

The documentation and process conversion measures necessary to comply with this revision shall be completed by 23 January 2004.

INCH-POUND

MIL-PRF-19500/586F
17 October 2003
SUPERSEDING
MIL-PRF-19500/586E
14 April 2000

PERFORMANCE SPECIFICATION

* SEMICONDUCTOR DEVICE, DIODE, SILICON, SCHOTTKY BARRIER, HERMETIC, TYPES 1N5819-1, 1N5819UR-1, 1N6761-1, AND 1N6761UR-1, JAN, JANTX, JANTXV, JANS, JANHC, AND JANKC

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

1. SCOPE

1.1 Scope. This specification covers the performance requirements for silicon, Schottky barrier diodes. Four levels of product assurance are provided for each encapsulated device types as specified in MIL-PRF-19500, and two levels of product assurance for each unencapsulated device type die.

* 1.2 Physical dimensions. See figure 1 (DO-41), figure 2 (DO-213AB), and figure 3 (JANC die) dimensions.

* 1.3 Maximum ratings.

Types	V_{RWM}	I_{O1} (1)	I_{FSM}	T_{STG}
	<u>V (pk)</u>	<u>A dc</u>	<u>A (pk)</u>	<u>°C</u>
1N5819-1, 1N5819UR-1	45 (1)	1.0	25	-65°C to +150°C
1N6761-1, 1N6761UR-1	100 (2)	1.0	25	-65°C to +150°C

(1) For derating curves, see figures 4 through 7.

(2) The maximum T_J depends on the voltage applied. See figures 4 through 7.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC/VAC, Post Office Box 3990, Columbus, OH 43216-5000, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

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FSC 5961

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* 1.4 Primary electrical characteristics. Unless otherwise specified, primary electrical characteristics at $T_A = +25^\circ\text{C}$.

Types	Max V_{FM1} $I_F = 0.1 \text{ A}$	V_{F2} $I_F = 1.0 \text{ A}$	Max V_{FM3} $I_F = 3.1 \text{ A}$	Max I_{RM} @ V_{RWM} pulsed method (see 4.5.1)		Max C_T $V_R = 5 \text{ V dc}$	Max $R_{\theta JL}$ or $R_{\theta JEC}$ 3/8 lead length or end cap	Max $Z_{\theta JX}$
				$T_J = +25^\circ\text{C}$ I_{RM1}	$T_J = +100^\circ\text{C}$ I_{RM2}			
	<u>V (pk)</u>	<u>V (pk)</u>	<u>V (pk)</u>	<u>mA</u>	<u>mA</u>	<u>pF</u>	<u>$^\circ\text{C/W}$</u>	<u>$^\circ\text{C/W}$</u>
1N5819-1	0.34	0.49	0.80	0.05	5.0	70	70	12
1N5819UR-1	0.34	0.49	0.80	0.05	5.0	70	40	12
1N6761-1	0.38	0.69	NA	0.10	12.0	70	70	12
1N6761UR-1	0.38	0.69	NA	0.10	12.0	70	40	12

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 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 listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-19500 - Semiconductor Devices, General Specification for.

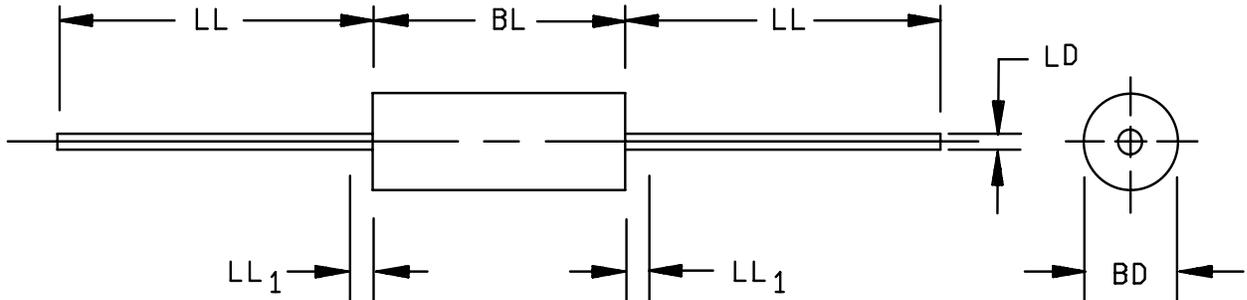
STANDARD

DEPARTMENT OF DEFENSE

MIL-STD-750 - Test Methods for Semiconductor Devices.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production Services (DAPS), Building 4D (NPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated specifications or specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

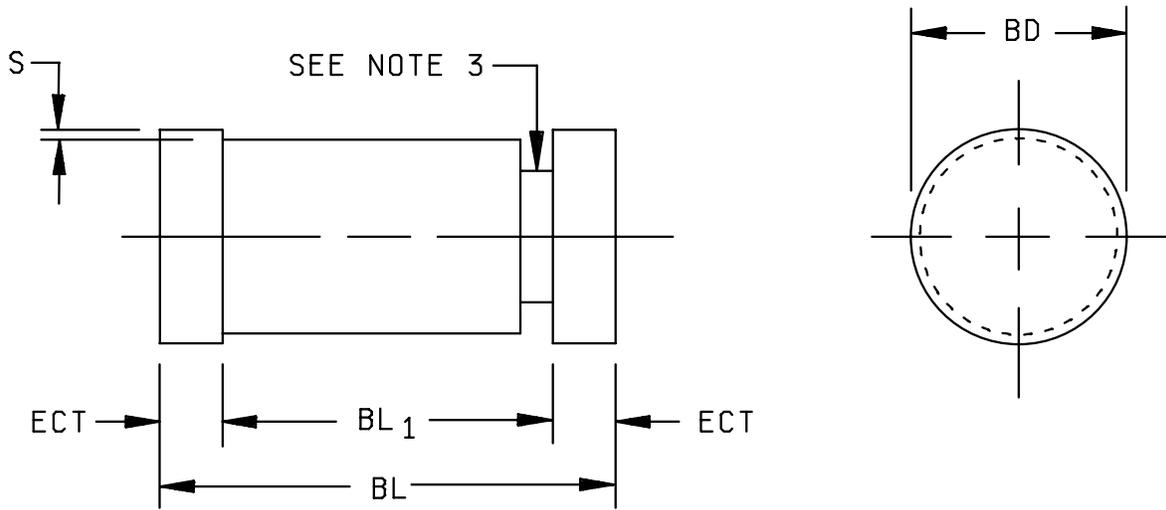


Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
LD	.028	.034	0.71	0.86	
BD	.080	.107	2.03	2.72	3
BL	.160	.205	4.06	5.21	3
LL	1.000		25.40		
LL ₁		.050		1.27	4

NOTES:

1. Dimensions are in Inch pounds.
2. Millimeter equivalents are given for general information only.
3. Package contour optional within cylinder of diameter BD and length BL. Slugs if any shall not be included within this cylinder, but shall not be subject to the minimum limit of BD.
4. Lead diameter not controlled in this zone to allow for flash, lead finish build-up, and minor irregularities other than slugs.
5. Dimensions are in accordance with ASME Y 14.5M.

* FIGURE 1. Physical dimensions, 1N5819-1 and 1N6761-1 (DO-41).

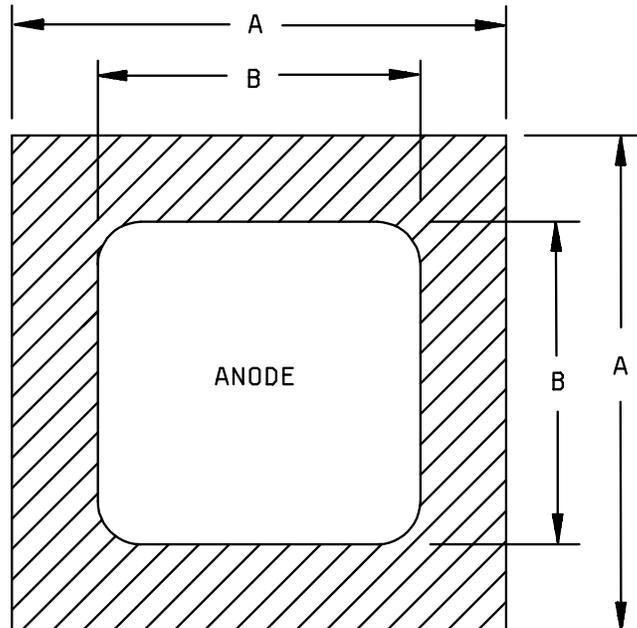


Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.189	.205	4.80	5.21
BL ₁	.159 REF		4.04 REF	
BD	.094	.105	2.39	2.67
ECT	.016	.022	0.41	0.56
S	.001		0.03	

NOTES:

1. Dimensions are in Inch pounds.
2. Millimeter equivalents are given for general information only.
3. Gap not controlled, shape of body and gap not controlled.
4. Dimensions are in accordance with ASME Y 14.5M.

* FIGURE 2. Physical dimensions of surface mount family, 1N5819UR-1, and 1N6761UR-1 (DO-213AB).



BACKSIDE IS CATHODE

Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	0.89	0.99	.035	.039
B	0.79	0.84	.031	.033

Design data

Metallization:

Top: (Anode)..... AL

Back: (Cathode)..... Au

AL thickness 25,000 Å min

Gold thickness 4,000 Å min

Chip thickness 10 Mils ± 2 Mils

FIGURE 3. JANC (A-version) die dimensions.

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 requirements and physical dimensions. The interface requirements and physical dimensions shall be as specified in MIL-PRF-19500 and on figures 1, 2, and 3 herein.

3.4.1 Lead finish. Unless otherwise specified, 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 Lead material. Lead material shall be copper clad steel with a minimum of 50 percent copper by weight.

* 3.4.3 Metallurgical bond construction. Devices shall be category I or II metallurgically bonded, double plug construction in accordance with MIL-PRF-19500 and herein.

3.5 Diode construction. These devices shall be constructed in a manner and using materials which enable the diodes to meet the applicable requirements of MIL-PRF-19500 and this document.

3.5.1 Surface mount. The U version shall be considered structurally identical to the non-U version except for lead attach.

3.6 Marking. Marking shall be in accordance with MIL-PRF-19500.

3.6.1 Marking for UR devices. UR-suffix devices only, all marking (except for 3.6.2) may be omitted from the body, but shall be retained on the initial container.

3.6.2 Polarity. The polarity of all types shall be indicated with a contrasting color band to denote the cathode end. Alternatively, for UR suffix devices, a minimum of three contrasting color dots spaced around the periphery on the cathode end may be used.

3.7 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in 1.3, 1.4, and table I.

3.8 Electrical test requirements. The electrical test requirements shall be specified in table I.

3.9 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).

4.2 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-19500.

4.2.1 JANHC and JANKC devices. Qualification for devices shall be in accordance with MIL-PRF-19500. This testing may be performed on a TO-5 package in lieu of the DO-41 axial leaded package.

* 4.2.2 Group E qualification. Group E inspection shall be performed for qualification or re-qualification only. In case qualification was awarded to a prior revision of the associated specification that did not request the performance of table II tests, the tests specified in table II herein shall be performed by the first inspection lot of this revision to maintain qualification.

* 4.3 Screening (JAN, JANTX, JANTXV, and JANS levels only). Screening shall be in accordance with table 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 (see table IV of MIL-PRF-19500)	Measurement
	JANS level
1a	Required
1b	Required
2	Not required
3a	Required
3b	Not applicable
(1) 3c	Required (see 4.3.3)
4, 5, 6 and 7a	Not applicable
7b	Required
8	Required
9	Required. I_{R1} and V_{F2}
(2) 10	Required. $T_A = +100^\circ\text{C}$; $V_{RWM} = 100 \text{ V(pk)}$; 1N6761; $T_A = +110^\circ\text{C}$; $V_{RWM} = 45 \text{ V(pk)}$; 1N5819, $I_O = 0$, half sine wave, $f = 60 \text{ Hz}$
11	Required. $\Delta I_{R1} \leq 100$ percent of initial reading or .02 mA whichever is greater. $\Delta V_{F2} \leq \pm 50 \text{ mV dc}$.
12	Required. See 4.3.2
13	Required. Subgroup 2 of table I herein; $\Delta I_{R1} \leq 100$ percent of initial reading or .02 mA whichever is greater; $V_{F2} \leq \pm 50 \text{ mV dc}$.
14a	Not applicable
14b	Optional (3)
15	Required
16	Required

See notes at end of table.

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4.3 Screening (JAN, JANTX, JANTXV, and JANS levels only) - Continued.

Screen (see table IV of MIL-PRF-19500)	Measurement	
	JANTXV and JANTX Level	JAN level
1a	Not required	Not required
1b	Required (JANTXV only)	Not required
2	Not required	Not required
3a	Required	Required in accordance with MIL-PRF-19500, JANTX level
3b	Not applicable	Not applicable
(1) 3c	Required (see 4.3.3)	Required (see 4.3.3)
4, 5, 6 and 7a	Not applicable	Not applicable
7b	Required	Not required
8	Not required	Not required
9	Not applicable	Not applicable
(2) 10	Required $T_A = +100^\circ\text{C}$; $V_{RWM} = 100 \text{ V(pk)}$; 1N6761; $T_A = +110^\circ\text{C}$; $V_{RWM} = 45 \text{ V(pk)}$; 1N5819, $I_O = 0$, half sine wave, $f = 60 \text{ Hz}$	Not applicable
11	Required, I_{R1} and V_{FM2}	Not applicable
12	Required See 4.3.2, $t = 48 \text{ hours}$	Not applicable
13	Required Subgroup 2 of table I herein; $\Delta I_{R1} \leq 100$ percent of initial reading or .02 mA whichever is greater; $V_{F2} \leq \pm 50 \text{ mV dc}$.	Not applicable
14a	Not applicable	Not applicable
14b	Optional (3)	Not required
15 and 16	Not required	Not required

(1) Thermal impedance shall be performed any time after sealing provided temperature cycling is performed in accordance with table IV of MIL-PRF-19500, screen 3 prior to this thermal test.

(2) Junction temperature (T_J) is not to exceed 115°C at V_{RWM} . T_J is affected by the device mounting thermal resistance when parasitic power is generated by the temperature dependent leakage current. Until this leakage becomes significant near thermal runaway, T_J remains approximately equal to T_A or T_J for $I_O = 0$.

(3) In accordance with MIL-PRF-19500.

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4.3.1 Screening (JANHC or JANKC). Screening of die shall be in accordance with “Discrete Semiconductor Die/Chip Lot Acceptance” appendix G of MIL-PRF-19500 and die shall be 100-percent probed in accordance with table I, subgroup 2.

* 4.3.2 Burn-in conditions. Burn-in conditions are as follows: $I_F = 1.0$ A dc (min), adjust I_F , or T_A to achieve $T_J = 100^\circ\text{C}$ min. Mounting and test conditions shall be in accordance with method 1038 of MIL-STD-750, test condition B.

* 4.3.3 Thermal impedance ($Z_{\theta JX}$ measurements). The $Z_{\theta JX}$ measurements shall be performed in accordance with method 3101 of MIL-STD-750. The maximum screen limit shall be developed by the supplier using statistical methods and it shall not to exceed the table I, subgroup 2 herein.

4.4 Conformance inspection. Conformance inspection shall be in accordance with MIL-PRF-19500.

* 4.4.1 Group A inspection. Group A inspection shall be conducted in accordance with table V of MIL-PRF-19500, and table I herein. The following test conditions shall be used for $Z_{\theta JX}$, group A inspection and shall be in accordance with method 3101 of MIL-STD-750:

- a. I_M measurement current 1 mA to 10 mA.
- b. I_H forward heating current 2.0 A.
- c. t_H heating time 10 ms.
- d. t_{MD} measurement delay time 70 μs maximum.

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the conditions specified for subgroup testing in table VIa (JANS), and table VIb (JAN, JANTX, and JANTXV) of MIL-PRF-19500. Electrical measurements (end-points) shall be in accordance with the applicable inspections of table I, subgroup 2 herein.

* 4.4.2.1 Group B inspection, table VIa (JANS) of MIL-PRF-19500.

<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
B3	1056	-55°C to 100°C, 25 cycles, n = 22, c = 0.
	1051	-55°C to 150°C, 25 cycles, n = 22, c = 0.
B3	4066	$I_{FSM} = 25$ A(pk), condition A2, $I_O = 1.0$ A; T_A = room ambient as defined in the general requirements of MIL-STD-750; 5 surges of 8.3 ms each at 1 minute intervals.
B4	1036	$I_F = 1.0$ A; T_A = room ambient as defined in the general requirements of MIL-STD-750; $t_{on} = t_{off} = 3$ minutes minimum for 2,000 cycles.
B5	1027	$I_F = 1$ A dc (minimum), adjust I_F or T_A to achieve T_J , see figures 4, through 7.
B6		Not applicable.

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* 4.4.2.2 Group B inspection, table VIb (JAN, JANTX, and JANTXV of MIL-PRF-19500).

<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
B2	1056	-55°C to 100°C, 10 cycles, n = 22, c = 0.
	1051	-55°C to 150°C, 25 cycles, n = 22, c = 0.
B2	4066	I _{FSM} = 25 A(pk), condition A 2, I _O = 1.0 A; T _A = room ambient as defined in the general requirements of MIL-STD-750 (see 4.5); 5 surges of 8.3 ms each at 1 minute intervals.
B3	1027	I _F = 1 A dc (minimum), adjust I _F or T _A to achieve T _J see figures 4, through 7.
B4	2075	In accordance with 4.5.2.

4.4.3 Group C inspection. Group C inspection shall be conducted in accordance with the conditions specified for subgroup testing in table VII of MIL-PRF-19500. Electrical measurements (end-points) shall be in accordance with the applicable inspections of table I, subgroup 2 herein.

* 4.4.3.1 Group C inspection, table VII of MIL-PRF-19500.

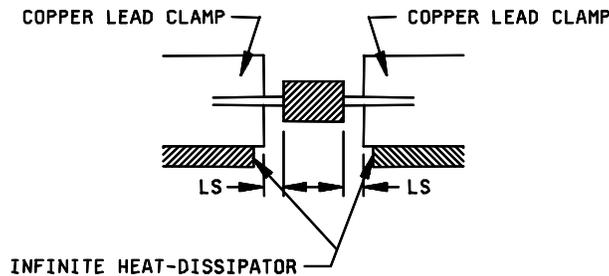
<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
C2	2036	Tension: Test condition A; weight = 10 pounds; t = 15 s. Lead fatigue: Test condition E; weight 1 pounds. NOTE: Both tension and lead fatigue are not applicable for UR devices.
C5	3101	See 4.4.5 herein.
	4081	
C6	1027	I _F = 1 A dc (minimum), adjust I _F or T _A to achieve T _J = +125°C minimum.
C7	2031	n = 22, c = 0.

* 4.4.4 Group E inspection. Group E inspection shall be conducted in accordance with table IX of MIL-PRF-19500 and the conditions for subgroup testing in table II herein. Electrical measurements (end-points) shall be in accordance with the applicable inspections of table I, subgroup 2 herein.

* 4.4.5 Thermal resistance. Thermal resistance measurement shall be in accordance with method 3101 or 4081 of MIL-STD-750. Forced moving air or draft shall not be permitted across the device during test. The maximum limit for $R_{\theta JL}$ under these test conditions shall be $R_{\theta JL} (\text{max}) = 70^{\circ}\text{C/W}$, $R_{\theta JEC} (\text{max}) = 40^{\circ}\text{C/W}$. The following conditions shall apply when using method 3101:

- a. I_M 1 mA to 10 mA.
- b. I_H 1.0 A.
- c. t_H 25 seconds minimum.
- d. t_{MD} 70 μs maximum.

LS = lead spacing = .375 inch (9.53 mm) for non-surface mount devices and 0 inch for surface mount devices as defined as follows:



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

4.5.1 Pulse measurements. Conditions for pulse measurement shall be as specified in 4.3.2.1 of MIL-STD-750.

4.5.2 Decap internal visual scribe and break (DPA). Scratch glass at cavity area with diamond scribe. Carefully snap open. Using 30X magnification, examine the area where die or bond material was in contact with the plug and verify metallurgical bonding area.

4.5.3 Steady-state operation life. This test shall be conducted with a half-sine wave of the specified peak voltage impressed across the diode in the reverse direction followed by a half-sine waveform of the specified average rectified current. The forward conduction angle of the rectified current shall not be greater than 180 degrees nor less than 150 degrees.

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TABLE I. Group A inspection.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical examination	2071					
<u>Subgroup 2</u>						
Thermal impedance	3101	See 4.3.3	$Z_{\theta JX}$		12	$^{\circ}\text{C/W}$
Forward voltage	4011	$I_F = .1 \text{ A (pk) pulsed (see 4.5.1)}$	V_{FM1}			V
1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1					0.34 0.38	
Forward voltage	4011	$I_F = 1.0 \text{ A (pk) pulsed (see 4.5.1)}$	V_{F2}			V
1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1					0.49 0.69	
Forward voltage	4011	$I_{FM} = 3.1 \text{ A (pk) pulsed (see 4.5.1)}$	V_{FM3}		0.80	V
Reverse current leakage	4016	Pulse method	I_{RM1}			mA
1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1		$V_{RM} = 45 \text{ V (pk)}$ $V_{RM} = 100 \text{ V (pk)}$			0.05 0.10	
<u>Subgroup 3</u>						
High temperature operation:		$T_A = +100^{\circ}\text{C}$				
Reverse current leakage	4016	Pulse method (see 4.5.1)				
1N5819-1, 1N5819UR-1		$V_{RM} = 45 \text{ V (pk)}$	I_{RM2}		5.0	mA
1N5819-1, 1N5819UR-1		$V_R = 40 \text{ V (pk)}$	I_{RM3}		4.5	mA
1N5819-1, 1N5819UR-1		$V_R = 35 \text{ V (pk)}$	I_{RM4}		4.0	mA
1N5819-1, 1N5819UR-1		$V_R = 24 \text{ V (pk)}$	I_{RM5}		3.5	mA
1N5819-1, 1N5819UR-1		$V_R = 12 \text{ V (pk)}$	I_{RM6}		2.5	mA
1N5819-1, 1N5819UR-1		$V_R = 6 \text{ V (pk)}$	I_{RM7}		2.0	mA
1N6761-1, 1N6761UR-1		$V_{RM} = 100 \text{ V (pk)}$	I_{RM2}		12.0	mA
1N6761-1, 1N6761UR-1		$V_{RM} = 50 \text{ V (pk)}$	I_{RM3}		5.0	mA
1N6761-1, 1N6761UR-1		$V_{RM} = 25 \text{ V (pk)}$	I_{RM4}		3.5	mA
1N6761-1, 1N6761UR-1		$V_{RM} = 12 \text{ V (pk)}$	I_{RM5}		2.5	mA

See footnote at end of table.

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TABLE I. Group A inspection. - Continued

Inspection ^{1/}	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 3</u> - Continued						
Forward voltage 1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1	4011	Pulse method (see 4.5.1) $I_F = 1.0 \text{ A (pk)}$	V_{F4}		0.45 0.64	V
Low temperature operation:		$T_A = -55^\circ\text{C}$				
Reverse current leakage 1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1	4016	Pulse method (see 4.5.1) $V_{RM} = 45 \text{ V (pk)}$ $V_R = 90 \text{ V (pk)}$	I_{R5}		0.2 0.4	mA
Forward voltage 1N5819-1, 1N5819UR-1 1N6761-1, 1N6761UR-1	4011	Pulse method (see 4.5.1) $I_F = 1.0 \text{ A (pk)}$	V_{F5}		0.65 0.80	V
<u>Subgroup 4</u>						
Capacitance	4001	$V_R = 5 \text{ V dc}$, $.01 \leq f \leq 1 \text{ MHz}$, $V_{SIG} = 15 \text{ mV p-p}$	C_T		70	pF

^{1/} For sampling plan, see MIL-PRF-19500.

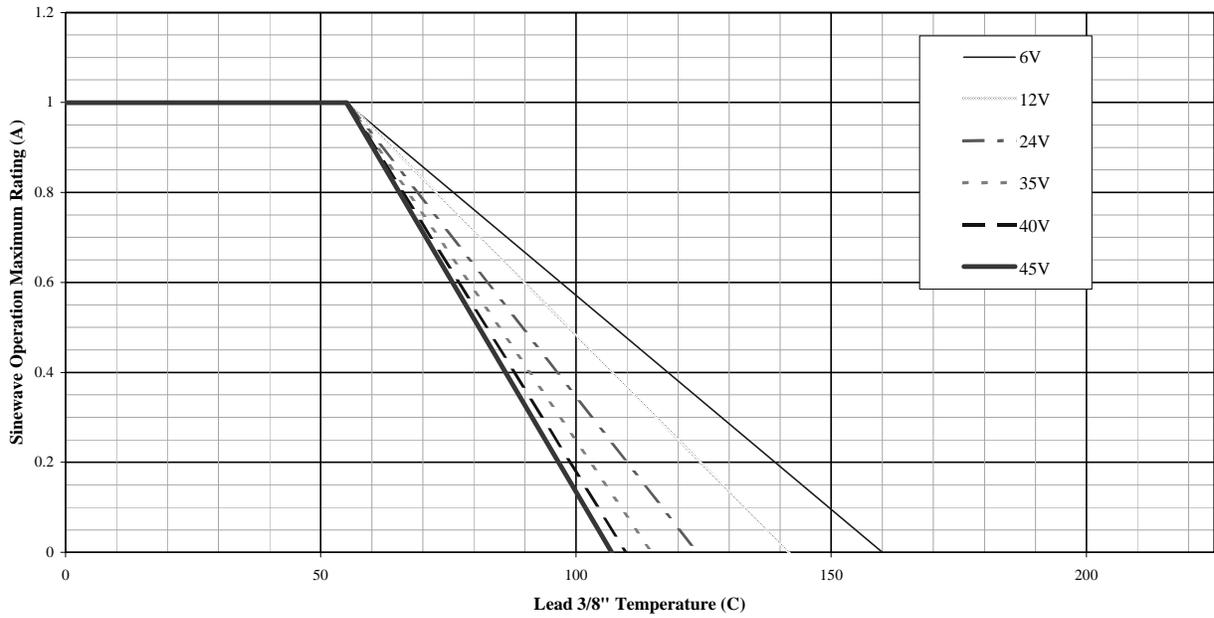
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* TABLE II. Group E inspection (all quality levels) for qualification and re-qualification.

Inspection	MIL-STD-750		Sampling plan
	Method	Conditions	
<u>Subgroup 1</u>			22 devices c = 0
Thermal shock	1056	500 cycles -55°C to 100°C	
Thermal shock (temperature cycling)	1051	500 cycles -55°C to 150°C	
Hermetic seal	1071	Test condition E	
Electrical measurement		See table I, subgroup 2	
<u>Subgroup 2</u>			22 devices c = 0
Steady-state reverse bias	1038	Test condition A; 1,000 hours, see 4.4.3.1.C6 herein.	
Electrical measurement		See table I, subgroup 2	
<u>Subgroup 3</u>			3 devices c = 0
DPA	2101	Cross section and scribe and break	
<u>Subgroup 4</u>			
Thermal impedance curves		Each supplier shall submit their (typical) design thermal impedance curves to the qualifying activity. In addition, the optimal test conditions and $Z_{\theta JX}$ limit shall be provided to the qualifying activity in the qualification report.	
<u>Subgroup 5</u>			
Not applicable			
<u>Subgroup 6</u>			3 devices c = 0
ESD	1020		
<u>Subgroup 7</u>			45 devices c = 0
Soldering heat	2031		
<u>Subgroup 8</u>			45 devices
Resistance to glass cracking	1057	Test condition B. Test to destruction or 25 cycles max whichever comes first.	

Schottky Temperature-Current Derating Curve

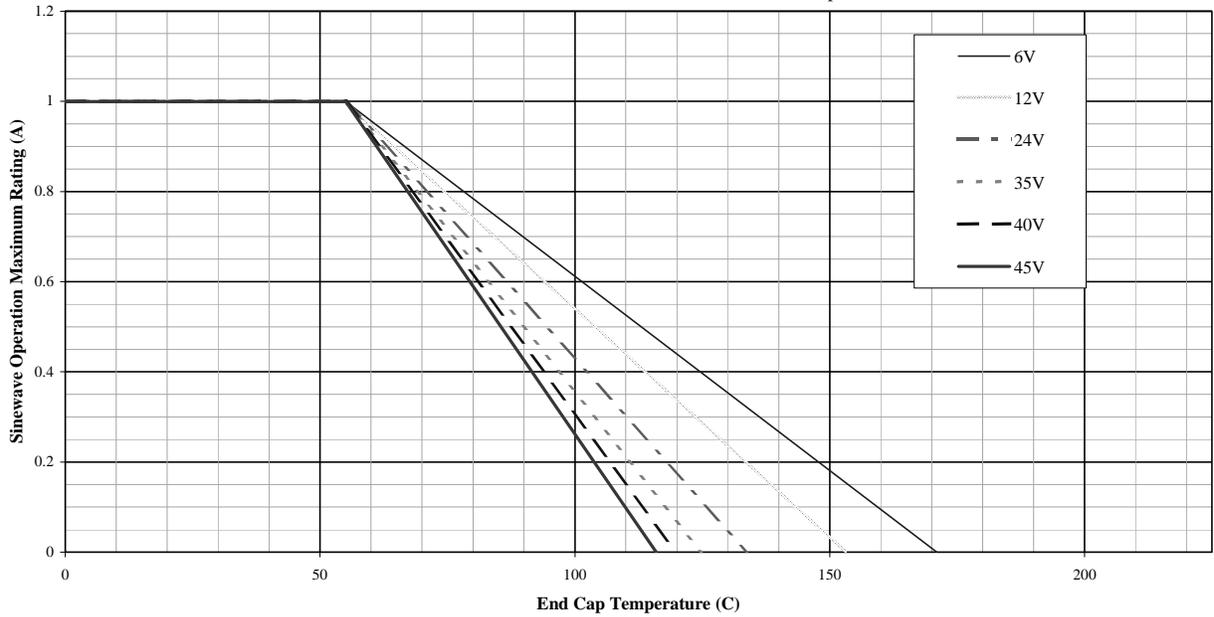
Tc = 25°C 1N5819-1 Thermal Resistnace Junction to Lead 3/8" = 70.0°C/W



* FIGURE 4. Derating for 1N5819-1 (DO-41).

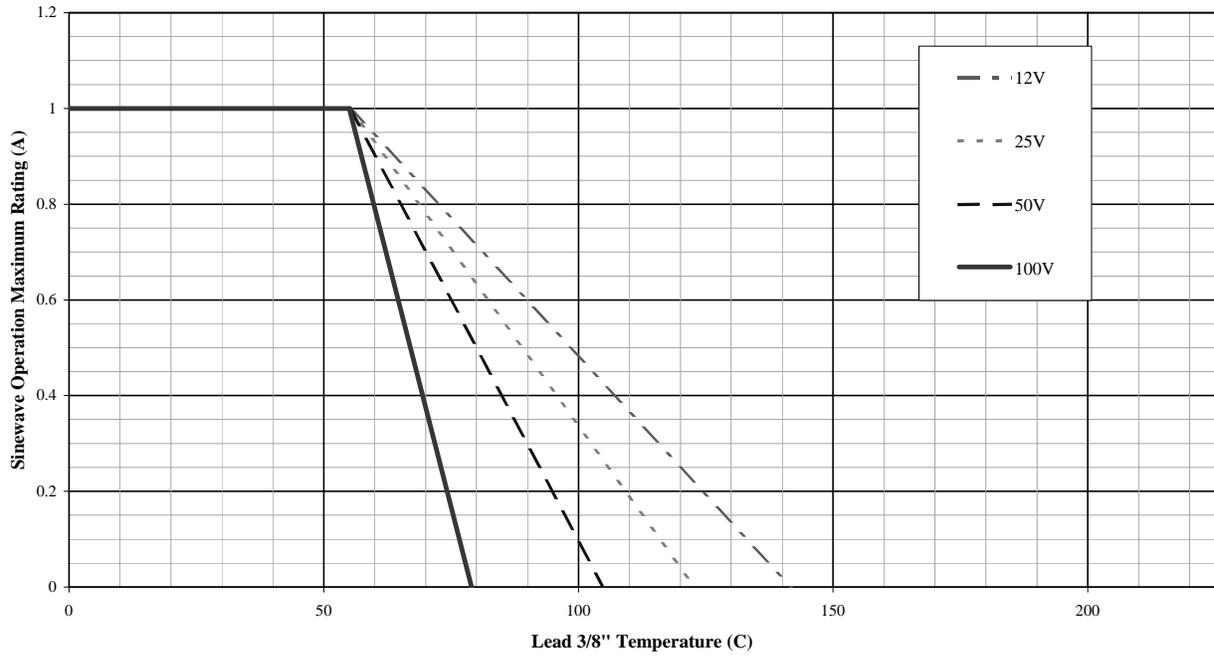
Schottky Temperature-Current Derating Curve

Tc = 25°C 1N5819-UR1 Thermal Resistnace Junction to End Cap = 40.0°C/W



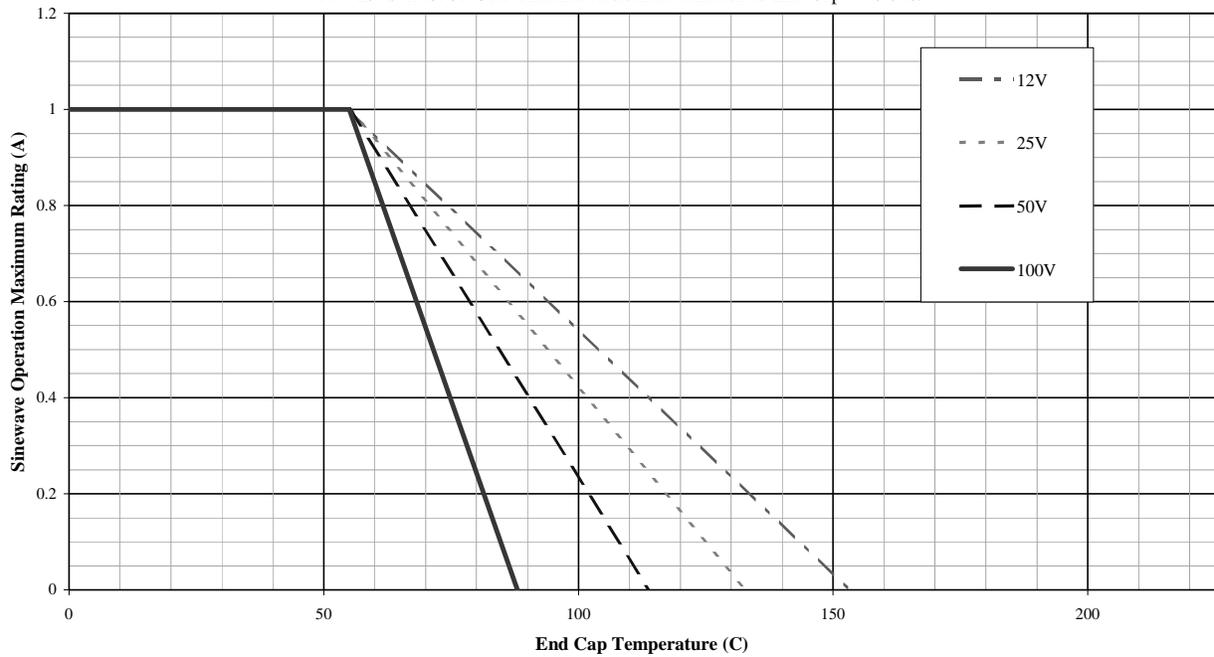
* FIGURE 5. Derating for 1N5819-UR1 (DO-213AB).

Schottky Temperature-Current Derating Curve
Tc = 25°C 1N6761-1 Thermal Resistnace Junction to Lead 3/8" = 70.0°C/W



* FIGURE 6. Derating for 1N6761-1 (DO-41).

Schottky Temperature-Current Derating Curve
Tc = 25°C 1N6761-UR1 Thermal Resistnace Junction to End Cap = 40.0°C/W



* FIGURE 7. Derating for 1N6761-UR1 (DO-213AB).

5. PACKAGING

5.1 Packaging. 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 or 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

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

6.1 Intended use. The notes specified in MIL-PRF-19500 are applicable to this specification.

6.2 Acquisition requirements. The acquisition requirements are as specified in MIL-PRF-19500.

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 Defense Supply Center, Columbus, ATTN: DSCC-VQE, P.O. Box 3990, Columbus, OH, 43216-5000.

6.4 Suppliers of die. The qualified die suppliers with the applicable letter version (example JANHCA1N5819) will be identified on the QML.

JANC ordering information	
PIN	Manufacturer
1N5819	JANHCA1N5819, JANKCA1N5819
1N6761	JANHCA1N6761, JANKCA1N6761

* 6.4 Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. 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 and relationship to the last previous issue.

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

Preparing activity:
 DLA - CC
 (Project 5961-2719)

Review activities:
 Army - AR, MI, SM
 Navy - AS, MC
 Air Force - 19, 99

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

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I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-PRF-19500/586F	2. DOCUMENT DATE 17 October 2003
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3. **DOCUMENT TITLE** SEMICONDUCTOR DEVICE, DIODE, SILICON, SCHOTTKY BARRIER, HERMETIC, TYPES 1N5819-1, 1N5819UR-1, 1N6761-1, AND 1N6761UR-1, JAN, JANTX, JANTXV, JANS, JANHC, AND JANKC

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) COMMERCIAL DSN FAX EMAIL	7. DATE SUBMITTED

8. PREPARING ACTIVITY

a. Point of Contact Alan Barone	b. TELEPHONE Commercial DSN FAX EMAIL 614-692-0510 850-0510 614-692-6939 alan_barone@dla.mil		
c. ADDRESS Defense Supply Center, Columbus ATTN: DSCC-VAC, P.O. Box 3990, Columbus, OH 43216-5000	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Standardization Program Office (DLSC-LM) 8725 John J. Kingman, Suite 2533, Fort Belvoir, VA 22060-6221 Telephone (703) 767-6888 DSN 427-6888		