFB, NY 13441, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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°C to +150°C
Maximum power dissipation per gate, (P _D)	1/	6.1 mW dc
Lead temperature (soldering, 10 seconds)	-	+300°C
Thermal resistance, junction-to-case (θ _{JC}):		
Cases A, B, C, and D	- - - - -	(See MIL-M-38510, appendix C)
Case 2	- - - - -	+80°C/W 2/
Junction temperature (T _J)	3/	+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 dc
Maximum low level input voltage (V _{IL})	- -	+0.7 V dc
Case operating temperature range (T _C)	- -	-55°C to +125°C

2. APPLICABLE DOCUMENTS**2.1 Government documents.**

2.1.1 Specification and standard. The following specification and standard form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Departments of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATION**MILITARY**

MIL-M-38510 - Microcircuits, General Specification for.

STANDARD**MILITARY**

MIL-STD-883 - Test Methods and Procedures for Microelectronics.

(Copies of the specification and standard required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein (except for associated detail specifications, specification sheets or MS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Detail specification. The individual item requirements shall be in accordance with MIL-M-38510, and as specified herein.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-M-38510 and herein.

- 1/ Must withstand the added P_D due to short circuit test (e.g., IOS).
- 2/ When a thermal resistance value is included in MIL-M-38510, appendix C, it shall supersede the value stated herein.
- 3/ Maximum junction temperature shall not be exceeded except for allowable short duration burn-in screening conditions in accordance with 5004 of MIL-STD-883.

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

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

3.2.3. Schematic circuits. Schematic circuits shall be submitted to the preparing activity prior to inclusion of a manufacturer's device in this specification and shall be submitted to the qualifying activity and agent activity (DESC-ECS) as a prerequisite for qualification. All qualified manufacturers' schematics shall be maintained by the agent activity and will be available upon request.

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

3.3 Lead material and finish. Lead material and finish shall be in accordance with MIL-M-38510 (see 6.4).

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

3.4.1 Post-irradiation performance characteristics. The electrical performance characteristics of radiation hardness assured devices following exposure to the designated radiation levels are as specified in table III, subgroups 1 and 9 and apply at an ambient temperature of +25°C.

3.5 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.

3.6 Marking. Marking shall be in accordance with MIL-M-38510.

3.7 Microcircuit group assignment. The devices covered by this specification shall be in microcircuit group number 8 (see MIL-M-38510, appendix E).

4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-M-38510 and methods 5005 and 5007, as applicable, of MIL-STD-883, except as modified herein.

4.2 Screening. Screening shall be in accordance with method 5004 of MIL-STD-883, and shall be conducted on all devices prior to qualification and quality conformance inspection. The following additional criteria shall apply:

a. Burn-in test (method 1015 of MIL-STD-883).

(1) Test condition D, E, or F, using the circuit shown on figure 3 or equivalent.

(2) $T_A = +125^\circ\text{C}$ minimum.

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. The percent defective allowable (PDA) shall be as specified in MIL-M-38510.

4.3 Qualification inspection. Qualification inspection shall be in accordance with MIL-M-38510. Inspections to be performed shall be those specified in method 5005 of MIL-STD-883 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

4.4 Quality conformance inspection. Quality conformance inspection shall be in accordance with MIL-M-38510. Inspections to be performed shall be those specified in method 5005 of MIL-STD-883 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

TABLE I. Electrical characteristics.

Test	Symbol	Conditions $-55^{\circ}\text{C} \leq T_{\text{C}} \leq +125^{\circ}\text{C}$	Device type	Limits		Unit
				Min	Max	
High-level output voltage	V _{OH}	V _{CC} = 4.5 V; V _{IIL} = 0.7 V; I _{OH} = -400 μA	01,03,05, 07,09	2.5		V
Low-level output voltage	V _{OL}	V _{CC} = 4.5 V; V _{IIL} = 2.0 V; I _{OL} = 4 mA	A11		0.4	V
Input clamp voltage	V _{IC}	V _{CC} = 4.5 V; I _{IN} = -18 mA; T _C = +25°C	A11		-1.5	V
Collector cut- off current	I _{CEX}	V _{CC} = 4.5 V; V _{IIL} = 0.7 V; V _{OH} = 5.5 V	02,04,06 08		100	μA
High-level input current	I _{IH1}	V _{CC} = 5.5 V; V _{IIL} = 2.7 V	A11		20	μA
	I _{IH2}	V _{CC} = 5.5 V; V _{IIL} = 5.5 V	A11		100	μA
Low-level input current	I _{IL}	V _{CC} = 5.5 V; V _{IIL} = 0.4 V	01,02,03, 04,05,06,09 07 08	-30 -30 -30	-400 -380 -440	μA
	I _{OS}	V _{CC} = 5.5 V 1/	01,03,05, 07,09	-15	-100	mA
	I _{ICCH}	V _{CC} = 5.5 V; V _{IN} = 0 V	01,02 03,04 05 06 07,08 09		1.6 2.4 1.2 1.4 0.8 0.5	mA
Low-level supply current	I _{ICCL}	V _{CC} = 5.5 V; V _{IN} = 5.5 V	01,02 03,04 05,06 07,08 09		4.4 6.6 3.3 2.2 1.1	mA
	t _{PHL}	C _L = 50 pF; R _L = 2 k Ω V _{CC} = 5.0 V	01,03,05,07, 02,04,06,08, 09	2 2 2	24 55 38	ns
	t _{PLH}	C _L = 50 pF; R _L = 2 k Ω V _{CC} = 5.0 V	01,03,05,07, 02,04,06,08, 09	2 2 2	20 60 32	ns
1/ Not more than one output should be shorted at a time.						

TABLE II. Electrical test requirements.

MIL-STD-883 test requirements	Subgroups (see table III)	
	Class S devices	Class B devices
Interim electrical parameters (method 5004)	1	1
Final electrical test parameters (method 5004)	1*, 2, 3, 9, 10, 11	1*, 2, 3, 9
Group A test requirements (method 5005)	1, 2, 3, 9, 10, 11	1, 2, 3, 9
Group B test requirements (method 5005) subgroup 5	1, 2, 3, 9, 10, 11	N/A
Group C end-point electrical parameters (method 5005)	N/A	1, 2, 3
Additional electrical subgroups for group C periodic inspections	N/A	10, 11
Group D end-point electrical parameters (method 5005)	1, 2, 3	1, 2, 3
Group E end-point electrical parameters (method 5005)	1, 9	1, 9

*PDA applies to subgroup 1 (see 4.2.c.).

4.4.1 Group A inspection. Group A inspection shall be in accordance with table I of method 5005 of MIL-STD-883 and as follows:

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, 6, 7, and 8 shall be omitted.

4.4.2 Group B inspection. Group B inspection shall be in accordance with table II of method 5005 of MIL-STD-883. Electrical parameters shall be as specified in table II herein.

4.4.3 Group C inspection. Group C inspection shall be in accordance with table III of method 5005 of MIL-STD-883 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 requirements for class B devices and shall consist of the tests, conditions and limits specified for subgroups 10 and 11 of group A.
- c. Steady-state life test (method 1005 of MIL-STD-883) conditions:
 - (1) Test condition D, E, or F, using the circuit shown on figure 3 or equivalent.
 - (2) $T_A = +125^\circ\text{C}$ minimum.
 - (3) Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

4.4.4 Group D inspection. Group D inspection shall be in accordance with table IV of method 5005 of MIL-STD-883. End-point electrical parameters shall be as specified in table II herein.

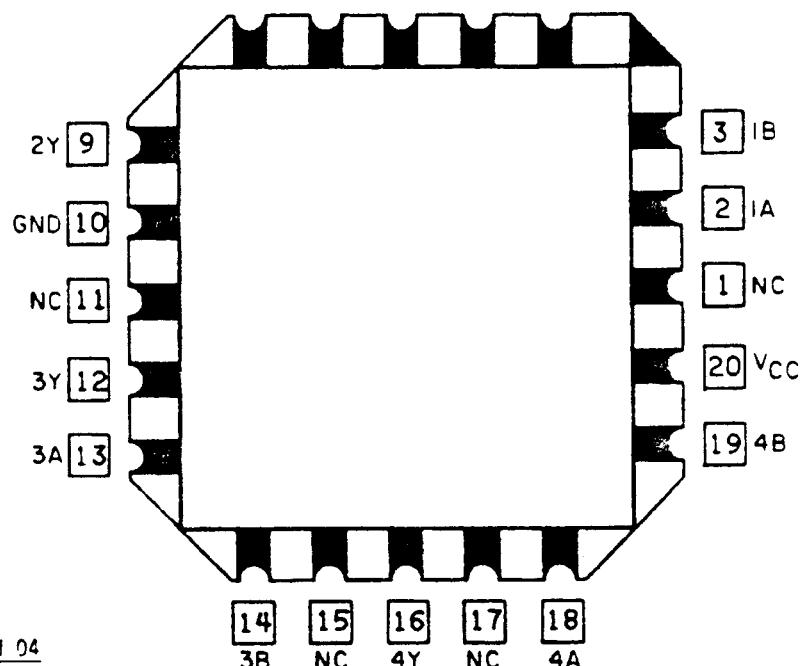
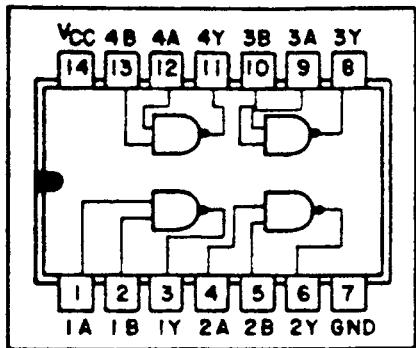
Device types 01 and 02

Case 2

2B	NC	2A	NC	IY
8	7	6	5	4

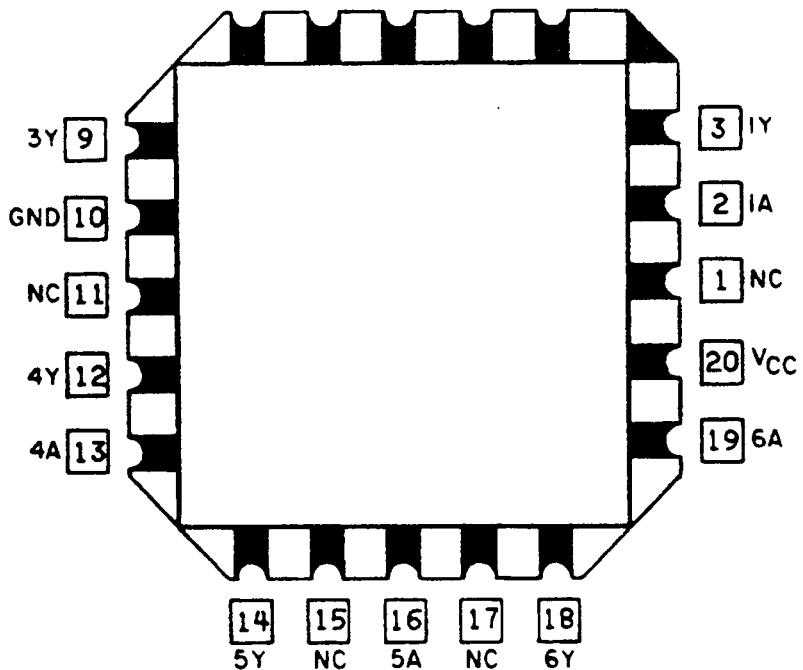
Device types 01 and 02

Cases A, B, C and D

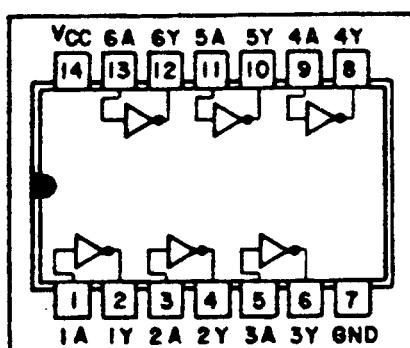
Device types 03 and 04

Case 2

3A	NC	2Y	NC	2A
8	7	6	5	4

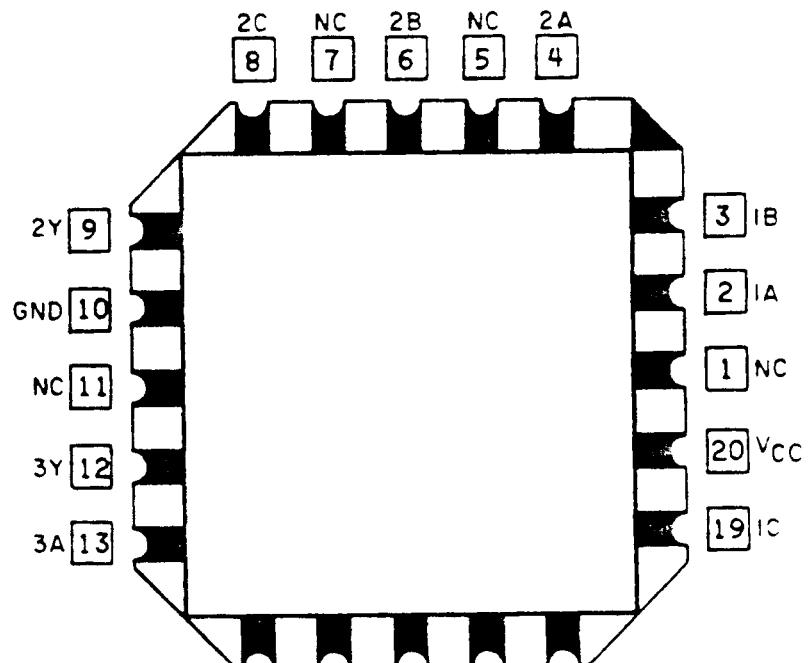
Device types 03 and 04

Cases A, B, C and D

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

Device types 05 and 06

Case 2



Device types 07 and 08

Case 2

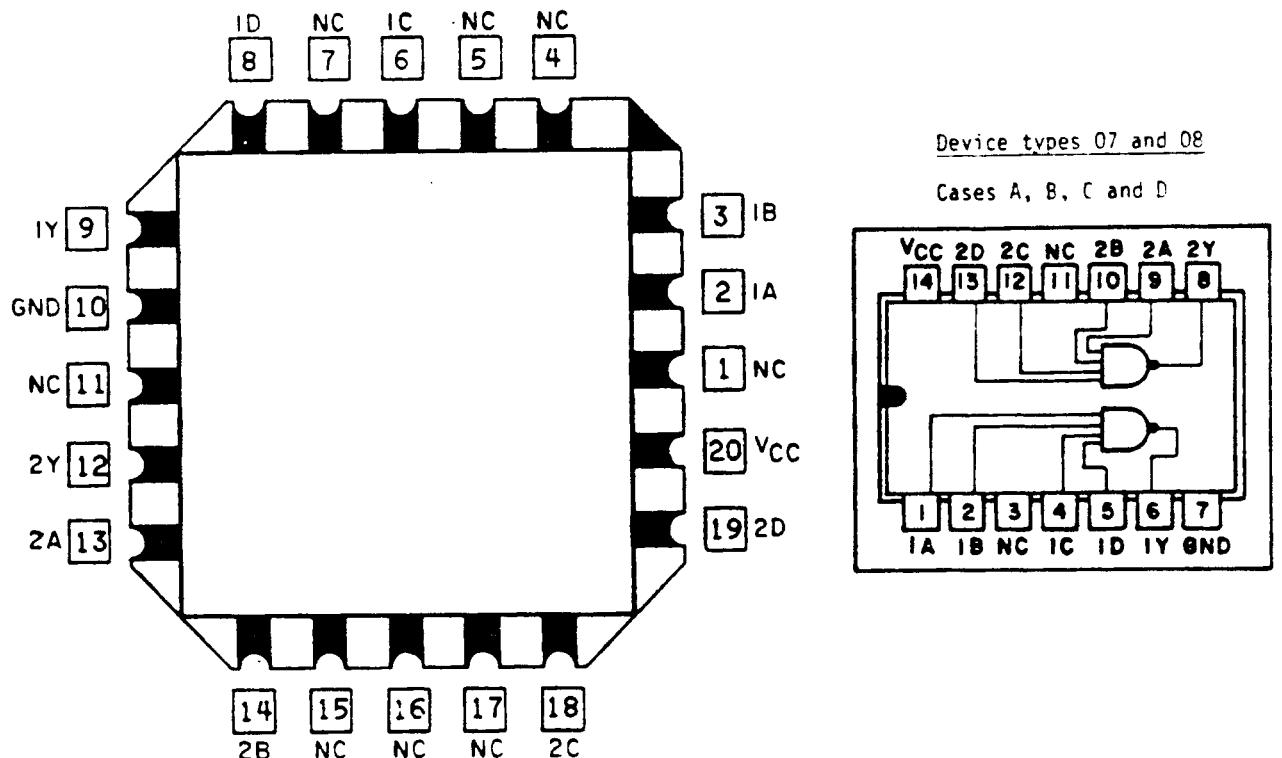
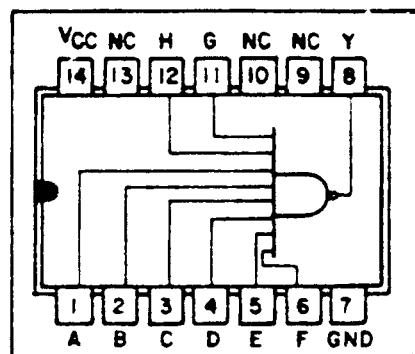


FIGURE 1. Logic diagrams and terminal connections (top view) - Continued.

Device type 09

Cases A, B, C and D



Device type 09

Case 2

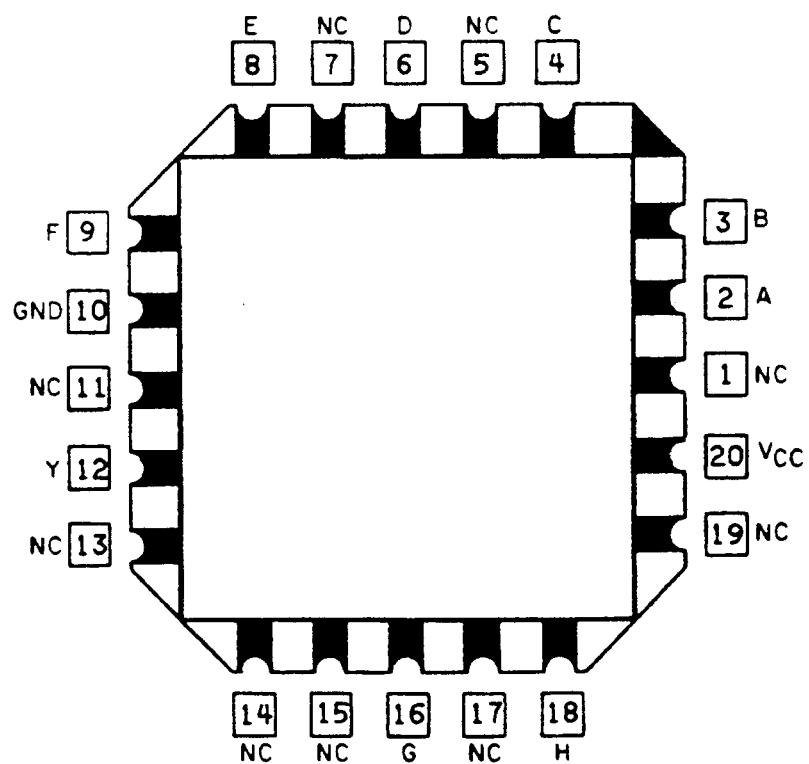


FIGURE 1. Logic diagrams and terminal connections (top view) - Continued.

Device types 01 and 02

Truth table each gate		
Input		Output
A	B	Y
L	L	H
H	L	H
L	H	H
H	H	L

Positive logic $Y = \overline{AB}$ Device types 03 and 04

Truth table each gate	
Input	Output
A	Y
L	H
H	L

Positive logic $Y = \overline{A}$ Device types 07 and 08Device types 05 and 06

Truth table each gate			
Input		Output	
A	B	C	Y
L	L	L	H
H	L	L	H
L	H	L	H
H	H	L	H
L	L	H	H
H	L	H	H
L	H	H	H
H	H	H	L

Positive logic $Y = \overline{ABC}$

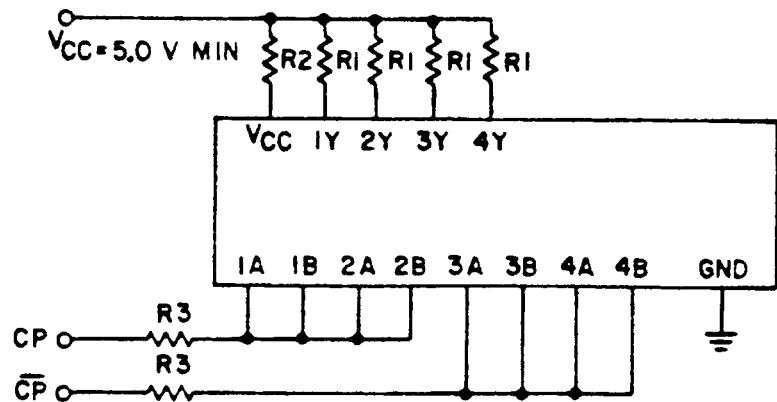
Truth table each gate				
Input				Output
A	B	C	D	Y
L	L	L	L	H
H	L	L	L	H
L	H	L	L	H
H	H	L	L	H
L	L	H	L	H
H	L	H	L	H
L	H	H	L	H
H	H	H	L	H
L	L	L	H	H
H	L	L	H	H
L	H	L	H	H
H	H	L	H	H
L	L	H	H	H
H	L	H	H	H
L	H	H	H	H
H	H	H	H	L

Positive logic $Y = \overline{ABCD}$ Device type 09

Truth table								
Inputs								Output
A	B	C	D	E	F	G	H	Y
H	H	H	H	H	H	H	H	L

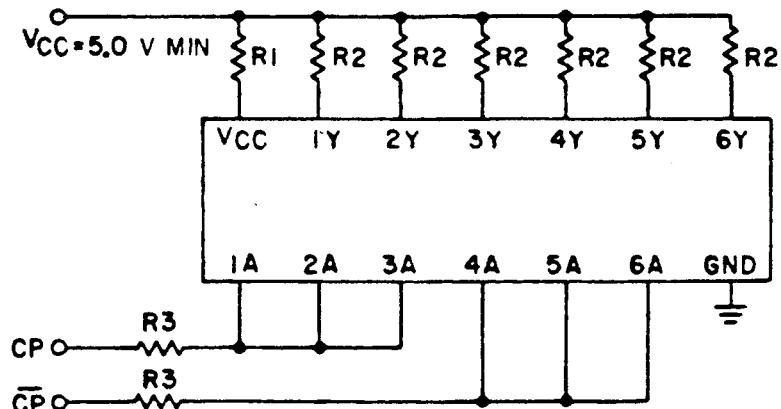
All other combinations of H and L at the inputs give H output.

Positive logic $Y = \overline{ABCDEFGHI}$ FIGURE 2. Truth tables and logic equations.

Device types 01 and 02

NOTES:

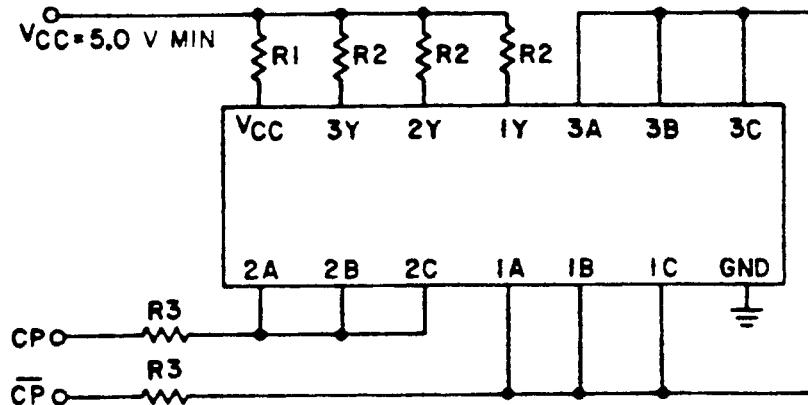
1. CP or \bar{CP} = 100 kHz $\pm 50\%$ square wave; duty cycle = 50 $\pm 15\%$; $V_{IH} = 2.0$ V minimum to 5.5 V maximum; $V_{IL} = -0.5$ V minimum to 0.7 V maximum.
2. $R1 = 1 \text{ k}\Omega \pm 5\%$; $R2 = 10\Omega \pm 5\%$; $R3 = 27\Omega \pm 5\%$.
3. V_{CC} shall be high enough to insure that 5.0 V minimum is present at device V_{CC} terminal.

Device types 03 and 04

NOTES:

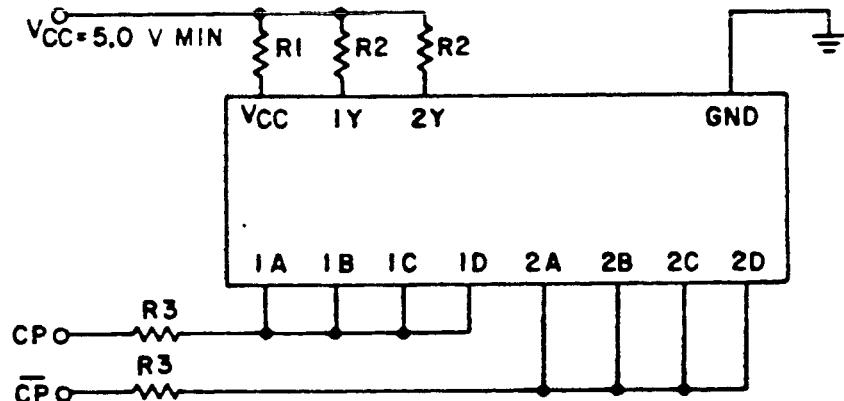
1. $R1 = 10\Omega \pm 5\%$; $R2 = 1 \text{ k}\Omega \pm 5\%$; $R3 = 27\Omega \pm 5\%$.
2. CP or \bar{CP} = 100 kHz $\pm 50\%$ square wave; duty cycle = 50 $\pm 15\%$; $V_{IH} = 2.0$ V minimum to 5.5 V maximum; $V_{IL} = -0.5$ V minimum to 0.7 V maximum.
3. V_{CC} shall be high enough to insure that 5.0 V minimum is present at device V_{CC} terminal.

FIGURE 3. Burn-in and life test circuit.

Device types 05 and 06

NOTES:

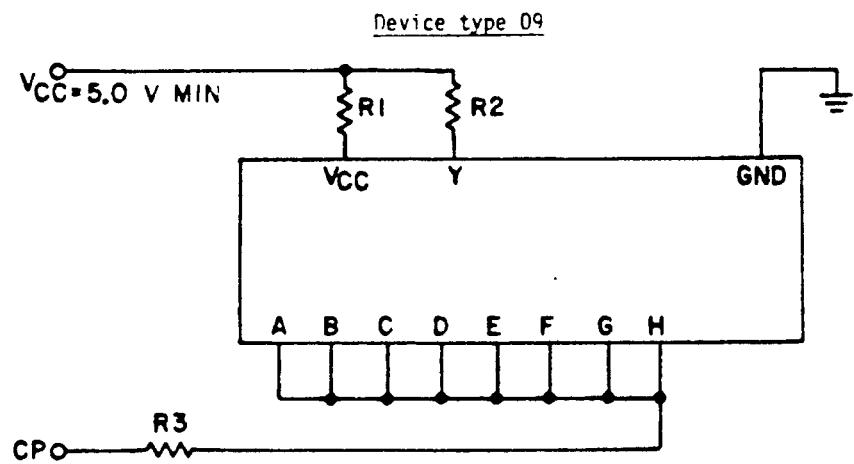
1. R₁ = 10Ω ±5%; R₂ = 1 kΩ ±5%; R₃ = 27Ω ±5%.
2. CP or CP̄ = 100 kHz ±50% square wave; duty cycle = 50 ±15%; V_{IH} = 2.0 V minimum to 5.5 V maximum; V_{IL} = -0.5 V minimum to 0.7 V maximum.
3. V_{CC} shall be high enough to insure that 5.0 V minimum is present at device V_{CC} terminal.

Device types 07 and 08

NOTES:

1. CP or CP̄ = 100 kHz ±50% square wave; duty cycle = 50 ±15%; V_{IH} = 2.0 V minimum to 5.5 V maximum; V_{IL} = -0.5 V minimum to 0.7 V maximum.
2. R₁ = 10Ω ±5%; R₂ = 1 kΩ ±5%; R₃ = 27Ω ±5%.
3. V_{CC} shall be high enough to insure that 5.0 V minimum is present at device V_{CC} terminal.

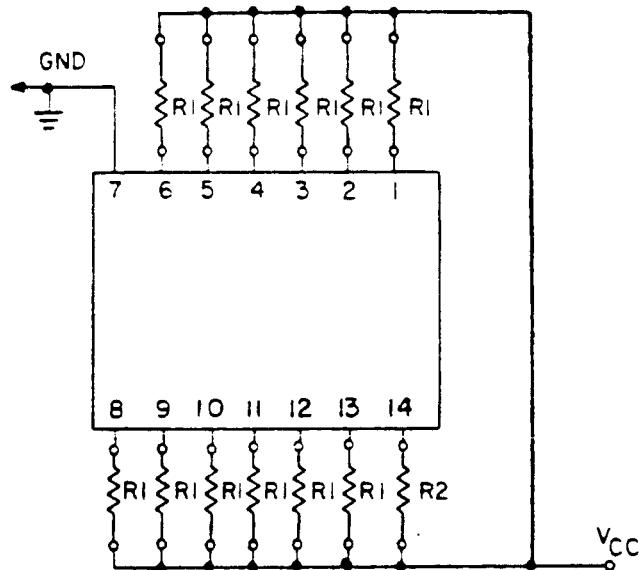
FIGURE 3. Burn-in and life test circuit - Continued.

**NOTES:**

1. $R_1 = 10\Omega \pm 5\%$; $R_2 = 1 \text{ k}\Omega \pm 5\%$; $R_3 = 27\Omega \pm 5\%$.
2. $CP = 100 \text{ kHz} \pm 50\%$ square wave; duty cycle = $50 \pm 15\%$; $V_{IH} = 2.0 \text{ V minimum to } 5.5 \text{ V maximum}$; $V_{IL} = -0.5 \text{ V minimum to } 0.7 \text{ V maximum}$.
3. V_{CC} shall be high enough to insure that 5.0 V minimum is present at device V_{CC} terminal.

FIGURE 3. Burn-in and life test circuit - Continued.

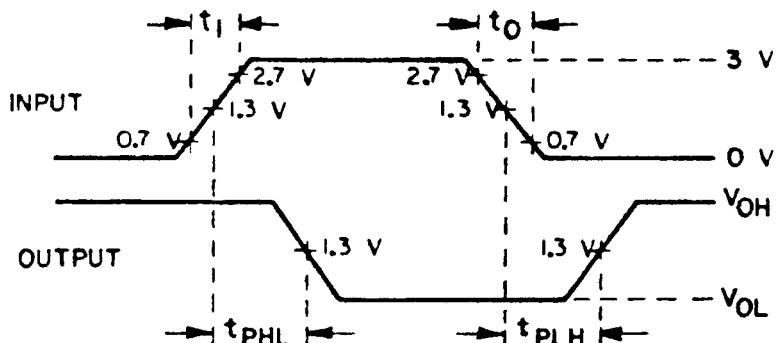
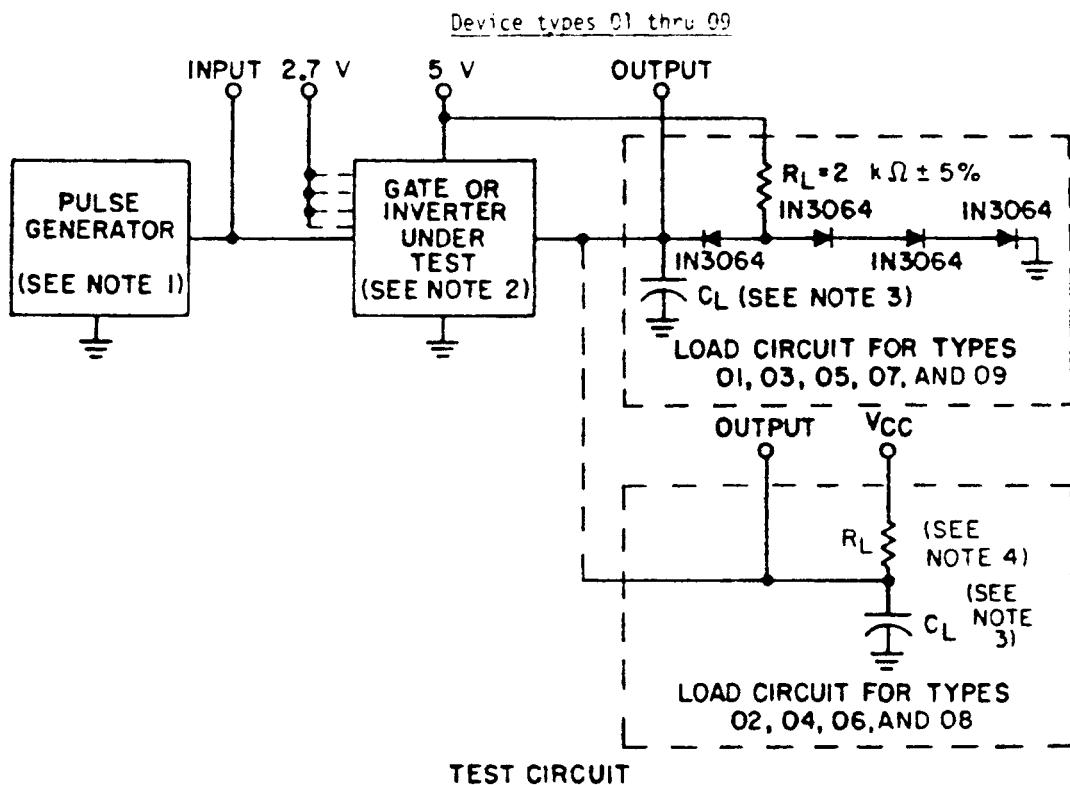
All device types



NOTES:

1. High temperature ($175^{\circ}C$), condition F circuit only.
2. $R_1 = 2k\Omega$, $R_2 = 2\Omega$
3. V_{CC} shall be chosen such that 5.0 v minimum is present at V_{CC} terminal

FIGURE 3. Burn-in and life test circuits - Continued.

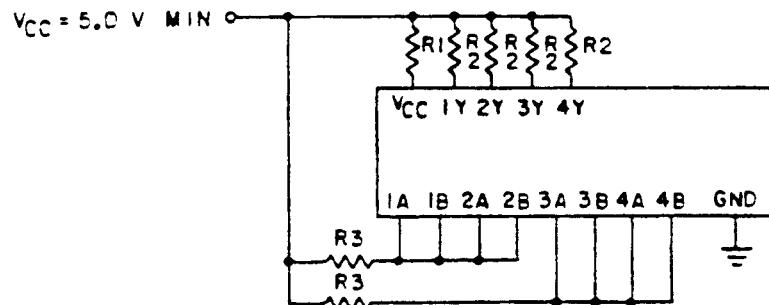


NOTES:

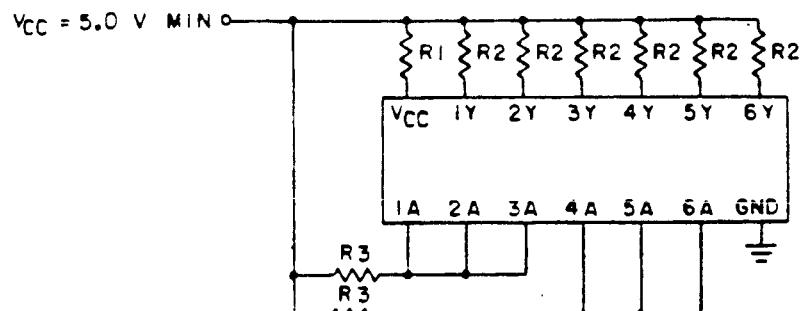
1. Pulse generator has following characteristics:
 $t_1 \leq 15 \text{ ns}$, $t_0 \leq 6 \text{ ns}$, PRR $\leq 1 \text{ MHz}$, duty cycle = 50% and $Z_{\text{OUT}} \approx 50\Omega$.
2. Inputs not under test are at 2.7 V.
3. $C_L = 50 \text{ pF} \pm 10\%$, including scope probe, wiring, and stray capacitance.
4. $R_L = 2 \text{ k}\Omega \pm 5\%$.
5. Voltage measurements are to be made with respect to network ground terminal.

FIGURE 4. Switching time test circuit and waveforms for device types 01 through 09.

Device types 01 and 02



Device types 03 and 04



Device types 05 and 06

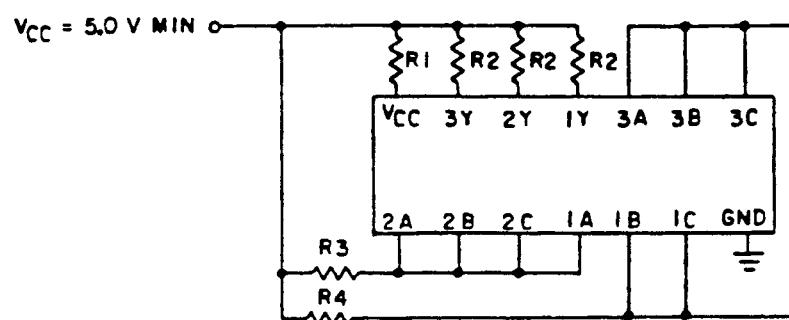
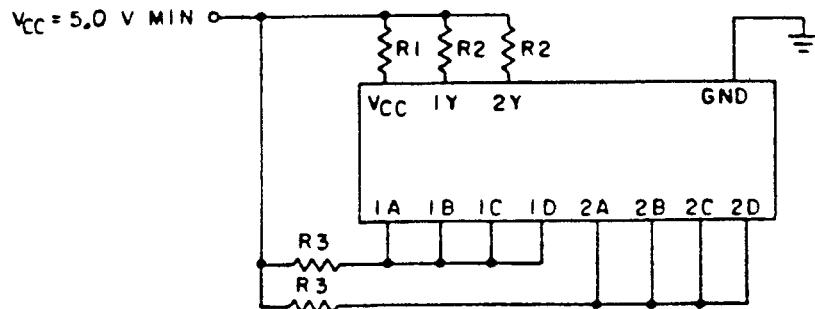
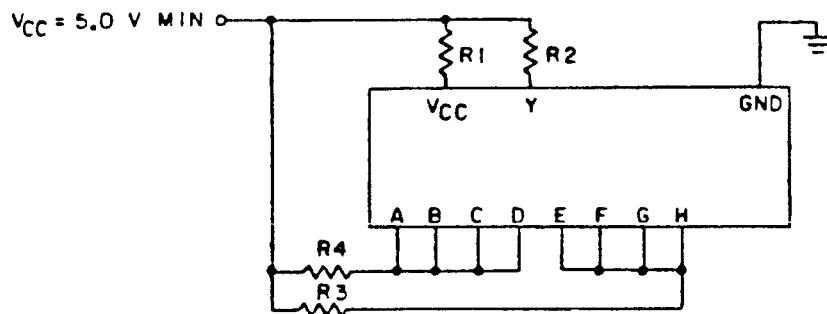


FIGURE 5. Bias conditions for total dose radiation test.

Device types 07 and 08Device type 09

Bias conditions

Device type	V _{CC} (volts) 1/	R ₁ (ohms)	R ₂ (ohms)	R ₃ (ohms)	R ₄ (ohms)
01	5.5	0	1.3 k	1.3 k	---
02	5.5	0	1.3 k	1.3 k	---
03	5.5	0	1.3 k	1.8 k	---
04	5.5	0	1.3 k	1.8 k	---
05	5.5	0	1.3 k	1.3 k	1.0 k
06	5.5	0	1.3 k	1.3 k	1.0 k
07	5.5	0	1.3 k	1.3 k	---
08	5.5	0	1.3 k	1.3 k	---
09	5.5	0	1.4 k	1.3 k	1.3 k

1/ V_{CC} shall be high enough to insure that a 5.0 volts minimum is present at the device test V_{CC} terminal.

FIGURE 5. Bias conditions for total dose radiation test - Continued.

TABLE III. Group A inspection for device type 01.
Terminal conditions (pins not designated may be high, $2.0 \text{ V} < V_{DD} < 0.7 \text{ V}$, or open).

Sang group	Symbol	MIL-STD-883C method	Test no.	Measured								Unit
				1	2	3	4	5	6	7	8	
T _C = 1.025°C	V _{DD}	3006	1-2 3-4 5-6 7-8	5.5 V 5.5 V 5.5 V 5.5 V	0.7 V 0.7 V 0.7 V 0.7 V	5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V	1.7 V 1.7 V 1.7 V 1.7 V	
V _{DD}	3007	9 10 11 12	9 10 11 12	2.0 V 2.0 V 2.0 V 2.0 V	4 mA 4 mA 4 mA 4 mA	2.0 V 2.0 V 2.0 V 2.0 V	2.0 V 2.0 V 2.0 V 2.0 V	0.4 V 0.4 V 0.4 V 0.4 V				
V _{IC}		13 14 15 16 17 18 19 20	13 14 15 16 17 18 19 20	-18 mA -18 mA -18 mA -18 mA -18 mA -18 mA -18 mA -18 mA								
I _{IN1}	3010	21 22 23 24 25 26 27 28	21 22 23 24 25 26 27 28	2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V	2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V 2.7 V	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V	20 20 20 20 20 20 20 20		
I _{IN2}		29 30 31 32 33 34 35 36	29 30 31 32 33 34 35 36	5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V	100 100 100 100 100 100 100 100		
I _{IL}	3009	37 38 39 40 41 42 43 44	37 38 39 40 41 42 43 44	0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V	0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V 0.5 V	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	GND GND GND GND GND GND GND GND	5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V 5.5 V	21 21 21 21 21 21 21 21		
I _{OS}	3011	45 46 47 48	45 46 47 48	5.5 V 5.5 V 5.5 V 5.5 V	5.5 V 5.5 V 5.5 V 5.5 V	GND GND GND GND	GND GND GND GND	GND GND GND GND	5.5 V 5.5 V 5.5 V 5.5 V	1.7 V 1.7 V 1.7 V 1.7 V		
I _{CCM}	3005	49	49	GND	GND	GND	GND	GND	GND	VCC	1.6 V	
I _{CCL}	3005	50	50	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	VCC	4.4 V	

See footnotes at end of device type 01.

TABLE III. Group A Inspection for device type 01 - Continued.
terminal conditions (pins not designated may be high > 0.4 or low < 0.7 V, or open).

Subgroup	Symbol	MIL-STD-883C Test no.	Test no.	Measured terminal limits												
				Min	Max	Unit	A1	B1	C1	D1	E1	F1	G1	H1	I1	J1
2	Same tests, terminal conditions, and limits as for subgroup 1, except $T_C = +125^\circ C$ and VIC tests are omitted.															
3	Same tests, terminal conditions, and limits as for subgroup 1, except $T_C = -55^\circ C$ and VIC tests are omitted.															
9	$T_C = +25^\circ C$ CPN	3003 (Fig 4)	51	IN	2.7 V	OUT	2.7 V									
10	$T_C = +125^\circ C$ CPN	68	52	IN	2.7 V	OUT	2.7 V									
11		69	53	IN	2.7 V	OUT	2.7 V									
12		70	54	IN	2.7 V	OUT	2.7 V									
13		71	55	IN	2.7 V	OUT	2.7 V									
14		72	56	IN	2.7 V	OUT	2.7 V									
15		73	57	IN	2.7 V	OUT	2.7 V									
16		74	58	IN	2.7 V	OUT	2.7 V									
17		75	59	IN	2.7 V	OUT	2.7 V									
18		76	60	IN	2.7 V	OUT	2.7 V									
19		77	61	IN	2.7 V	OUT	2.7 V									
20		78	62	IN	2.7 V	OUT	2.7 V									
21		79	63	IN	2.7 V	OUT	2.7 V									
22		80	64	IN	2.7 V	OUT	2.7 V									
23		81	65	IN	2.7 V	OUT	2.7 V									
24		82	66	IN	2.7 V	OUT	2.7 V									
25																
26																
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29																
30																
31																
32																
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82																

11 Same tests, terminal conditions, and limits as for subgroup 10, except $T_C = -55^\circ C$.

12 I_{IL} limits for circuit C: -20/-100; for circuits A, B, C, D, E, and F: -15/-100.

Measured terminal	Min/max limits for circuit
A	-100 / -300
B	-100 / -300
C	-100 / -300
D	-100 / -300
E	-100 / -300
F	-100 / -300
G	-100 / -300
H	-100 / -300
I	-100 / -300
J	-100 / -300
K	-100 / -300
L	-100 / -300
M	-100 / -300
N	-100 / -300
O	-100 / -300
P	-100 / -300
Q	-100 / -300
R	-100 / -300
S	-100 / -300
T	-100 / -300
U	-100 / -300
V	-100 / -300
W	-100 / -300
X	-100 / -300
Y	-100 / -300
Z	-100 / -300

TABLE III. Group A inspection for device type 02
for initial conditions (initial temperature = 70° F or 21° C, 0.1 V, or open).

THEORY AND PRACTICE IN COMMUNICATIONS

2. Issue date, terminal conditions, and limits as for subgroup 1, except $T_c = 125^\circ\text{C}$ and VIC tests are omitted.

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TABLE III. Group A Inspection for device type 02 - Continued.
Terminal conditions (pins not designated may be high ≥ 0.7 V or low ≤ 0.1 V, or open).

Subgroup	Symbol MIL-STD-883C	Test no.	Method	Limits																							
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal			
$T_C = +25^\circ C$	Op.HL	3003 (Fig. 4)																									
		47	IN	2.7	V	0.01	2.7	V																			
		48	2.7	V	0.01	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V				
		49	IN	2.7	V	0.01	2.7	V																			
		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		55	IN	2.7	V	0.01	OUT																				
		56	2.7	V	0.01	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V				
		57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		63	IN	2.7	V	0.01	OUT																				
		64	2.7	V	0.01	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V				
		65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		71	IN	2.7	V	0.01	OUT																				
		72	2.7	V	0.01	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V	2.7	V				
		73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
		78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

11 Same tests, terminal conditions, and limits as for subgroup 10, except $T_C = -55^\circ C$.

12 For case 2, pins not referenced are NC.

13 Limits in μA are as follows:

Measured terminal	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Min/max limits for circuit
TA, TB, 2A, 3A, 4A, 4B	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100

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

Subgroup	Symbol	MIL-STD-883 method	Groups			Groups			Groups			Groups			Groups			Groups				
			1A, B, C, D	1B	1C	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	6C	7A	7B
T _C = +25°C	I _{OH}	3006	1	0.7 V	-400 μ A	5.5 V	5.5 V	GND	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V
		-	2	5.5 V	-	0.7 V	-400 μ A	5.5 V	0.7 V	-400 μ A	-	-	-	-	-	-	-	-	-	-	-	-
		-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V _{OL}	3007	7	2.0 V	-	-	GND	2.0 V	-	4 mA	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	8	GND	-	-	GND	-	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V _{IC}	3011	13	-10 mA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{IM1}	3010	19	2.7 V	-	-	GND	2.7 V	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	20	GND	-	-	GND	-	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{IM2}	3005	25	5.5 V	-	-	GND	5.5 V	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	26	GND	-	-	GND	-	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{IL}	3009	31	0.4 V	-	-	5.5 V	5.5 V	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-
	-	32	5.5 V	-	-	0.4 V	5.5 V	-	-	0.4 V	-	-	-	-	-	-	-	-	-	-	-	-
	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{OS}	3011	37	-	-	-	GND	-	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
	-	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{CCH}	3005	43	-	-	-	GND	-	-	-	GND	-	-	-	-	-	-	-	-	-	-	-	-
I _{CCC}	3005	44	5.5 V	-	-	5.5 V	5.5 V	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-

2 Same tests, terminal conditions, and limits as for subgroup 1, except T_C = +125°C and V_C tests are omitted.

3 Same tests, terminal conditions, and limits as for subgroup 1, except T_C = -55°C and V_C tests are omitted.

See footnotes at end of device type 01.

TABLE III. Growth and development of *Candida albicans* at 0°, 0.7°, or 40°.

Some 6000-10,000 *Leptospiral* conditions, and 1000-1500 cases for subacute TD, except TC = 55°C.

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TABLE III. Group A inspection for device type 0A
Terminal conditions (pins not designated may be high, 2.0 V or low, 0 V, or open).

Subgroup	Symbol	MIL-STD-883 method	Test no.	Cases												Measured terminal	Min	Max	Unit	
				1	2	3	4	5	6	7	8	9	10	11	12					
T _C = -25°C	V _{OL}	3007	1	2.0 V	GND	2.0 V	4 mA	GND	GND	GND	-	4 mA	2.0 V	4 mA	GND	4.5 V	1V	0.4 A	A	
			2	GND	-	-	-	-	-	-	-	-	-	-	-	-	2V	-	-	-
			3	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	-	-
			4	-	-	-	-	-	-	-	-	-	-	-	-	-	4V	-	-	-
			5	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	-
			6	-	-	-	-	-	-	-	-	-	-	-	-	-	6V	-	-	-
T _C = 55°C	V _{OL}	3007	7	0.7 V	5.5 V	0.7 V	5.5 V	1V	0.4 A	A										
			8	5.5 V	-	5.5 V	0.7 V	5.5 V	2V	-	-	-								
			9	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	-	-
			10	-	-	-	-	-	-	-	-	-	-	-	-	-	4V	-	-	-
			11	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	-
			12	-	-	-	-	-	-	-	-	-	-	-	-	-	6V	-	-	-
V _{IC}	V _{IC}	3007	13	-	-	-	-	-	-	-	-	-	-	-	-	-	1V	0.4 A	A	
			14	-	-	-	-	-	-	-	-	-	-	-	-	-	2V	-	-	-
			15	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	-	-
			16	-	-	-	-	-	-	-	-	-	-	-	-	-	4V	-	-	-
			17	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	-
			18	-	-	-	-	-	-	-	-	-	-	-	-	-	6V	-	-	-
T _{H1}	V _{OL}	3007	19	2.7 V	GND	2.7 V	1V	0.4 A	A											
			20	GND	-	-	-	-	-	-	-	-	-	-	-	-	2V	-	-	-
			21	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	-	-
			22	-	-	-	-	-	-	-	-	-	-	-	-	-	4V	-	-	-
			23	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	-
			24	-	-	-	-	-	-	-	-	-	-	-	-	-	6V	-	-	-
T _{H2}	V _{OL}	3007	25	5.5 V	GND	5.5 V	1V	0.4 A	A											
			26	GND	-	-	-	-	-	-	-	-	-	-	-	-	2V	-	-	-
			27	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	-	-
			28	-	-	-	-	-	-	-	-	-	-	-	-	-	4V	-	-	-
			29	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	-
			30	-	-	-	-	-	-	-	-	-	-	-	-	-	6V	-	-	-
T _L	V _{OL}	3007	31	0.9 V	GND	0.9 V	1V	0.4 A	A											
			32	5.5 V	-	5.5 V	2.7 V	OUT	-	-										
			33	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
			34	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
			35	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
			36	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
T _{CCM}	V _{CCM}	3005	37	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-
			38	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
T _{CCCL}	V _{CCCL}	3005	39	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-
			40	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-	
T _{CCH}	V _{CCH}	3005	41	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-
T _C = 0.5°C	V _{OL}	3007	42	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-
			43	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-
			44	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7 V	OUT	-	-

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.

4 Same tests, terminal conditions, and limits as for subgroup 1, except T_C = -55°C, and V_{CC} tests are omitted.

TABLE III. Terminal conditions of a 1000 hr. test device type D - Continued.

Same tests, terminal conditions, and limits as for subgroup 10, except $T_C = -55^\circ C$.

11/ For case 2, pins not referenced are NC.

22 / Answers in a Nutshell:

Measured terminal	Min/max limits for circuit			
	A	B	C	
1A, 2A, 3A, 4A, 5A, 6A	-150/-300	-30/-300	-150/-300	-150/-400
				-150/-380

TABLE III. Group A inspection for services 28-35. Terminal conditions (pins not designated may be high or low, or open).

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

TESTS												TESTS												TESTS								
Subgroup			Symbol			MIL-STD-883 Method			Test no.			Measured terminal min max			Measured terminal min max																	
9			10			11			12			13			14			15			16			17			18					
$T_C = +25^\circ\text{C}$			$T_C = +125^\circ\text{C}$			$T_C = -55^\circ\text{C}$			$T_C = -55^\circ\text{C}$ and V_T tests omitted			$T_C = -55^\circ\text{C}$ and V_T tests omitted			$T_C = -55^\circ\text{C}$ and V_T tests omitted			$T_C = -55^\circ\text{C}$ and V_T tests omitted			$T_C = -55^\circ\text{C}$ and V_T tests omitted			$T_C = -55^\circ\text{C}$ and V_T tests omitted								
2			Same tests, terminal conditions, and limits as for subgroup 1, except $T_C = +125^\circ\text{C}$ and V_T tests are omitted.			3			Same tests, terminal conditions, and limits as for subgroup 1, except $T_C = -55^\circ\text{C}$ and V_T tests are omitted.			4			5			6			7			8			9			10		
54			55			56			57			58			59			60			61			62			63			64		
65			66			67			68			69			70			71			72			73			74			75		
76			77			78			79			80			81			82			83			84			85			86		
87			88			89			90			91			92			93			94			95			96			97		
t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}			t_{PLH}					
t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}			t_{PHL}					
t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}			t_{PDL}					
t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}			t_{PDLH}					
t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}			t_{PDLT}					
t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}			t_{PDTL}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}					
t_{PDTLH}			t_{PDTLH}			t_{PDTLH}			t_{PDTLH}																							

1/ for case 2; plus not referenced in NC.

31 In 1101111021111111

Measured terminal	Min/max limits for circuit					
	A	B	C	D	E	F
1A, 1B, 1C	-120/-360	-30/-300	-150/-300	-300/-300	-160/-400	-100/-340
2A, 2B, 2C						
3A, 3B, 3C						

3/ 105. Limits for circuit C are: -20/-100 mA, for circuit B are: -30/-300 mA; for circuits A, D, E, and F: -15/-100 mA.

TABLE III. Group A inspection for device type 06.
Terminal conditions [pins not designated may be high, -7.0 or low, -0.7 V, or open].

Subgroup	Symbol	MIL-STD-883 method	Group A, C, D Case 17		Group B Case 17		Group C Case 17		Group D Case 17		Group E Case 17		Group F Case 17		Group G Case 17		Group H Case 17		Group I Case 17		Group J Case 17		Group K Case 17		Group L Case 17		Group M Case 17		Group N Case 17		Group O Case 17		Group P Case 17		Group Q Case 17		Group R Case 17		Group S Case 17		Group T Case 17		Group U Case 17		Group V Case 17		Group W Case 17		Group X Case 17		Group Y Case 17		Group Z Case 17																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Test no.	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J	1K	1L	1M	1N	1O	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J	2K	2L	2M	2N	2O	2P	2Q	2R	2S	2T	2U	2V	2W	2X	2Y	2Z	3A	3B	3C	3D	3E	3F	3G	3H	3I	3J	3K	3L	3M	3N	3O	3P	3Q	3R	3S	3T	3U	3V	3W	3X	3Y	3Z	4A	4B	4C	4D	4E	4F	4G	4H	4I	4J	4K	4L	4M	4N	4O	4P	4Q	4R	4S	4T	4U	4V	4W	4X	4Y	4Z	5A	5B	5C	5D	5E	5F	5G	5H	5I	5J	5K	5L	5M	5N	5O	5P	5Q	5R	5S	5T	5U	5V	5W	5X	5Y	5Z	6A	6B	6C	6D	6E	6F	6G	6H	6I	6J	6K	6L	6M	6N	6O	6P	6Q	6R	6S	6T	6U	6V	6W	6X	6Y	6Z	7A	7B	7C	7D	7E	7F	7G	7H	7I	7J	7K	7L	7M	7N	7O	7P	7Q	7R	7S	7T	7U	7V	7W	7X	7Y	7Z	8A	8B	8C	8D	8E	8F	8G	8H	8I	8J	8K	8L	8M	8N	8O	8P	8Q	8R	8S	8T	8U	8V	8W	8X	8Y	8Z	9A	9B	9C	9D	9E	9F	9G	9H	9I	9J	9K	9L	9M	9N	9O	9P	9Q	9R	9S	9T	9U	9V	9W	9X	9Y	9Z	10A	10B	10C	10D	10E	10F	10G	10H	10I	10J	10K	10L	10M	10N	10O	10P	10Q	10R	10S	10T	10U	10V	10W	10X	10Y	10Z	11A	11B	11C	11D	11E	11F	11G	11H	11I	11J	11K	11L	11M	11N	11O	11P	11Q	11R	11S	11T	11U	11V	11W	11X	11Y	11Z	12A	12B	12C	12D	12E	12F	12G	12H	12I	12J	12K	12L	12M	12N	12O	12P	12Q	12R	12S	12T	12U	12V	12W	12X	12Y	12Z	13A	13B	13C	13D	13E	13F	13G	13H	13I	13J	13K	13L	13M	13N	13O	13P	13Q	13R	13S	13T	13U	13V	13W	13X	13Y	13Z	14A	14B	14C	14D	14E	14F	14G	14H	14I	14J	14K	14L	14M	14N	14O	14P	14Q	14R	14S	14T	14U	14V	14W	14X	14Y	14Z	15A	15B	15C	15D	15E	15F	15G	15H	15I	15J	15K	15L	15M	15N	15O	15P	15Q	15R	15S	15T	15U	15V	15W	15X	15Y	15Z	16A	16B	16C	16D	16E	16F	16G	16H	16I	16J	16K	16L	16M	16N	16O	16P	16Q	16R	16S	16T	16U	16V	16W	16X	16Y	16Z	17A	17B	17C	17D	17E	17F	17G	17H	17I	17J	17K	17L	17M	17N	17O	17P	17Q	17R	17S	17T	17U	17V	17W	17X	17Y	17Z	18A	18B	18C	18D	18E	18F	18G	18H	18I	18J	18K	18L	18M	18N	18O	18P	18Q	18R	18S	18T	18U	18V	18W	18X	18Y	18Z	19A	19B	19C	19D	19E	19F	19G	19H	19I	19J	19K	19L	19M	19N	19O	19P	19Q	19R	19S	19T	19U	19V	19W	19X	19Y	19Z	20A	20B	20C	20D	20E	20F	20G	20H	20I	20J	20K	20L	20M	20N	20O	20P	20Q	20R	20S	20T	20U	20V	20W	20X	20Y	20Z	21A	21B	21C	21D	21E	21F	21G	21H	21I	21J	21K	21L	21M	21N	21O	21P	21Q	21R	21S	21T	21U	21V	21W	21X	21Y	21Z	22A	22B	22C	22D	22E	22F	22G	22H	22I	22J	22K	22L	22M	22N	22O	22P	22Q	22R	22S	22T	22U	22V	22W	22X	22Y	22Z	23A	23B	23C	23D	23E	23F	23G	23H	23I	23J	23K	23L	23M	23N	23O	23P	23Q	23R	23S	23T	23U	23V	23W	23X	23Y	23Z	24A	24B	24C	24D	24E	24F	24G	24H	24I	24J	24K	24L	24M	24N	24O	24P	24Q	24R	24S	24T	24U	24V	24W	24X	24Y	24Z	25A	25B	25C	25D	25E	25F	25G	25H	25I	25J	25K	25L	25M	25N	25O	25P	25Q	25R	25S	25T	25U	25V	25W	25X	25Y	25Z	26A	26B	26C	26D	26E	26F	26G	26H	26I	26J	26K	26L	26M	26N	26O	26P	26Q	26R	26S	26T	26U	26V	26W	26X	26Y	26Z	27A	27B	27C	27D	27E	27F	27G	27H	27I	27J	27K	27L	27M	27N	27O	27P	27Q	27R	27S	27T	27U	27V	27W	27X	27Y	27Z	28A	28B	28C	28D	28E	28F	28G	28H	28I	28J	28K	28L	28M	28N	28O	28P	28Q	28R	28S	28T	28U	28V	28W	28X	28Y	28Z	29A	29B	29C	29D	29E	29F	29G	29H	29I	29J	29K	29L	29M	29N	29O	29P	29Q	29R	29S	29T	29U	29V	29W	29X	29Y	29Z	30A	30B	30C	30D	30E	30F	30G	30H	30I	30J	30K	30L	30M	30N	30O	30P	30Q	30R	30S	30T	30U	30V	30W	30X	30Y	30Z	31A	31B	31C	31D	31E	31F	31G	31H	31I	31J	31K	31L	31M	31N	31O	31P	31Q	31R	31S	31T	31U	31V	31W	31X	31Y	31Z	32A	32B	32C	32D	32E	32F	32G	32H	32I	32J	32K	32L	32M	32N	32O	32P	32Q	32R	32S	32T	32U	32V	32W	32X	32Y	32Z	33A	33B	33C	33D	33E	33F	33G	33H	33I	33J	33K	33L	33M	33N	33O	33P	33Q	33R	33S	33T	33U	33V	33W	33X	33Y	33Z	34A	34B	34C	34D	34E	34F	34G	34H	34I	34J	34K	34L	34M	34N	34O	34P	34Q	34R	34S	34T	34U	34V	34W	34X	34Y	34Z	35A	35B	35C	35D	35E	35F	35G	35H	35I	35J	35K	35L	35M	35N	35O	35P	35Q	35R	35S	35T	35U	35V	35W	35X	35Y	35Z	36A	36B	36C	36D	36E	36F	36G	36H	36I	36J	36K	36L	36M	36N	36O	36P	36Q	36R	36S	36T	36U	36V	36W	36X	36Y	36Z	37A	37B	37C	37D	37E	37F	37G	37H	37I	37J	37K	37L	37M	37N	37O	37P	37Q	37R	37S	37T	37U	37V	37W	37X	37Y	37Z	38A	38B	38C	38D	38E	38F	38G	38H	38I	38J	38K	38L	38M	38N	38O	38P	38Q	38R	38S	38T	38U	38V	38W	38X	38Y	38Z	39A	39B	39C	39D	39E	39F	39G	39H	39I	39J	39K	39L	39M	39N	39O	39P	39Q	39R	39S	39T	39U	39V	39W	39X	39Y	39Z	40A	40B	40C	40D	40E	40F	40G	40H	40I	40J	40K	40L	40M	40N	40O	40P	40Q	40R	40S	40T	40U	40V	40W	40X	40Y	40Z	41A	41B	41C	41D	41E	41F	41G	41H	41I	41J	41K	41L	41M	41N	41O	41P	41Q	41R	41S	41T	41U	41V	41W	41X	41Y	41Z	42A	42B	42C	42D	42E	42F	42G	42H	42I	42J	42K	42L	42M	42N	42O	42P	42Q	42R	42S	42T	42U	42V	42W	42X	42Y	42Z	43A	43B	43C	43D	43E	43F	43G	43H	43I	43J	43K	43L	43M	43N	43O	43P	43Q	43R	43S	43T	43U	43V	43W	43X	43Y	43Z	44A	44B	44C	44D	44E	44F	44G	44H	44I	44J	44K	44L	44M	44N	44O	44P	44Q	44R	44S	44T	44U	44V	44W	44X	44Y	44Z	45A	45B	45C	45D	45E	45F	45G	45H	45I	45J	45K	45L	45M	45N	45O	45P	45Q	45R	45S	45T	45U	45V	45W	45X	45Y	45Z	46A	46B	46C	46D	46E	46F	46G	46H	46I	46J	46K	46L	46M	46N	46O	46P	46Q	46R	46S	46T	46U	46V	46W	46X	46Y	46Z	47A	47B	47C	47D	47E	47F	47G	47H	47I	47J	47K	47L	47M	47N	47O	47P	47Q	47R	47S	47T	47U	47V	47W	47X	47Y	47Z	48A	48B	48C	48D	48E	48F	48G	48H	48I	48J	48K	48L	48M	48N	48O	48P	48Q	48R	48S	48T	48U	48V	48W	48X	48Y	48Z	49A	49B	49C	49D	49E	49F	49G	49H	49I	49J	49K	49L	49M	49N	49O	49P	49Q	49R	49S	49T	49U	49V	49W	49X	49Y	49Z	50A	50B	50C	50D	50E	50F	50G	50H	50I	50J	50K	50L	50M	50N	50O	50P	50Q	50R	50S	50T	50U	50V	50W	50X	50Y	50Z	51A	51B	51C	51D	51E	51F	51G	51H	51I	51J	51K	51L	51M	51N	51O	51P	51Q	51R	51S	51T	51U	51V	51W	51X	51Y	51Z	52A	52B	52C	52D	52E	52F	52G	52H	52I	52J	52K	52L	52M	52N	52O	52P	52Q	52R	52S	52T	52U	52V	52W	52X	52Y	52Z	53A	53B	53C	53D	53E	53F	53G	53H	53I	53J	53K	53L	53M	5

TABLE III. Group A inspection for device type 06 - Continued.
Terminal conditions (pins not designated may be high $\frac{1}{2}$.0 V or low \leq 0.7 V, or open).

11 Same tests, terminal conditions, and limits as for subgroup 10, except $T_c = -55^\circ C$.

11 / For case 2, pins not referenced are NC.

2/ The limits in μA are as follows:

Measured terminal	Max/min 100Ω for circuit	A	B	C	D
TA, TB, TC, TD, TC, TA, TB, TC	-160/-400 -30/-300 -150/-300				
		-150/-300			

TABLE III. Group A inspection for device type 07. Terminal conditions (pins not designated may be HIGH ≥ 2.7 V or LOW ≤ 0.7 V, or open).

Subgroup	Symbol	Test No.	Cases												Limits												
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Measured terminal	Min	Max	Unit	
1 $T_c = +25^\circ\text{C}$	V _{OM}	3006	1	0.7 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	
		2	5.5 V	0.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		3	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		4	-	-	0.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		5	-	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		6	-	-	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		7	-	-	-	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8	-	-	-	-	-	-	5.5 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y _{OL}	3007	9	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	2.0 V	
	3007	10	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
Y _{IC}		11	-10 mA	-10 mA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		12	-	-	-10 mA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y _{IMI}	3010	19	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V	2.7 V
		20	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
		21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y _{IMT}		27	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V
		28	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
		29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Y _{IL}	3019	35	0.4 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V
		36	5.5 V	0.4 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V
		37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{OL}	3011	43	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
	3011	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I _{CCM}	3005	45	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND
	3005	46	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V	5.5 V
I _{CCCL}		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

2 Same tests, terminal conditions, and limits as for subgroup 1, except $T_c = +125^\circ\text{C}$ and V_{IC} tests are omitted.

3 Same tests, terminal conditions, and limits as for subgroup 1, except $T_c = -55^\circ\text{C}$ and V_{IC} tests are omitted.

15000 25000 30000 35000 40000 45000 50000 55000 60000 65000 70000 75000 80000 85000 90000 95000 100000 105000 110000 115000 120000 125000 130000 135000 140000 145000 150000 155000 160000 165000 170000 175000 180000 185000 190000 195000 200000 205000 210000 215000 220000 225000 230000 235000 240000 245000 250000 255000 260000 265000 270000 275000 280000 285000 290000 295000 300000 305000 310000 315000 320000 325000 330000 335000 340000 345000 350000 355000 360000 365000 370000 375000 380000 385000 390000 395000 400000 405000 410000 415000 420000 425000 430000 435000 440000 445000 450000 455000 460000 465000 470000 475000 480000 485000 490000 495000 500000 505000 510000 515000 520000 525000 530000 535000 540000 545000 550000 555000 560000 565000 570000 575000 580000 585000 590000 595000 600000 605000 610000 615000 620000 625000 630000 635000 640000 645000 650000 655000 660000 665000 670000 675000 680000 685000 690000 695000 700000 705000 710000 715000 720000 725000 730000 735000 740000 745000 750000 755000 760000 765000 770000 775000 780000 785000 790000 795000 800000 805000 810000 815000 820000 825000 830000 835000 840000 845000 850000 855000 860000 865000 870000 875000 880000 885000 890000 895000 900000 905000 910000 915000 920000 925000 930000 935000 940000 945000 950000 955000 960000 965000 970000 975000 980000 985000 990000 995000 1000000

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TABLE III. Group A Inspection for device type 07 - Continued.
Terminal conditions (pin not designated may be high $\geq 2.0\text{ V}$ or low $\leq 0.7\text{ V}$, or open).

Subgroup	Symbol	Cases	A _{case}	A _{case} - T _{case} - Test method	T _C Method	TESTS									
						Min	Max	Unit	Min	Max	Unit	Min	Max	Unit	Min
9	t _{PHH}	3003	47	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2	17	mA
		48	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	18	50	mA
		49	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1C	50	mA
		50	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1D	50	mA
		51	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2A	50	mA
		52	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2B	50	mA
		53	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2C	50	mA
		54	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2D	50	mA
	t _{PLH}	55	IN	2.7 V	IN	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	15	-	mA
		56	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	18	50	mA
		57	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1C	50	mA
		58	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1D	50	mA
		59	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2A	50	mA
		60	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2B	50	mA
		61	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2C	50	mA
		62	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2D	50	mA
10	t _{PHL}	63	IN	2.7 V	IN	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	24	-	mA
		64	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	18	50	mA
		65	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1C	50	mA
		66	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1D	50	mA
		67	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2A	50	mA
		68	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2B	50	mA
		69	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2C	50	mA
		70	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2D	50	mA
	t _{PLH}	71	IN	2.7 V	IN	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	20	-	mA
		72	2.7 V	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	18	50	mA
		73	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1C	50	mA
		74	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	1D	50	mA
		75	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2A	50	mA
		76	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2B	50	mA
		77	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2C	50	mA
		78	-	IN	2.7 V	2.7 V	OUT	ON	2.7 V	2.7 V	5.0 V	1A to 1V	2D	50	mA

11 Same tests, terminal condition, and limits as for subgroup 10, except $T_C = -55^\circ\text{C}$.

1/ For case 2, pins not referenced are NC.

2/ All limits in μA are as follows:

Measured terminal	limits for circuit			
	1	2	3	4
1N, 1S, 1C, 1D, 2N, 2S, 2C, 2D	0	0	0	0
2N, 2S, 2C, 2D	-120/-360	-30/-360	-160/-400	-120/-360

3/ I_S limits for circuit C: -20/-100 μA ; for circuits A, B, D, E, and F: -15/-100 μA .

TABLE III. Group A inspection for device type 08
Terminal conditions (pins not designated may be High > 2.0 V or Low < 0.7 V, or open).

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Subgroup	Symbol	Test no.	Cases		Measured		Limits	
			A ₀ , D ₀	A ₁ , D ₁	terminal	min	max	unit
$T_c = +25^\circ\text{C}$	V _{0L}	3007	1	2.0 V GND	2.0 V GND	4 mA	GND	IV
		3007	2	5.5 V GND	5.5 V GND	4 mA	2.0 V GND	IV
I _{CEx}		3	0.7 V 5.5 V	5.5 V 0.7 V	5.5 V 5.5 V	-	5.5 V 5.5 V	IV
		4	5.5 V 0.7 V	5.5 V 0.7 V	5.5 V 5.5 V	-	5.5 V 5.5 V	IV
		5	5.5 V -	5.5 V -	5.5 V -	-	5.5 V -	IV
		6	-	5.5 V -	-	-	-	IV
		7	-	5.5 V -	-	-	-	IV
		8	-	5.5 V -	-	-	-	IV
		9	-	5.5 V -	-	-	-	IV
		10	-	5.5 V -	-	-	-	IV
I _{VC}		11	-10 mA	-10 mA	-10 mA	-10 mA	-10 mA	mA
		12	-10 mA	-10 mA	-10 mA	-10 mA	-10 mA	mA
		13	-	-	-	-	-	mA
		14	-	-	-	-	-	mA
		15	-	-	-	-	-	mA
		16	-	-	-	-	-	mA
		17	-	-	-	-	-	mA
		18	-	-	-	-	-	mA
I _{IMI}		3010	19	2.7 V GND	2.7 V GND	2.7 V GND	GND	5.5 V -
		20	-	-	-	-	-	IV
		21	-	-	-	-	-	IV
		22	-	-	-	-	-	IV
		23	-	-	-	-	-	IV
		24	-	-	-	-	-	IV
		25	-	-	-	-	-	IV
		26	-	-	-	-	-	IV
I _{TH2}		27	5.5 V GND	5.5 V GND	5.5 V GND	5.5 V GND	5.5 V GND	IV
		28	-	-	-	-	-	IV
		29	-	-	-	-	-	IV
		30	-	-	-	-	-	IV
		31	-	-	-	-	-	IV
		32	-	-	-	-	-	IV
		33	-	-	-	-	-	IV
		34	-	-	-	-	-	IV
I _{IL}		3009	35	0.4 V 5.5 V	5.5 V 5.5 V	5.5 V 5.5 V	5.5 V 5.5 V	IV
		36	-	-	-	-	-	IV
		37	-	-	-	-	-	IV
		38	-	-	-	-	-	IV
		39	-	-	-	-	-	IV
		40	-	-	-	-	-	IV
		41	-	-	-	-	-	IV
		42	-	-	-	-	-	IV
I _{ICCL}		3005	43	-	-	-	-	IV
I _{CCM}		3005	44	GND	GND	GND	GND	IV

2 Same tests, terminal conditions, and limits as for subgroup 1, except $T_c = +125^\circ\text{C}$ and VIC tests are omitted.

3 Same tests, terminal conditions, and limits as for subgroup 1, except $T_c = -55^\circ\text{C}$ and VIC tests are omitted.

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TABLE III. Group A Inspection for device type 06 - Continued.
terminal conditions (pins not designated may be high ≥ 2.7 V or low ≤ 0.7 V, or open).

Subgroup	Symbol	Case A B C D Case 2 J	Test no.	Measured limits																					
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Measured terminal			
$T_c = +25^\circ C$	t_{PHL}	3003 (Fig 4)	45	IN	2.7 V	2.7 V	OUT	IN	2.7 V	5.0 V	1A to 1V	2	36 mA												
		46	2.7 V	2.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		t_{PLH}	53	IN	2.7 V	2.7 V	OUT	IN	2.7 V	1A to 1V	-	40 mA													
			54	2.7 V	2.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			55	IN	2.7 V	2.7 V	OUT	IN	2.7 V	1A to 1V	-	-													
			56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		t_{PHL}	61	IN	-	-	OUT	IN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	55 mA
			62	2.7 V	2.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
		t_{PLH}	69	IN	2.7 V	2.7 V	OUT	IN	2.7 V	1A to 1V	-	55 mA													
			70	2.7 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-
			76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1A to 1V	-	-

11 Same tests, terminal conditions, and limits as for subgroup 10, except $T_c = -55^\circ C$.

12 For case 2, pins not referenced are NC.

13 All limits in mA are as follows:

Measured terminal	Minimum limits for circuit				
	1	2	3	4	5
TA, TB, TC, TD 2A, 2B, 2C, 2D	-160/-400	-30/-300	-160/-400	-200/-440	-150/-180
					-120/-160

TABLE III. Group A Inspection for device type 09.

Subgroup	Symbol	Initial Tested	Initial Tested	Measured Requirements				Min	Max	Unit
				1	2	3	4			
1	V _{OH}	3000	1	0.7	1.5	2.5	4.0	-	-	-
1	V _{OL}	3000	1	0.7	1.5	2.5	4.0	-	-	-
1	T _{C = 25°C}	3000	1	0.7	1.5	2.5	4.0	-	-	-
2	V _{DD}	3000	1	0.7	1.5	2.5	4.0	-	-	-
2	V _{DD}	3000	2	0.7	1.5	2.5	4.0	-	-	-
2	V _{DD}	3000	3	0	2	5	8	-	-	-
2	V _{DD}	3000	4	0	2	5	8	-	-	-
2	V _{DD}	3000	5	0	2	5	8	-	-	-
2	V _{DD}	3000	6	0	2	5	8	-	-	-
2	V _{DD}	3000	7	0	2	5	8	-	-	-
2	V _{DD}	3000	8	0	2	5	8	-	-	-
2	V _{DD}	3000	9	0	2	5	8	-	-	-
2	V _{DD}	3000	10	0	2	5	8	-	-	-
2	V _{DD}	3000	11	0	2	5	8	-	-	-
2	V _{DD}	3000	12	0	2	5	8	-	-	-
2	V _{DD}	3000	13	0	2	5	8	-	-	-
2	V _{DD}	3000	14	0	2	5	8	-	-	-
2	V _{DD}	3000	15	0	2	5	8	-	-	-
2	V _{DD}	3000	16	0	2	5	8	-	-	-
2	V _{DD}	3000	17	0	2	5	8	-	-	-
2	V _{DD}	3000	18	0	2	5	8	-	-	-
2	V _{DD}	3000	19	0	2	5	8	-	-	-
2	V _{DD}	3000	20	0	2	5	8	-	-	-
2	V _{DD}	3000	21	0	2	5	8	-	-	-
2	V _{DD}	3000	22	0	2	5	8	-	-	-
2	V _{DD}	3000	23	0	2	5	8	-	-	-
2	V _{DD}	3000	24	0	2	5	8	-	-	-
2	V _{DD}	3000	25	0	2	5	8	-	-	-
2	V _{DD}	3000	26	0	2	5	8	-	-	-
2	V _{DD}	3000	27	0	2	5	8	-	-	-
2	V _{DD}	3000	28	0	2	5	8	-	-	-
2	V _{DD}	3000	29	0	2	5	8	-	-	-
2	V _{DD}	3000	30	0	2	5	8	-	-	-
2	V _{DD}	3000	31	0	2	5	8	-	-	-
2	V _{DD}	3000	32	0	2	5	8	-	-	-
2	V _{DD}	3000	33	0	2	5	8	-	-	-
2	V _{DD}	3000	34	0	2	5	8	-	-	-
2	V _{DD}	3000	35	0	2	5	8	-	-	-
2	V _{DD}	3000	36	0	2	5	8	-	-	-
2	V _{DD}	3000	37	0	2	5	8	-	-	-
2	V _{DD}	3000	38	0	2	5	8	-	-	-
2	V _{DD}	3000	39	0	2	5	8	-	-	-
2	V _{DD}	3000	40	0	2	5	8	-	-	-
2	V _{DD}	3000	41	0	2	5	8	-	-	-
2	V _{DD}	3000	42	0	2	5	8	-	-	-
2	V _{DD}	3000	43	0	2	5	8	-	-	-
2	V _{DD}	3000	44	0	2	5	8	-	-	-
2	V _{DD}	3000	45	0	2	5	8	-	-	-
2	V _{DD}	3000	46	0	2	5	8	-	-	-
2	V _{DD}	3000	47	0	2	5	8	-	-	-
2	V _{DD}	3000	48	0	2	5	8	-	-	-
2	V _{DD}	3000	49	0	2	5	8	-	-	-
2	V _{DD}	3000	50	0	2	5	8	-	-	-
2	V _{DD}	3000	51	0	2	5	8	-	-	-
2	V _{DD}	3000	52	0	2	5	8	-	-	-
2	V _{DD}	3000	53	0	2	5	8	-	-	-
2	V _{DD}	3000	54	0	2	5	8	-	-	-
2	V _{DD}	3000	55	0	2	5	8	-	-	-
2	V _{DD}	3000	56	0	2	5	8	-	-	-
2	V _{DD}	3000	57	0	2	5	8	-	-	-
2	V _{DD}	3000	58	0	2	5	8	-	-	-
2	V _{DD}	3000	59	0	2	5	8	-	-	-
2	V _{DD}	3000	60	0	2	5	8	-	-	-
2	V _{DD}	3000	61	0	2	5	8	-	-	-
2	V _{DD}	3000	62	0	2	5	8	-	-	-
2	V _{DD}	3000	63	0	2	5	8	-	-	-
2	V _{DD}	3000	64	0	2	5	8	-	-	-
2	V _{DD}	3000	65	0	2	5	8	-	-	-
2	V _{DD}	3000	66	0	2	5	8	-	-	-
2	V _{DD}	3000	67	0	2	5	8	-	-	-
2	V _{DD}	3000	68	0	2	5	8	-	-	-
2	V _{DD}	3000	69	0	2	5	8	-	-	-
2	V _{DD}	3000	70	0	2	5	8	-	-	-
2	V _{DD}	3000	71	0	2	5	8	-	-	-
2	V _{DD}	3000	72	0	2	5	8	-	-	-
2	V _{DD}	3000	73	0	2	5	8	-	-	-
2	V _{DD}	3000	74	0	2	5	8	-	-	-
2	V _{DD}	3000	75	0	2	5	8	-	-	-
2	V _{DD}	3000	76	0	2	5	8	-	-	-
2	V _{DD}	3000	77	0	2	5	8	-	-	-
2	V _{DD}	3000	78	0	2	5	8	-	-	-
2	V _{DD}	3000	79	0	2	5	8	-	-	-
2	V _{DD}	3000	80	0	2	5	8	-	-	-
2	V _{DD}	3000	81	0	2	5	8	-	-	-
2	V _{DD}	3000	82	0	2	5	8	-	-	-
2	V _{DD}	3000	83	0	2	5	8	-	-	-
2	V _{DD}	3000	84	0	2	5	8	-	-	-
2	V _{DD}	3000	85	0	2	5	8	-	-	-
2	V _{DD}	3000	86	0	2	5	8	-	-	-
2	V _{DD}	3000	87	0	2	5	8	-	-	-
2	V _{DD}	3000	88	0	2	5	8	-	-	-
2	V _{DD}	3000	89	0	2	5	8	-	-	-
2	V _{DD}	3000	90	0	2	5	8	-	-	-
2	V _{DD}	3000	91	0	2	5	8	-	-	-
2	V _{DD}	3000	92	0	2	5	8	-	-	-
2	V _{DD}	3000	93	0	2	5	8	-	-	-
2	V _{DD}	3000	94	0	2	5	8	-	-	-
2	V _{DD}	3000	95	0	2	5	8	-	-	-
2	V _{DD}	3000	96	0	2	5	8	-	-	-
2	V _{DD}	3000	97	0	2	5	8	-	-	-
2	V _{DD}	3000	98	0	2	5	8	-	-	-
2	V _{DD}	3000	99	0	2	5	8	-	-	-
2	V _{DD}	3000	100	0	2	5	8	-	-	-
2	V _{DD}	3000	101	0	2	5	8	-	-	-
2	V _{DD}	3000	102	0	2	5	8	-	-	-
2	V _{DD}	3000	103	0	2	5	8	-	-	-
2	V _{DD}	3000	104	0	2	5	8	-	-	-
2	V _{DD}	3000	105	0	2	5	8	-	-	-
2	V _{DD}	3000	106	0	2	5	8	-	-	-
2	V _{DD}	3000	107	0	2	5	8	-	-	-
2	V _{DD}	3000	108	0	2	5	8	-	-	-
2	V _{DD}	3000	109	0	2	5	8	-	-	-
2	V _{DD}	3000	110	0	2	5	8	-	-	-
2	V _{DD}	3000	111	0	2	5	8	-	-	-
2	V _{DD}	3000	112	0	2	5	8	-	-	-
2	V _{DD}	3000	113	0	2	5	8	-	-	-
2	V _{DD}	3000	114	0	2	5	8	-	-	-
2	V _{DD}	3000	115	0	2	5	8	-	-	-
2	V _{DD}	3000	116	0	2	5	8	-	-	-
2	V _{DD}	3000	117	0	2	5	8	-	-	-
2	V _{DD}	3000	118	0	2	5	8	-	-	-
2	V _{DD}	3000	119	0	2	5	8	-	-	-
2	V _{DD}	3000	120	0	2	5	8	-	-	-
2	V _{DD}	3000	121	0	2	5	8	-	-	-
2	V _{DD}	3000	122	0	2	5	8	-	-	-
2	V _{DD}	3000	123	0	2	5	8	-	-	-
2	V _{DD}	3000	124	0	2	5	8	-	-	-
2	V _{DD}	3000	125	0	2	5	8	-	-	-
2	V _{DD}	3000	126	0	2	5	8	-	-	-
2	V _{DD}	3000	127	0	2	5	8	-	-	-
2	V _{DD}	3000	128	0	2	5	8	-	-	-
2	V _{DD}	3000	129	0	2	5	8	-	-	-
2	V _{DD}	3000	130	0	2	5	8	-	-	-
2	V _{DD}	3000	131	0	2	5	8	-	-	-
2	V _{DD}	3000	132	0	2	5	8	-	-	-
2	V _{DD}	3000	133	0	2	5	8	-	-	-
2	V _{DD}	3000	134	0	2	5	8	-	-	-
2	V _{DD}	3000	135	0	2	5	8	-	-	-
2	V _{DD}	3								

TABLE III. Group A inspection for device type 09 - (continued). Terminal conditions (pins not designated may be high $\geq 2.0V$ or low $\leq 0.1V$, or open).

Terminal conditions (points) defined by the right-hand side of Eq. (2.10), $\psi_0 = 0$, or open.

11 Some 1000, seasonal emulsions, and 1000s for subgroups 10, except 1c. - 55°C.

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1 B33W31H 38W SW16 2 3113 181

Measured terminal	Min/max limits for circuit			
	A	B	C	D
K, B, C, D, E, F, G, H	-120/-300	-30/-300	-160/-400	-150/-300
F	-160/-400	-150/-300	-150/-300	-150/-300
E	-150/-300	-150/-300	-150/-300	-150/-300
D	-150/-300	-150/-300	-150/-300	-150/-300
C	-150/-300	-150/-300	-150/-300	-150/-300
B	-150/-300	-150/-300	-150/-300	-150/-300
A	-150/-300	-150/-300	-150/-300	-150/-300

LOS limits for circuit C: -20/-100 dB for circuits A, B, D, E, and F; -15/-100 dB

4.4.5 Group E inspection. Group E inspection shall be in accordance with table V of method 5005 of MIL-STD-883 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Radiation hardness assurance exposure (method 1019 of MIL-STD-883) conditions: Total dose exposure circuit shown on figure 5.

4.5 Methods of inspection. Methods of inspection shall be specified 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.

5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-M-38510.

6. NOTES

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

6.2 Ordering data. The acquisition document should specify the following:

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

6.3 Abbreviations, symbols, and definitions. The abbreviations, symbols, and definitions used herein are defined in MIL-M-35810, MIL-STD-1331, and as follows:

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

6.4 Logistic support. Lead materials and finishes (see 3.3) are interchangeable. Unless otherwise specified, microcircuits acquired for Government logistic support will be acquired to device class B (see 1.2.2), lead material for finish C (see 3.3). Longer length leads and lead forming shall not affect the part number.

6.5 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-35810 device types and may have slight physical variations in relation to case size. The presence of this information shall not be deemed as permitting substitution of generic-industry types for MIL-M-35810 types or as a waiver of any of the provisions of MIL-M-35810.

Military device type	Generic-industry type
01	54LS00
02	54LS03
03	54LS04
04	54LS05
05	54LS10
06	54LS12
07	54LS20
08	54LS22
09	54LS30

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

TABLE IV. Manufacturers' designations.

Device types	Circuits					
	A Texas Instruments	B Signetics Corp.	C National Company	D Raytheon Company	E Motorola Inc.	F Fairchild Semiconductor
01	X	X	X	X	X	X
02	X	X	X	X	X	X
03	X	X	X	X	X	X
04	X	X	X	X	X	X
05	X	X	X	X	X	X
06	X	X	X	X	X	
07	X	X	X	X	X	X
08	X	X	X	X	X	X
09	X	X	X	X	X	X

6.7 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.

Custodians:

Army - ER
Navy - EC
Air Force - 17

Review activities:

Army - AR, MI
Navy - OS, SH, TD
Air Force - 11, 19, 85, 99
DLA - ES

User activities:

Army - SM
Navy - AS, CG, MC

Preparing activity:

Air Force - 17

Agent:

DLA - ES

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