INCH-POUND
MIL-M-38510/111A
10 December 2003
SUPERSEDING
MIL-M-38510/111
3 January 1979

MILITARY SPECIFICATION

MICROCIRCUITS, ANALOG SWITCH WITH DRIVER, MONOLITHIC AND MULTI-CHIP SILICON

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

Reactivated for new design as of 10 December 2003. May be used for either new or existing design acquisition

1. SCOPE

- 1.1 <u>Scope</u>. This specification covers the detail requirements for silicon, break-before-make, monolithic and multichip analog switches with drivers. Two product assurance classes and a choice of case outlines and lead finishes are provided and are reflected in the complete part number. For this product, the requirements of MIL-M-38510 have been superseded by MIL-PRF-38535, (see 6.3)
 - 1.2 Part number. The part number should be in accordance with MIL-PRF-38535, and as specified herein.
 - 1.2.1 <u>Device types.</u> The device types should be as follows:

Device type	<u>Circuit</u>
01	Dual channel, 30 Ω , SPST switches
02	Dual channel, 75 Ω , SPST switches
03	Dual channel, 30 Ω , DPST switches
04	Dual channel, 75 Ω , DPST switches
05	Single channel, 30 Ω , SPDT switch
06	Single channel, 75 Ω , SPDT switch
07	Dual channel, 30 Ω , SPDT switches
08	Dual channel, 75 Ω , SPDT switches

NOTE: A channel is defined as a driver with associated switches.

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

Outline letter	Descriptive designator	<u>Terminals</u>	Package style
A <u>1</u> /	GDFP5-F14 or CDFP6-F14	14	Flat pack
С	GDIP1-T14 or CDIP2-T14	14	Dual-in-line
D	GDFP1-F14 or CDFP2-F14	14	Flat pack
E	GDIP1-T16 or CDIP2-T16	16	Dual-in-line
I	MACY1-X10	10	Can
Χ	CDFP3-F14	14	Flat pack

^{1/} Inactive package case outline.

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 email bipolar@dscc.dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at www.dodssp.daps.mil.

AMSC N/A FSC 5962

1.3 Absolute maximum ratings.

Voltage, negative supply to positive supply [(+V _{CC}) – (-V _{CC})]	36 V dc
Voltage, drain to positive supply (+V _{CC} - V _D)	33 V dc
Voltage, negative supply to drain [V _D – (-V _{CC})]	33 V dc
Voltage, source to drain (V _D – V _S)	±22 V dc
Voltage, negative supply to logic supply [V _L – (-V _{CC})]	36 V dc
Voltage, input to logic supply (V _L – V _{IN})	8 V dc
Voltage, reference supply to logic supply (V _L – V _R)	8 V dc
Voltage, reference supply to input (V _{IN} – V _R)	8 V dc
Voltage, negative supply to reference supply [V _R –(-V _{CC})]	27 V dc
Voltage, input to reference supply (V _R – V _{IN})	2 V dc
Current, any terminal	30 mA
Lead temperature (soldering, 60 seconds)	+300°C
Junction temperature	_
Storage temperature	

1.4 Recommended operating conditions.

Positive supply voltage (+V _{CC})	+15 V dc
Negative supply voltage (-V _{CC})	- 15 V dc
Reference supply voltage (V _R)	
Logic supply voltage (V _L)	+5 V dc
Ambient operating temperature range (T _A)	

1.5 Power and thermal characteristics.

Case outline	Maximum allowable power dissipation	$\underline{\text{Maximum}} \; \theta_{\text{JC}}$	$\underline{\text{Maximum}} \; \theta_{\text{JA}}$
C, E	400 mW @ T _A = 125°C	35°C/W	120°C/W
D, A	350 mW @ $T_A = 125^{\circ}C$	60°C/W	140°C/W
I	350 mW @ T _A = 125°C	40°C/W	140°C/W
Χ	300 mW @ $T_A = 125^{\circ}C$	30°C/W	166°C/W

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 <u>Specifications, standards, and handbooks</u>. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Departments of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

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 from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

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

3. REQUIREMENTS

- 3.1 <u>Qualification</u>. Microcircuits furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.3 and 6.4).
- 3.2 <u>Item requirements</u>. The individual item requirements shall be in accordance with MIL-PRF-38535 and as specified herein or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.
- 3.3 <u>Design, construction, and physical dimensions</u>. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein.
- 3.3.1 <u>Terminal connections</u>. The terminal connections shall be as specified on figure 1. Switch positions shown are for a high level input logic.
- 3.3.2 <u>Schematic circuits</u>. The schematic circuits shall be maintained by the manufacturer and made available to the qualifying activity and the preparing activity (DSCC-VA) 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 <u>Electrical performance characteristics</u>. The electrical performance characteristics are as specified in table I, and apply over the full recommended ambient operating temperature range, unless otherwise specified.
- 3.5.1 <u>Switch operation</u>. The analog switches shall turn "on" with either a low input $(V_R \le V_{IL} \le 0.8 \text{ V})$ or a high input $(2 \text{ V} \le V_{IH} \le V_L)$ as follows:

Device type	V_{IN}	Switch ON	Switch OFF
01, 02	0.8 V dc	1,2	
,	2.0 V dc		1,2
03, 04	0.8 V dc		1,2,3,4
	2.0 V dc	1,2,3,4	
05, 06	0.8 V dc	2	1
	2.0 V dc	1	2
07, 08	0.8 V dc	3,4	1,2
	2.0 V dc	1,2	3,4

- 3.6 <u>Electrical test requirements</u>. 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.
 - 3.8 Marking. Marking shall be in accordance with MIL-PRF-38535.
- 3.9 <u>Microcircuit group assignment</u>. The devices covered by this specification shall be in microcircuit group number 94 (see MIL-PRF-38535, appendix A).

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

Characteristic	Symbol	Conditions 1/	Temperature range	Device type	Li	mits	Unit
		(unless otherwise specified, $V_L = +5 \text{ V}$, $V_R = \text{GND}$ and $\pm V_{CC} = \pm 15 \text{ V}$	iango	,,,,,	Min	Max	
Resistance drain-to- source (on)	R _{DS}	V_{IN} = (see 3.5.1), V_{D} = -7.5 V, I_{S} = -10 mA	-55°C ≤ T _A ≤ 125°C	01, 03, 05, 07		60	Ω
		$V_{IN} = (see 3.5.1),$ $V_{D} = -10 \text{ V}, I_{S} = -10 \text{ mA}$		02, 04, 06, 08		150	
Source leakage current (off)	I _{S(OFF)}	V_{IN} = (see 3.5.1), V_{D} = -10 V, V_{S} = 10 V, $+V_{CC}$ = 10 V, $-V_{CC}$ = -20 V	-55°C ≤ T _A ≤ 125°C	All	-100	100	nA
		V_{IN} = (see 3.5.1), V_D = -7.5 V, V_S = +7.5 V		01, 03, 05, 07	-100	100	
		V_{IN} = (see 3.5.1), V_D = -10 V, V_S = 10 V		02, 04, 06, 08	-100	100	
Drain leakage current (off)	I _{D(OFF)}	V_{IN} = (see 3.5.1), V_{D} = 10 V, V_{S} = -10 V, $+V_{CC}$ = 10 V, $-V_{CC}$ = -20 V	-55°C ≤ T _A ≤ 125°C	All	-100	100	nA
		V_{IN} = (see 3.5.1), V_{D} = 7.5 V, V_{S} = -7.5 V		01, 03, 05, 07	-100	100	
		V_{IN} = (see 3.5.1), V_D = 10 V, V_S = -10 V		02, 04, 06, 08	-100	100	
Channel leakage current (on)	I _{D(ON)+} I _{S(ON)}	V_{IN} = (see 3.5.1), V_{D} = V_{S} = -7.5 V	-55°C ≤ T _A ≤ 125°C	01, 03, 05, 07	-200	200	nA
		$V_{IN} = (see 3.5.1),$ $V_D = V_S = -10 \text{ V}$		02, 04, 06, 08	-200	200	
Low level input current	I _{IL}	V _{IN} = GND	-55°C ≤ T _A ≤ 125°C	All	-250	-0.1	μА
High level input current	I _{IH}	V _{IN} = 5 V	-55°C ≤ T _A ≤ 125°C	All	-2	20	μА
Time to turn on	t _{ON}	See figure 5	T _A = -55°C	01, 03, 05, 07		150	ns
			$T_A = 25^{\circ}C$ $T_A = 125^{\circ}C$			150 300	
Time to turn on	t _{ON}	See figure 5	$T_A = -55^{\circ}C$ $T_A = 25^{\circ}C$	02, 04, 06, 08		250 250	ns
			$T_A = 25 \text{ C}$ $T_A = 125 \text{ C}$	_		350	-

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

Characteristic	Symbol	Conditions 1/	Temperature range	Device type	Li	mits	Unit
		(unless otherwise specified, $V_L = +5 \text{ V}$, $V_R = \text{GND}$ and $\pm V_{CC} = \pm 15 \text{ V}$	i di igo	, ypc	Min	Max	
Time to turn off	t _{OFF}	See figure 5	T _A = -55°C	All		130	ns
			T _A = 25°C			130	
			T _A = 125°C			200	
Positive supply current	+lcc	V _{IN} = GND and 5 V	-55°C ≤ T _A ≤ 125°C	01, 02, 07, 08		2.5	mA
				05, 06		1.4	
		V _{IN} = GND		03, 04		5	
		V _{IN} = 5 V				1.7	
Negative supply current	-lcc	V _{IN} = GND and 5 V	-55°C ≤ T _A ≤ 125°C	01, 02, 07, 08	-8		mA
				05, 06	-4.8		7
		V _{IN} = GND	1	03, 04	-8.8		-
		V _{IN} = 5 V			-6.4		
Logic supply current	I _L	V _{IN} = GND and 5 V	-55°C ≤ T _A ≤ 125°C	01, 02, 03, 04, 07, 08		7	mA
				05, 06		5	1
Reference supply current	I _R	V _{IN} = GND and 5 V	-55 °C ≤ T_A ≤ 125 °C	All	-2.2		mA
Charge transfer error	V _{CTE}	$V_S = GND$ (See table III footnote <u>3/</u>)	T _A = 25°C	All		20	mV
Crosstalk between	V _{CT} <u>2</u> /	f = 10 MHz,	T _A = 25°C	All	60		dB
channels		$V_{gen} = 1 V_{P-P}$					
Single channel isolation	V _{ISO}	f = 10 MHz, V _{gen} = 1 V _{P-P}	T _A = 25°C	All	50		dB
Break-before-make time delay	t _D	See figure 6	-55°C ≤ T _A ≤ 125°C	05, 06, 07, 08	5		ns

 $[\]underline{1}\!/$ Test conditions are specified in table III and figures 2, 3, 4, and 5. $\underline{2}\!/$ For monolithic devices only.

TABLE II. Electrical test requirements.

	Subgroups	(see table III)
MIL-PRF-38535	Class S	Class B
test requirements	devices	devices
Interim electrical parameters	1	1
Final electrical test parameters	1*, 2, 3, 9	1*, 2, 3, 9
Group A test requirements	1,2,3,(4,7)**,	1,2,3,(4,7)**,
	9,10,11,	9,10,11,
	(12)***	(12)***
Group B electrical test parameters when	1,2,3 and	
using the method 5005 QCI option	table IV delta limits	N/A
Group C end-point electrical	1,2,3 and	1 and
parameters	table IV delta limits	table IV delta limits
Additional electrical subgroups for group C periodic inspections	N/A	(4, 7)****
Group D end-point electrical	1,2,3	1
parameters	, ,-	
Additional electrical subgroups for group D periodic inspections	(4,7)****	None

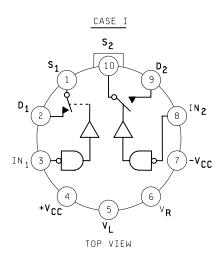
- * PDA applies to subgroup 1.
- ** See 4.4.1d
- *** See 4.4.1c
- **** See 4.4.3c
- ***** See 4.4.4

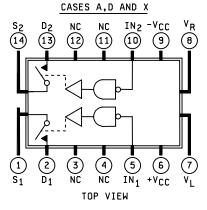
4. VERIFICATION.

- 4.1 <u>Sampling and inspection</u>. Sampling and inspection procedures shall be in accordance with MIL-PRF-38535 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not effect the form, fit, or function as function as described herein.
- 4.2 <u>Screening</u>. Screening shall be in accordance with MIL-PRF-38535, and shall be conducted on all devices prior to qualification and quality conformance inspection. The following additional criteria shall apply:
 - a. The burn-in test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.
 - b. Reverse bias burn-in (method 1015 of MIL-STD-883). This screen shall apply to class S only. However, regardless of device class, for device types 05, 06, 07, and 08, an additional burn-in will be performed following an interim electrical test (see table II, PDA applies). The additional burn-in will be performed with the logic level of the switch drivers opposite to that used in the first burn-in.

- c. 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.
- d. Additional screening for space level product shall be as specified in MIL-PRF-38535.
- e. Internal visual inspection (method 2010 and method 2017 multichip criteria of MIL-STD-883). For multichip devices, internal visual inspection shall be performed for each chip within the package.
- 4.3 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-38535.
- 4.4 <u>Technology Conformance inspection (TCI)</u>. Technology conformance inspection shall be in accordance with MIL-PRF-38535 and herein for groups A, B, C, and D inspections (see 4.4.1 through 4.4.4).
- 4.4.1 Group A inspection. Group A inspection shall be in accordance with table III of MIL-PRF-38535 and as follows:
 - Tests shall be as specified in table II herein.
 - Subgroups 5, 6, and 8 shall be omitted.
 - c. Subgroup 12 (device types 05, 06, 07, and 08) shall be added to group A inspection as specified in table III herein. The sample size series number shall be 7 for all classes (accept on 0).
 - d. Subgroups 4 and 7 shall be performed for initial qualification only using a sample of 5 devices for each device type submitted to group A inspection, with no failure allowed. If not more than 1 failure is found in the first sample of 5, a second sample of 5 is permitted with no further failures allowed.
 - 4.4.2 Group B inspection. Group B inspection shall be in accordance with table II of MIL-PRF-38535.
- 4.4.3 Group C inspection. Group C inspection shall be in accordance with table IV of MIL-PRF-38535 and as follows:
 - a. End point electrical parameters shall be as specified in table II herein.
 - b. The steady-state life test duration, test condition, and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document control by the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.
 - c. A special subgroup shall be added to group C inspection for class B devices only, and it shall consist of the group A subgroups 4 and 7 as specified in table III herein. This special subgroup shall be performed on each device type that is qualified from those listed in 1.2.1 herein. After initial qualification, the special subgroup shall be performed periodically on a single device type selected from those device types previously qualified. A sample of 5 devices (of the device type to be inspected) shall be chosen and submitted to test with no failures allowed. If not more than 1 failure is found in the first sample of 5, a second sample of 5 is permitted with no further failures allowed. When more than one device type is qualified, the single device type selected shall be different device type for each subsequent periodic inspection until all qualified device types have been inspected. The sequence of single device types shall be repeated to fulfill the periodic inspection requirement.

Device type 01 and 02





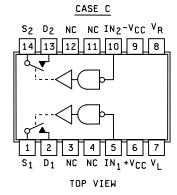
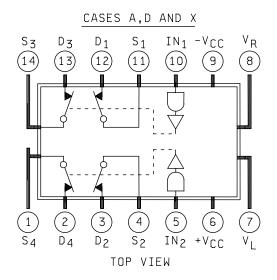
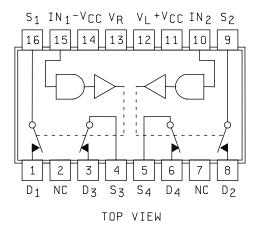


Figure 1. <u>Terminal connections</u>.

Device type 03 and 04



CASE E

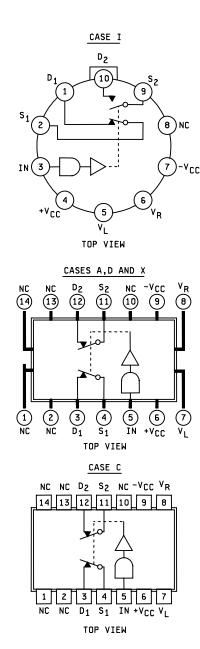


NOTES

- 1. Switch positions are shown for the high logic level input condition.
- 2. -V_{CC} may be connected to the base of metal packages (case I).

Figure 1. <u>Terminal connections</u> – Continued.

Device type 05 and 06

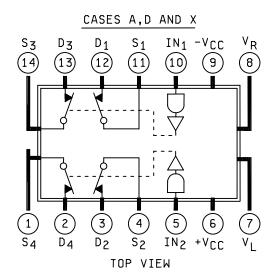


NOTES:

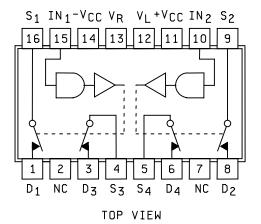
- 1. Switch positions are shown for the high logic level input condition.
 2. - V_{CC} may be connected to the base of metal packages (case I).

Figure 1. <u>Terminal connections</u> – Continued.

Device type 07 and 08



CASE E



NOTES:

- 1. Switch positions are shown for the high logic level input condition.
- 2. -V_{CC} may be connected to the base of metal packages (case I).

Figure 1. <u>Terminal connections</u> – Continued.

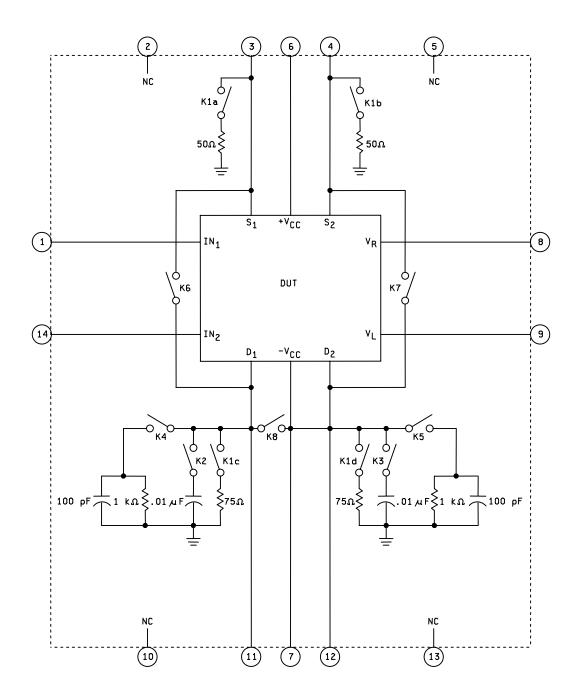


FIGURE 2. Test circuit (static and dynamic tests) for device types 01 and 02.

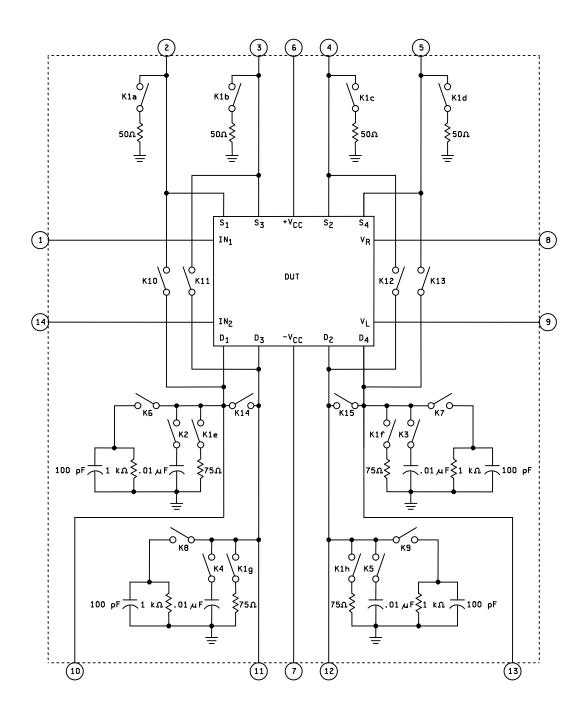


FIGURE 3. Test circuit (static and dynamic tests) for device types 03, 04, 07, and 08.

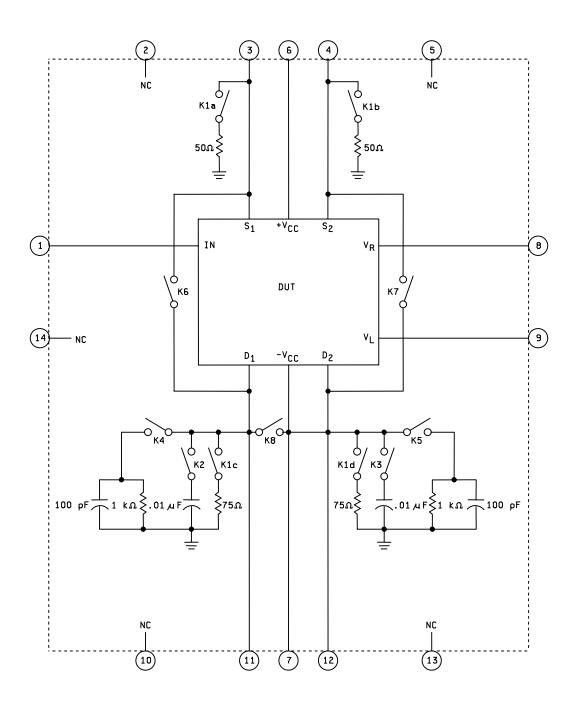
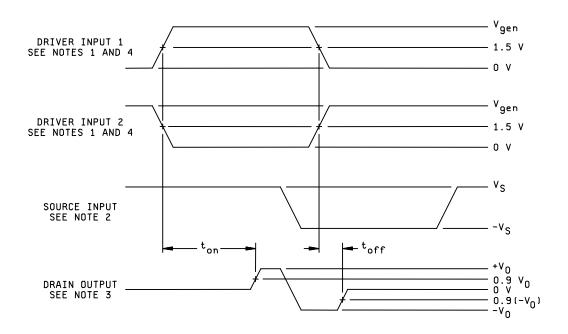


FIGURE 4. Test circuit (static and dynamic tests) for device types 05 and 06.



NOTES:

- 1. The driver pulse generator shall have the following characteristics:
 - a. $V_{gen} = 0 \text{ V to } 3.0 \text{ V}.$
 - b. Rise time (0.3 V to 2.7 V) \leq 10 ns
 - c. Fall time (2.7 V to 0.3 V) \leq 10 ns
- 2. The source pulse generator shall have the following characteristics:
 - a. $V_{gen} = -7.5 \text{ V}$ to +7.5 V square wave (device types 01, 03, 05, and 07).
 - b. $V_{gen} = -10 \text{ V}$ to +10 V square wave (device types 02, 04, 06, and 08).

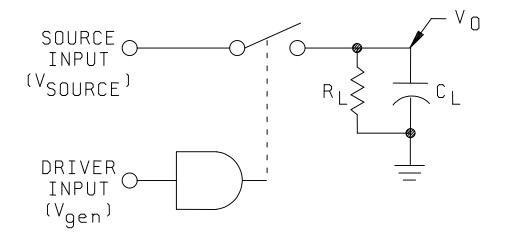
FIGURE 5. Input-output waveforms for time delay tests.

3. For device types 01, 03, 05, and 07:

a.
$$V_{source} = +7.5 \text{ V for T}_{on}$$
.
b. $V_{source} = -7.5 \text{ V for T}_{off}$.

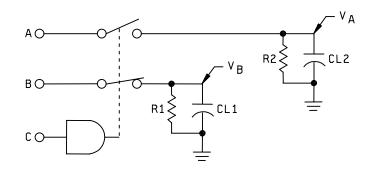
For device types 02, 04, 06, and 08:

- a. $V_{\text{source}} = +10.0 \text{ V for } T_{\text{on}}$.
- b. $V_{\text{source}} = -10.0 \text{ V for T}_{\text{off}}$.
- 4. Driver input 1 shall be used to test all switches for device types 03 and 04, switch 1 for device types 05 and 06 and switches 1 and 2 for device types 07 and 08. Driver input 2 shall be used to test all switches for device types 01 and 02, switch 2 for device types 05 and 06 and switches 3 and 4 for device types 07 and 08.



$$R_L = 1 k\Omega \pm 5\%$$
 $C_L = 95-200 pf \pm 5\%$
(C_ INCLUDES ASSOCIATED TEST SYSTEM CAPACITANCE)

FIGURE 5. Input-output waveforms for time delay tests – Continued.



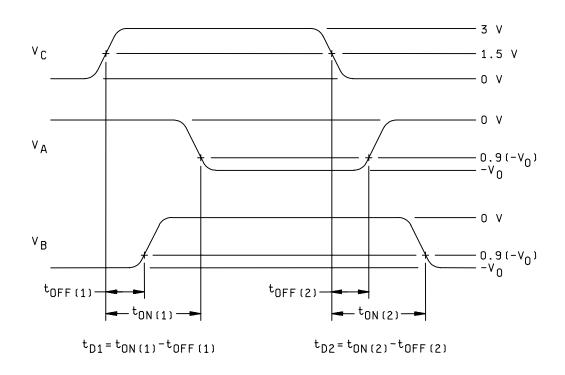


FIGURE 6. Break-before-make test.

NOTES:

- 1. R1 = R2 = 1 k Ω ± 5%. C_{L1} = C_{L2} = (95-200) pF ± 5%, to include test and fixture capacitance.
- 2. Both TD1 and TD2 shall be measured. These measurements shall apply only to device types 05, 06, 07, and 08. See 3.5.1 for switch conditions.
- 3. V_{source} = -7.5 V (for T_{on} and T_{off} Device types 05 and 07). V_{source} = -10.0 V (for T_{on} and T_{off} Device types 06 and 08).
- 4. $V_O = -7.2 \text{ V}$ (device types 05 and 07). $V_O = -9.2 \text{ V}$ (device types 06 and 08).
- 5. The driver pulse generator shall have the following characteristics:
 - a. $V_{gen} = 0 \text{ V to } 3.0 \text{ V}.$
 - b. Rise time $(0.3 \text{ V to } 2.7 \text{ V}) \le 10 \text{ ns.}$
 - c. Fall time (2.7 V to 0.3 V) \leq 10 ns.
- 6. Break-before-make performance: The device types 05, 06, 07 and 08 all operate in the break-before-make mode at room temperature ($25^{\circ} \pm 3^{\circ}C$) and higher (to $125^{\circ} \pm 3^{\circ}C$). Break-before-make performance is defined as a difference between T_{on} and T_{off} of ≥ 5 ns when two switches driven by a common driver are switching a common analog signal. T_{on} and T_{off} are measured as shown in figure 6. Below room temperture, it is possible that under negative analog voltage conditions, break-before-make action may not occur.

FIGURE 6. Break-before-make test - Continued.

TABLE III. Group A inspection for device type 01.

	Unit	/ ⁷ /	\ 2\	υĄ	ν	h	ν	υĄ	ν	۷u	ν	ν	ν	Αų	Υ'n	Υn	, M	mA	"	"	3	n	"	77	'n	/ ⁷ / ₀	\ \ \ \ \
its	Max			_	_	-	_	_	_	1	_	7	7	-0.1	-0.1	10	10	1.5	1.5			4.5	4.5				
Limits	Min	-7.8	-7.8	7	7	7	7	7	7	٠-	7	-5	-5	-250	-250	7	7			ç.	ç			-2.2	-2.2	-8.1	
Measured pin no.		3	4	က	4	င	4	7	12	11	12	က	4	-	41	-	41	9	9	7	7	6	6	80	80	3	,
Relays energized	1	None	ı	77	n	n	u u	я	n	n	u u	Ж К	7	None	ı	u	n	n	n	n	n	n	n	77	33	n	39
	41 N		0.8 V		2.0 V		2.0 V		2.0 V		2.0 V		0.8 V		GND		5.0 V	GND	2.0 \	GND	5.0 V	GND	2.0 \	GND	5.0 V		
	S 13																										
	12 D ₂		-7.5 V		-10 V		-7.5 V		10 \		7.5 V		-7.5 V														1
	٦ 1			-10 V		-7.5 V		10 \		7.5 V		7.5 V														-7.5 V	
	5 S																										_
	໑ >	2.0 V	3	n	3	n	3	3	3	n	3	3	3	,,	3	3	3	n,	3	3	3	n	3	n	3	"	3
mber ₁ -/	∞ ×	GND	3	n	3	n	3	3	3	,,,	3	3	3	n	3	3	3	n	n	n	3	n	n	n	3	"	
Adapter pin number ₁ –	-V _{cc}	-15 V	.15 V	-20 V	-20 V	-15 V	.15 V	-20 V	-20 V	-15 V	.15 V	-15 V	3	,,	3	3	3	n	n	n	3	n	n	3	n	,,,	3
Adap	9													,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3	3	3	n	3	3	3	n	3	3	3	"	33
	NC S																										_
	8 S		-10 mA		10 V		7.5 V		-10 V		-7.5 V		-7.5 V														
	S, 3	10 mA		10 \		7.5 V		-10 V		-7.5 V		-7.5 V														-10 mA	
	2 S	`•								•		_														`.	
	ΕŽ	V 8.0		2.0 V		2.0 V		2.0 V		2.0 V		0.8 V		GND		2.0 V		GND	5.0 V	GND	2.0 V	GND	5.0 V	GND	5.0 V	0.8 V	_
	Test no.	-	2	က	4	2	9	7						13			16										
	Symbol Te	R _{DS}	R _{DS}	S(OFF)	n	n	*	D(OFF)	, n	n	*	(NO)	+1s(on)	1		Ξ	Ξ	8	+ CC	00	8	٦		ο α	: œ	R _{DS}	
	Subgroup	1	T _A =+25°C					_				_				_		_	_		_	_ 7	•	-		. 5.	

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

					r				1								_						r		Г			_
	Unit	u,	3	3	n	3	3	3	n	3	Ą	Ϋ́	Αų	<u>A</u>	mA	mA	mA	mA	mA	mA	mA	mA	101	> 2	hA	ı	3	=
iits	Max	100	n	=	n	n	3	ä	200	200	-0.1	-0.1	20	20	1.5	1.5			4.5	4.5					100	n	3	=
Limits	Min	-100	n	=	n	n	3	ä	-200	-200	-250	-250	-2	-5			-2	ς			-2.2	-2.2	-7.8	-7.8	-100	n	3	=
Measured pin no.		8 4	tσ	4	11	12	7	12	3	4	-	41	1	41	9	9	7	7	6	6	8	80	ဗ	4	ဗ	4	က	4
Relays energized		None "	ä	3	,,	n	n	n	K6	7	None	3	n	n	n n	n	n	n n	я	и	ŋ	n	n	3	n	n	3	=
	<u>4</u> ₹	700	>	2.0 V		2.0 V		2.0 V		0.8 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V		0.8 V		2.0 V		2.0 V
	S 3																											
	12 D ₂		>	7.5 V		10 \		7.5 V		-7.5 V														-7.5 V		-10 V	;	-7.5 V
	7 7	-10 V	7.5 V		10 V		7.5 V		7.5 V														-7.5 V		-10 V		-7.5 V	
	0 Q																											
	o >	2.0°V	3		,,	3	3	ä	'n	3	,,	3	,,	3	3	3	n	3	3	tt.	"	3	n	3	, ,	n	3 :	=
ser ₁₋ /	8 ×		ı,	=	,,	=	3	,	n	31	,	3	,,	3	3	,	n	3	,,	и	,,,	,	, n	=	, ,	ı,	3	=
Adapter pin number ₁ –/			> >	· >	>	>	>	>	>														>	>	>	>	> ;	>
Adapter	۲۸-	'							-15 V	3	3	3	"	3	3	3	n	3	3	n	"	3						
	9 +	10 V	15 V	15 V	10 V	10 V	15 V	15 V	15 V	"	"	3	31	3	3	3	n	3	"	u	"	3	15 V	15 V	10 V	10 V	15 V	15 V
	NC 2																											
	4 %	1 01	2	7.5 V				-7.5 V		-7.5 V														-10 mA		10 \		7.5 \
	လ လွ	10 V	7.5 V	!	-10 V		-7.5 V		-7.5 V														-10 mA		10 V		7.5 V	
	2 S																											
	- <u>⊼</u>	2.0 V	2.0 V	,	2.0 V		2.0 V		0.8 V		GND		2.0 V		GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	0.8 V		2.0 V		2.0 V	
	Test no.	27	29	30	31	32	33	34	35	36	37	38	39	40	4	42	43	44	45	46	47	48	49	20	51	52	53	54
	Symbol	I _{S(OFF)}			D(OFF)				D(ON)	S(ON)		_	Ξ	Ξ	8	<u>8</u> +	-lcc	-lc	_		œ	œ	R _{DS}	R _{DS}	S(OFF)	3	3	=
	Subgroup	2	O CZI+= ∀I		<u> </u>				_					-	_				_ - +				က်	T _A =-56°C			_	

See footnotes at end of table.

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

							- 1						-1		1		7		7		_			T		1			J		1		1
	Unit	ν	3	n	я	75	,,	A.	Ā	Μ	<u>A</u>	mA	n	3	: :	= :	= =	: 3		~ ~ ~ ~ ~	mV _{P-} dB	mV _{p-p}	2 NE	SU	Su	Su	ns	us	я	3 3	: :	3 3	3 3
Limits	Max	100	100	100	100	200	200	- 0.1	-0.1	10	10	2.5	2.5			~ 1	7			88	1.0	3.16	3.16	150	150	130	130	300	300	500	200	150 150	130
Lin	Min	-100	-100	-100	-100	-200	-200	-250	-250	-1	7			8-	-8		0	7 0	-7		90		2	88									
Measured pin no.		11	12	11	12	3	4	-	41	1	14	9	9	7	1	o (6	∞ (8	1, 2	12	11	12	1 to11	14 to 12	1 to 11	14 to 12	1 to11	14 to12	1 to 11	14 to 12	1 to11 14 to12	1 to 11
Relays energized	0	None	n	n	"	K6	K7	None	×	n	3	n	ш	,,	: 3	:		: 3		2 2	K1	K1	조	K4	K5	K4	K5	K4	K5	₹ ?	Ϋ́	<u> </u>	<u>አ</u> አ
	4 N		2.0 V		2.0 V		0.8 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND GND	5.0 V	N 3/	2.0 V		2.0 V		Z		N		Z	-	<u> </u>	Z	2
	NC 13																																
	12 D ₂		10 \		7.5 V		-7.5 V																		OUT		OUT		OUT	Ė	100	DOUT	<u> </u>
	٦ 1	10 V		7.5 V		7.5 V																		OUT		OUT		OUT		OUT	!	OUT	OUT
	0 Q																																
	6 >	5.0 V	3	3	3	n	я	n	3	,,,	3	n	п	"	: :		, ,	: 3		: :	5.0 V	5.0 V	2.0 V	5.0 V	3	31	n	"	n .	3 3	. ;	3 3	3 3
mber ₁ -/	8 > «			3	3	n	я	3	3	"	3	"	n	"	: :	= :	# 1	: 3		3 3	GND	GND		GND		"	u	n	n	3 3	. ;	3 3	3 3
Adapter pin number ₁ –,	7 -V _{cc}	20 V	50 V	15 V	15 \	15 V	15 V	15 V	3	n	3	n	u	n		= ;	: :	: 3		= =	-15 V	-15 V	> 2	-15 V		"	n	"	ı	= =		= =	" "
Adapt										,,	3	,,	п	,,	. :		, ,							15 V		"	u	"	n.	3 3		3 3	2 2
	PC P		_			-	7														11. (ALIT/VIN)	_		100							_		
	4 S 2 Z		-10 V		-7.5 V		-7.5 V													GND	15 V dB _{CT} = -20 log (V _{OLIT} /V _{IN})		/4/ 	- ESI 03 .	Z		Z		z		z	z	2
							-7.													 	$\frac{4}{\text{dB}_{\text{CT}}} =$	/ 1	4 Z										
	ς δ 3	-10		-7.5 V		-7.5 V														OND COND	\4\ \A_0	/ <u>4</u>		Z		Z		Z		Z	:	<u>Z</u>	2
	8°			_				_																									
	LΣ	2.0 V		2.0 V		0.8 V		GND		2.0 V		GND	5.0 V	GND	5.0 V	GND GND	5.0 \	באַ בּי	2.0 v	ි ≧	0.8	2.0 V		Z		Z		Z		Z	:	Z	Z
	Test no.	55	26	22	28	26	09	61	62	63	64	9	99	29	89	69	20	- 6	7.7	74	75	92		78	79	80	81	82	83	84	82	86 87	88
	Symbol	lprofFi				D(ON)	S(ON)	_	_	Ξ	Ξ	8	8	20	00	_	7	œ	~	V _{CTE}	Vcr 2/	OSI	OSI	Ş	ton 77	OFF	OFF	ton	ton	OFF	OFF	to to	OFF
	Subgroup	3	T _A =-55°C									_		_			+			T _A = 25°C	7 25°C			6	$T_A = 2V$ C	>		10	\ = +125°C	+	++7	11 T₄ = -55°C	+

See footnotes at end of table.

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TABLE III. Group A inspection for device type 02.

			1				_				ı —		_		_				_		_				_		1	
	Unit	> > 2 2	ν	3	¥	¥	n	¥	¥	3	"	3	γ'n	<u>4</u>	γ'n	<u>4</u>	ΨW	"	n	n	"	¥	"	3	/ 2 /	\ <u>2</u>	ν	4 4 4
its	Max		-	_	_	_	1	_	_	_	2	7	-0.1	-0.1	10	10	1.5	1.5			4.5	4.5					100	9 6
Limits	Min	-10.75 -10.75	-	7	7	7	-1	7	7	7	-2	-5	-250	-250	-1	7			-2	-5			-2.2	-2.2	-11.50	-11.50	-100	7 -
Measured pin no.	-	ω4	ဗ	4	ო	4	11	12	1	12	3	4	1	4	1	41	9	9	7	7	6	0	8	80	3	4	3	4 κ
Relays energized)	None "	n	n	n	n	n	n	n	n	K6	7	None	n	n	n	n	3	n	n	n	n	n	n	n	3	None	3 3
	4 <u>⊼</u>	0.8 V		2.0 V		2.0 V		2.0 V		2.0 V		0.8 V		GND		2.0 \	GND	5.0 V	GND	5.0 V	GND	2.0 \	GND	5.0 V		0.8 V		2.0 V
	NC 13																											
	12 D ₂	-10 V		-10 V		-10 V		10 \		10 \		-10 V														-10 V		-10 \
	5 1	-10 V	-10 V		-10 V		10 V		10 V		-10 V														-10 V		-10 V	-10 \
	NC 10		_		_						_														_			
		> .		_						_	_	_		_		_	_						_		_		^ ^	
r 1–/	ი >		3	•	3	•	,	•	-	•	,	9	3	3	"	3	•	"	•	3	"	3	•	3	•	3	2.0 V	
equnu	∞ >	GNC GNC	n	3	3	3	n	3	3	3	"	3	"	3	"	3	"	3	"	3	"	3	"	3	"	3	GND	3 3
Adapter pin number ₁ –/	-\- -\-	-15 V -15 V	-20 V	-20 V	-15 V	-15 V	-20 V	-20 V	-15 V	-15 V	-15 V	3	n	3	n	3	n	3	n	3	"	3	"	3	-15 V	-15 V	-20 V	-20 V -15 V
Ad	9 +V _{cc}	15 V 15 V	10 V	10 V	15 V	15 V	10 V	10 V	15 V	15 V	15 V	33	n	3	n	3	"	3	n	n	"	3	"	33	15 V	15 V	10 V	10 V
	NC S																											
	4 S	-10 mA		10 \		10 \		-10 V		-10 V		-10 V														-10 mA		10 \
	လ ကိ	۲	10 V		10 \		-10 V		-10 V		-10 V														-10 mA		10 V	10 \
	NC 2	ì																							`-			
	-Σ	V 8.0	2.0 V		2.0 V		2.0 V		2.0 V		0.8 V		GND		2.0 V		GND	2.0 \	GND	5.0 V	GND	5.0 V	GND	5.0 V	0.8 V		2.0 V	2.0 V
	Test no.	- 2	3	4	2	9	7	∞	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28
	Symbol	R PS	S(OFF)	, a	3	3	D(OFF)	ä	3	3	+(NO)d	S(ON)			Ξ	Ξ	8	8	00	8	7		œ	œ	R _{DS}	R _{DS}	S(OFF)	
	Subgroup	1 T _A =+25°C					_				_				_	_	_	_			- T	-	-	-	2	- _A =+125°C		

See footnotes at end of table.

TABLE III. Group A inspection for device type 02 - Continued.

														_		_		_		_		_								
	Unit	hA	n	•	"	n	з	n	n	γn	, Aj	γn	Μ	ΑW	mA	WA	mA	ΑW	mA	ΑW	mA	/ <u>5</u> /	\ <u>2</u>	۷V	ı	n	я	n	: :	: 3
its	Max	100	n	:	3	"	n	200	200	-0.1	-0.1	20	20	1.5	1.5			4.5	4.5					100	n	n	n	"	3 3	
Limits	Min	-100	"		3	,,	3	-200	-200	-250	-250	-2	-5			-2	-2			-2.2	-2.2	-10.75	-10.75	-100	3	"	3	17	3 3	: :
Measured pin no.		4	**	F	12	7	12	3	4	1	14	1	4	9	9	7	7	6	တ		∞			3	4	က	4	11	15	1.7
Relays energized		None	,,		,	2	2	K6	K7	None	=	n	3	n	ш	n	3	n	я	n	я	n	3	n	3	n	2	"	3 3	: 3
	4 ∏ 2	2.0 V			2.0 V		2.0 V		0.8 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V		0.8 V		2.0 V		2.0 V		2.0 V	2.0 V
	S 13																													
	12 D ₂	-10 V			10 \		10 V		-10 V														-10 V		-10 V		-10 V		10 \	10 V
	14 م			> 01		10 \		-10 V														-10 V		-10 V		-10 V		10 V		>
	N 10																													
	ا 6	2.0 V	,,	_	3	,,	n	,,	а	n	=	,,	3	,,	ıı.	,,	,	,,	3	n	3	,,	3	,,	3	33	3	2.0 V	3 3	: 3
er 1–/	8 ×				_	_		_	,	_	_	_			,	_	_	_						_		_				
dmun ni		GND	,	_	3		3		u	"	3	"	3	n .	11	"	"	"	3	"	3		3			3	3	9		
Adapter pin number ₁	-V _{cc}	-15 V	ć	^ ^?-	-20 \	-15 \	-15 V	-15 V	n	"	3	77	3	ŋ	n	"	3	,,	3	,,	3	-15 V	-15 V	-20 √	-20 V	-15 \	-15 V	-20 V	-20 \	-15 V
Α	6 +V _{cc}	15 V	7.07	10 N	10 \	15 V	15 V	15 V	111	n	=	n	3	ŋ	n	n	3	,,,	3	"	3	15 V	15 V	10 V	10 \	15 V	15 V	10 V	10 ;	15 V
	NC NC																													
	4 S ₂	10 V			-10 \		-10 V		-10 V														-10 mA		10 \		10 \		-10 \	-10 V
	S, 3		7.07	-10 \		-10 V		-10 V														-10 mA		10 V		10 \		-10 V		> OL-
	S ²																													
	ΓŽ			2.0 \		2.0 V		V 8.0		GND		2.0 V		GND	5.0 V	GND	2.0 V	GND	5.0 V	GND	5.0 V	0.8 V		2.0 V		2.0 V		2.0 V		× 0.2
	Test no.	30	Č	3.1	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	20	51	52	53	54	22	26	57 58
	Symbol	I _{S(OFF)}		D(OFF)				D(ON)+	S(ON)	П	_	Ξ	Ξ	00	cc	-lcc	8	-	_	œ	œ	R _{DS}	R _{DS}	S(OFF)		n	n	D(OFF)		
	Subgroup	2	T _A =+125°C					_					_	_		_	-	_ _	7		-	3	T _A =-55°C			_		_		

See footnotes at end of table.

TABLE III. Group A inspection for device type 02 - Continued.

	Unit	4	μ	4	ΑM	4	Ą	Ā		,	u,	,	3	,	3	mV _{p-p}	/p-p	М _{Vp-р} d B	0-0/	mV _{P-P}	ם	su.			_						Ī	3 3
										,	,	•	_	,	_										,							
Limits	Max		200	-0.1		10	19	2.5	2.5			2	7			20	20	1.0	3.16	3.16		250	707	130	25.0	35.0	3 6	007	ZOC	250	707	130
	Min	-200	-200	-250	-250	7	7			φ-	ထု			-5	-5			09		Ĺ	ဂ္ဂ											
Measured pin no.		က	4	-	14	-	14	9	9	7	7	6	6	∞	∞	11	12	12	11	12		1 to11	14 10 12	1 to 11	1 + 10 12	14 to 12	44.44	1 2 1	71 01 41	1 to11	14 10 12	1 to 11 14 to 12
Relays energized)	K6	₹	None	3	n	3	n	×	n	"	n	×	n	×	K2	K3	K1	7	조		ች 7	2	አ 7 4 π	22	ት ሊ ተ	2 2	ζ 7 4 r	S S	₹ 7	2	
	14 IN ₂		0.8 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V		/ <u>8</u> N	2.0 V		2.0 V		2	=	2	=	Ζ	-	3	≥	3	≦	Z
	13 NC																															
	12 D ₂		-10 V																			Ē	5	Ē	5	5	5	<u> </u>	100	<u> </u>	5	TUO
	٦ 1	-10 V																				TU0	!	00	Ę	3	Ē	5	!	- 100		DOOT
	0 S																															
	6 >	5.0 V	3	"	3	"	3	, n	3	n	,,	"	3	n	3	n	n	"	5.0 V	5.0 V		2.0 \		: :	"	3	"	3	: :	: :		: :
/-1 Jaguir	ω > «	GND	n n	n	3	n	3	n	n	n	и	n	3	n	3	"	п	11	GND	GND		GND "	:	: :	"	3	33	3	:	3 3		
Adapter pin number ₁ –′	-V _{cc}	-15 V	-15 V	n	3	n	3	n	3	n	"	n	3	n	3	"	w.	"	-15 V	-15 V		-15 V	:	: :	n	3	3	3	:	= =		3 3
Ada	9	15 V	15 V	n	3	n	3	n	3	n	u	n	3	n	3	"	п	" (N	15 V	15 V	N)	15 \	:	: :	n	3	3	3	: :	3 3		3 3
	S C																	(V _{OUT} /V _{IN})			(VOUT/VIN)											
	8 A		-10 V														GND	$dB_{CT} = -20 \log (V_o)$	1	— ī	o = -20 log	2	2	2	=	2	-	-	2	3	=	Z
	လ လွ	-10 V														GND			/ ₄ NI	<u>_</u>		Z		Z	2	<u></u>	2	<u> </u>		Z		Z
	2 S																															
	- Ā	0.8 V		GND		2.0 \		GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	N 3/		8.0	2.0 V			Z		Z	2	<u></u>	2	<u></u>		Z		<u></u>
	Test no.	29	09	61	62	63	64	65	99	29	89	69	20	71	72		74	75	92			78	6/	80	- 0	200	8 8	0 0 4 r	82	86	/0	88 88 88
	Symbol	l _{D(ON)+}	l _{D(ON)+}	=	_	Ξ	Ξ	8	00	20	CC	_	_	ĸ	œ	V _{сте}	V _{CTE}	Vcr Z /	osi	ISO		Š,	(ON 77	OFF	+ OFF	N E	S.	OFF	OFF	Š,	NO.	OFF
	Subgroup	3	T _A =-55°C					_	_	<u> </u>		_ - Ŧ	-	<u> </u>	-	4	T _A = 25°C	7 T _A = 25°C	<u> </u> - :			0 0 F	ک هک = ۸	>	0	0 1 1 1 N	0 02 1	+	+	11	၂ = -၁၁ ၂ = -۷	٠,

See footnotes at end of table.

TABLE III. Group A inspection for device type 03.

						_																					
	Unit	V ₂ /	\ \ 2	/2/	\ 2	ν	"	n	"	3	¥	¥	n	"	3	¥	"	3	n	3	n	"	"	3	n	Αų	Ą
iits	Max					1	3	3	=	3	3	3	3	"	3	3	=	3	3	3	3	2	7	7	7	-0.1	Ó.
Limits	Min	-7.8	-7.8	-7.8	-7.8	-1	31	3	3	3	3	3	n n	"	"	3	3	3	3	3	3	-5	-5	-5	-5	-250	-250
Measured pin no.		2	က	4	2	2	က	4	2	2	က	4	2	10	11	12	13	10	11	12	13	2	3	4	2	1	4
Relays energized)	None	3	n	я	п	×	n	n	"	n	n	n	n	n	n	n	"	n	n	n	K10	X11	K12	K13	None	я
	4 √ 7	ı		2.0 V	2.0 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			2.0 V	2.0 V		GND
	13 D4				-7.5 V				-10 V				-7.5 V				10 \				7.5 V				-7.5 V		
	12 D ₂			-7.5 V				-10 V				-7.5 V				10 \				7.5 V				-7.5 V			
	2 ع		-7.5 V				-10 \				-7.5 V				10 \				7.5 V				-7.5 V				
	ص 10 م	_				-10 V				-7.5 V				10 V				7.5 V				-7.5 V					
	ი >	>	3	3	3	,	3	n	n		3	n	3	"	3	n	n	3	n	3	3	. ,	n	3	3	"	3
1-/	8 %		3	3	3	,,	3	3	2	3	3		y y	,,	,		2	3	3	3	3	,,	3	3	y y	n	3
Adapter pin number ₁ –,	-V _{CC}		•	3	3	-20 V	3	n n	n	-15 V	3		3	-20 V	3		n	-15 V		3	3	,,	3	3	3	n	3
Adapte		Ė																									
	9	15	3	3	" ∀	10 V	"	"	3	15 V	*	77	,	10 V	33	77	,	15 V	"	3	*	"	"	3	"	ש	"
	S 2			_	-10 mA				10 \				7.5 V				-10 V				-7.5 V				-7.5 V		
	4 %	1		-10 mA				10 V				7.5 V				-10 V				-7.5 V				-7.5 V			
	က တိ		-10 mA				10 \				7.5 V				-10 V				-7.5 V				-7.5 V				
	S 2	-10 mA				10 V				7.5 V				-10 V				-7.5 V				-7.5 V					
	L Ā	2.0 V	2.0 \			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			2.0 V	2.0 V			GND	
	Test no.	_	2	က	4	2	9	7	80	6	10	11	12	13	4	15	16	17	18	19	20	21	22	23	24	25	26
	Symbol	R _{DS}				S(OFF)								D(OFF)								+(NO)d	S(ON)	, a	n	-	=
	Subgroup	-	A =+25°C							_								_								_	_

See footnotes at end of table.

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TABLE III. Group A inspection for device type 03 - Continued.

					_			_	_		_				_								_							_
	Unit	Αų	μĄ	mA	n	3	3	31	n	3	n	/ ² / ₂ /	, ' '2	/ >>	ν	3	3	3	3	3	3	n	3	3	3	3	3	3	3 3	:
Limits	Max	10	10	3	0.1			4.5	4.5						100	n	n	n	3	3	3	ш	"	3	n	31	"	n	3 3	
Lin	Min	١-	-1			5.5-	4			-2.2	-2.2	-8.1		Σ. φ.	-100	3	n	3	3	3	3	n	"	3	n	77	3	3	3 3	
Measured pin no.		ı	14	9	9	2	7	6	6	8	8	2	n •	4 13	2	က	4	2	2	က	4	5	10	1	12	13	10	11	12	13
Relays energized)	None	ű	"	u	n	3	n	и	"	11	, ,	3	: 3	"	n	n	n	n	n	3	и	n	n	n	ä	3	3	3	
	4 <u>N</u>		5.0 V	GND	5.0 V	GND	2.0 \	GND	5.0 V	GND	5.0 V			2.0 <			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 \	0.8 \
	13 D4													-7.5 V				-10 V				-7.5 V				10 \			;	7.5 \
	12 D ₂													V 6.7-			-10 V				-7.5 V				10 \				7.5 V	
	2 - 2											7 5 7	۰ C: /-			-10 V				-7.5 V	_			10 \				7.5 V		_
	10 10											-7.5 V			-10 V				-7.5 V				10 V				7.5 V			
	6 \	2.0 V	TI.	u	и	3	3	,,	u	u	u	, ,	3	: 3		3	3	n	3	3	3	u	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3	3	3	3	3	3 3	
ser 1-/	8 × 8	_	m	3	ıı	3	3	,,	и	3	u.	3 3	-	. 3	3		,		3	3	3	ш	"	3	,	3	3	=	3 3	_
Adapter pin number ₁ -/															>				>				^				>			_
Adapter				"	n	"	3	31	11	"	n	3 3	3	: 3	-20 V	n	п	n	-15 V	3	3	ш	-20 V	3	п	3	-15 V	3	3 3	:
,	9	15 V	n	n	n	,,	3	"	"	n	n	3 3	3	. 3	10 V	n	я	n	15 V	3	3	77	10 V	3	я	3	15 V	u	3 3	:
	S ₄													-10 mA				10 \				7.5 V				-10 V			i	-7.5 V
	4 S													-10 mA			10 V				7.5 \				-10 V				-7.5 V	
	လ လိ											5	A			10 \				7.5 V				-10 \				-7.5 V		
	S, 2											-10 mA			10 V				7.5 V				-10 V				-7.5 V			_
	-Σ	5.0 V		GND	5.0 V	GND	2.0 \	GND	5.0 V	GND	5.0 V	2.0 V	×.0 ×		0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 \		_
	Test no.	27	28	58	30	31	32	33	34	35	36	37	0 0	39 40	41	42	43	44	45	46	47	48	49	20	51	25	53	54	22	99
	Symbol	_=	Iн	8	8	20	8	٦	٦	ď	В	R _{DS}			S(OFF)								D(OFF)	,						
	Subgroup	1	\ =+25°C					7	7	: -	,	2	2,GZL+=		_ -				_								_			

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

											_		_		_		_												
	:	Unit	ν	ν	٩u	ν	Αu	<u>A</u>	Αn	<u>A</u>	mA	mA	mA	шĄ	mA	шĄ	mA	mA	٧2/	\ \ \	/2/	\ \ \ \	ν	3	3	3	3	3	3 3
its	Max		200	200	200	200	-0.1	-0.1	20	20	3	0.1			4.5	4.5							100	3	3	ä	3	3	3 3
Limits	Min		-200	-200	-200	-200	-250	-250	-2	-5			-5.5	4			-2.2	-2.2	-7.8	-7.8	-7.8	-7.8	-100	3	3	3	3	3	3 3
Measured pin no.			2	က	4	5	1	14	1	41	9	9	7	7	6	6	8	80	2	က	4	5	2	ဗ	4	2	2	ဇ	4 r.
Relays energized			K10	7	K12	K13	None	=	n	3	n	n	n	3	n	u	n	3	n	=	3	n	n	n	3	,	2	3	3 3
	14	IN_2			2.0 V	2.0 V		GND		2.0 \	GND	5.0 V	GND	5.0 V	GND	2.0 \	GND	5.0 V			2.0 V	2.0 V			0.8 \	0.8 \			0.8 \
	13	D ₄				-7.5 V																-7.5 V				-10 V			-7.5 V
	12	D_2			-7.5 V																-7.5 V				-10 \				-7.5 V
	1	D_3		-7.5 V																-7.5 V				-10 V				-7.5 V	
	10	D_1	-7.5 V																-7.5 V				-10 V				-7.5 V		
	6	VL	2.0 V	3	3	3	n	3	n	3	n	3	n	3	'n	3	'n	3	5.0 V	3	3	3	n	3	3	n	3	3	3 3
ımber ₁ –/	&	V_R	GND	n	n	3	n	3	,,	3	n	n	n	3	n	ŋ	n	3	GND	3	3	n	n	3	3	я	3	3	3 3
Adapter pin number ₁ –,	7	-Vcc	-15 V	"	3	3	,,	3	,,,	3	, n	n	n	3	n	3	n	3	-15 V	3	3	ä	-20 V	3	ä	3	-15 V	3	3 3
Adap	9				ä	3	n	3	,,	3	n	n	n	3	ņ	3	ņ	3	15 V	3	3	n	10 V	3	3	3	15 V		3 3
	2					-7.5 V																-10 mA				10 \			7.5 V
	4	S_2			-7.5 V																-10 mA	7			10 V				7.5 \
	က	S³		-7.5 V	<u>'</u> -															-10 mA	7			10 \	_			7.5 V	
	2			-2															-10 mA	~			10 V	_			7.5 V		
			_	> (Q		۸۱		Q	>	Q	>	Q	>	Q	>		>			0.8 V	>					
		Ι	2.0 V				GND		2.0 V					5.0 V					2.0 V								0.8 V		
	Test no.		22	28	29	09	61	62	63	64	9	99	29	89	69	70	71	72	73	74	75	9/	77	78	79	80	8	82	83 84 84
	Symbol			ls(on)			۳	_	Ξ	Ξ	8	8	-lcc	00		_	ĸ	œ	R _{DS}				S(OFF)						
	Subgroup		2	T _A =+125°C							_	-			_+	7	F	-	œ.	T _A = -5'5°C		-	_				-		

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 – Continued.

										_				_		_		_				_				_			_
	Unit	P'	=	3	3	3	33	3	3	n	3	3	3	Μ	Α	γn	, AI	mA	mA	Αm	mA	WA	mA	WA	mA	$^{d-d}$ Λ m	'a	3 3	
Limits	Max	100	:	"	3	3	IJ	3	я	200	3	"	n	-0.1	-0.1	10	10	2	1.7			2	7			70	20	50	70
	Min	-100	=	"	3	n	"	n	n	-200	"	"	n	-250	-250	۲-	7			-8.8	-6.4			-5	-5				
Measured pin no.		10	-	12	13	10	7	12	13	2	က	4	2	-	14	1	4	9	9	7	7	6	o	8	∞	10	7	2 5	<u>C</u>
Relays energized		None	=	3	я	u	3	3	ı	K10	7. 7.	K12	K13	None	3	n	ı	n	u u	n	3	n	3	n	3	K2	주 4	χ 2	2
	4 N			0.8 \	0.8 V			0.8 V	0.8 V			2.0 V	2.0 V		GND		5.0 V	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \			რ მ Z Z	ે ા
	13 D4				10 \				7.5 V				-7.5 V																1
	12 D ₂			10 \				7.5 V				-7.5 V																	1
	2 1		10 \				7.5 V				-7.5 V																		1
	<u>0</u> 4					7.5 V				-7.5 V	',																		1
						7.5				-7.																			1
1-/	ი >			3	3	3	3	3	-	•	3	3	3	3	•	"	3	9	3	3	3	"	3	3	3	•	3	3 3	_
equinu u	∞ >			3	3	3	"	"	3	"	"	"	n	n	"	"	3	n	3	"	"	"	3	"	"	"	"	3 3	1
Adapter pin number ₁	-V _{cc}	-20 V	:	3	3	-15 V	3	"	3	"	3	3	3	"	3	n	3	n	3	"	3	"	3	"	3	"	3	3 3	
Υ	9 \	10 V	:	3	3	15 V	3	3	3	IJ	3	3	3	3	u	n	3	n	3	IJ	3	n	3	IJ	3	IJ		3 3	
	S ₄				-10 V				-7.5 V				-7.5 V															2	GIND
	4 S			-10 V				-7.5 V				-7.5 V																GND	
	က တိ		-10 \				-7.5 V				-7.5 V																GND		1
	S, 2					-7.5 V				-7.5 V	_															GND			1
	LΣ	0.8 V	0.8 \				0.8 V			2.0 V	2.0 V			GND		2.0 V		GND	2.0 V	GND	2.0 V	GND	2.0 V	GND	2.0 V	IN 3/	/ 임 임		1
	Test no.	85		87	88				92			92	96	97	86	66												- 5	711
	Symbol	Ір(оғғ)								+(NO)	S(ON)		я			Ξ	Ξ	8	8	-lcc	00	7	_	œ	œ	VcTE			
	Subgroup	က	T _A = -55°C											_	_			_				_∓	-	:	-	4,	T _A =+25°C		

See footnotes at end of table.

TABLE III. Group A inspection for device type 03 - Continued.

		Unit	mV _{p-p}	mV _{p-p}	dB	mV_{p-p}		3	3	dB	us	3	3	3	su	3	3	3	,,,	77	n	ш	y.	3	3	а	"	3	3	3	"	3	3	a a
its	Max		1.0	1.0		3.16	3.16	3.16	3.16		150	150	150	150	130	130	130	130	300	300	300	300	200	200	200	200	150	150	150	150	130	130	130	130
Limits	Min				90					50																								
Measured pin no.			12 or 13	10 or 11		10	11	12	13		2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13
Relays energized)		Σ:	조		K1	조	조	조		K6	% %	8 8	Κ7	K6	8X	8 8	Κ7	K6	8 8	Х	K7	Ye	Х 8	8 8	K7	K6	% %	8 8	Κ7	K6	8 8 8	8 9	Υ
	14	IN_2		2.0 V				0.8 V	0.8 V				Z	Z			Z	Z			Z	Z			Z	Z			Z	Z			Z	Z
	13	D4												DQ.				OUT				OUT				OUT				OUT				5
	12	D_2											OUT				OUT				DUT				OUT				OUT				OUT	
	11	ص										OUT				OUT				OUT TO				DQ T				OUT				5		
	10	D,									OUT				OUT				OUT				DOT				OUT				OUT			
	6	۸	5.0 V	2.0 \		5.0 V	'n	n	3	и	5.0 V	3	n	3	n	3	3	3	,,	ņ	3	n	n	3	=	11	n	3	n	3	n	ņ	3	3
umber ₁ -/	8	VR	GND	GND		GND	3	3	3		GND	3	3	3	"	3	3	3	"	3	3	a	3	3	3	п	"	3	3	3	"	3	3	3
Adapter pin number ₁ –′	7	-Vcc	-15 V	-15 V	UT/VIN)	-15 V	=	3	3	UT/VIN)	-15 V	3	3	3	"	3	3	3	n	3	3	п	3	3	3	"	"	3	3	3	"	3	3	ņ
Ada	9		15 \		= -20 log (V_{\odot}				3	$dB_{JSO} = -20 \log (V_{OUT}/V_{IN})$	15 V	n	n	3	n	3	3	3	"	ņ	n	n	ŋ	3	3	11	n	n	n	3	n	×	n	3
	2	S ₄		⁄ 9	$dB_{CT} = -1$				Z 4ı	$dB_{JSO} = -$,,			Z				Z				N				N				Z				Z
	4	S_2		⁄о _І				/4 NI					z				Z				Z				Z				z				Z	
	3	S³	2				/4 N	ļ.				Z				Z				Z				Z			Z	Z				Z		
	2	S,	2			/ 7 NI					Z				Z				Z				Z				Z				Z			
	1	ľ	2.0 V			0.8 V	0.8 V				Z	Z			Z	Z			Z	Z			Z	Z			Z	Z			Z	Z		
	Test no.		113	4 4		115	116	117	118		119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142
	Symbol		Vcr 2/	Vc⊤ Z /		OSI					ton				OFF				ton				OFF				ton				OFF			
	horparo (=+25°C						>	6	=+25°C							10	=+125°C							14	=-55°C						

t See footnotes at end of table.

TABLE III. Group A inspection for device type 04

					_																							
	Unit	\ \ \ \ \ \ \ \ \ \	> >	i /3	ν	3	3	3	3	3	3	3	n	3	3	3	3	3	3	3	ŋ	3	3	я	Υ'n	, Aj	Υ'n	. A
its	Мах				1	3	3	3	3	ı	n	n	n	"	n	3	"	31	ı	ä	2	2	2	2	-0.1	-0.1	10	10
Limits	Min	-10.75	-10.75	-10.75	-	y y	3	3	3	n	n	3	n	3	3	n	n	3	3	u u	-2	-5	-5	-5	-250	-250	-1	7
Measured pin no.	-	3 2) 4	2	2	3	4	2	2	က	4	2	10	1	12	13	10	11	12	13	7	က	4	2	-	41	1	41
Relays energized)	None "	n	31	n	n	3	n	33	3	n	3	n	3	3	n	3	3	3	3	K10	K11	K12	K13	None	3	n	n
	4 √	ı	2.0 V	2.0 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			2.0 V	2.0 V		GND		5.0 V
	13 D4			-10 V				-10 V				-10 V				10 \				10 V				-10 V				
	12 D ₂		-10 V				-10 V				-10 V				10 \				10 \				-10 V					
	11 D ₃	701-	> 2			-10 V				-10 V				10 \	,			10 \				-10 V						
	10 10	-10 V			-10 V				-10 V				10 V				10 \				-10 V							
	6 \	5.0 V	3	3	n	3	n	n	3	3	n	3	n	я	3	n	3	3	"	ä	n	n	×	n	n	3	n	n
1-/	8 ×	GND "	3	3	"	3	3	3	n	3	n	3	n	31	3	3	3	3	3	3	"	3	3	3	n	3	n	3
Adapter pin number 1–	-V _{cc}	-15 V "	n	3	-20 V	n	з	9	-15 V	3	я	7	-20 V	3	3	,	-15 V	3	3	3	n	n	3	n	,,	=	,,,	n
Ada	9 1+	15 V	3	3	10 V	n	n	n	15 V		n	"	10 V	3	"	,	15 V		"	3	n	n	×	n	n	3	n	n
	S ₄			-10 mA	"			10 \				10 \				-10 V				-10 V				-10 V				
	4 S	ı	-10 mA				10 V				10 \	,			-10 V				-10 V				-10 V					
	က တိ	-10 m				10 \				10 \				-10 \				-10 V				-10 V						
	s s				10 V				10 V				-10 V				-10 V				-10 V							
	LΣ		>		0.8 V	0.8 V			0.8 \	0.8 V			0.8 V	0.8 \			0.8 V	0.8 \			2.0 V	2.0 V			GND		2.0 V	
	Test no.	- 0	и e:) 4	2	9	7	80	6	10	7	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Symbol	R _{DS}			S(OFF)								D(OFF)								+(NO)d	(NO)S	3	n	-1	_	Ξ	Ξ
	lbgroup	1.25.0	0 0 0		<u> </u>				_				<u> </u>				_								_	_	<u> </u>	

TABLE III. Group A inspection for device type 04 - Continued.

							_								_															
		Onit	Αm	"	n	n	ŋ	n	n	n	\ 	/s 	/2 /2/	\ \	υĄ	n	n	3	3	3	¥	ä	n	n	n	n	n	3	3	¥
iits	Max		3	0.1			4.5	4.5							100	"	u u	3	3	3	3	3	n	3	3	3	u u	3	3	3
Limits	Min				-5.5	4			-2.2	-2.2	-11.50	-11.50	-11.50	-11.50	-100	"	u u	3	3	3	3	3	n	3	3	3	u u	3	3	3
Measured pin no.			9	9	7	7	6	6	8	80	2	က	4	5	2	က	4	2	2	က	4	5	10	1	12	13	10	1	12	13
Relays energized			None	ä	,,,	n	"	n	n	n	n	я	n	n	n	n	n	n n	n	3	3	3	"	n	3	3	n	n	ä	"
	41	\mathbb{N}_2	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V			2.0 V	2.0 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 V			0.8 V	0.8 \
	13	D ₄												-10 V				-10 V				-10 V				10 \				10 \
	12	D_2											-10 V				-10 V				-10 V				10 \				10 V	
	7	D_3										-10 V				-10 V				-10 V				10 \				10 V		
	10	D1									-10 V				-10 V				-10 V				10 V				10 V			
	6 ;	۸	2.0 V	3	"	3	,,	3	3	3	3	,,	n	3	y y	3	3	3	3	3	'n	3	n	z	,,	3	3	3	3	3
lber ₁ -/	ω ₂				,,	ņ	,,	ņ	,,	ņ	ņ	,,	n	ņ	ņ	'n	ņ	3	3	,,	,,	ņ	"	ņ	n	ņ	ņ	3	3	3
Adapter pin number ₁ –															> (>		_		-20 V		_		-15 V		_	
Adapter			7 -15 V		"	,,	"	3	"	3	•	7	3	77	/ -20 V	3	3		/ -15 V		3	3			3	"			3	"
	9 ;	+\ ⁰	15 \	"	n	'n	"	m	"	'n	n		3	; √	10 V	3	n	3	15 V	3	3	,,	10 V	3	3	,	15 V	3	3	3
	20	S												-10 mA	n			10 \				10 \				-10 V				-10 V
	4 (S_2											-10 mA				10 V				10 V				-10 V				-10 V	
	ო (S_3										-10 mA				10 \				10 \				-10 \				-10 V		
	7 0	S ₁									-10 mA				10 V				10 \				-10 V				-10 V			
	- :	ΙΝ ¹	GND	2.0 \	GND	5.0 V	GND	5.0 V	GND	5.0 V	2.0 V	2.0 V			0.8 V	0.8 \			0.8 \	0.8 \			0.8 V	0.8 \			0.8 V	0.8 V		
	Test no.		29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	20	51	52	53	54	22	26
	Symbol		+loc	□ +	00	8	_		α.	: œ	R _{DS}				S(OFF)								D(OFF)							
	Subgroup		1	A =+25°C	<u> </u>		<u> </u>		-		2	=+125°C		-	<u> </u> -				_				<u> </u>				_			

See footnotes at end of table.

TABLE III. Group A inspection for device type 04 - Continued.

							_		_		_		_		_							_								
	.: 	Onit	Ρ	ν	٩	υĄ	Μ	Ą	Υ'n	Ą	mA	mA	mA	mA	mA	mA	mA	mA	/ 2 ×	/ -	/ ₂	\ 2/	hu	3	3	3	3	3	3	3
Limits	Max		200	200	200	200	-0.1	-0.1	20	20	3	0.1			4.5	4.5							100	3	3	3	3	3	3	3
Lin	Min		-200	-200	-200	-200	-250	-250	-2	-5			-5.5	4			-2.2	-2.2	-10.75	-10.75	-10.75	-10.75	-100	3	n	n	3	n	"	3
Measured pin no.			2	က	4	2	1	14	-	14	9	9	7	7	6	o	8	œ	2	m ·	4	5	2	က	4	2	2	က	4	2
Relays energized)		K10	7	K12	K13	None	11	n	11	n	я	n	я	я	я	n	я	n	:	3 :	n	n	3	n	n	31	n	я	я
	4 :	\mathbb{N}_2			2.0 V	2.0 V		GND		2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \			2.0 \	2.0 V			0.8 \	0.8 \			0.8 V	0.8 \
	13	D_4				-10 V																-10 V				-10 V				-10 V
	17	D_2			-10 V																-10 \				-10 \				-10 V	
	7	D_3		-10 V															7	-10 V				-10 V				-10 V		
	10	D1	-10 V																-10 V				-10 V				-10 V			
	6)	۸	2.0 \	3	3	3	,,,	3	n	3	,,	3	n	3	n	3	,,	3	2.0 V		3 :	m,		3	3	3	3	3	3	"
nber ₁ -/	8 >		_	7	3	3	,,,	3	3	3	n	3	3	3	,,,	3	,,	3	GND .		3 :	"	n	3	n	3	3	3	3	3
Adapter pin number 1–	,		-15 \ (3	3	3	,,	3	n	=	,,	3	,,	,,	,,	3	n	,,	-15 V (3 :	,,	-20 V	3	,	=	-15 V	3	3	3
Adapte		_																												
	9		15 V	3	3	*	,,	3	n	3	n	3	n	"	,,	3	"	"	15 V			" Yu	10 V	3	77	,	15 V	3	3	*
	ر د	S ₄			_	-10																-10 mA	n		_	10 \				10 \
	4 (S_2			-10 V																-10 mA				10 \				10 V	
	ო (Š		-10 \															,	-10 mA				10 \				10 \		
	~ 0	S ₁	-10 V																-10 mA				٨ ٥١				10 V			
	- 3	IN_1	2.0 V	2.0 \			GND		5.0 V		GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \	2.0 V	2.0 \			0.8 V	0.8 \			0.8 V	0.8 \		
	Test no.		22	28	29	09	61	62	63	64	65	99	29	89	69	20	7.1	72	73	74	75	92	77	78	79	80	81	82	83	84
	Symbol		l _{D(ON)+}				II.	2	Ξ	Ξ	8	8	-lcc	00	٦	١	ď	α	R _{DS}				S(OFF)							
	Subgroup		2	T _A =+125°C					l		_	_			_∓	7	:	-	3/	T _A = -55°C			_				-			

See footnotes at end of table.

TABLE III. Group A inspection for device type 04 - Continued.

	Unit	υĄ	•	•		*	,			,			n n	۷	Α	۷	Ą	⋖	₹	Ā	mA	mA	₹	Ā	mA
				_	_	_	_	_	_		_	_								ш	Ε	ш	Ε	ш	=
Limits	Max	100		"	"	"	n	3	"	200		3	n	-0.1		10	10	2	1.7	_		7	7		
	Min	-100	3	3	3	"	"	3	"	-200	3	3	3	-250	-250	-	7			-8.8	-6.4			-5	-5
Measured pin no.	-	10	7	12	13	10	11	12	13	2	က	4	2	τ-	14	τ-	14	9	9	7	7	6	6	80	∞
Relays energized)	None	3	3	n	n	3	3	3	K10	7 11	K12	K13	None	3	n	3	n	3	n	3	n	3	n	3
	14 IN ₂			0.8 V	0.8 V			0.8 V	0.8 V			2.0 V	2.0 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V
	13 D4				10 V				10 V				-10 V												
	12 D ₂			10 \				10 \				-10 V													
	٦ ٦		10 \				10 V				-10 V														
	10 D1	10 V				10 \				-10 V															
	6 >	5.0 V	3	3	3	3	3	3	"	n	3	3	n	33	n n	33	3	n	3	n	з	"	3	"	3
umber 1-/	8 ×	GND	"	"	n	n	n	3	n	n	ä	3	я	"	3	"	"	n	3	n	n	n	3	n	3
Adapter pin number ₁ –	-V _{cc}	-20 V	3	3	3	-15 V	3	3	ņ	n	3	3	n	"	ņ	"	n	n	3	n	n	n	3	.,,	3
Ada	9	10 V	n	'n		15 V		3	¥	n	3	n n	n	"	n	"	3	n	3	n	n	n	3	n	3
	S ₄				-10 V				-10 V				-10 V												
	8 A			-10 V				-10 V				-10 V													
	က ကိ		-10 \				-10 V				-10 V														
	S, 2	-10 V				-10 V				-10 V															
	- Ā	0.8 V	0.8 V			0.8 \	0.8 V			2.0 V	2.0 V			GND		5.0 V		GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	2.0 \
	Test no.	85	98	87	88	88	06	91	92	93	94	92	96	26	86	66	100	101	102	103	104	105	106	107	108
	Symbol	Ів(оғғ)								D(ON)+	S(ON)	;;;;	я	_		Ξ	Ξ	8	8	-lcc	8	_		~	. 0
	Subgroup	3	T _A = -55°C							<u> </u>				_	-			_				_+	-	:	•

TABLE III. Group A inspection for device type 04 - Continued.

												г			T T			1			_			_		
	Unit	^{d-d} ∧̃w	3 3	d-d∕Vm	dB B	^{d-d} ∧m	3 3	. e	su.		n	n	n	3 3	n		3 3	n	3 3	: 3	"	n	н :	"	3 3	3 3
Limits	Мах	20 20	20	1.0	?	3.16	3.16	3.16	250	250	250	130	130	130 130	350		3 3	200	3 3	. 3	250	n	= :	n	130	3 3
Lin	Min				09			20																		
Measured pin no.		10 11	13	12 or 13	5	11	7 5	5	2 to 10	3 to 11 4 to 12	5 to 13	2 to 10	3 to 11	4 to 12 5 to 13	2 to 10	3 to 11	4 to 12 5 to 13	2 to 10	3 to 11	4 to 12	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10 3 to 11	4 to 12
Relays energized		X X	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	조조	:	조조	∑3	\ <u>\</u>	8 K	× ×	2 \	K6	8 8	& ₹	K6	X 82	& ₹	У	8	₹ \$. Ye	8 8	8 8	K7	8 X	201
	14 IN ₂		ଲାଲା ଅଅ	207	· i		0.8 \	0.8		Z	Z			ZZ			ZΖ			ZZ			Z	Z		Z
	13 D4										OUT			DUT			OUT			E	5			OUT		<u>+</u>
	12 D ₂									Ė	-			DOL			OUT		į	00			OUT			OUT
	11 D ₃								Ė	5			OUT		!	OUT			OUT			OUT			TIO	
	10 D ₁								OUT			OUT			OUT			OUT			DUT				DOC	
	6 ا	2.0 V	3 3	, ,	3	2.0 V		: 3	2.0 V	. 3	3	n	3	3 3	з :	:	3 3	"	3 :	: 3	3	3	3 :	"	3 3	3 3
mber ₁ _/	8 V _R	gwp gwb	3 3	, ,		GND "	3 3		GND		n	n	3	3 3	,		3 3	n	3 3	: 3	"	з	3 :	,		3 3
Adapter pin number ₁ –/	7 -Vcc	-15 V "-	3 3	, ,	(NI V)	-15 V	= =	- (N/L)	-15 V	, 3	n	n	3	3 3	я :		= =	n	3 3	: :	3	3	3 :	3	= =	3 3
Adap	6 +V _{cc}		а а	, ,	$dB_{CT} = -20 \log (V_{OUT}/V_{IN})$. 15 V	3	-20 log (V _{OUT} /V _{IN}	15.V		3	n	ņ	3 3	3 1		3 3	n	3 3	: :	3	u	3 :	T T	= =	3 3
	5 S ₄ +		GND	/9	<u>≅</u> IB _{CT} = -2(-	$dB_{ISO} = -20$			Z			Z			Z			2	<u> </u>		-	Z		3
	4 S ₂		GND	/9			- A N	≥ o		2				Z			 Z			 Z			Z			z
	3 S ₃	GND		<u>2</u> /		/ _A N							z			 Z			Z		z	z			Z	
		_								_			_		Z				_		Z					
	2 S ₁			/ <u>2</u>		/ 4 //			Z			Z			=			Z			=				Z	
	- <u>⊼</u>	/સ N N)	2.0 V		0.8 V 0.8 V			Z 2	≧		Z	Z		Z	<u>z</u>		Z	Z		Z	Z			ZZ	:
	Test no.	109	111	113	· ·	115 116	117	2118	119	120	122	123	124	125	127	128	129 130	131	132	133	135	136	137	138	139	. 4 4
	Symbol	N _{CTE}	3 3	/2 12/ /2 12/	<u> </u>	OSI			ton			OFF			ton			OFF			ţ	;			OFF	
	Subgroup	4 = +25°C		7	000			>	6	\ =+25°C					16	=+125°C					1,1	. _A =-55°C		1		

t See footnotes at end of table.

TABLE III. Group A inspection for device type 05.

	::	ODIE	/2/	\ 2/	ν	3	n	3	n	n	3	3	n	3	Υn	. A.	mA	n	n	п	n	3	n	n	/2/	\ 	hA	٩u	ν	۷
its	Max				_	3	ı	3	n	3	3	3	2	2	-0.1	10	0.8	0.8			3.2	3.2					100	100	100	2
Limits	Min		-7.8	-7.8	-1	3	n	3	n	3	3	3	-5	-5	-250	7			က္	-3			-2.2	-2.2	-8.1	-8.1	-100	-100	-100	5
Measured pin no.			4	ო	က	4	ო	4	11	12	7	12	4	ო	-	_	9	9	7	7	6	o	8	œ	4	က	3	4	ღ	
Relays energized			None	3	я	3	n	3	n	3	3	3	K7	У	None	3	я	n	n	п	n	n	n	n	n	3	"	3	ı	"
	14																													
	13																													_
	17	D ₂	-7.5 \			-10 \		-7.5 V		10 \		7.5 V	-7.5 V												-7.5 V			-10 \		1
	Ξ.α	<u>ر</u>		-7.5 V	-10 V		-7.5 V		10 V		7.5 V			-7.5 V												-7.5 V	-10 V		-7.5 V	
	10																													
	6 >	۸۲	2.0 \	3	n	3	3	3	n	3	3	3	n	3	n	3	n	3	n	"	n	3	,,,	3	n	ı	31	"	3	
nber 1–/	∞ <u>></u>	1			"	3	3	3	n	3	3	3	"	3	'n	3	"	ä	n	"	ŋ	3	"	ä	n	3	,,,	3	3	
Adapter pin number 1–1	2	-Vcc	15 V	15 V	20 V	20 V	15 V	-15 V	20 V	20 V	15 V	15 V	-15 V	3	n	3	, n	3	y,	ш	n	3	,,,	3	-15 V	15 V	20 V	20 \	-15 V	
Adapt	9							15 \ -'				15 \	15 V		n	3	,,	,	, n	"	n	3	,,	3		15 \			15 \	
	2	+	~	~	7	<u>~</u>	~	~	Ŧ	<u>~</u>	~	~	1												1,	~	1	<u>~</u>	~	-
	4 (52	-10 mA			10 \		7.5 V		-10 V		-7.5 V	-7.5 V												-10 mA			10 V		1
	e (1		-10 mA	10 V		7.5 V		-10 V		-7.5 V		-7	-7.5 V			_		_							10 mA	10 V		7.5 V	1
	2	,,		-10	1(7.5		7		-7.			-7.												-10	1		7.5	_
		,	>	>	>	>	>	>	>	>	>	>	>	>	Ω	>	Ω	>		^		>		>	^	>	^	>	>	-
	- 1	≤	0.8 \	2.0	0.8	2.0	0.8	2.0 V	0.8	2.0	0.8	2.0	0.8	2.0 V	GN GN	5.0 V	S	2.0	S	2.0	S	5.0 V	B	2.0	0.8	2.0	0.8	2.0	0.8 V	(
	Test no.		-	7	3	4	2	9	7	∞	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	c
	Symbol		R _{DS}	R _{DS}	S(OFF)		3	3	D(OFF)	, a	3	3	+(NO)d	S(ON)	1	Ξ	8	8	8	CC	٦		œ	· œ	R _{DS}	R _{DS}	S(OFF)		3	"
	Subgroup		_	=+25°C	I				_				_		ı		_	_	_	_	- +	-	-		2	=+125°C			-	

See footnotes at end of table.

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

					_		_				_			_	_		1		_				_				_	
	Unit	٩u	: 3	3	"	я	Αų	ΑŢ	mA	mA	Αm	mA	mA	mA	mA	mA	٧2/	\ 	hA	3	3	3	n	3	3	я	33	3
Limits	Max	100	: 3	я	200	200	-0.1	20	8.0	8.0			3.2	3.2					100	3	3	я	n	n	n	я	200	200
	Min	-100	. 3	ä	-200	-200	-250	-5			6-	-3			-2.2	-2.2	-7.8	-7.8	-100	3	"	y	n	"	"	n	-200	-200
Measured pin no.	_	1.	7.5	- 2	4	က	1	_	9	9	7	7	6	6	8	80	4	ო	3	4	ო	4	11	12	7	12	4	က
Relays energized	•	None	: 3	3	K7	K6	None	71	"	3	"	а	"	ű	n	n	n	3	n	ä	"	n	n	ä	n	21	K7	K6
	14																											
	13																											
	12 D ₂	1	10 \	7.5 V	-7.5 V												-7.5 V			-10 V		-7.5 V		10 V		7.5 V	∆ 5′ <i>L</i> -	
	<u>5</u> 7	10 V	7 2 7	\ c. /		-7.5 V												-7.5 V	-10 V		-7.5 V		10 V		7.5 V			-7.5 V
	10																											
	6 >	2.0 V	. 4	3	"	3	n	3	n	n	n	и	n	"	,,,	3	y	3	"	3	n	3	n	n	n	я	"	3
mber ₁₋ /	8 > ^α	GND	: :	n	"	3	n	3	n	3	n	ш	n	ii.	n	3	n	3	,,	3	31	3	n	3	n	3	"	3
Adapter pin number ₁ –/	-\ -\ -\	-20 V	-20 V	-15 V	31	n	,,	n n	31	'n	n	u	31	n	,,	3	n n	n	-20 V	-20 V	-15 V	-15 V	-20 V	-20 V	-15 V	-15 V	-15 V	-15 V
Ada	9	1	70 /	15 V	n	3	n	3	n	"	n	щ	n	11	n	3	'n	3	10 V	10 \	15 V	15 V	10 V	10 V	15 V	15 V	15 V	15 V
	2																											
	4 %		-10 V	.7.5 V	-7.5 V												-10 mA			10 \		7.5 V		-10 V		-7.5 V	.7.5 V	
	လ လိ	>	7 2 7			-7.5 V												-10 mA	10 V		7.5 V		-10 V		-7.5 V			-7.5 V
	2			·														1										_
	- ≥	0.8 V	> 0.2	2.0 \	0.8 V	2.0 V	GND	2.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V
	Test no.			32																								
	Symbol	Ір(о́гг)		я	NOO	(NO)S	1	Ξ	ಶ	ಕ	-lcc	SS	_	٦	œ	œ	R _{DS}	R _{DS}	S(OFF)	ä	31	3	D(OFF)	İ	3	3	D(ON	S(ON)
	ubgroup	2	=+125°C							_	_		- ∓	7		-	3.	A =-55°C		٠ -	-		-				-	

See footnotes at end of table.

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

							T		1			0	0				1												
	C	Υī	<u>A</u>	mA	11	, ,	n	n	n	3	mV _{p-p}	mV _{P-F}	mV _{p-p}	В	mV _{p-f}	ج چ	ns.	3	JJ	n	n	3	n	3	n	n	n	n	3 3
Limits	Max	-0.1	10	1.4	1.4		ĸ	2			20	20	1.0		3.16	3.16	150	150	130	130	300	300	200	200	150	150	130	130	
ıj.	Min	-250	7			4.8	ř		-5	-5				09		50	9												5
Measured pin no.	-	-	_	9	9	7	- σ	ာတ	8	∞	11	12	12		12	7	11	12	11	12	11	12	11	12	11	12	11	12	11
Relays energized)	None	я	я :	n	3 3	я	3	ŋ	3	K 2	K3	조		조	조	7	2	Х	K 5	4	K 5	Х	χ 5	4 4	K5	4	K5	K4, K8 K4, K8
	41																												
	13																												
	12 D ₂																	OUT		OUT		OUT		OUT		OUT		OUT	
	٦ 1																DUT		OUT		OUT		OUT		OUT		OUT		
	10																												
	6 >	2.0 V	я	я :	m,	" "	n	n n	n	3	,,	y,	2.0 \	3	5.0 V	2.0 \	5.0 V		n	n	n	3	n	3	n	n	n	п	3 3
umber ₁ –/	ω > _α			n	,,	3 3	"	ä	n	'n	y	ņ	GND		GND	GND	GND] =	n	я	"	n	n	n	n	п	"	п	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Adapter pin number ₁ –′	-V _{cc}	-15 V	ä	я :	n,	n n	"	ä	n	3	3	ij	-15 V	(NIV)	-15 V	-15 V	-15 V) =	n,	з	n	3	n	ı	n	n	n	п	, ,
Ada	9 14	15 V	3	я :	,,	" "	33	3	"	*	3	n,	15 V	r = -20 log (V _{OUT} /V _{IN})	15 V	15 V -15 V -20 log (Volt7/Viv.)	15 \		, n	3		3	n	"		ш	,,	щ	n,
	2													$dB_{CT} = -\frac{1}{2}$		_ = 280 - = 280 - = 2	2							n				u	
	4 S ₂											GND		_	/ 4 /	_		Z		Z		Z		Z		Z		N	ZZ
	S, 3										GND		N 4 ≥			Z 4l	z		Z		Z		Z		Z		Z		ZZ
	2																												
	- ≧	QNS	V 0.	QNS	.0 V	ONS		> 0	QNS	> 0.	13/	13/	\ O.		2.0 V	> 8:	z		n	3	n	3	n	3	n	и	n	u	, ,
	Test no.	22	28	29	9	61	63	64	9	99	29	68	69		70	71	72	73	74	75	92	77	78	79	80	81	82	83	84 85
	Symbol	4	≖	8	20	20	ပ္ပ -		œ	œ	V _{сте}	V _{СТЕ}	VcT 72/		OSI	OSI		<u>Ş</u> Ş						OFF	ton	ton	OFF		t _{D1} t _{D2}
	ubgroup	3	C=-55°C				-	+ +	-	-	4-	= +25°C	<u>'</u>	=+\$5°C			6	4 =+26°C	>	>	10	=+125°C	+	+	11	J55°C	+	+	12 _A =25°C

t See footnotes at end of table.

TABLE III. Group A inspection for device type 06.

		1										_				_				_				_		_	_
	Unit	\ \ <u>\</u>	V <u>2</u> /	ν	ŋ	n	3	n	,,	"	3	n	3	Αų	<u>A</u>	mA	n	y	3	n	n	n	3	/Z /	<u> </u>	ν	۵۵
its	Max			1	3	3	3	n	3	3	3	2	7	-0.1	10	8.0	0.8			3.2	3.2					100	5
Limits	Min	-10.75	-10.75	-1	3	n	77	n	77	3	3	-2	-5	-250	7			-3	ကု			-2.2	-2.2	-11.50	-11.50	-100	5
Measured pin no.		4	3	3	4	3	4	11	12	11	12	4	3	1	_	9	9	7	7	6	6	8	80	4	3	3	•
Relays	ı	None		"	3	я	я	я	3	3	я	K7	Ж 6	None	3	n	я	n	я	n	я	n	я	n	я	n	39
	14																										
	13																										_
	15 D ₂	-10 V			-10 \		-10 V		10 \		10 \	-10 V												-10 V			
	٦ 1		-10 V	-10 V		-10 V		10 V		10 V			-10 V												-10 V	-10 V	
	10																										
	6 >	2.0 V		"	3	я	3	n	3	3	3	n	3	n	3	"	3	n	3	n	n	n	3	n	"	,,,	
1–1 1–1	8 ×	GND		n	я	з	3	n	3	3	3	n	3	n	3	n	3	n	3	n	3	n	3	n	n	n	
Adapter piir indringer 1-	-\ -\ -\	-15 V	-15 V	-20 V	-20 V	-15 V	-15 V	-20 V	-20 V	-15 V	-15 V	-15 V	3	"	3	"	3	n	3	n	3	n	3	-15 V	-15 V	-20 V	
Y	9 1	15 V	15 V	10 V	10 V	15 V	15 V	10 V	10 V	15 V	15 V	15 V	я	n	3	,,	n	n	я	n	n	n	3	15 V	15 V	10 V	
	2																										_
	4 S	-10 mA			10 \		10 \		-10 V		-10 V	-10 V												-10 mA			
	ر ج ع		-10 mA	10 V		10 \		-10 V		-10 \			-10 \												-10 mA	10 V	_
	2																										_
	- ≧	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	GND	2.0 \	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	0.8 V	2.0 V	0.8 V	
	Test no.	- 1	2	3	4	2	9	7	œ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	0
	Symbol	R _{DS}	R_{DS}	S(OFF)	, a	n	3	D(OFF)		3	3	+(NO)D	S(ON)	II.	Ξ	8	8	00	8	_		œ	œ	R _{DS}	R _{DS}	S(OFF)	
	Subgroup	1	T _A = 25°C					<u> </u>				_				_	_	_		_∓	-	<u> </u>		2	. =125°C		_

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 - Continued.

								_				_		_		_		_		_						_			
	Unit	ν	3	n	¥	"	3	y	n	Αų	Ą	μA	3	n	3	y	31	y	"	V <u>2</u> /	V <u>2</u> /	hA	3	n	3	y	u	3	n
Limits	Max	100	n	n	3	33	3	200	200	-0.1	20	8.0	0.8			3.2	3.2					100	31	3	n	n	33	3	ш
Lin	Min	-100	n	n	3	n	n	-200	-200	-250	-5			6-	ဇှ			-2.2	-2.2	-10.75	-10.75	-100	"	u	n	n	n	3	n
Measured pin no.		3	4	11	12	1	12	4	3	1	1	9	9	7	7	6	6	8	80	4	3	3	4	က	4	11	12	1	12
Relays energized		None	n n	"	"	3	3	K7	K6	None	3	n	n n	n	n	n	n n	n	3	n		n	3	"	n	n	n n	3	и
	14																												
	13																												
	15 D°	7	-10 V		10 \		10 \	-10 V															-10 V		-10 V		10 \		10 V
	7 7	-10 V		10 V		10 V	,		-10 V													-10 V		-10 V		10 V		10 V	
	10																												
	6 >	5.0 V	ä	'n	3	3	n	y	n	n	ä	,,	3	"	3	y	3	,,	"	,,	u	"	3	3	3	n	31	ä	я
ıber ₁ –/	8 >			,,,	,	3	ņ	, ,	ш	n	ņ	,,	3	,,	3	, ,	3	,,	3	,,	n	"	3	,	3	n	3	"	ū
Adapter pin number ₁ –/	-\\- -\\-	-	-15 V	-20 V	^ C	2 \	-15 V	, n	ш	n	,,	,,	3	,,	3	, n	3	,,	,,	,,	и	-20 V	-20 V	-15 V	> 2	-20 V	-20 V	-15 V	-15 V
Adapte																													
	9 \	15	15 V	10	10	15 V	15	n	77	"	3	,,	3	n	3	n	3	,,	3	,,		10	10		15 V	10	10	15 V	15
	2				_		_													A			_	"			_		,
	4 %	7	10 V		-10 V		-10 V	-10 \												-10 mA	1		10 \		10 \		-10 V		-10 V
	დ დ	10 V		-10 V		-10 V			-10 V												-10 mA	10 V		10 \		-10 V		-10 V	
	2																												
	<u>- Z</u>	0.8 V	2.0 V	0.8 V	2.0 V	0.8 \	2.0 V	0.8 V	2.0 V	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V	0.8 V	2.0 V
	Test no.	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	20	51	52	53	54
	Symbol	SOFF	IS(OFF)	D(OFF)	'n	3	3	+(NO)d	S(ON)	1	Ξ	8	8	22	8	7	_	œ	œ	R _{DS}	R _{DS}	S(OFF)		n	ä	D(OFF)	, a	3	п
	ubgroup	2	=+125°C	<u> </u>				<u> </u>				_	_	_		_+	7	-	-	6	. _^ =-55°C			-		_			

See footnotes at end of table.

TABLE III. Group A inspection for device type 06 - Continued.

	Unit	υĄ	υĄ	γ'n	Ą	mA	,	ä	n	n	n n	"	3	mV _{p-p} mV _{p-p}	م-م//ر		۰٫۷۲	m مواكرة	gg	su ,	3 3		= =		з :	"	,	n	3 3	n	"
	Max	00	200	-0.1			4.1			2	5			20 20	1.0 n			3.16 п	+	250	30	20	350	000	200	00	250	50	130	3	
Limits	Min		-200					-4.8	4.8			-5	-5			09	· ·		20	N 60	1	-	m (יי	2	2	7	2			2
Measured pin no.			m m	τ- ···	_	9	9	- 2		6	6	8	8	11	12		12	=		1.7	11	12	- ;	71.	7	12	=	12	11	11	12
Relays I)	K7	K6	None	ä	"	n	n	77	n	"	n	3	25 &	7		Ž	조		<u> </u>	Α 4	¥2:	Α 7	Ϋ́	Х	K5	<u>주</u>	K5	Х 4	K4. K8	K4, K8
	14																														
	13																														
	12 D ₂	-10 V																		TUO		00	7	00		OUT		OUT	Ę	3	
	5 م		-10 V																<u>+</u>	3	OUT	!			- -		<u> </u>		OUT		
	10																														
\ .	6 \	5.0 V	3	n	3	"	2	"	u	n	u	33	3	и и	31	ä	20 \	5.0 V	: (2.0°	3	: :	: :	:	з :	:	3	ш	3 3	3	3
umber 1-	8 ×	GND	я	n	3	"	77	"	ú	n	"	"	n	,,	n		GND	GND	2	פואם פואם	"		= =		u :		¥	ш	"	n	3
Adapter pin number ₁ –′	-V _{cc}	-15 V	3	n	3	"	n	3	n	n	ı,	31	3	3 3	33	UT/VIN)	75.	-15 V	(NI A/LI)	ار ا ا	n :	: :	3 3		з ;		z	п	n	n	3
Ada	9 14	15 V	3	"	3	"	n	"	n	n	n	"	3	3 3	n	dB _{CT} = -20 log (V _{OUT} /V _{IN})				۲ <u>۰</u>	3 3	:	3		u :	"		ш	3 3	3	
	2															$dB_{CT} = -2$		_	dB _{ISO} = -							ш				=	
	4 S	-10 V												GND			Z	<u> </u>		Z	:	Z	3	2		Z		Z	2	Z	Z
	လ လွ		-10 V											GND	/ ₄ N]		N	3		Z		Z		Z		Z		Z	Z	Z
	2																														
	- ≥	0.8 V	2.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	2.0 V	N N 원원	2.0 V		20.7	0.8 V		<u>Z</u> ₃	3	: :	: :	:	3 :		3	n	3 3	"	3
	Test no.	55	26	22	28	59	09	61	62	63	64	9	99	67 68	69		20	71	1	73	74	75	16	//	78	79	80	81	82	84	85
	Symbol	l _{D(ON)+}	ls(on)	2	Ξ	2	8 8	20	၁၁	7	Γ.	ď	œ	V _{CTE} V _{CTE}	Vcr Z/	l	ğ	081		Š Š	OFF	OFF	ţo,	L ON	OFF	OFF	ton	ton	OFF	t t	t
	Subgroup	ဗ	T _A =-55°C			<u> </u>		_	_	_∓	+	-	-	4 _A = +25°C	2	T _A =+25°C				9 T _A =+26°C	>	!	10	. =+125°C	+	+	7	T _A =-55°C	+	12	. =25°C

t See footnotes at end of table.

TABLE III. Group A inspection for device type 07.

						_								_								_					
	Unit	٧2/	\ 2	\ \ 2	$\sqrt{2}$	۷V	n	"	"	"	"	3	3	"	n	3	3	n	"	3	3	n	з	n	11	Αų	Α
Limits	Max					1	"	3	3	3	3	3	3	"	3	3	3	3	3	3	u u	7	7	7	2	-0.1	1.
ij	Min	-7.8	-7.8	-7.8	-7.8	۲-	3	3	3	3	3	3	3	"	3	3	3	3	3	3	3	-5	7	-5	-5	-250	-250
Measured pin no.	-	2	3	4	5	2	က	4	2	2	3	4	5	10	11	12	13	10	11	12	13	2	က	4	5	1	14
Relays energized)	None	3	n	п	n	3	3	3	3	3	ä	ı	n	3	3	3	3	3	3	n	K10	7	K12	K13	None	ı
	4 √ Z			2.0 V	0.8 V			0.8 \	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			2.0 V	0.8 V		GND
	13 D4				-7.5 V				-10 V				-7.5 V				10 V				7.5 V				-7.5 V		
	12 D ₂			-7.5 V				-10 V				-7.5 V				10 \				7.5 V				-7.5 V			
	11 گ		-7.5 V				-10 V				-7.5 V				10 V				7.5 V				-7.5 V				
	10 10	7.5 V				-10 V	_			-7.5 V				10 V				7.5 V				-7.5 V	''				
		_				-1(-7.				10				7.5				-7.					
- -	6 \	5.0 V	3	"	11	n	ä	3	3	"	"	3	7	"	"	3	3	3	3	3	n	"	3	ŋ	я	"	"
number	∞ >	GND	n	n	"	n	n	"	n	"	"	n	n	"	,,	3	"	"	"	3	n	n	ä	"	и	n	"
Adapter pin number 1–	-V _{cc}	-15 V	3	3	11	-20 V	3	3	3	-15 V	3	¥	3	-20 V	3	3	3	-15 V	3	3	3	n	3	ij	n	n	3
Ad	6 +V _{CC}	15 V	3	3	11	10 V	n	3	33	15 V	3	3	3	10 V	n	3	3	15 V	3	3	з	n	3	3	и	"	n n
	S ₄				-10 mA				10 \				7.5 V				-10 V				-7.5 V				-7.5 V		
	8 A			-10 mA				10 \				7.5 V				-10 V				-7.5 V				-7.5 V	_		
	င်္လိ		-10 mA	`,			10 \				7.5 V				-10 V				-7.5 V				-7.5 V	_			
	S ₁	-10 mA	<u>~</u>			10 V	_			7.5 V				-10 V				-7.5 V				-7.5 V	-				
			>				>																>			0	
	LΣ	2.0 V	0.8			0.8 V	5.0			0.8 V	5.0			0.8 V	5.0			0.8	2.0 V			2.0 V	0.8			GND	
	Test no.	1	7	က	4	2	9	7	∞	6	10	Ξ	12	13	4	15	16	17	18	19	20	21	22	23	24	25	26
	Symbol	R _{DS}	3	n	ш	S(OFF)	, ,	3	3	3	3	n	n	D(OFF)		3	¥	77	3	ı	n	+(NO)d	S(ON)	, u	ш	П	2
	Subgroup	-	T _A = 25°C							-								_								_	-

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 –Continued.

				_								_	_	_	/																
	C	Αu	<u>A</u>	m/	3	"	ä	n	3	"	3	\ 2	\ \ 	>	\ \	ν	3	3	33	3	3	"	3	"	3	3	3	3	3	3	3
Limits	Max	10	10	1.5	1.5			4.5	4.5							100	3	3	3	3	3	n	з	"	n	n	ä	"	з	з	3
ij	Min	-1	7			-2	-5			-2.2	-2.2	-8.1	-	-8 1	-8.1	-100	3	3	"	3	3	3	3	n	3	3	3	3	3	3	3
Measured pin no.		-	14	9	9	7	7	6	6	8	œ	2	က	4	5	2	က	4	2	2	က	4	2	10	11	12	13	10	11	12	73
Relays energized	ı	None	n	n	n	n	n	n	n	n	n	ŋ	u u	n	п	n	3	n	3	ä	3	u	ı	n	u	u	3	¥	3	n n	3
	4 √ Z		2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \			2.0 V	0.8 V			0.8 \	2.0 V			0.8 \	2.0 V			0.8 \	2.0 V			0.8 \	20.7
	13 D4														-7.5 V				-10 V				-7.5 V				10 \				7.5 V
	12 D ₂													-7.5 V				-10 V				-7.5 V	_			10 \				7.5 V	
	2 2												-7.5 V	_			-10 V				-7.5 V	_			10 \				7.5 V		
													-				``				-			^	_						
	10 10											-7.5 V				-10 V				-7.5 V				10 V				7.5 V			
/-1	ნ > [¯]	5.0 ∨	3	n	3	n	n	77	3	,,	3	3	3	3	и	,	3	3	3	3	3	3	n	n	n	n	3	n	n	3	3
number	8 \	GND	3	n	3	"	з	11	3	"	3	3	3	3	11	n	3	3	"	3	3	n	3	"	n	n	"	3	3	3	"
Adapter pin number ₁ –,	7 -V _{cc}	-15 V	3	n,	я	n	я	n	31	"	31	"	3	31	ш	-20 V	3	3	3	-15 V	3	31	з	-20 V	я	n	3	-15 V	я	3	z
Ad	9 +V _{CC}	15 V	u u	n	n	n	n	n	y	n	n	y	3	n	п	10 V	u u	y	'n	15 \	3	n	ņ	10 V	n	n	n	15 V	n	n	3
	S ₄														-10 mA				10 \				7.5 V				-10 V				-7.5 V
	4 S ₂													-10 mA				10 \				7.5 V				-10 V				-7.5 V	
	က လိ												-10 mA	_			10 \				7.5 V				-10 V				-7.5 V		
	S, 2											-10 mA				10 V				7.5 V				-10 V				-7.5 V			
	ΕŽ	2.0 V		GND	2.0 V	GND	5.0 V	GND	2.0 \	GND	5.0 V	2.0 V	0.8 \			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V				2.0 V		
	o o											37		39	40								48				52				26
	Symbol Te		<u>=</u>	8	8	8	8	7		~	<u>«</u>	R _{DS}	3	3	п	S(OFF)	3	3	=	3	3	n	3	(OFF)		3	3	3	3	3	3
)S								٥	1						
	Subgroup	-	T _A =+25°C					7	7	7	-	2	T _A = 125°C			-				-								-			

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 –Continued.

								_		_		_		_	_														
	Unit	hA	n	n	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Υn	Ŋ.	Υ'n	Ŋ.	٨w	3	n	n	n	n	"	n	/ ² /	\ ₂ /	٧2/	/2	γu	"	3	n	3	"	3 3	
Limits	Мах	200	n	n	ш	-0.1	-0.1	70	20	1.5	1.5			4.5	4.5							100	3	n	n	31	n	3 3	
ij	Min	-200	y	y	19	-250	-250	-5	-5			-5	ς			-2.2	-2.2	-7.8	y	n	3	-100	×	3	n	3	n	u :	:
Measured pin no.		2	က	4	2	l	14	1	14	9	9	7	7	6	6	8	8	7	က	4	2	7	က	4	2	2	က	4 1	2
Relays energized		K10	K11	K12	K13	None	n	n	n	n	n	n	n	n	и	n	и	n	3	я	n	n	3	n	я	u u	ä	3 3	
	4 ₹	1		2.0 V	0.8 V		GND		5.0 V	GND	5.0 V	GND	2.0 \	GND	5.0 V	GND	5.0 V			2.0 V	0.8 V			0.8 V	2.0 V			0.8 V	2.0 \
	13 D4				-7.5 V																-7.5 V				-10 V			;	-7.5 V
	15 D	1		-7.5 V																-7.5 V				-10 \				-7.5 V	_
	2 ح	,	-7.5 V																-7.5 V				-10 V				-7.5 V		
	2 م 10	-7.5 V																-7.5 V				-10 V				-7.5 V			_
	ი >	5.0 V	3	3	11	n	3	n	3	n	3	n	3	n	ш	33	ш	n	з	3	3	n	3	3	3	3	3	3 3	:
mber ₁ -/	∞ >	GND	я	я		,,,	3	,,	3	n	3	3	n n	"	11	"	и	n	3	n	3	"	3	3	3	3	3	3 3	-
Adapter pin number ₁ –	-\-\	-15 V	3	3	ш	"	3	n	u u	n	3	n	3	,,	ш	n	u	n	3		3	-20 V	3	y	3	-15 V	3	3 ;	_
Adap	9/+			n	и	n	3	n	3	n	7	n	ņ	n	n	,,	ű	,,	"	n	=	10 V	3	3		15 V		3 3	
	S. 5	_			-7.5 V																-10 mA				10 \				7.5 \
	4 %			-7.5 V	-															-10 mA	_			10 \				7.5 V	_
	က ကိ	,	-7.5 V	17															-10 mA	7			10 \	`			7.5 V	_	
	ر 3 م	1	1-															-10 mA	-			10 V	_			7.5 V	7		
	ΓŽ		> 8			GND		5.0 V		QN	۸0	QN Qu	> 0	QN	5.0 V	QN		_	> 8			0.8 V	>0			0.8 \ 7	> 0		
		2.0	0.			ย		2.0																					
	Test no.	22	28	29	9	61	62	63	64	9	99	29	99	69	70	71	72	73	74	75	9/	27	78	79	80	8	82	83	84
	Symbol	+(NO)q	ls(on)	я	и	П	2	Ξ	Ξ	8	8	20	00	٦	Γ.	ď	М	R _{DS}	3	3	3	S(OFF)	3	3	3	3	3	3 3	
	Subgroup	2	, = 125°C							_				_+	+	-	-	6	A = -55°C			-				-			

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 - Continued.

													_						_		_		_					
	Unit	u, "	я	u	"	"	"	3	n	3	*	7	Υn	<u>A</u>	Αų	Ą	шA	n	"	3	"	3	n	3	mV_{p-p}	3	3	3
Limits	Max	100	n	n	3	3	3	33	200	3	3	3	-0.1	-0.1	10	10	2.5	2.5				7			20	20	20	20
	Min	-100	3	3	3	3	3	3	-200	3	3	3	-250	-250	-با	7			φ	φ			-5	-5				
Measured pin no.	-	10	12	13	10	11	12	13	2	က	4	2	-	14	1	41	9	9	2	7	6	6	8	∞	10	11	12	13
Relays energized)	None "	ä	з	n	ı	IJ	n	K10	X 11	K12	K13	None	я	n	з	n	n	n	я	n	я	n	я	K2	주 4	K 2	2
	14 IN ₂		0.8 V	2.0 V			0.8 V	2.0 V			2.0 V	0.8 V		GND		2.0 \	GND	5.0 V			ନା ଆ							
	13 D4			10 \				7.5 V				-7.5 V																
	12 D ₂		10 \				7.5 V				-7.5 V																	
	5 م	10 V	• •			7.5 V				-7.5 V																		
	10 D1	10 V			7.5 V				-7.5 V																			
	6 >	2.0 V	3	3	'n	»	3	3	5.0 V	3	n	ņ	n	3	"	3	"	α	,,	3	n	3	n	3	n :	3	3	3
nber ₁ _/	8 ×	_	3		'n	"	"	3	0	3	n	,,	,,	3	3	3	"	n	,,,	3	n	ı	n n	3	3 :	3	3	3
Adapter pin number ₁ -/	-V _{cc}		"	3	-15 V	n n	3	ņ	-15 V	3	2	n	n	3	n	3	n	u	,,	3	n	3	n n	3	n	3	3	3
Adapt	9 4 9	_	3	3	15 \ -1		'n	ņ	15 V -1		,	3	"	3	n	3	,,	ű	,	3	3	3	n	3	,,	3	_	
			_	>		_	_			_	_			_		_				_		_		_				
	S ₄		>	-10			>	-7.5 V			>	-7.5 V																GND
	4 S		-10 V	-		>	-7.5 V			>	-7.5 V																GND	
	က တိ	,	-		_	-7.5 V				-7.5 V																GND		
	S 2	-10 \			-7.5 V				-7.5 V																GND			
	ĽΣ	0.8 V	ì		0.8 V	2.0 V			2.0 V	0.8 \			GND		2.0 V		GND	5.0 V	/ε NI	/ત ⊠								
	Test no.	85 86	87	88	88	90	91	92	93	94	92	96	26	86	66	100	101	102	103	104	105	106	107	108	109	110	111	112
	Symbol	Ір(о́РF)	3	3	3	3	3	3	+(NO)	S(ON)	ä	3	 	1	Ξ	Ξ	8	22	20	00		_	œ	œ	V _{CTE}	3	3	3
	Subgroup	3	2						<u> </u>				_	-			_				_+	7	-	-	4-	A = +25°C		_

See footnotes at end of table.

TABLE III. Group A inspection for device type 07 -Continued.

		Unit	mV _{p-p}	3	<u>. В</u>	mV _{p-p}	. :	: :	дB	su.	3	n	3 3	я	3	n	: :	3	3 3	: 3	n	3 3	n	3	я :	3 3	3	3 3	3 3
	Max		_			†		3.16) :	150	3	3	130	3	3	300		3	200	: 3	a a	150	3	3	130		3		
Limits	Min				09	(1)	.,	., .	20	`			`												`			22 22	22
Measured pin no.			11	3	7	0,	_	2 5)	2 to 10	3 to 11 4 to 12	5 to 13	2 to 10	- 2	5 to 13	2 to 10	3 to 11	5 to 13	2 to 10	3 to 11 4 to 12	5 to 13	2 to 10	3 10 11	5 to 13	2 to 10	7 5	5 to 13		5 5
			- 1	_	_	- ,				2 to	5 4 5 5	5 to	2 to	2 to	5 to	2 to	3 to	5 to	2 tc	3 to 11 4 to 12	5 tc	2 to 10	0 Z	5 to	2 to	3 to 11	5 to		
Relays energized)		조조	조	조	∑ 3	Σ.	Σ <u>Σ</u>	2	8 8	S S	7	8 2	<u> </u>	₹	. Ke	X	2 \	8 8	ჯ <u>ჯ</u>	K7	8 Z	2 2	2 \	K6	∞ 5	2 \	K6, K1 ² K6, K1 ²	K7, K15 K7, K15
	14	IN_2		2.0 V	0.8 V			0.8 <	ì		Z	Z					2	ZΖ		Z	Z		Ξ	ZΖ		3	ZZ		ZZ
	13	D_4										OUT			OUT			OUT			OUT			OUT			DUT		
	12	D_2									OUT			DUT			Ē	5		OUT			Ę	5		Ē	5		
	11	$D_{\!\scriptscriptstyle 3}$								Ē	5		Ē	5			100		!	00		F	5		!	OUT			
	10	D_1								OUT			OUT			OUT			OUT			OUT			OUT				
	6	N_L	2.0 V		3	2.0 V	: :	: :	ä	2.0 V	n	3	2 2	n	3	n	: :	3	33 5	: 3	n.	" "	3	3	я :		ä	3 3	3 3
-1 January	8	V _R	gnb g	"	, (GND	: :	: :		GND "	я	3	3 3	n	3	n :	: :	3	33 3	: 3	n	" "	3	3	я :		3	3 3	3 3
Adapter pin number 1–	7	-Vcc	-15 V	3		-15 V	. :	: :	(NIV)	-15 V	3	3	3 3	3	3	,,	: 3	3	3	: =	n	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	n	3	u :	: :	3	3 3	3 3
Adap	9				" dB _{CT} -20 log			3	-20 log (Vo∟	15 V	ä	n	3 3	3	"	n	: 3	3	3 3	: 3	и	"	n	3	и :		3		3 3
		S ₄ +			4 ا	,		/4/	$dB_{JSO} = -20$			Z			Z			Z			Z			Z			z		Z <u>Z</u>
	4			/ ₄ / ₁	Z				- -		Z			Z						Z			2						ZZ
			/1			,		\ <u>4</u>		_			_										_				=		
	က		N /				N /4			=	≦		=	≦		-	<u>Z</u>		:	<u> </u>		Z				<u> </u>		ZZ	
	2	S ₁	/ 4 NI			N 4/				≧			≥			Z			≧			Z			≧			ZZ	
	-	ľ	2.0 V 0.8 V			0.8 V	2.0 \			<u>z</u>	≧		Z 2	≧		≥ :	Z		≥ :	Z		<u>Z</u>	≧		≥ :	Z		ZZ	
	Test no.		113 114	115	116	117	118	119	2	121	123	124	125	127	128	129	130	132	133	134 135	136	137	130	140	141	142	4 4 2 4 4 2 4 4	145 146	147
	Symbol		Vcr 7/			OSI				ton			OFF			ton			OFF			ton			OFF			to,	7 6 6
	Subgroup		7 T _^ =+25°C			<u> </u>			>	6 F	ر =+25°C					16	T _A =+125°C					T- 14	၂ _မ =-55					12 T. =25°C	

See footnotes at end of table.

TABLE III. Group A inspection for device type 08.

														_													
	Unit	\ <u>2</u>	\ \ 	/2/	\ \ \	hu	3	3	3	3	3	3	3	n	3	3	3	=	3	3	3	n	3	3	n	γ'n	. Υπ
its	Мах					1	3	3	3	3	3	3	3	"	3	3	3	3	3	з	n	2	3	3	ш	-0.1	-0.1
Limits	Min	-10.75	3	"	3	-1	"	n	n	3	n	n	y	"	n	31	31	n	"	3	n	-2	ä	3	ш	-250	-250
Measured pin no.	-	2	ო	4	2	2	က	4	2	2	ო	4	2	10	7	12	13	10	7	12	13	2	က	4	5	1	41
Relays energized)	None	3	n n	×	n	n n	n	3	×	n	n	n	n	7	3	3	3	3	ä	n	K10	7	K12	K13	None	n
	4 N 2 ×			2.0 V	0.8 V			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			2.0 V	0.8 V		GND
	13 D4				-10 V				-10 V				-10 V				10 \				10 \				-10 V		
	12 D ₂			-10 V				-10 V				-10 V				10 \				10 \				-10 \			
	٦ -		-10 \				-10 V				-10 V				10 \				10 \				-10 V				
	<u>0</u> 4	-10 V				-10 V				-10 V				10 V				10 \				-10 V					
	6 \	2.0 V	=	3	3	,,	3	3	ņ	3	3	ņ	3	,,	3	3	3	"	3	3	ņ	ņ	3	3	m,	n	3
er 1-/	8 N	_	3	,,	3	n	,,	,,	ņ	3	,	n		,,,	ņ	3	3	,,,	,	ä	ņ	n	3	,	n	n	3
Adapter pin number ₁ –/	-\ -V _{cc}					^ (>		3		۸(3		>		3				3			
Adapter		_		"	3	-5	3	•	3	v -15 V		_	3	v -20 V		_	3	v -15 V		_	3	•	3	_	n	77	3
	9	15	3	3	* <u>4</u>	10 V	3	3	,	15 V	3	3	*	10 V	79	3	"	15 V	3	3	" /	n	3	3	, ,	n	3
	S 5				-10 mA				10 V				10 \				-10 V				-10 V				-10 V		
	4 S			-10 mA				10 \				10 \				-10 V				-10 V				-10 V			
	ო წ		-10 mA				10 V				10 V				-10 V				-10 V				-10 V				
	S ₁	-10 mA				10 V				10 V				-10 V				-10 V				-10 V					
	<u>- ₹</u>	2.0 V	0.8 \			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			2.0 V	0.8 V			GND	
	Test no.	1	2	က	4	2	9	7	8	စ	10	1	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56
	Symbol	R _{DS}	¥	3	n	S(OFF)	3	3	¥	ä	3	n	n	D(OFF)		3	3	3	3	ä	n	+(NO)d	S(ON)	, u	п	1	=
	Subgroup	-	T _A = 25°C						-	-							-	-				1			_	٠.	_

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 -Continued.

										_														1—				
	Unit	μA	. Υπ	mA	3	"	3	"	3	n	3	V <u>2</u> /	3	3	31	٩u	=	3	3	3	3	=	=	33	ä	ı	=	3
iits	Мах	10	10	1.5	1.5			4.5	4.5							100	:	n	"	"	n	n	n	n	я	75	11	3
Limits	Min	-1	7			-2	-5			-2.2	-2.2	-11.50	3	3	n n	-100	:	3	3	3	3	3	=	n	3	3	"	,,
Measured pin no.		-	14	9	9	2	7	6	6	8	8	2	ဗ	4	5	2	က	4	2	2	က	4	2	10	11	12	13	10
Relays energized)	None	n	n	я	n	ä	n	ä	n	ä	n	ä	"	n	n	=	n	я	я	n	n	3	n	3	n	n n	3
	4 ⊼ م	1	5.0 V	GND	2.0 \	GND	2.0 \	GND	2.0 \	GND	2.0 \			2.0 V	0.8 V			0.8 V	2.0 V			0.8 \	2.0 V			0.8 V	2.0 V	
	13 D₄														-10 V				-10 V				-10 V				10 \	
	15 D ₂													-10 V				-10 V				-10 V				10 \		
	11 گ	,											-10 V				-10 \				-10 V				10 \			
	10 D,											-10 V				-10 V				-10 V				10 V				10 \
	ი >	5.0 V	3	n	3	n	3	n	3	n	3	5.0 V	3	3	3	,,	:	3	3	3	3	3	3	n,	×	3	,,	3
1-/	8 >	_	n	n	3	,,	3	,,	3	"	3	GND	3		3	n		3	3	3	3	=		,,	3	31	3	3
Adapter pin number ₁ -/	-\\	15.V	n	, n	3	,,	3	,,	3	n	3	-15 V	3	3	3	-20 V	:	3	3	-15 V	3		3	-20 V	3	3	3	-15 V
Adapte	- 9 +\rac{0.00}{0.00}			n	3	,,	3	,,	3	n	3	15 V		3	3	10 V	:	3	3	15 \ -			,	10 V	3	3	,,	15 \ -
	S ₄											1			mA	7			>	~			>	7			>	
	ω, ω													⋖	-10 m/				10 V			_	10 V				-10 V	
	4 %													-10 mA				10 V				10 \				-10 V		
	ო წ	>											-10 mA				10 <				10 \				-10 V			
	s 2											-10 mA				10 V				10 \				-10 V				-10 V
	<u>- ₹</u>	5.0 V		GND	5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	2.0 V	0.8 V			V 8.0	2.0 \			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V
	Test no.	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	20	51	25	53
	Symbol	_ =	<u>=</u>	23	00	22	8	-	_	ď		R _{DS}		3	я	S(OFF)	:	3	3	3	3	3	3	D(OFF)	, ,	3	3	3
	npgroup	-	= 25°C				7	FF	F -	. -	-	2	=125°C	_	_				_								_	

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 -Continued.

						_						_															
		Onit	ν	3	3	n	3	3	3	Αμ	Υn	μĄ	Υ'n	mA	3	n	3	n	3	n	3	V <u>2</u> /	3	3	n	n.A	
its	Max		100	100	100	200	200	200	200	-0.1	-0.1	20	20	1.5	1.5			4.5	4.5							100	: :
Limits	Min		-100	-100	-100	-200	-200	-200	-200	-250	-250	-2	-5			-2	ې			-2.2	-2.2	-10.75	y	"	ш	-100	
Measured pin no.			11	12	13	2	ო	4	2	1	4	-	4	9	9	7	7	6	တ	8	∞	2	ო	4	5	2	ω 4
Relays energized			n	n	n	K10	7	K12	K13	None	n	n	n	n	n	n	n	n	n	n	n	n	z	n	ш	n	: :
	14	$\frac{1}{2}$		0.8 V	2.0 V			2.0 V	0.8 V		GND		5.0 V	GND	5.0 V	GND	2.0 V	GND	5.0 V	GND	5.0 V			2.0 V	0.8 V		0.8 \
	13	٥			10 \				-10 V																-10 V		
	12	D_2		10 \				-10 V																-10 V			-10 V
	11	ص	10 V				-10 V																-10 V				-10 \
	10	٥				-10 V																-10 V				-10 V	
	6	^	2.0 V	3	я	n	3	3	3	n	3	n	я	n	3	"	3	n	3	"	3	"	3	3	и	n	
mber 1-/	8	> _R	GND	3	3	n	3	,	n	n	3	n	3	n	3	,,	3	n	3	"	3	,,,	3	,,	n	3	: :
Adapter pin number 1–	7	-V _{cc}	-15 V	3	я	"	3	3	3	,,	3	n	3	n	3	n	3	, n	3	"	3	n	3	"	m.	-20 V	: 3
Adap	9	+V _{cc}	15 V	3	3	ŋ	3	n	3	n	3	ŋ	3	, n	3	"	3	n	3	n	3	,,,	3	3	щ	10 V	
		S ₄			-10 V				-10 V																-10 mA		
	4	S_2		-10 V				-10 V																-10 mA			10 V
	3	လိ		`			-10 V																-10 mA	7			10 \
		Š	`-			-10 V	`,															-10 mA				10 V	
		_	Λ				>			۵		^		Q	>	Q	>	Q	>	Q							>
		ĭ	2.0			2.0	0.8 V			GND		5.0 V		GND	2.0	2 5	2.0	Z S	2.0	2 5	2.0	2.0	0.8			V 8.0	2.0
	Test no.		54	22	26	22	28	29	09	61	62	63	64	92	99	29	89	69	2	71	72	73	74	75	9/	77	8 6 2 4
	Symbol		l _{D(OFF)}	l _{D(OFF)}	D(OFF)	+(NO)d	S(ON)	ä	3	1	_	Ξ	Ξ	8	8	00	8		_	ď	œ	R _{DS}	я	"	ш	S(OFF)	: :
	ubgroup		2	=125°C				_		_	-	<u>!</u>	-			_		F -	F -	- -	-	Е	√ =-\$5°C	_	_		

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 -Continued.

		_																	_		_		1						
	Onit	۷u	3	n	3	n	n	ä	n	n	з	n	3	3	n	n	n	3	γn	<u>A</u>	Υn	, A	ΑW	3	n	3	"	n	n
ts	Мах	100	3	3	3	ш	"	3	n	"	u	3	31	3	200	3	3	3	-0.1	-0.1	10	10	2.5	2.5			7	7	
Limits	Min	-100	3	3	3	11	"	3	3	3	n	3	3	ä	-200	3	z	3	-250	-250	-1	7			8-	φ			-5
Measured pin no.	I	2	7	က	4	5	10	7	12	13	10	7	12	13	2	က	4	2	-	41	-	41	9	9	7	7	6	6	8 8
Relays energized		None	3	n	ä	и	n	ä	n	n	n	77	3	×	K10	K11	K12	K13	None	n	n	я	n	3	n	ä	n	ш	n
	4 N	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			0.8 V	2.0 V			2.0 V	0.8 V		GND		5.0 V	GND	5.0 V	GND	5.0 V	GND	5.0 V	OND
	13 D4	-10 V				-10 V				10 V				10 V				-10 V											
	12 D ₂				-10 V				10 \				10 \				-10 V												
	2 - 2			-10 V				10 V				10 \				-10 V													
	10 D1		-10 V				10 V				10 \				-10 V														
	6 \	2.0 V	'n	3	3	п	n	3	ä	3	3	3	3	3	n	3	ä	3	n	3	n	3	n	3	n	3	n	и	3 3
1–/	8 × «			3	3		"	3	3	3	3	3	3	3	, n	3	3	z	,,	3	n	3	,,	3	n,	3	"	11	" "
Adapter pin number ₁ _	-V _{cc}	20 V	15 V	3	3	n	-20 V	3	n	n n	-15 V	,	3	,,	ņ	3	z	3	ņ	3	ņ	3	n	3	n	ņ	n	и	" "
Adapte	9				3		10 V		n		- \ \ 21		3	ä	n	3	n	3	n	3	,,	3	n	3	n	3	n	11	3 31
	S ₄					10 V	1			-10 V				-10 V				-10 V											
	0)	10								÷			>				>												
	8 A				10 \				-10 V				-10 V				-10 V												
	ო წ			10 V				-10 V				-10 V				-10 V													
	S, 2		10 V				-10 V				-10 V				-10 V														
	LΣ		0.8 V	2.0 V	_		0.8 V	2.0 V	_	_	0.8 V	2.0 V			2.0 V	0.8 V	_		GND		5.0 V		GND	2.0 \	GND	5.0 V	GND	5.0 V	GND
Test no.		80	81	82	83	84	82	98	87	88	89	06	91	92	93	94	92	96	26	86	66	100	101	102	103	104	105	106	107
Symbol		ls(OFF)	3	3	a a	n,	D(OFF)	, H	я	3	3	n	3	3	+(NO)d	S(ON)	, , u	3	F	=	Ξ	Ξ	8	8	8	8 8	١	7	œ 1
Subgroup		3	T _A =-55°C							_	-							-		_	<u> </u>	_	-		_		- -	Ŧ -	

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 -Continued.

		_			r					1					1											
	C	mV _{p-p}	n	n	n	3	=	=	용	mV _{p-p}		3	ı	В	Su	=	3	n	,,	3	3	n	n	3	3	n
ts	Max	20	2 2	20	1.0	3	n	n		3.16	3.16	3.16	3.16		250	n	3	n	130	3	3	n	320	3	3	n
Limits	Min								09	0	0	0	0	20												
Measured pin no.	-	10	- 5	1 5	11	10	13	12		10	-	12	13		2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13
Relays energized)	X Z	ς χ 4 π	<u> 2</u>	X	조	조	조		Σ	조	조	조		K6	8 8	8 8	K7	K6	8	8 8	K7	K6	% %	8 8	K7
	<u>4</u> 5	4		iβ ≥			2.0 V	0.8 V				0.8 V	2.0 V				Z	Z							Z	Z
	13 D,	+																OUT				DUT				DOT
	15 D,	4															OUT				OUT				TUO	
	7 2	0														5				DO T				OUT		
	10,70	-													OUT				OUT				OUT			
	ი >	2.0 \	я	я	n	3	"	"		5.0 V	"	3	я	я	2.0 V	3	3	ä	n	3	3	3	n	3	ä	3
ımber ₁ –/	8 %	GND "	n	n	n	31	"	3		GND	3	3	я		GND	я	u	я	n	31	u	з	n	3	ä	з
Adapter pin number ₁ _/	۲۸-	-15 V	n	n	n	3	3	n n	= -20 log (V _{OUT} /V _{IN})	-15 V	3	3	я	(NIV)	-15 V	n	3	n	n	3	3	з	n	3	3	n
Ada	9 \	15 \		2	n	3	"	'n	0 log (V	15 V	"	3	ä	0 log (V	15 V	ŋ	3	3	n	3	3	3	n	3	3	3
	S 22			GND		3		N 4	$dB_{CT} = -2$				N 4	dB _{ISO} = -5				Z				Z				Z
	4 წ	7	CNC	5			N 4]	-			<u>4</u>					Z				Z				Z	
	က တိ					\ <u>4</u> \					Z	ł				Z				Z				Z		
	2 2				/ 4 NI					/ V NI					Z				Z				Z			
	- <u>Ž</u>	<u>ટ</u> ટ	 ક		2.0 V	0.8 V				0.8 V	2.0 V				Z	Z			Z	Z			Z	Z		
	Test no.	109	5 5	112	113	411	115			117	118	1	120		121	122	123	124	125	126	127	128	129	130	131	132
	Symbol	V _{сте}	3	3	Vcr Z/					OSI		116			towo	<u> </u>			OFF				ton			
	Subgroup	4			2	T _A =+25°C				I			>	>	6	T _A =+25°C			I				10	T _A =+125°C		

See footnotes at end of table.

TABLE III. Group A inspection for device type 08 -Continued.

														1			
	Unit	SU	n	n	3	"	3	ij	3	n	3	я	3	n	3	n	n
Limits	Мах	200	я	n	я	250	3	n n	3	130	3	я	3				
Ë	Min													2	2	2	2
Measured pin no.		2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	2 to 10	3 to 11	4 to 12	5 to 13	11	11	12	12
Relays energized		K6	K8	K9	K7	K6	K8	K9	K7	K6	K8	K9	K7	K6, K14	K6, K14	K7, K15	K7, K15
	<u>+</u> ⊼	ı		Z	Z			Z	Z			Z	Z			Z	Z
	13 D4				OUT				OUT				OUT				
	12 D ₂	ı		OUT				OUT				OUT					
	2 ع	ı	DOT				OUT				DO T						
	10 D1	OUT				OUT				OUT							
	6 >	5.0 V	n	"	3	"	3	"	3	"	3	3	3	'n	3	'n	3
mber ₁ -/	8 V _R	GND	n	n	n	"	я	'n	я	n	y	n	3	"	3	'n	я
Adapter pin number 1_/	7 -V _{CC}	-15 V	n	"	n	n	n	3	n	n	3	=	3	"	3	ņ	n
Adap	9	1		'n	3	n	3	3	3	n	3	=	3	ņ	3	ņ	я
	S S				Z				Z				Z			Z	Z
	4 %	ı		Z				Z				Z				Z	Z
	က တိ		Z				Z				Z			Z	Z		
	S 2	Z				N				Z				Z	Z		
	ΓŽ	Z	Z			Z	Z			Z	Z			Z	Z		
	Test no.	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148
	Symbol -	tore				ton				OFF				t _{D1}	t _{D2}	10	D2
	Subgroup	10	T _A =+125°C			11	T _A =-55°C							15	T _A =25°C		

NOTES:

1/ The test circuits used with table III are shown in figures 2, 3, and 4. The waveforms on figure 5 apply to all device types as specified within table III. for ton and toff). The waveforms in figure 6 apply to device types 05, 06, 07, and 08 as specified within table III.

 R_{DS} (in Ω) = -100 (measured value +7.5) for device types 01, 03, 05, and 07. R_{DS} (in Ω) = -100 (measured value +10) for device types 02, 04, 06, and 08. R_{DS} may be measured differentially with respect to V_A . In case of differentially measured voltages, the table III limits representing voltage drop across the tested switch must be maintained. 7_/

The input pulse generator shall have the following characteristics: (a) $V_{gen} = 3.0 \text{ V}$ (b) Rise time $\leq 10 \text{ ns}$ (c) Fall time $\leq 10 \text{ ns}$ and (d) PRR = 100 kHz at 50% duty cycle. 3–/

 $_4$ The input generator shall have the following characteristics: $V_{gen} = 1 V_{PP}$ at 10 MHz. V_{CT} is measured on monolithic devices only.

 $_{5-}/$ Input (IN $\underline{3}/$) shall be applied to either S₁ or S₃.

6-/ Input (IN 3/) shall be applied to either S_2 or S_4 .

 $_{7-}/~{
m V}_{
m c o}$ applies only to monolithic devices.

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- 4.4.4 <u>Group D inspection</u>. Group D inspection shall be in accordance with table V of MIL-PRF-38535. End point electrical parameters shall be as specified in table II herein. A special subgroup shall be added to group D inspection for class S devices only, and it shall consist of the group A subgroups 4 and 7 as specified in table III herein. This special subgroup shall be performed on each device type that is qualified from those listed in 1.2.1 herein. After initial qualification, the special subgroup shall be performed periodically on a single device type selected from those device types previously qualified. When more than one device type is qualified, the single device type selected shall be different device type for each subsequent periodic inspection until all qualified device types have been inspected. The sequence of single device types shall be repeated to fulfill the periodic inspection requirement.
 - 4.5 Methods of inspection. Methods of inspection shall be specified and as follows.
- 4.5.1 <u>Voltage and current</u>. All voltage values given, except differential voltages, are referenced to the external zero reference level of the supply voltage. Currents given are conventional current and positive when flowing into the referenced terminal.
- 4.5.2 <u>Life test cooldown procedure</u>. When devices are measured at 25°C following application of the operating life or burn-in test condition, they shall be cooled to room temperature prior to removal of the bias.

Test	Device types										
		01, 03, 05, 07		02, 04, 06, 08							
	Liı	mits	Delta	Lir	Delta						
	Min	Max		Min	Max						
R _{DS}	-7.8 V		±30 mV	-10.75 V		75 mV					
I _{S(OFF)}	-1 nA	1 nA	±0.5 nA	-1 nA	1 nA	±0.5 nA					
ID(OFF)	-1 nA	1 nA	+0.5 nA	-1 nA	1 nA	+0.5 nA					

Table IV. Groups C end point electrical parameters ($T_A = 25^{\circ}C$, $\pm V_{CC} = \pm 15 \text{ V}$).

5. PACKAGING

5.1 <u>Packaging requirements</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department of Defense Agency, or within the Military Department'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

- 6.1 <u>Intended use.</u> Microcircuits conforming to this specification are intended for original equipment design applications and logistic support of existing equipment.
 - 6.2 Acquisition requirements. Acquisition documents should specify the following:
 - a. Title, number, and date of the specification.
 - b. Complete part number (see 1.2).
 - c. 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.
 - d. Requirements for certificate of compliance, if applicable.
 - Requirements for notification of change of product or process to acquiring activity in addition to notification of the qualifying activity, if applicable.

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- Requirements for failure analysis (including required test condition of MIL-STD-883, method 5003), 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 <u>Superseding information</u>. The requirements of MIL-M-38510 have been superseded to take advantage of the available Qualified Manufacturer Listing (QML) system provided by MIL-PRF-38535. Previous references to MIL-M-38510 in this document have been replaced by appropriate references to MIL-PRF-38535. All technical requirements now consist of this specification and MIL-PRF-38535. The MIL-M-38510 specification sheet number and PIN have been retained to avoid adversely impacting existing government logistics systems and contractor's parts lists.
- 6.4 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List QML-38535 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DSCC-VQ, 3990 E. Broad Street, Columbus, Ohio 43123-1199.
- 6.5 <u>Abbreviations, symbols, and definitions</u>. The abbreviations, symbols, and definitions used herein are defined in MIL-PRF-38535, MIL-HDBK-1331, and as follows:.

$+V_{CC}$	 Positive supply voltage
-V _{CC}	 Negative supply voltage
+l _{cc}	 Positive supply current
-I _{CC}	 Negative supply current
V_L	 Logic supply voltage
IL	 Logic supply current
R_{DS}	 Resistance of an "ON" switch
V_D	 Drain voltage
Vs	 Source voltage
I _D	 Drain current
ls	 Source current
$I_{D(ON)}$	 Leakage current from an "ON" driver into the switch
I _{D(OFF)}	 Leakage current into the drain terminal of an "OFF" switch
I _{S(OFF)}	 Leakage current into the source terminal of an "OFF" switch
ton	 Switching time as defined in figure 5
toff	Switching time as defined in figure 5
VA	Analog signal voltage
I _R	 Reference current
V _R	 Reference voltage
V _{CTE}	Charge transfer error
Vct	Crosstalk between switches
V _{ISO}	Isolation from source to drain of a closed switch
- 100	 ionalisti ii oni oo ali oo ali alii. Of a olooda officifi

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

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

Military device type	Generic-industry type
01	181A
02	182A
03	184A
04	185A
05	187A
06	188A
07	190A
08	191A

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

Custodians: Army – CR

Navy - EC Air Force - 11 NASA – NA

DLA - CC

Review activities: Army – MI, SM

Navy - AS, CG, MC, SH, TD

Air Force – 03, 19, 99

Preparing activity: DLA - CC

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