

The documentation and process conversion measures necessary to comply with this document shall be completed by 30 May 2024.

INCH-POUND

MIL-RF-19500/286L
w/AMENDMENT 1
30 January 2024
SUPERSEDING
MIL-PRF-19500/286L
8 November 2018

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, DIODE, SILICON, POWER RECTIFIER,
TYPES 1N4245 THROUGH 1N4249, JAN, JANTX, JANTXV, AND JANHC

These devices are inactive for new design after 15 March 1993.
For new design, use [MIL-PRF-19500/427](#) (see 6.6).

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

The requirements for acquiring the product described herein shall consist of
this specification sheet and [MIL-PRF-19500](#).

1. SCOPE

1.1 Scope. This specification covers the performance requirements for silicon, power rectifier, medium-recovery diodes. Four levels of product assurance are provided for each device type as specified in [MIL-PRF-19500](#).

1.2 Package outline and die topography. The device package for the encapsulated device is a round body axial lead similar to a DO-204-AA package (formerly DO-7) in accordance with [figure 1](#). The dimensions and topography for JANHC unencapsulated die is as follows: The A version die in accordance with [figure 2](#).

1.3 Maximum ratings.

Type	V _R	V _{RWM}	I _O (1) T _A = 55°C (2)	I _{FSM} I _O = 1.0 A dc t _p = 8 ms	Barometric pressure (reduced)	T _{STG} and T _J	R _{θJL} at L = .375 inch (9.53 mm)	Z _{θJX}	t _{rr}
	<u>V dc</u>	<u>V (pk)</u>	<u>A dc</u>	<u>A (pk)</u>	<u>mm Hg</u>	<u>°C</u>	<u>°C/W</u>	<u>°C/W</u>	<u>μs</u>
1N4245	200	200	1.0	25	8	-65 to +175	36	4.5	5.0
1N4246	400	400	1.0	25	8	-65 to +175	36	4.5	5.0
1N4247	600	600	1.0	25	8	-65 to +175	36	4.5	5.0
1N4248	800	800	1.0	25	33	-65 to +175	36	4.5	5.0
1N4249	1,000	1,000	1.0	25	33	-65 to +175	36	4.5	5.0

- (1) I_O rating is independent of heat sinking, special mounting, or forced air across the body or leads of the device.
(2) Derate linearly at 8.33 mA/°C between T_A = +55°C to +175°C.

Comments, suggestions, or questions on this document should be addressed to DLA Land and Maritime, ATTN: VAC, P.O. Box 3990, Columbus, OH 43218-3990, or emailed to Semiconductor@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

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FSC 5961



1.4 Primary electrical characteristics. Not applicable.

1.5 Part or Identifying Number (PIN). The PIN is in accordance with [MIL-PRF-19500](#), and as specified herein. See [6.4](#) for PIN construction example and [6.5](#) for a list of available PINs.

1.5.1 JAN certification mark and quality level for encapsulated devices. The quality level designators for encapsulated devices that are applicable for this specification sheet from the lowest to the highest level are as follows: "JAN", "JANTX", and "JANTXV".

1.5.2 JAN certification mark and quality level for unencapsulated devices (die). The quality level designators for unencapsulated devices (die) that are applicable for this specification sheet from the lowest to the highest level are as follows: "JANHC".

1.5.3 Device type. The designation system for the device types of semiconductors covered by this specification sheet are as follows.

1.5.3.1 First number and first letter symbols. The semiconductors of this specification sheet use the first number and letter symbols "1N".

1.5.3.2 Second number symbols. The second number symbols for the semiconductors covered by this specification sheet are as follows: "4245", "4246", "4247", "4248", and "4249".

1.5.4 Die identifiers for unencapsulated devices (manufacturers and critical interface identifiers). The manufacturer die identifier that is applicable for this specification sheet is "A" (see [figure 2](#) and [6.7](#)).

1.5.5 Lead finish. The lead finishes applicable to this specification sheet are listed on [QML-19500](#).

2. APPLICABLE DOCUMENTS

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

2.2 Government documents.

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

DEPARTMENT OF DEFENSE SPECIFICATIONS

[MIL-PRF-19500](#) - Semiconductor Devices, General Specification for.

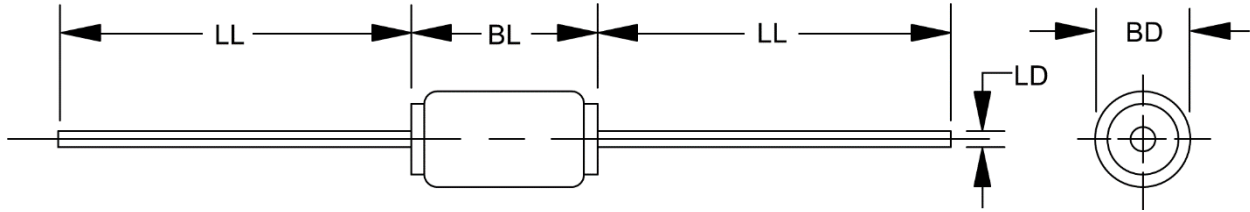
DEPARTMENT OF DEFENSE STANDARDS

[MIL-STD-750](#) - Test Methods for Semiconductor Devices.

(Copies of these documents are available online at <https://quicksearch.dla.mil>.)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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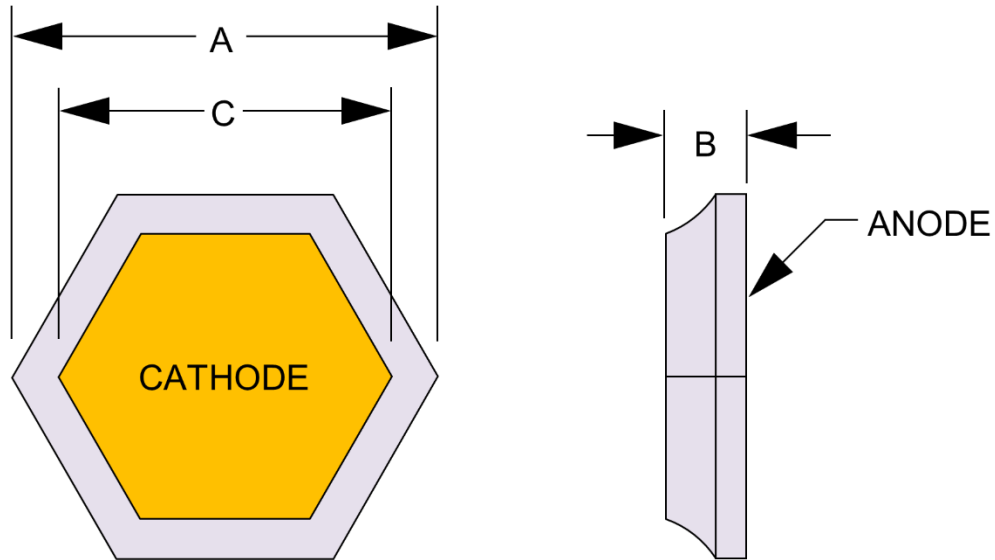


Symbol	Dimensions				Notes
	inch	inch	mm	mm	
	Min	Max	Min	Max	
BD	.065	.110	1.65	2.79	3
BL	.125	.250	3.18	6.35	4
LD	.027	.032	0.69	0.81	5
LL	.70	1.30	17.78	33.02	

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. The shape of the body, within the bounds of the dimensions is optional.
3. Dimension BD shall be measured at the largest diameter.
4. The BL dimension shall include the entire body including slugs and sections of the leads over which the diameter is uncontrolled. This uncontrolled area is defined as the zone between the edge of the diode body and extending .050 inch (1.27 mm) onto the leads.
5. Dimension LD are pre-solder dip.

FIGURE 1. Physical dimensions for modified DO-204AA package.



A - version

Letter	Dimensions			
	inch	inch	mm	mm
	Min	Max	Min	Max
A	.047	.053	1.19	1.35
B	.007	.011	0.18	0.28
C	.033	.037	0.84	0.94

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. The metallization characteristics of the die are:
Top metal: Gold 10,000 Å minimum.
Back metal: Gold 4,000 Å minimum.

FIGURE 2. Physical dimensions and characteristics for JANHC (A-version) die.

3. REQUIREMENTS

3.1 General. The individual item requirements shall be as specified in [MIL-PRF-19500](#) and as modified herein.

3.2 Qualification. Devices furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturer's list (QML) before contract award (see [4.2](#) and [6.3](#)).

3.3 Abbreviations, symbols, and definitions. Abbreviations, symbols, and definitions used herein shall be as specified in [MIL-PRF-19500](#).

3.4 Interface and physical dimensions. Interface and physical dimensions shall be as specified in [MIL-PRF-19500](#), and on [figures 1](#) and [2](#). No lead (Pb) shall be used in the construction of the die bonds.

3.4.1 Lead finish. Lead finish shall be solderable in accordance with [MIL-PRF-19500](#), [MIL-STD-750](#), and herein. Where a choice of lead finish is desired, it shall be specified in the acquisition document (see [6.2](#)).

3.4.2 Diode construction. Except for the JANHC devices, these devices shall be constructed utilizing non-cavity double plug construction with high temperature metallurgical bonding between both sides of the silicon die and terminal pins. The metallurgical bond between the die and the plug shall be in accordance with the category I requirement of [MIL-PRF-19500](#).

3.5 Marking. Marking shall be in accordance with [MIL-PRF-19500](#). At the option of the manufacturer, marking may be omitted from the body, but shall be retained on the initial container.

3.6 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in [1.3](#) and [table I](#).

3.7 Electrical test requirements. The electrical test requirements shall be group A as specified herein.

3.8 Workmanship. Semiconductor devices shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. Qualification inspection (see [4.2](#)).
- b. Screening (see [4.3](#)).
- c. Conformance inspection (see [4.4](#)).
- d. Element evaluation of un-encapsulated die (see [4.6](#)).

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4.2 Qualification inspection. Qualification inspection shall be in accordance with [MIL-PRF-19500](#) and as specified herein.

4.2.1 Group E qualification. Group E qualification shall be performed herein for qualification or requalification only. In case qualification was awarded to a prior revision of the specification sheet that did not request the performance of [table II](#) tests, the tests specified in [table II](#) herein that were not performed in the prior revision shall be performed on the first inspection lot to this revision to maintain qualification.

4.2.2 Qualification of un-encapsulated JANHC die. Qualification inspection for unencapsulated die shall be in accordance with appendix G of [MIL-PRF-19500](#). This qualification testing may be performed with the die mounted in a TO-5 package in lieu of the DO-204AA axial leaded package.

4.3 Screening (JANTX, and JANTXV levels only). Screening shall be in accordance with table E-IV of [MIL-PRF-19500](#) and as specified herein. The following measurements shall be made in accordance with [table I](#) herein. Devices that exceed the limits of [table I](#) herein shall not be acceptable.

Screen	Measurements for JANTX and JANTXV levels
(1) 3c	See 4.3.2
7a	Not applicable
7b	Optional
9	Not applicable
10	Method 1038 of MIL-STD-750 , condition A
11	I_{R1} and V_{F1}
12	See 4.3.1
(2) 13	Subgroup 2 of table I herein. $\Delta V_{F1} \leq +.1, -.2$ V dc; $\Delta I_{R1} \leq 100$ percent of initial values or ± 100 nA dc, whichever is greater. Scope display evaluation (see 4.5.3)
14a	Not applicable
(3) 14b	Required

- (1) Shall be performed anytime after temperature cycling, screen 3a, and does not need to be repeated in screening requirements.
- (2) Thermal impedance is not required in screen 13, if it has already previously performed.
- (3) For clear glass diodes, the hermetic seal (gross leak) may be performed at anytime after temperature cycling.

4.3.1 Power burn-in conditions. Power burn-in conditions are as follows (see [4.5.2](#)): $I_{O(min)}$ = Rated I_O (see [1.3](#) herein). $T_A = 55^\circ\text{C}$ maximum. Test conditions in accordance with method 1038 of [MIL-STD-750](#), condition B. Adjust I_O or T_A to achieve the required T_J . $T_J = 135^\circ\text{C}$ minimum. With approval of the qualifying activity and preparing activity, alternate burn-in criteria (hours, bias conditions, T_J , mounting conditions) may be used for JANTX and JANTXV quality levels. A justification demonstrating equivalence is required. In addition, the manufacturing site's burn-in data and performance history will be essential criteria for burn-in modification approval.

4.3.2 Thermal impedance. The thermal impedance measurements shall be performed in accordance with method 3101 or 4081 as applicable of [MIL-STD-750](#) using the guidelines in that method for determining I_M , I_H , t_H , t_{MD} , and K factor where appropriate. See [table II](#), subgroup 4 herein. Thermal impedance limit used by supplier shall not exceed the thermal impedance graph, see [figure 3](#) herein.

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4.4 Conformance inspection. Conformance inspection shall be in accordance with MIL-PRF-19500 and as specified herein.

4.4.1 Group A inspection. Group A inspection shall be conducted in accordance with MIL-PRF-19500 and table I.

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the conditions specified for subgroup testing in table E-VIB (JAN, JANTX, and JANTXV) of MIL-PRF-19500, and as follows.

Subgroup	Method	Inspection
B2	4066	Condition A, $I_{FSM} = 25$ A (pk), ten surges of 1/120 s each at 1 minute intervals, superimposed on $I_0 = 1.0$ A dc, $V_R = \text{rated } V_{RWM}$ (see 1.3).
B3	1027	$I_0 = 1.0$ A dc minimum; $T_A = +55^\circ\text{C}$ (maximum); $T_J = +150^\circ\text{C}$ minimum; $f = 50$ to 60 Hz; $V_R = \text{rated } V_{RWM}$ (see 1.3). Adjust I_0 to achieve a $T_J = +150^\circ\text{C}$ minimum.

4.4.3 Group C inspection. Group C inspection shall be conducted in accordance with the conditions specified for subgroup testing in table E-VII of MIL-PRF-19500, and as follows.

Subgroup	Method	Inspection
C2	2036	Tension: Test condition A; weight = 10 pounds (4.54 kg); $t = 15$ seconds. Lead fatigue: Test condition E; weight = 2 pounds (0.91 kg).
C5	4081	$+25^\circ\text{C} \leq T_R \leq 35^\circ\text{C}$, $R_{\theta JL} \leq 42^\circ\text{C/W}$, $L = .375$ inch (9.525 mm) (see 1.3 and 4.3.2).
C6	1026	$I_0 = 1.0$ A dc minimum; $T_A = +55^\circ\text{C}$ (max.); $T_J = +150^\circ\text{C}$ minimum; $f = 50$ to 60 Hz; $V_R = \text{rated } V_{RWM}$ (see 1.3). Adjust I_0 to achieve a $T_J = +150^\circ\text{C}$ minimum.

4.4.4 Group E inspection. Group E inspection shall be conducted in accordance with the conditions specified for subgroup testing in table E-IX of MIL-PRF-19500 and table II herein.

4.5 Methods of inspection. Methods of inspection shall be as specified in the appropriate tables and as follows.

4.5.1 Inspection conditions. Unless otherwise specified, all inspections shall be conducted at $T_A = \text{room ambient}$ as defined in the general requirements of 4.5 of MIL-STD-750.

4.5.2 Free air power burn-in and life tests. The use of a current limiting or ballast resistor is permitted provided that each DUT still sees the full P_t (minimum) and that the minimum applied voltage, where applicable, is maintained through out the burn-in period.

4.5.2.1 Junction temperature measurements. Method 3100 of MIL-STD-750 shall be used to measure T_J .

4.5.2.2 Mounting configurations. Any clips or heat sink mounting configurations may be utilized provided that I_0 is adjusted such that the junction temperature of each diode is maintained at $T_J = +135^\circ\text{C}$ minimum for burn-in screening and $T_J = +150^\circ\text{C}$ minimum for JAN, JANTX and JANTXV life testing.

4.5.3 Scope display evaluation. Scope display evaluation shall be sharp and stable in accordance with method 4023 of MIL-STD-750. Scope display may be performed on ATE (automatic test equipment) for screening only with the approval of the qualifying activity. Scope display in table I, group A, subgroup 4 shall be performed on a scope. Reverse current over the knee shall be 500 μA peak.

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4.5.4 Pulse measurements. Conditions for pulse measurement shall be as specified in section 4 of MIL-STD-750.

4.5.5 Peak reverse power characterization. The testing to characterize P_{RM} shall be conducted in accordance with method 4065 of MIL-STD-750. The following details shall apply:

- During the test, the voltage (V_{BR}) shall be monitored to verify it has not collapsed.
- Any collapse in V_{BR} during or after the P_{RM} test, or rise in leakage current (I_R) after the test that exceeds I_{R1} in table I, shall be considered a failure to that level of applied P_{RM} .
- Progressively higher levels of P_{RM} shall be applied until failure occurs on all devices within the chosen sample size to characterize each subplot.

4.6 Element evaluation of un-encapsulated die. The element evaluation of un-encapsulated die shall be in accordance with appendix G of MIL-PRF-19500.

TABLE I. Group A inspection.

Inspection 1/	MIL-STD-750		Symbol	Limit	Limit	Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical examination	2071					
<u>Subgroup 2</u>						
Thermal impedance 2/	3101	See 4.3.2	$Z_{\theta JX}$		4.5	°C/W
Forward voltage	4011	Condition B, $I_F = 1$ A dc (pulsed, see 4.5.4); duty cycle = 2 percent maximum	V_{F1}	0.6	1.3	V (pk)
Forward voltage	4011	Condition B, $I_F = 3$ A (pk), duty cycle ≤ 2 percent pulsed, $t_p \leq 8.3$ ms	V_{F2}	0.8	1.3	V (pk)
Reverse current leakage	4016	Condition A or B; DC method; $V_R =$ rated (see 1.3)	I_{R1}		1.0	μ A dc
Breakdown voltage	4021	$I_R = 100 \mu$ A dc	$V_{(BR)}$			
1N4245				240		V
1N4246				480		V
1N4247				720		V
1N4248				960		V
1N4249				1,150		V

See footnotes at end of table.

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TABLE I. Group A inspection - Continued.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limit	Limit	Unit
	Method	Conditions		Min	Max	
<u>Subgroup 3</u>						
High temperature operation:		$T_A = +125^{\circ}\text{C}$				
Reverse current leakage	4016	Condition A or B; DC method, $V_R = \text{rated (see 1.3)}$	I_{R2}		150	$\mu\text{A dc}$
Low temperature operation:		$T_A = -55^{\circ}\text{C}$				
Forward voltage	4011	Condition B, $I_F = 3.0 \text{ A (pk)}$, duty cycle ≤ 2 percent pulsed, $t_p \leq 8.3 \text{ ms}$	V_{F3}		1.5	V dc
<u>Subgroup 4</u>						
Reverse recovery time	4031	Condition B, $I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{(REC)} = 0.25 \text{ A}$	t_{rr}		5	μs
Scope display	4023	Condition A (sharp and stable), $n = 116$; $c = 0$				
<u>Subgroup 5</u>						
Not applicable						
<u>Subgroup 6</u>						
Forward surge	4066	Condition A, $I_{FSM} = 25 \text{ A (pk)}$; ten surges of 8.3 ms each at 1 minute intervals, superimposed on $I_O = 1 \text{ A}$ $V_{RWM} = \text{rated (see 1.3)}$; $T_A = +55^{\circ}\text{C}$				
Electrical measurements		See table I , subgroup 2				
<u>Subgroup 7</u>						
Not applicable						

1/ For sampling plan, see [MIL-PRF-19500](#).

2/ For end-point measurements, this test is required for the following subgroups:
Group B, subgroups 2 and 3 (JAN, JANTX, and JANTXV).
Group C, subgroup 2.
Group E, subgroup 1.

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TABLE II. Group E inspection (all quality levels) for qualification and requalification only.

Inspection	MIL-STD-750		Sampling plan
	Method	Conditions	
<u>Subgroup 1A</u>			45 devices c = 0
Temperature cycling (air to air)	<u>1</u> / 1051	20 cycles, except high temperature shall be 150°C and low temperature shall be -195°C.	
Hermetic seal <u>2</u> /	1071		
Electrical measurements		See table I , subgroup 2 and table III , steps 1 and 2.	
<u>Subgroup 1B</u>			45 devices c = 0
Temperature cycling (air to air)	1051	500 cycles, condition C, -65°C to +175°C.	
Hermetic seal <u>2</u> /	1071		
Electrical measurements		See table I , subgroup 2 and table III , steps 1 and 2.	
<u>Subgroup 2</u>			22 devices c = 0
Steady-state dc blocking life	1048	T _A = +150°C; t = 1,000 hours +65, -0 hours; dc = 80 to 85 percent rated V _{RWM} (see 1.3).	
Electrical measurements		See table I , subgroup 2 and table III , steps 1 and 2.	
<u>Subgroup 4</u>			
Thermal impedance		See MIL-PRF-19500 .	
<u>Subgroup 5</u>			22 devices c = 0
Barometric pressure (reduced)	1001	Pressure = 8 mm Hg for 1N4245, 1N4246, and 1N4247. Pressure = 33 mm Hg for 1N4248 and 1N4249.	

See footnotes at end of table.

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TABLE II. Group E inspection (all quality levels) for qualification and requalification only – Continued.

Inspection	MIL-STD-750		Sampling Plan
	Method	Conditions	
<u>Subgroup 8</u>			
Peak reverse power	4065	Peak reverse power (P_{RM}) = shall be characterized by the supplier and the data shall be available to the Government. The test to destruction shall be performed on each subplot.	45 devices c = 0
Electrical measurements		See 4.5.5.	
<u>Subgroup 9</u>			
Resistance to glass cracking	1057	Test condition B. Step stress to destruction by increasing cycles or up to a maximum of 25 cycles.	45 devices c = 0
<u>Subgroup 10</u>			
Forward surge current	4066	Condition A, I_{FSM} = rated (see 1.3); ten surges of 8.3 ms each at 1 minute intervals superimposed on $I_O = 1.0$ A (see 1.3); V_{RWM} = rated (see 1.3); $T_A = + 55^\circ\text{C}$.	22 devices c = 0
Electrical measurement		See table I, subgroup 2.	

1/ Test method 1056 of MIL-STD-750, condition D, using liquid nitrogen, may be used in lieu of test method 1051.

2/ For opaque glass diodes use test method 2068 of MIL-STD-750.

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TABLE III. Groups A, B, C, and E delta measurements. 1/ 2/ 3/ 4/

Step	Inspection	MIL-STD-750		Symbol	Limit	Limit	Unit
		Method	Conditions		Min	Max	
1.	Forward voltage	4011	Condition B; $I_F = 3.0$ A dc pulse width = 8.3 ms maximum, duty cycle = 2 percent maximum.	ΔV_{F2}		± 0.1 V dc maximum	
2.	Reverse current	4016	Condition A or B; DC method; $V_R =$ rated (see 1.3).	ΔI_{R1}	± 50 nA dc or ± 100 percent of initial value, whichever is greater.		

- 1/ Devices that exceed the [table I](#), subgroup 2 limits for this test shall not be accepted.
- 2/ The delta measurements taken during group B inspection for quality levels JAN and JANTX (table E-VIB of [MIL-PRF-19500](#)) shall be as follows: In addition to the measurements specified for subgroup 3 and 6, the measurements of steps 1 and 2 of this table shall also be taken.
- 3/ The delta measurements taken during group C inspection for all quality levels (table E-VII of [MIL-PRF-19500](#)) shall be as follows: In addition to the measurements specified for subgroup 6, the measurements of steps 1 and 2 of this table shall also be taken.
- 4/ The delta measurements for group E inspection for all quality levels (table E-IX of [MIL-PRF-19500](#)) shall be as follows:
 - a. In addition to the measurements specified for subgroup 1, the measurements of steps 1 and 2 of this table shall also be taken.
 - b. In addition to the measurements specified for subgroup 2, the measurements of steps 1 and 2 of this table shall also be taken.

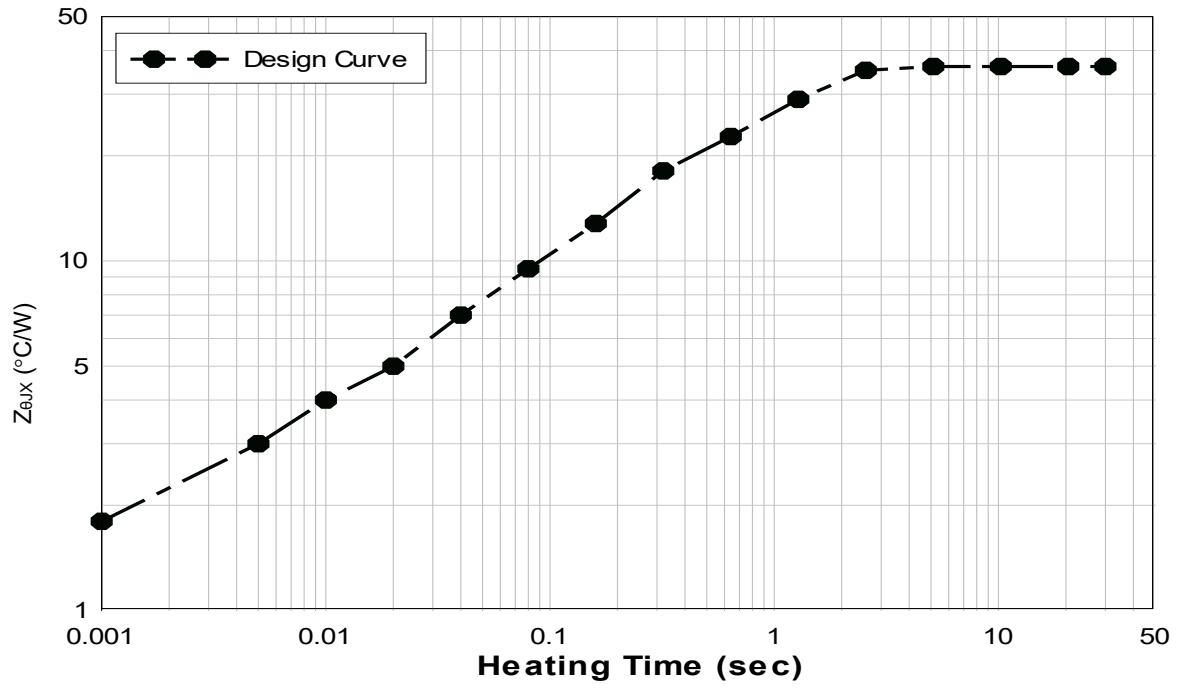


FIGURE 3. Thermal impedance graph $R_{\theta JL}$ 36°C/W .

5. PACKAGING

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

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory. The notes specified in MIL-PRF-19500 are applicable to this specification.)

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

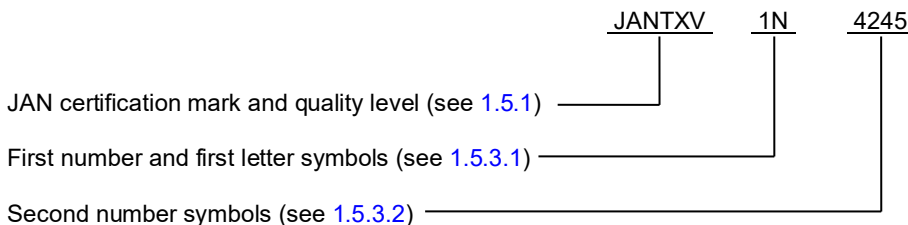
6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Packaging requirements (see 5.1).
- c. Lead finish (see 3.4.1).
- d. The complete PIN, see 1.5 and 6.4.

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List (QML 19500) 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 orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DLA Land and Maritime, ATTN: VQE, P.O. Box 3990, Columbus, OH 43218-3990 or e-mail vqe.chief@dla.mil. An online listing of products qualified to this specification may be found in the Qualified Products Database (QPD) at <https://qpldocs.dla.mil>.

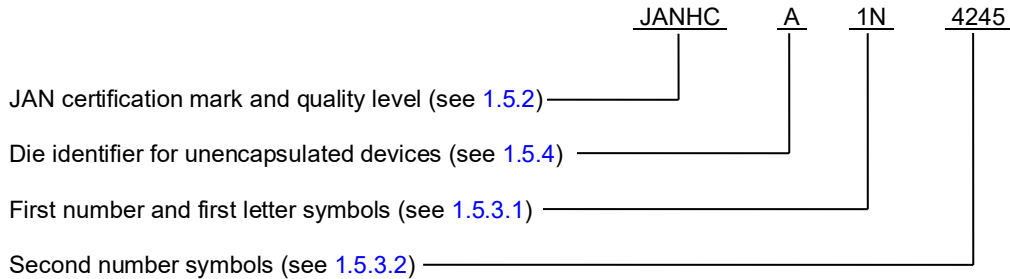
6.4 PIN construction example.

6.4.1 Encapsulated devices The PINs for encapsulated devices are constructed using the following form.



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6.4.2 Un-encapsulated devices. The PINs for un-encapsulated devices are constructed using the following form.



6.5 List of PINs. The following is a list of possible PINs available on this specification sheet.

PINs for types 1N4245, 4246, 4247, 4248, and 4249		
JAN1N4245	JANTX1N4245	JANTXV1N4245
JAN1N4246	JANTX1N4246	JANTXV1N4246
JAN1N4247	JANTX1N4247	JANTXV1N4247
JAN1N4248	JANTX1N4248	JANTXV1N4248
JAN1N4249	JANTX1N4249	JANTXV1N4249

6.6 Superseded PINs. The following supersession data applies to PINs associated with this document:

Superseding type as specified within MIL-PRF-19500/427H, dated 8 July 2000	Superseded type as specified within MIL-S-19500/228G, 21 May 1993	Superseded type as specified within MIL-S-19500/286D, dated 15 March 1993	Superseded type as specified within MIL-S-19500/365A, NOTICE 1 28 December 1982
1N5614	1N3611	1N4245	1N4383
1N5616	1N3612	1N4246	1N4384
1N5618	1N3613	1N4247	1N4385
1N5620	1N3614	1N4248	1N4585
1N5622	1N3957	1N4249	1N4586

6.7 Substitution information. Devices covered by this specification are substitutable for the manufacturer's and user's PIN. This information in no way implies that manufacturer's PINs are suitable as a substitute for the military PIN.

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6.8 Suppliers of die (if applicable).

JANC ordering information	
PIN	Manufacturer
	14552
1N4245	JANHCA1N4245
1N4246	JANHCA1N4246
1N4247	JANHCA1N4247
1N4248	JANHCA1N4248
1N4249	JANHCA1N4249

6.9 Request for new types and configurations. Requests for new device types or configurations for inclusions in this specification sheet should be submitted to: DLA Land and Maritime, ATTN: VAC, Post Office Box 3990, Columbus, OH 43218-3990 or by electronic mail at "semiconductor@dla.mil".

6.10 Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:

Army – CR
Navy – SH
Air Force – 85
DLA – CC

Preparing activity:

DLA – CC

(Project 5961–2024–009)

Review activities:

Army – AR, MI
Navy – AS, MC
Air Force – 19

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