

The documentation and process conversion measures necessary to comply with this revision shall be completed by 23 October 1999.

INCH-POUND

MIL-PRF-19500/358E
23 July 1999
SUPERSEDING
MIL-S-19500/358D
26 May 1994

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, DIODE, SILICON, VOLTAGE REGULATOR
TYPES 1N3305 THROUGH 1N3350, B AND RB, 1N4549 THROUGH 1N4554, B AND RB,
JAN, JANTX, JANTXV, AND JANS

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 B type (standard polarity) and RB type (reverse polarity), 50 watt, silicon, voltage regulator diodes. Four levels of product assurance are provided for each device type as specified in MIL-PRF-19500.

1.2 Physical dimensions. See figure 1 (D0-5).

1.3 Maximum ratings. Maximum ratings are as shown in columns 3, 7, and 9 of table II herein and as follows:

Derate $P_T = 50 \text{ W}$ at $T_C \geq +75^\circ\text{C}$ at $0.5 \text{ W}/^\circ\text{C}$ above $T_C \geq +75^\circ\text{C}$.

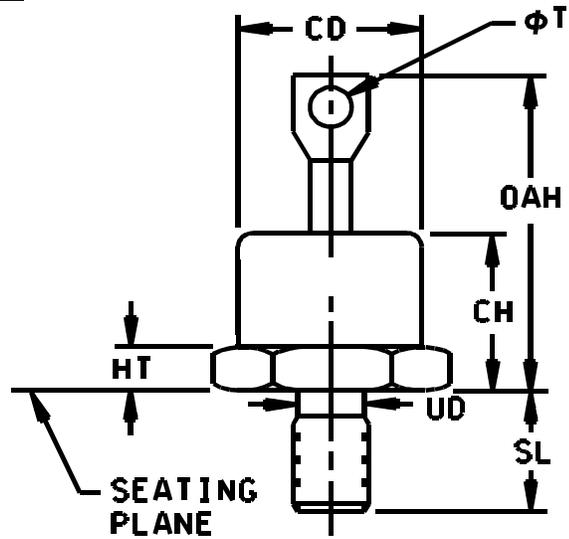
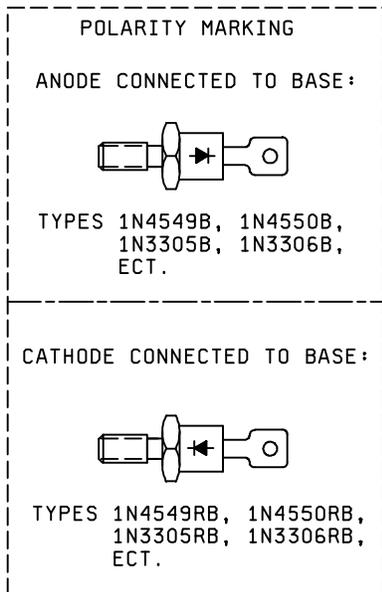
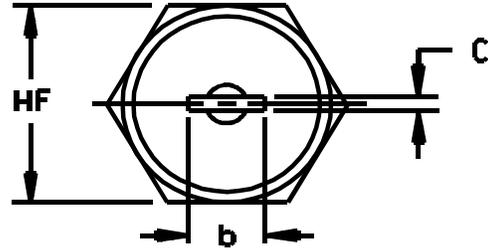
$-65^\circ\text{C} \leq T_C \leq +150^\circ\text{C}$; $-65^\circ\text{C} \leq T_{STG} \leq +175^\circ\text{C}$.

1.4 Primary electrical characteristics. Primary electrical characteristics are as shown in columns 1, 8, 11, and 12 of table II herein, and as follows:

Thermal resistance ($R_{\theta JC}$) = $2.0^\circ\text{C}/\text{W}$ maximum.

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-VAC, 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.

Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
b	----	.375	----	9.53	
C	----	.080	----	2.03	
CD	----	.667	----	16.94	
CH	----	.450	----	11.43	
HF	.667	.687	16.94	17.45	
HT	.060	----	1.52	----	
OAH	----	1.000	----	25.40	
SL	.422	.453	10.72	11.51	2, 3, 6
UD	.220	.249			
ΦT	----	.175	----	4.45	



NOTES:

1. Dimensions are in inches.
2. Maximum pitch diameter of plated threads shall be basic pitch diameter; (.2268). .250-28 UNF-2B UNF-2A THD NF optional.
3. Complete threads to extend to within 2-½ threads of seating plane.
4. Angular orientation of this terminal is undefined.
5. Metric equivalents are given for general information only.
6. Diameter of unthreaded portion shall be .249 maximum and .220 minimum.

FIGURE 1. Physical dimensions.

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

MILITARY

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

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Automated Printing Service, 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.

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.

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

3.3.1 Lead material and finish. Lead finish shall be solderable as defined in 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).

3.3.2 Polarity. Standard units (B) shall have the anode connected to the stud. Reversed units (RB) shall have the cathode connected to the stud.

3.4 Marking. Marking shall be in accordance with MIL-PRF-19500. At the option of the manufacturer, the marking of the country of origin may be omitted from the body of the semiconductor.

3.4.1 RB types. Reverse (cathode to stud) units shall be marked with an "R" preceding the "B" in the type designation.

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 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 products list before contract award (see 4.2 and 6.4).

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.

4.3 Screening (JANS, JANTX, and JANTXV 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	JANTX and JANTXV levels
9	I_R and V_Z (for devices with $V_{Z(nom)} \geq 10$ V dc; see column 1 of table II)	Not applicable
11	I_R and V_Z ; $\Delta I_R = 100$ percent of initial value or $2 \mu A$ dc, whichever is greater; $\Delta V_Z = \pm 1$ percent of initial value (for devices with $V_{Z(nom)} \geq 10$ V dc; see column 1 of table II)	I_{R1} and V_Z
12	See 4.3.1	See 4.3.1
13	Subgroup 2, (except forward voltage test) and 3 of table I herein; $\Delta I_{R1} = 100$ percent of initial value or $2 \mu A$ dc, whichever is greater; $\Delta V_Z = \pm 1\%$ of initial value	Subgroup 2 (except forward voltage test) of table I herein; $\Delta I_{R1} = 100$ percent of initial value or $2 \mu A$ dc, whichever is greater; $\Delta V_Z = \pm 1$ percent of initial value

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

$I_Z =$ Column 4 of table II at a $T_C = +150^\circ C$.

4.4 Conformance inspection. Conformance inspection shall be in accordance with MIL-PRF-19500 and as specified herein. Group A inspection shall be performed on each subplot.

4.4.1 Group A inspection. Group A inspection shall be conducted in accordance with MIL-PRF-19500 and table I herein. End point electrical measurements shall be in accordance with table I, group A, subgroup 2 herein.

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the conditions specified for subgroup testing in tables VIa (JANS) and VIb (JAN, JANTX, and JANTXV) of MIL-PRF-19500 and paragraphs 4.4.2.1 and 4.4.2.2 herein. Electrical measurements (end-points) shall be in accordance with table I, group A, subgroup 2 herein. Delta measurements shall be in accordance with table III 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	4066	Not required.
B4	1037	I_Z = column 7 of table II $T_C = 30^\circ\text{C} \pm 3^\circ\text{C}$, $t_{on} = t_{off} = 3$ minutes minimum for 2,000 cycles.
B5	1027	I_Z = column 4 of table II for 168 hours, $T_A = 125^\circ\text{C}$ or adjusted as required, to give an average lot $T_J = 225^\circ\text{C}$.
B6	4081	$R_{\theta JC} = 2.0^\circ\text{C/W}$ maximum. For purposes of this test, junction-to-case shall be used in lieu of junction-to-lead and $R_{\theta JC}$ shall be used in lieu of $R_{\theta JL}$. The case shall be the reference point for calculation of junction-to-case thermal resistance ($R_{\theta JC}$). The mounting arrangement shall be with heat sink to case.

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	1051	$T_{high} = +175^\circ\text{C}$
B2	----	Surge (see 4.5.1) $I_{ZSM} =$ column 9 or table II.
B3	1027	$I_Z =$ column 4 of table II min., adjust I_Z or T_A to achieve $T_J = 150^\circ\text{C}$ min.
B5	4081	$R_{\theta JC} = 2.0^\circ\text{C/W}$ maximum. For purposes of this test, junction-to-case shall be used in lieu of junction-to-lead and $R_{\theta JC}$ shall be used in lieu of $R_{\theta JL}$. The case shall be the reference point for calculation of junction-to-case thermal resistance ($R_{\theta JC}$). The mounting arrangement shall be with heat sink to case.
B6	1032	$T_A = +175^\circ\text{C}$.

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) and delta requirements shall be in accordance with table I, group A, subgroup 2 and table III herein.

<u>Subgroup</u>	<u>Method</u>	<u>Condition</u>
C2	2036	Tension: test condition A, 20 pounds, $t = 15$ seconds; Torque (stud): Test condition D2, mounting = normal mounting means, 30 lb-in, $t = 30$ seconds; bending stress: Test condition F; 3 pounds, 15 seconds.
C5	4081	Not required.
C6	1026	$I_Z =$ column 4 of table II min., adjust I_Z or T_A to achieve $T_J = 150^\circ\text{C}$ min.
C8	4071	$I_Z =$ column 4 of table II, $T_1 = 30^\circ\text{C} \pm 3^\circ\text{C}$, $T_2 = T_1 + 100^\circ\text{C}$ each subplot; $\alpha V_Z =$ Col. 12 of table II, $\%/^\circ\text{C}$; (sampling plan = 22 devices, $c = 0$, small lot = 12 devices, $c = 0$).

TABLE I. Group A inspection.

Inspection <u>1/</u>	MIL-STD-750		Symbol	<u>2/</u> Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical inspection	2071					
<u>Subgroup 2</u>						
Forward voltage	4011	$I_F = 10 \text{ A dc}$	V_F		1.5	V dc
Reverse current	4016	$V_R = \text{column 10 of table II, dc method}$	I_{R1}		Column 11	$\mu\text{A dc}$
Regulator voltage (see 4.5.3)	4022	$I_Z = \text{column 4 of table II}$	V_Z	Column 2	Column 3	V dc
<u>Subgroup 3</u>						
High-temperature operation:		$T_A = 150^\circ\text{C}$				
Reverse current	4016	$V_R = \text{column 10 of table II, dc method}$	I_{R2}		Column 13	$\mu\text{A dc}$
<u>Subgroup 4</u>						
Small-signal breakdown impedance	4051	$I_Z = \text{column 4 of table II, } I_{\text{sig}} = 10 \text{ percent } I_Z$	Z_Z		Column 5	ohms
Knee impedance	4051	$I_{ZK} = 5 \text{ mA dc, } I_{\text{sig}} = 10 \text{ percent } I_{ZK}$	Z_{ZK}		Column 6	ohms
<u>Subgroup 5</u>						
Not applicable						
<u>Subgroup 6</u>		JANS level only				
Surge current (see 4.5.1)	4066	$I_{ZSM} = \text{column 9 of table II}$				
End point electrical measurements		Group A, subgroup 2 above.				
<u>Subgroup 7</u>		JANS level only				
Voltage regulation (see 4.5.2)			$V_{Z(\text{reg})}$		Column 8	V dc
Temperature coefficient of breakdown voltage (see 4.5.4)	4071	$I_Z = \text{column 4 of table II, } T_1 = 30^\circ\text{C} \pm 3^\circ\text{C, } T_2 = T_1 + 100^\circ\text{C}$	αV_Z		Column 12	$\% / ^\circ\text{C}$

1/ For sampling plan, see MIL-PRF-19500.2/ Column references are to table II herein.

TABLE II. Characteristics and ratings.

Voltage group	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13
	V _Z	V _Z	V _Z	I _Z	Z	Z _K	I _Z	V _{ZREG}	I _{ZSM}	V _R	I _{R1}	αV _Z	I _{R2}
	Nom	Min	Max	Test current	Impedance max	Knee impedance	Max dc current T _C = 30°C ±3°C	Voltage regulation	T _C = 30°C ±3°C max	Reverse voltage	Reverse current dc max	Temperature coefficient max	Reverse current dc maximum T _A = +150°C
Subgroup I	V dc	V dc	V dc	mA dc	Ω	Ω	mA dc	V dc	A dc	V dc	μA dc	%/°C	μA dc
1N4549	3.9	3.71	4.09	3200	0.16	400	12400	0.66	40.00	0.5	150	-.050	1/
1N4550	4.3	4.09	4.51	2900	0.16	500	11050	0.58	38.00	0.5	150	-.035	
1N4551	4.7	4.47	4.93	2650	0.12	600	10100	0.40	35.00	1.0	100	±.015	
1N4552	5.1	4.85	5.35	2450	0.12	650	9300	0.36	32.00	1.0	20	+0.035	
1N4553	5.6	5.32	5.88	2250	0.12	900	8500	0.34	30.00	1.0	20	+0.050	
1N4554	6.2	5.89	6.51	2000	0.14	1000	7650	0.36	25.00	2.0	20	+0.055	
Subgroup II													
1N3305	6.8	6.46	7.14	1850	0.20	750	7000	0.40	37.00	4.5	300	+0.057	1000
1N3306	7.5	7.13	7.87	1700	0.30	350	6350	0.50	33.00	5.0	125	+0.067	750
1N3307	8.2	7.79	8.61	1500	0.40	250	5800	0.60	29.00	5.4	50	+0.070	500
1N3308	9.1	8.65	9.55	1370	0.50	250	5240	0.70	26.50	6.1	25	+0.075	400
1N3309	10.0	9.50	10.50	1200	0.60	250	4760	0.90	24.00	6.7	25	+0.081	300
1N3310	11.0	10.45	11.55	1100	0.80	250	4330	1.00	21.50	8.4	10	+0.085	200
1N3311	12.0	11.40	12.60	1000	1.00	250	3970	1.10	20.00	9.1	10	+0.079	200
1N3312	13.0	12.35	13.65	960	1.10	250	3750	1.20	18.50	9.9	10	+0.080	200
1N3313	14.0	13.30	14.70	890	1.20	250	3000	1.40	17.00	11.4	10	+0.080	200
1N3314	15.0	14.25	15.75	830	1.40	250	3170	1.50	15.50	11.4	10	+0.082	200
1N3315	16.0	15.20	16.80	780	1.60	250	2970	1.60	14.75	12.2	10	+0.083	200
1N3316	17.0	16.15	17.85	740	1.80	250	2500	1.80	13.75	13.0	10	+0.085	200
1N3317	18.0	17.10	18.90	700	2.00	250	2640	1.90	12.75	13.7	10	+0.085	200
1N3318	19.0	18.05	19.95	660	2.20	250	2200	2.00	12.75	13.7	10	+0.086	200

See footnote at end of table.

TABLE II. Characteristics and ratings - Continued.

Voltage group	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13
	V _Z Nom	V _Z Min	V _Z Max	I _Z Test current	Z Impedance max	Z _K Knee impedance	I _Z Max dc current T _C = 30°C ±3°C	V _{ZREG} Voltage regulation	I _{ZSM} T _C = 30°C ±3°C max	V _R Reverse voltage	I _{R1} Reverse current dc max	αV _Z Temperature coefficient max	I _{R2} Reverse current dc maximum T _A = +150°C
Subgroup II	V dc	V dc	V dc	mA dc	Ω	Ω	mA dc	V dc	A dc	V dc	μA dc	%/°C	μA dc
1N3319	20.0	19.00	21.00	630	2.40	250	2380	2.30	11.75	15.2	10	+0.086	200
1N3320	22.0	20.90	23.10	570	2.50	250	2160	2.50	10.50	16.7	10	+0.087	200
1N3321	24.0	22.80	25.20	520	2.60	250	1980	2.60	9.75	18.2	10	+0.088	200
1N3322	25.0	23.75	26.25	500	2.70	250	1550	2.80	9.00	18.2	10	+0.089	200
1N3323	27.0	25.65	28.35	460	2.80	250	1760	2.90	8.25	20.6	10	+0.090	200
1N3324	30.0	28.50	31.50	420	3.00	300	1590	3.00	7.75	22.8	10	+0.091	200
1N3325	33.0	31.35	34.65	380	3.20	300	1440	3.20	7.25	25.1	10	+0.092	200
Subgroup III													
1N3326	36.0	34.20	37.80	350	3.50	300	1320	3.40	6.50	27.4	10	+0.093	200
1N3327	39.0	37.10	40.90	320	4.00	350	1220	3.60	5.88	29.7	10	+0.094	200
1N3328	43.0	40.90	45.10	290	4.50	400	1110	3.80	5.38	32.7	10	+0.095	200
1N3329	45.0	42.75	47.25	280	4.50	400	930	3.90	5.14	32.7	10	+0.095	200
1N3330	47.0	44.65	49.35	270	5.00	400	1020	4.00	4.90	35.8	10	+0.095	200
1N3331	50.0	47.50	52.50	250	5.00	500	830	4.20	4.76	38.8	10	+0.096	200
1N3332	51.0	48.45	53.55	245	5.20	500	930	4.40	4.36	38.8	10	+0.096	200
1N3333	52.0	49.40	54.60	240	5.50	500	790	4.65	4.38	42.6	10	+0.096	200
1N3334	56.0	53.20	58.80	220	6.00	500	850	4.75	4.13	42.6	10	+0.096	200
1N3335	62.0	58.90	65.10	200	7.00	600	770	5.00	3.68	47.1	10	+0.097	200
1N3336	68.0	64.60	71.40	180	8.00	600	700	5.50	3.35	51.7	10	+0.097	200
1N3337	75.0	71.25	78.75	170	9.00	600	640	5.75	3.00	56.0	10	+0.098	200
1N3338	82.0	77.90	86.10	150	11.00	700	580	6.25	2.75	62.2	10	+0.098	200
1N3339	91.0	86.45	95.55	140	15.00	800	530	6.75	2.35	69.2	10	+0.099	200

See footnote at end of table.

TABLE II. Characteristics and ratings - Continued.

Voltage group	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Col 12	Col 13
	V _Z Nom	V _Z Min	V _Z Max	I _Z Test current	Z Impedance max	Z _K Knee impedance	I _Z Max dc current T _C = 30°C ±3°C	V _{ZREG} Voltage regulation	I _{ZSM} T _C = 30°C ±3°C max	V _R Reverse voltage	I _{R1} Reverse current dc max	αV _Z Temperature coefficient max	I _{R2} Reverse current dc maximum T _A = +150°C
Subgroup IV	V dc	V dc	V dc	mA dc	Ω	Ω	mA dc	V dc	A dc	V dc	μA dc	%/°C	μA dc
1N3340	100.0	95.00	105.00	120	20.00	900	480	7.50	2.25	76.0	10	+1.00	200
1N3341	105.0	99.75	110.25	120	25.00	1000	380	8.25	2.15	83.0	10	+1.00	200
1N3342	110.0	104.50	115.50	110	30.00	1100	430	9.00	2.05	83.0	10	+1.00	200
1N3343	120.0	114.00	126.00	100	40.00	1200	400	9.50	1.88	91.2	10	+1.00	200
1N3344	130.0	123.50	136.50	95	50.00	1300	370	10.00	1.73	99.8	10	+1.00	200
1N3345	140.0	133.00	147.00	90	60.00	1400	325	11.00	1.61	114.0	10	+1.00	200
1N3346	150.0	142.50	157.50	85	75.00	1500	320	12.00	1.50	114.0	10	+1.00	200
1N3347	160.0	152.00	168.00	80	80.00	1600	300	13.00	1.43	121.6	10	+1.00	200
1N3348	175.0	166.25	183.75	70	85.00	1700	230	13.75	1.34	121.6	10	+1.00	200
1N3349	180.0	171.00	189.00	68	90.00	1800	260	14.50	1.25	136.8	10	+1.00	200
1N3350	200.0	190.00	210.00	65	100.00	2000	240	16.00	1.10	152.0	10	+1.00	200

1/ This test is not applicable for devices 1N4549B, RB through 1N4554B, RB.

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

Step	Inspection	MIL-STD-750		Symbol	Limit	Unit
		Method	Conditions			
1.	Forward voltage	4011	I _F = 10 A dc	ΔV _F 2/	±50 mV dc change from previously measured value.	

1/ The delta measurements for table VIa (JANS) of MIL-PRF-19500 are as follows:

a. Subgroups 3, 4, and 5, see table III herein, step 1.

2/ The delta measurements for table VII (JANS only) of MIL-PRF-19500 are as follows:

a. Subgroups 2, 3, and 6, see table III herein, step 1.

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

4.5.1 Surge current I_{ZSM} . The currents specified in column 9 of table II shall be applied in the reverse direction and shall be superimposed on the current (I_Z = column 4 of table II) a total of five surges at 1-minute intervals. Each individual surge shall be one-half square wave pulse of 1/120-second duration or an equivalent one-half sine wave with the same effective (rms) current.

4.5.2 Voltage regulation $V_{Z(reg)}$. A current at 10 percent of I_Z (column 7) shall be maintained until thermal equilibrium is obtained, and the V_Z shall then be increased to a level of 50 percent of I_Z (column 7) and maintained at this level for a period of time until thermal equilibrium is obtained. At which time, the voltage change shall not exceed column 8 of table II. During this test, the case temperature (T_C) of the diode shall be equal to $30^\circ\text{C} \pm 3^\circ\text{C}$.

4.5.3 Regulator voltage. The I_Z test current (column 4 of table II) shall be applied until thermal equilibrium is obtained prior to reading the regulator voltage. During this test, the case temperature (T_C) of the diode shall be equal to $30^\circ\text{C} \pm 3^\circ\text{C}$.

4.5.4 Temperature coefficient of regulator voltage (αV_Z). The device shall be temperature stabilized with current applied prior to reading regulator voltage at the specified case temperatures.

4.5.5 Inspection condition. Unless otherwise specified in MIL-PRF-19500 or herein, all inspections shall be made at case temperature (T_C) of $30^\circ\text{C} \pm 3^\circ\text{C}$.

4.5.6 Test ratings. Test ratings shall be as shown in table II. Type numbers with the suffix "RB" shall have identical requirements as shown in table II for the corresponding B type except the polarity shall be as specified in 3.3.2 herein.

4.5.7 Lot accumulation. Lot accumulation period shall be six months in lieu of six weeks.

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.

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 material and finish (see 3.3.1).
- c. Type designation, polarity type, and product assurance level.

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

6.4 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.

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 5961-2179)

Review activities:
Air Force - 80, 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-19500/358E	2. DOCUMENT DATE 99/07/23
3. DOCUMENT TITLE SEMICONDUCTOR DEVICE, DIODE, SILICON, VOLTAGE REGULATOR TYPES 1N3305 THROUGH 1N3350, B AND RB, 1N4549 THROUGH 1N4554, B AND RB, JAN, JANTX, JANTXV, AND JANS		
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@dscclia.mil	
c. ADDRESS Defense Supply Center Columbus ATTN: DSCC-VAC 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	