

The documentation and process conversion measures necessary to comply with this revision shall be completed by 18 September 1999.

INCH-POUND

MIL-PRF-19500/445D
18 June 1999
SUPERSEDING
MIL-S-19500/445C
4 January 1994

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, DIODE, SILICON, SWITCHING
TYPES 1N5712, 1N5712-1, AND 1N5712UR-1
JAN, JANTX, JANTXV, JANJ, 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 Schottky barrier diodes. Five levels of product assurance are provided for each encapsulated device type as specified in MIL-PRF-19500. Two level of product assurance are provided for each unencapsulated device type.

1.2 Physical dimensions. See figure 1, similar to D0-35 (1N5712 and 1N5712-1), figure 2 (DO-213AA), and figure 3 (JANHC and JANKC).

1.3 Maximum ratings.

Type	$R_{\theta JL}$ 1/	V_{RWM}	I_O	T_{STG} and T_J
	$^{\circ}C/W$	$V(pk)$	mA dc	$^{\circ}C$
1N5712	700	16	33 2/	-65 to +200
1N5712-1	250	16	33 3/	-65 to +150
1N5712UR-1	100	16	33 4/	-65 to +150

1/ Lead length = .375 inch except for surface mount.

2/ At $T_L = +140^{\circ}C$ and $L = .375$ inch, derate I_O to 0 at $+200^{\circ}C$.

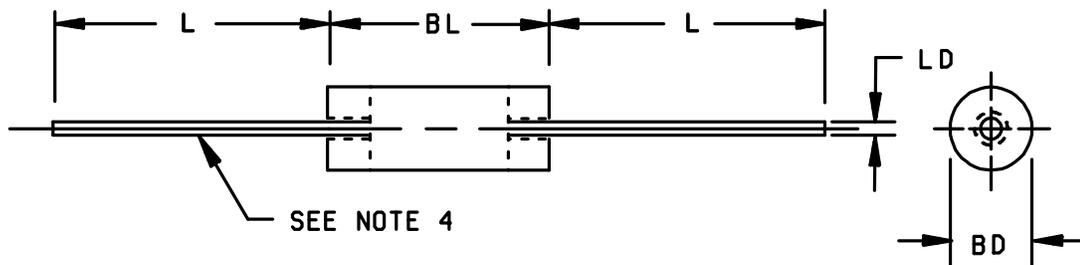
3/ At $T_L = +130^{\circ}C$ and $L = .375$ inch, derate I_O to 0 at $+150^{\circ}C$.

4/ At $T_{EC} = +140^{\circ}C$, derate I_O to 0 at $+150^{\circ}C$.

1.4 Primary electrical characteristics.

Limits	$V_{(BR)1}$ I_R = 10 μA dc	V_{F1} I_F = 1 mA dc	V_{F2} I_F = 35 mA dc	I_R V_R = 16 V dc	C $V_R = 0, f = 1$ MHz $V_{sig} = 50$ mV(pk)	τ_{CL} I_F = 20.0 mA	$Z_{\theta JX}$
	V dc	V dc	V dc	nA dc	pF	ps	$^{\circ}C/W$
Minimum	20	0.41	1.0	150	1.2	100	1N5712
Maximum					2.0		1N5712-1 1N5712UR-1
							1N5712-1 1N5712UR-1
							40

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

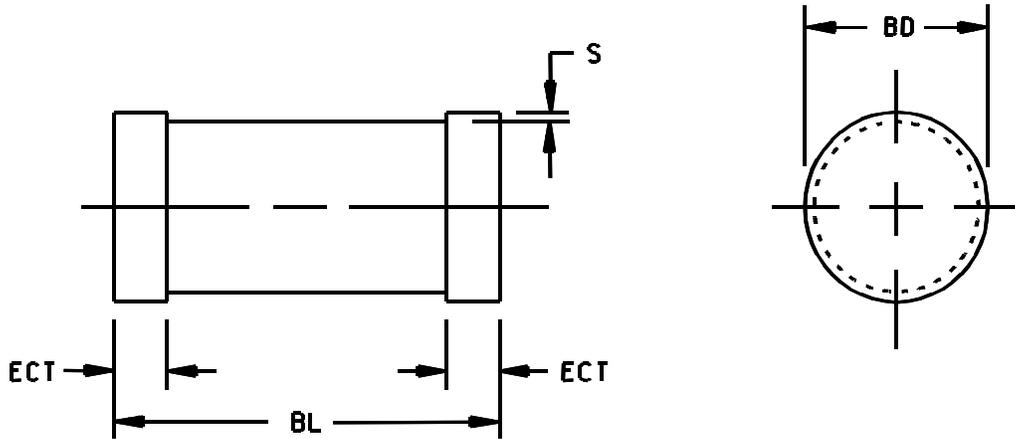


Dimensions					
Ltr	Inches		Millimeters		Notes
	Min	Max	Min	Max	
BL	.150	.170	3.81	4.32	3
LD	.068	.076	1.73	1.93	3, 4
L	1.000	1.500	25.40	38.10	
BD	.014	.022	0.36	0.56	

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Dimensions BL and LD include all components of the diode periphery except the sections of the leads over which the diameter is controlled.
4. Dimension BD shall be measured at the largest diameter.
5. In accordance with ANSI Y14.5M, diameters are equivalent to ϕx symbology.

FIGURE 1. Physical dimensions for 1N5712 and 1N5712-1.

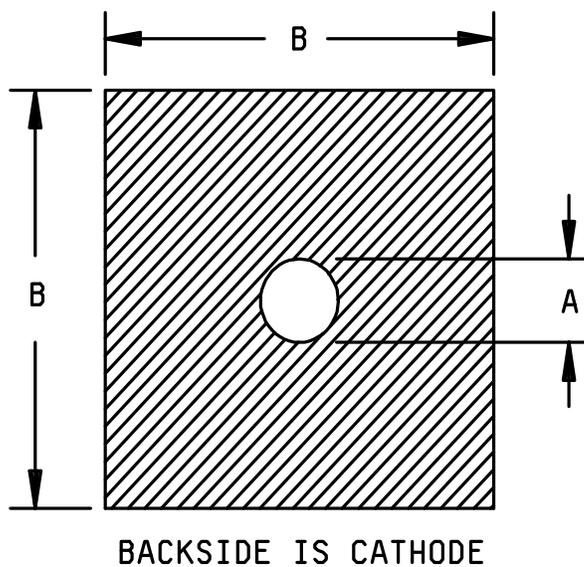


Dimensions					
Ltr	Inches		Millimeters		Notes
	Min	Max	Min	Max	
BD	.063	.067	1.60	1.70	
ECT	.016	.022	0.41	0.55	
BL	.130	.146	3.30	3.71	
S	.001 Min		0.03 Min		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. In accordance with ANSI Y14.5M, diameters are equivalent to ϕx symbology.

FIGURE 2. Physical dimensions, 1N5712UR-1 (DO-213AA).



Dimensions					
Ltr	Inches		Millimeters		Notes
	Min	Max	Min	Max	
A	.0029	.0035	.074	.089	
B	.0130	.0170	.330	.430	

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Element evaluation accomplished utilizing TO-5 package.
4. The physical characteristics of the die are:

Metallization:

Top (anode): Al.

Back (cathode): Au.

Al thickness: 25,000 Å minimum.

Gold thickness: 4,000 Å minimum.

Chip thickness: .010 inches (.25 mm) ±.002 inches (.05 mm).

FIGURE 3. Physical dimensions, JANHCA and JANKCA die.

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 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

MILITARY

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

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

DRAWING

Defense Electronics Supply Center

C68001 - Test Fixture for Effective Minority Carrier Lifetime.

(Copies of DESC drawing C68001 are available from Defense Supply Center Columbus, DSCC-VAT, Columbus, OH 43216-5000.)

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.

3. REQUIREMENTS

3.1 Associated specification. The individual item requirements shall be in accordance with MIL-PRF-19500, and as specified herein.

3.2 Abbreviations, symbols, and definitions. Abbreviations, symbols, and definitions used herein shall be as specified in MIL-PRF-19500, and as follows:

- EC End cap.
- UR Surface mount case outline, round end cap.
- τ_{CL} Effective carrier lifetime.

3.3 Interface requirements and physical dimensions. The Interface requirements and physical dimensions shall be as specified in MIL-PRF-19500, MIL-HDBK-6100, and herein.

3.3.1 Lead finish. Lead finish shall be solderable as defined in MIL-PRF-19500, MIL-STD-750, and herein.

3.3.2 Dash one construction. All devices shall be metallurgically bonded double plug construction in accordance with the requirements of category I or II, (see MIL-PRF-19500).

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

MIL-PRF-19500/445D

3.4.1 UR devices. "UR" devices shall be marked with a cathode band only. Initial container package marking will be in accordance with MIL-PRF-19500.

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

3.6 Electrical test requirements. The electrical test requirements shall be the subgroups specified in 4.4.2, 4.4.3, and table I.

3.7 Qualification. Devices furnished under this specification shall be products that are authorized by the qualifying activity for listing on the applicable qualified manufacturers list before contract award (see 4.2 and 6.6).

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 4.3).

4.1.1 Sampling inspection. Sampling inspection shall be in accordance with MIL-PRF-19500 and as specified herein, except that lot accumulation period shall be 6 months in lieu of 6 weeks.

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

4.2.1 Group E inspection. Qualification inspection shall be in accordance with MIL-PRF-19500 and table II herein.

4.2.2 JANHC and JANKC devices. Qualification shall be in accordance with MIL-PRF-19500.

4.2.3 JANJ devices. For JANJ level, 3.3.1 through 3.3.1.3 of MIL-PRF-19500 shall apply, except as modified herein. Supplier imposed requirements as well as alternate screens, procedures, and/or controls shall be documented in the QM plan and must be submitted to the Qualifying Activity for approval. When alternate screens, procedures, and/or controls are used, in lieu of the JANJ screens herein equivalency shall be proven and documented in the QM Plan. Radiation characterization may be submitted in the QM plan at the option of the manufacturer, however, paragraph 3.3.1.1 of MIL-PRF-19500 is not required. Die lot control and rework shall be in accordance with MIL-PRF-19500 paragraph 3.13 and D 3.13.2.1 for JANS level. Lot formation and conformance inspection requirements for JANJ shall be those used for JANTXV devices as a minimum.

4.2.4 JANJ Qualification. For JANJ qualification, 4.4.2.1 herein shall be performed as required by the Qualifying Activity.

4.3 Screening (JAN, JANTX, JANTXV, JANJ, 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	JANJ Level
1a	Required	Not Required
1b	Required	Required
2	Not Required	Not Required
3a	Required	Required
3b	Not Applicable	Not Applicable
3c 1/	Required (see 4.3.3)	Required (see 4.3.3)
4, 5, 6 and 7a	Not Applicable	Not Applicable
7b	Required	Required
8	Required	Not Required
9 and 10	Not Applicable	Not Applicable
11	Required I_{R1} and V_{F1}	Required I_{R1} and V_{F1}
12	Required, see 4.3.1	Required, see 4.3.1
13 3/	Required. Subgroup 2 and 3 of table I herein; $\Delta I_{R1} \leq 100$ percent of initial reading or 15 nA whichever is greater; $\Delta V_{FM1} \leq \pm 20$ mV dc.	Required. Subgroup 2 and 3 of table I herein; $\Delta I_{R1} \leq 100$ percent of initial reading or 15 nA whichever is greater; $\Delta V_{FM1} \leq \pm 20$ mV dc.
14a	Not Applicable	Not Applicable
14b	Optional 2/	Optional 2/
15	Required	Required Attributes data only, film or non-film techniques may be utilized.
16	Required	Required
17	Not Applicable	Required, subgroup 2 of table I herein.

See footnotes at end of table.

4.3 Screening (JAN, JANTX, JANTXV, JANJ, 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
3c <u>1/</u>	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 and 10	Not Applicable	Not Applicable
11	Required. I_{R1} and V_{F1}	Not Applicable
12	Required. See 4.3.1, $t = 48$ hours	Not Applicable
13 <u>3/</u>	Subgroup 2 of table I herein; $\Delta I_{R1} \leq 100$ percent of initial reading or 30 nA whichever is greater; $\Delta V_{F1} \leq \pm 40$ mV dc.	Not Applicable
14a	Not Applicable	Not Applicable
14b	Optional <u>2/</u>	(Not required)
15 and 16	Not Required	Not Required
17	Not Applicable	Not Applicable

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/ Per MIL-PRF-19500

3/ Test within 24 hours after removal from test.

4.3.1 Power burn-in conditions. Power burn-in conditions are as follows:

High temperature reverse bias (HTRB), MIL-STD-750, method 1038, test condition A;
 $V_R = 12.8$ V; $T_A = +150^\circ\text{C}$.

4.3.2 Screening (JANHC or JANKC). Screening of JANC die shall be in accordance with MIL-PRF-19500. As a minimum, die shall be 100-percent probed in accordance with group A, subgroup 2 (excluding thermal impedance).

4.3.3 Thermal impedance ($Z_{\theta JX}$ measurements). The $Z_{\theta JX}$ measurements shall be performed in accordance with MIL-STD-750, method 3101 to identify and remove atypical devices.

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 MIL-PRF-19500, and table I herein. The following test conditions shall be used for $Z_{\theta JX}$, group A inspection:

- a. I_M measurement current 1 mA to 10 mA.
- b. I_H forward heating current..... 50 mA to 200 mA.
- c. t_H heating time 10 ms.
- d. t_{MD} measurement delay time 70 μ s 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 (for JANS) and table VIb (for JAN, JANTX and JANTXV) of MIL-PRF-19500, and as follows. Electrical measurements (end-points) shall be in accordance with table I, group A, 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>
B4	1037	$I_O = 33$ mA; $V_R = 16$ V(pk); $f = 60$ Hz; $T_A =$ room ambient as defined in 4.5 of MIL-STD-750; $t_{on} = t_{off} = 3$ minutes minimum for 2,000 cycles; (see 4.5.1).
B5	1038	High temperature reverse bias (HTRB), test condition A, $V_R = 12.8$ V; $T_A = +150^\circ\text{C}$.
B6	3101 or 4081	$R_{\theta JL} = 250^\circ\text{C/W}$ for type 1N5712-1 and $R_{\theta JL} = 700^\circ\text{C/W}$ for type 1N5712; .375 inch or (9.52 mm) lead length (nonsurface mount). $R_{\theta JEC} = 100^\circ\text{C/W}$ (surface mount).

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

<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
B3	1038	High temperature reverse bias (HTRB), test condition A, $V_R = 12.8$ V; $T_A = +150^\circ\text{C}$.
B4		See 4.5.4.
B5		Not applicable.
B6	1032	$T_A = +150^\circ\text{C}$.

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, and as follows. Electrical measurements (end-points) shall be in accordance with table I, group A, subgroup 2 herein.

<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
C2	2036	(Not applicable to surface mount devices); Lead fatigue conditions: Test condition E; .062 inch (1.57 mm) lead restriction from case. Tension conditions: Test condition A; 4 pounds, 15 seconds.
C3	2056	Nonoperating (not required for double plug metallurgical bonded device).
C3	2006	20,000 g's; Y1, Y2, X1 (Not required for double plug metallurgical bonded device).
C6	1038	High temperature reverse bias (HTRB), test condition A, $V_R = 12.8 V$; $T_A = +150^\circ C$.

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

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

4.5.1 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° nor less than 150° .

4.5.2 Thermal resistance. Thermal resistance measurement shall be in accordance with MIL-STD-750, method 3101 or 4081. 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 as shown in group E. The following conditions shall apply when using method 3101:

- a. I_M 1 mA to 10 mA
- b. I_H 25 mA to 100 mA
- c. t_H 25 seconds minimum
- d. t_{MD} 70 μs maximum

LS = Lead spacing = 9.53 mm (.375 inch) minimum for leaded devices and LS = 0 minimum for unleaded devices as defined on figure 4 below:

LS = Lead spacing = .375 inch (9.52 mm) as defined on figure 4 below:

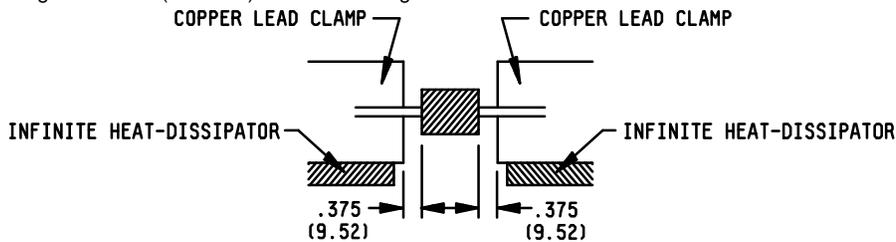


FIGURE 4. Mounting conditions.

4.5.3 Effective carrier lifetime (τ_{CL}). This test shall be measured with the device installed in the test fixture, drawing C68001 using the test setup shown on figure 5 herein. Adjust the signal generator to 54 MHz and maximum output in order to obtain a sufficient trigger signal for the oscilloscope. Adjust the sensitivity of the oscilloscope to 20 mV/cm. With the device in the test fixture, adjust the output of the amplifier until the peak amplitude of the forward current is 20 mA or 5 cm as seen on the oscilloscope. Change sensitivity of scope to 2 mV/cm. Under these conditions, the effective carrier lifetime is related to the amplitude designated as " τ_{CL} " shown on figure 6. This amplitude has the calibration of 50 ps/cm.

TABLE I. Group A inspection.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical inspection	2071					
<u>Subgroup 2</u>						
Forward voltage	4011	$I_F = 1 \text{ mA dc}$	V_{F1}		0.410	V dc
Forward voltage	4011	$I_F = 35 \text{ mA dc}$	V_{F2}		1.0	V dc
Reverse current	4016	DC method; $V_R = 16 \text{ V dc}$	I_{R1}		150	nA dc
Breakdown voltage	4021	$I_R = 10 \text{ } \mu\text{A dc}$	$V_{(BR)1}$	20	---	V dc
Thermal impedance	3101	See 4.4.1	$Z_{\Theta JX}$			$^{\circ}\text{C/W}$
1N5712 1N5712-1, 1N5712UR-1					100 40	
<u>Subgroup 3</u>						
High temperature operation:		$T_A = +150^{\circ}\text{C}$				
Reverse current	4016	DC method; $V_R = 16 \text{ V dc}$	I_{R2}	---	150	$\mu\text{A dc}$
Low temperature operation:		$T_A = -55^{\circ}\text{C}$				
Forward voltage	4011	$I_F = 1 \text{ mA dc}$	V_{F3}	---	0.55	V dc
Forward voltage	4011	$I_F = 35 \text{ mA dc}$	V_{F4}		1.0	V dc
Breakdown voltage	4021	$I_R = 10 \text{ } \mu\text{A dc}$	$V_{(BR)2}$	20	---	V dc
<u>Subgroup 4</u>						
Capacitance	4001	$V_R = 0 \text{ V dc}$; $f = 1 \text{ MHz}$; $V_{\text{sig}} = 50 \text{ mV(pk)}$ maximum	C	---		
1N5712 1N5712-1, 1N5712UR-1					1.2 2.0	pF pF
Effective carrier lifetime (see 4.5.2)		(see DESC drawing C68001)	τ_{CL}		100	ps
<u>Subgroups 5, 6, and 7</u>						
Not applicable						

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

TABLE II. Group E inspections (all quality levels) for qualification only.

Inspection ^{1/}	MIL-STD-750		Sampling plan
	Method	Conditions	
<u>Subgroup 1</u>			22 devices c = 0
Thermal shock (temperature cycling)	1051	500 cycles	
Electrical measurements		See table I, group A, subgroup 2 (V_{F1} and I_{R1})	
<u>Subgroup 2</u>			22 devices c = 0
Steady-state dc blocking life	1038	See 4.3.1, 1000 hrs	
Electrical measurements		See table I, group A, subgroup 2 (V_{F1} and I_{R1})	
<u>Subgroup 3</u>			
Not applicable			
<u>Subgroup 4</u>			22 devices c = 0
Thermal resistance surface mount	3101 or 4081	$R_{\theta JEC} = 100^{\circ}\text{C/W}$ (maximum) at zero lead length. $+25^{\circ}\text{C} \leq T_R \leq +35^{\circ}\text{C}$, (see 4.5.4) at $T_H \geq 25$ s.	
Thermal resistance leaded	3101 or 4081	For type 1N5712: $R_{\theta JL} = 700^{\circ}\text{C/W}$ (maximum); For type 1N5712-1: $R_{\theta JL} = 250^{\circ}\text{C/W}$ (maximum) at .375 inches (9.52 mm) lead length $+25^{\circ}\text{C} \leq T_R \leq +35^{\circ}\text{C}$, (see 4.5.4) at $T_H \geq 25$ s in still air.	
<u>Subgroup 5</u>			
Not applicable			
<u>Subgroup 6</u>			3 devices
ESD testing	1020		

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

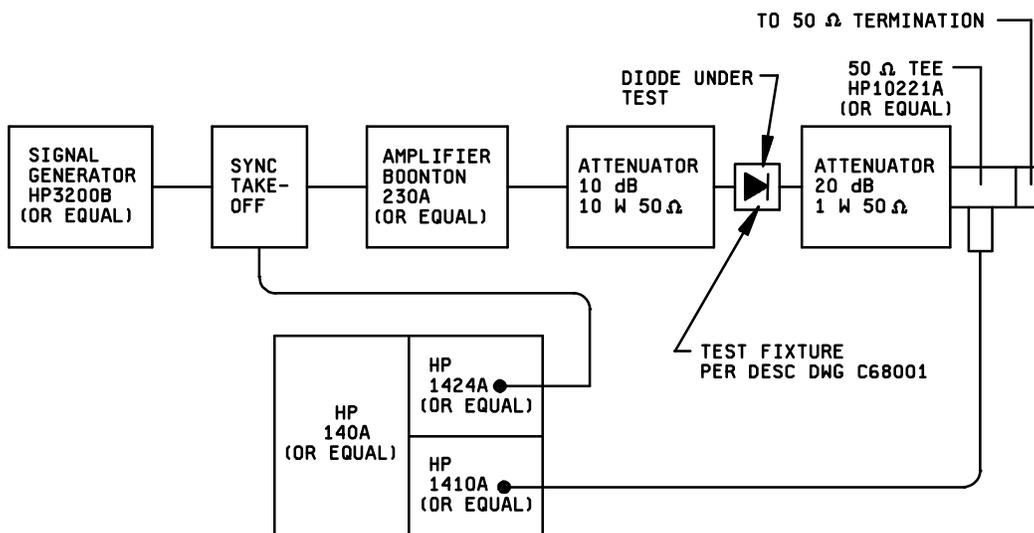
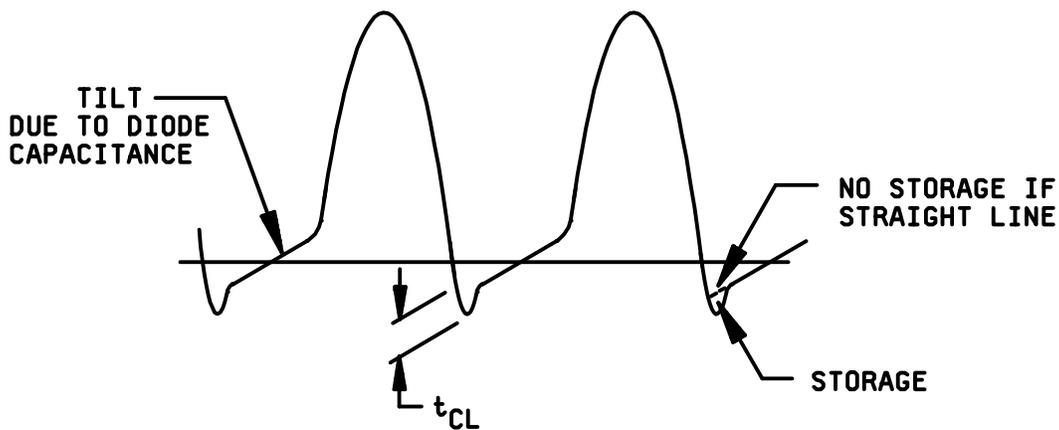


FIGURE 5. Test setup for diode lifetime measurement.



-FIGURE 6. Oscilloscope display in diode lifetime measurement.

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

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 material 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 Points' packaging activity within the Military Department or Defense Agency, or within the Military Departments' 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.

5.2 Marking. Unless otherwise specified (see 6.2), marking shall be in accordance with MIL-STD-129.

6. NOTES

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

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

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Issue of DODISS to be cited in the solicitation.
- b. Lead finish as specified (see 3.3.1).
- c. Product assurance level, type designator, and for die acquisition, the JANHC and JANKC identification (see figure 3 and 6.3).

6.3 Suppliers of die. The qualified die suppliers with the applicable letter version (example JANHCA1N5712) will be identified on the QPL.

JANC ordering information		
PIN	Manufacturer	
	55801	
1N5712	JANHCA1N5712	
1N5712	JANKCA1N5712	

6.4 Interchangeability information. The -1 device is not electrically identical to the non -1 device due to a difference in capacitance. Applications may be affected and users should evaluate their particularly applications for interchangeability.

6.5 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

6.6 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 purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from Defense Supply Center Columbus, DSCC-VQE, Columbus, OH 43216.

MIL-PRF-19500/445D

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 5961-2101)RP

Review activities:

Army - AR, MI, SM
Navy - AS, CG, MC
Air Force - 19, 85, 99

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL**INSTRUCTIONS**

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-PRF-19500/445D	2. DOCUMENT DATE 99/06/18
3. DOCUMENT TITLE SEMICONDUCTOR DEVICE, DIODE, SILICON, SWITCHING TYPES 1N5712, 1N5712-1, AND 1N5712UR-1 JAN, JANTX, JANTXV, JANJ, JANS, JANHC AND JANKC		
4. NATURE OF CHANGE <i>(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)</i>		
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@dsc.dla.mil	
c. ADDRESS Defense Supply Center Columbus ATTN: DSCC-VAT 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 Road, Suite 2533 Fort Belvoir, Virginia 22060-6221 Telephone (703) 767-6888 DSN 427-6888	