

The documentation and process conversion measures necessary to comply with this revision shall be completed by 12 December 1999.

INCH-POUND

MIL-PRF-19500/507C
12 September 1999
SUPERSEDING
MIL-S-19500/507B
9 December 1992

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, DIODE, SILICON, BIPOLAR TRANSIENT VOLTAGE SUPPRESSOR TYPES 1N6036A THROUGH 1N6072A 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 1500 watt, peak, pulse power, silicon, transient, voltage suppressor diodes. Four levels of product assurance are provided for each device as specified in MIL-PRF-19500.

1.2 Physical dimensions. See figure 1 (similar to DO - 13).

1.3 Maximum ratings. Maximum ratings are as shown in columns 5 through 8 of table III herein, and as follows:

$P_{PP} = 1500 \text{ W}$ (see figure 3) at $t_p = 1.0 \text{ ms}$.

$P_{M(AV)} = 1.0 \text{ W}$ (derate at $6.67 \text{ mW/}^\circ\text{C}$ above $T_A = +25^\circ\text{C}$) (see 6.4).

$-55^\circ\text{C} \leq T_{OP} \leq +175^\circ\text{C}$ (ambient), $-55^\circ\text{C} \leq T_{STG} \leq +175^\circ\text{C}$ (ambient).

1.4 Primary electrical characteristics at $T_A = +25^\circ\text{C}$. Primary electrical characteristics are shown in columns 2 and 4 of table III herein.

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 section 3 and 4 of this specification, whether or not they are listed.

2.1.1 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 federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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.

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

3. REQUIREMENTS

3.1 Associated detail 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 on figure 1 (similar to DO-13) herein.

3.3.1 Metallurgical bond construction. Metallurgically bonded construction is required. The bonding flow shall have flow points above 260°C.

3.3.2 Lead finish. Unless otherwise specified, lead finish shall be solderable in accordance with MIL-STD-750, MIL-PRF-19500, and herein. Where a choice of lead finish is desired, it shall be specified in the acquisition requirements (see 6.2).

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

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

3.6 Electrical test requirements. The electrical test requirements shall be the subgroups specified in table I herein.

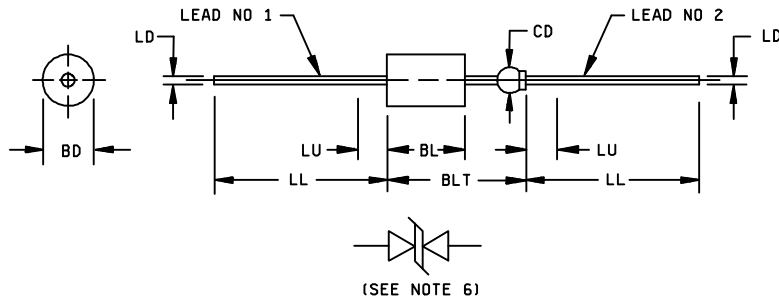
4. VERIFICATION

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).

4.1.1 Sampling and inspection. Sampling and inspection shall be in accordance with MIL-PRF-19500, and as specified herein except, lot accumulation shall be 3-months in lieu of 6-weeks.

4.2 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-19500 and 6.3 herein.



Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	0.215	0.235	5.46	5.97	1
BL	0.293	0.357	7.44	9.07	3
BLT	---	0.570	---	14.48	
CD	0.045	0.100	1.14	2.54	5
LD	0.025	0.035	0.64	0.89	
LL	1.000	1.625	25.40	41.28	4
LU	---	0.188	---	4.78	2

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. The major diameter is essentially constant along its length.
4. Within this zone, diameter may vary to allow for lead finishes and irregularities.
5. Dimension to allow for pinch or seal deformation anywhere along tubulation.
6. Symbol for internal construction of bipolar transient suppressor.
7. Lead 1 shall be electrically connected to the case.

FIGURE 1. Physical dimensions (similar to DO-13).

4.3 Screening (JANS, JANTX, and JANTXV levels only). Screening shall be in accordance with MIL-PRF-19500 (table IV), 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
3	$T_{(high)} = +175^{\circ}\text{C}$	$T_{(high)} = +175^{\circ}\text{C}$
9, 10, 11	Not applicable	Not applicable
12	See 4.5.1	See 4.5.1
13	Interim electrical, delta, and group A, subgroups 2 and 3, electrical parameters not applicable for this screen (performed in screen 12).	Interim electrical, delta, and group A, subgroups 2 and 3, electrical parameters not applicable for this screen (performed in screen 12).

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. End-point electrical measurements shall be in accordance with the applicable steps of table II herein.

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) and delta requirements shall be in accordance with the applicable steps of table II herein.

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

Subgroup	Method	Conditions
B3	4066	Condition for surge, 1 cycle, see 4.5.3b.
B5	1027	Condition for accelerated steady-state operation life are as follows: See 4.5.2, $T_A = +100^{\circ}\text{C}$ (min); $T_J = +225^{\circ}\text{C}$ (min); $t = 168$ hours minimum.
B4 and 6		Not applicable.

NOTE: All electrical measurements and tests shall be performed twice, once in each direction.

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

Subgroup	Method	Conditions
B2	4066	1 cycle, see 4.5.3b.
B3	1027	See 4.5.1, 1 ms pulse only (see 4.5.3b).
B5		Not applicable.

NOTE: All electrical measurements and tests shall be performed twice, once in each direction.

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) and delta requirements shall be in accordance with the applicable steps of table II herein.

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

Subgroup	Method	Conditions
C2	2036	Lead tension: Test condition A; weight = 5 pounds; $t = 15 \pm 3$ s. Lead fatigue: Test condition E; weight = 8 ounces.
C6	1026	See 4.5.1, 1 ms pulse only (see 4.5.3b).
C8		Condition for temperature coefficient of breakdown voltage are as follows: $I_{(BR)} =$ column 3 of table III, $T_1 = +25^\circ\text{C} \pm 3^\circ\text{C}$, $T_2 = T_1 + 100^\circ\text{C}$; $n = 22$, $c = 0$.
C9		Condition for maximum peak pulse current are as follow: See 4.5.3a, (20 μs pulse only) 10 pulses; $n = 22$, $c = 0$.

NOTE: All electrical measurements and tests shall be performed twice, once in each direction.

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

4.5.1 Power burn-in (HTRB) and steady-state operation life test conditions. The test conditions and order of events shall be as follows:

- a. Pulse in accordance with 4.5.3b, in polarity A 10 times (screening and group B) and 50 times (group C) at $T_A = +25^\circ\text{C}$.
- b. Pulse in accordance with 4.5.3b, in polarity B 10 times (screening and group B) and 50 times (group C) at $T_A = +25^\circ\text{C}$.
- c. Read I_D in polarities A and B at $T_A = +25^\circ\text{C}$, remove defective devices and record the number of failures.
- d. Apply the working peak reverse voltage (V_{WM}) (column 4 of table III) at polarity A at $T_A = +125^\circ\text{C}$ as follows:
 - (1) 48 hours (JANTX and JANTXV) and 120 hours (JANS) for the screening test.
 - (2) 170 hours (JAN, JANTX, and JANTXV) for group B steady-state operation life test.
 - (3) 500 hours for group C steady-state operation life test.
- e. Read I_D in polarity A at $T_A = +25^\circ\text{C}$. Devices with $\Delta I_D > 50$ percent (100 percent for steady-state operation life) of the initial reading or $1 \mu\text{A}$ dc, whichever is greater shall be considered defective. Remove defective devices and record the number of failures (see NOTE).
- f. Apply the working peak reverse voltage (V_{WM}) (column 4 of table III) at polarity B at $T_A = +125^\circ\text{C}$ as follows:
 - (1) 48 hours (JANTX and JANTXV) and 120 hours (JANS) for the screening test.
 - (2) 170 hours (JAN, JANTX, and JANTXV) for group B steady-state operation life test.
 - (3) 500 hours for group C steady-state operation life test.
- g. Read I_D in polarity B at $T_A = +25^\circ\text{C}$. Devices with $\Delta I_D > 50$ percent (100 percent for steady-state operation life) of the initial reading or $1 \mu\text{A}$ dc, whichever is greater shall be considered defective. Remove defective devices and record the number of failures (see NOTE).
- h. Read $V_{(BR)}$ in polarities A and B at $T_A = +25^\circ\text{C}$. Devices with $\Delta V_{(BR)} > 2$ percent (± 5 percent for steady-state operation life) of the initial reading shall be considered defective. Remove defective devices and record the number of failures (see NOTE).
- i. Read I_D in polarity A at $T_A = +25^\circ\text{C}$, remove defective devices and record the number of failures.

NOTE: For the purpose of this test, the direction in which the device is first pulsed shall be considered polarity A and the reverse direction polarity B.

4.5.1.1 Group C steady-state operation life test (alternate procedure). When the group B 340 hour life test is continued on test to 1,000 hours to satisfy the group C life test requirements, the test shall be performed as given in 4.5.1 with the following exceptions:

- a. 4.5.1 steps a and b shall be moved and performed following step g.
- b. 4.5.1 steps e and g shall be repeated after step a and b are performed and before step i is completed (step i may be omitted when this procedure is used).

4.5.2 Accelerated steady-state operation life (JANS). This test shall be conducted with the devices subjected to the breakdown current specified in column 10 of table III in opposite polarities for 84 + 8, - 4 hours in each polarity. At the beginning of the test and at the end of each time period, the devices shall be temperature stabilized at $T_A = +25^\circ\text{C}$ and subjected to pulse conditions at the rate of one pulse per minute (max) for 10 pulses in accordance with 4.5.3 as specified.

4.5.3 Maximum peak pulse current (I_{pp}). The peak pulse currents specified in column 7 of table III shall be applied while simultaneously maintaining a bias voltage of not less than the applicable voltage specified in column 4 of table III, in the same polarity as the peak pulse current. The peak pulse current shall be applied with a current vs time waveform as follows (1 pulse per minute maximum):

- a. Pulse current shall reach 100 percent of I_{pp} at $t \leq 8 \mu\text{s}$ and decay to 50 percent of I_{pp} at $t \geq 20 \mu\text{s}$ for (see figure 5).
- b. Pulse current shall reach 100 percent of I_{pp} at $t \leq 10 \mu\text{s}$ and decay to 50 percent of I_{pp} at $t \geq 1 \text{ ms}$ for $t_p = 1 \text{ ms}$ (see figure 4).

4.5.4 Clamping voltage. The peak pulse clamping voltage shall be measured across the diode in a 1 ms time interval. The response detector shall demonstrate equipment accuracy of ± 3 percent. The peak clamping voltage as specified in column 6 of table III shall be applicable to the 1 ms pulse of 4.5.3b only.

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TABLE I. Group A inspection.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limits <u>2/</u>		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u> Visual and mechanical examination	2071					
<u>Subgroup 2 3/</u> Standby current	4016	DC method, $V_R = V_{WM}$ (column 4 of table III)	I_D		Column 5	μA dc
Breakdown voltage	4022	$t_p \leq 300$ ms, duty cycle ≤ 2 percent, $I_{(BR)} =$ column 3 of table III	$V_{(BR)}$	Column 2	Column 2	V dc
<u>Subgroup 3 3/</u> Minimum breakdown voltage	4022	$t_p \leq 300$ ms, duty cycle ≤ 2 percent, $I_{(BR)} =$ column 3 of table III, $T_A = -55^\circ C$	$V_{(BR)}$	Column 9		V dc
<u>Subgroup 4 3/</u> Clamping voltage maximum (pulsed) (see 4.5.4)		$t_p = 1.0$ ms (see 4.5.3.b), $I_{PP} =$ column 7 of table III	V_C		Column 6	V (pk)
<u>Subgroups 5, 6 and 7</u> Not applicable						

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

2/ Column references are to table III.

3/ All electrical testing shall be performed twice, once in each direction.

TABLE II. Groups B and C electrical measurements. 1/ 2/ 3/ 4/

Step	Inspection	MIL-STD-750		Symbol	Limits 5/		Unit
		Method	Conditions		Min	Max	
1.	Standby current	4016	DC method, $V_R = V_{WM}$ column 4 of table III	I_D		Column 5	μA dc
2.	Breakdown voltage	4022	$t_p \leq 300$ ms, duty cycle ≤ 2 percent, $I_{(BR)} =$ column 3 of table III	$V_{(BR)}$	Column 2	Column 2	V dc
3.	Standby current	4016	DC method; $V_R = V_{WM}$ (column 4 of table III)	ΔI_D 6/		100 percent of initial reading or 20 percent of column 5 of table III, whichever is greater.	
4.	Breakdown voltage	4022	$t_p \leq 300$ ms, duty cycle ≤ 2 percent, $I_{(BR)} =$ column 3 of table III	$\Delta V_{(BR)}$ 6/		± 5 percent of initial value	
5.	Clamping voltage		$t_p = 1.0$ ms (see 4.5.3b); $I_{PP} =$ column 7 of table III	V_C		Column 6	V (pk)

1/ All electrical testing shall be performed twice, once in each direction.

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

- a. Subgroup 3, see table II herein, steps 1, 2 and 5.
- b. Subgroup 7, see table II herein, steps 1, 2, 3 and 4.

3/ The electrical measurements for table VIb (JANTX and JANTXV) of MIL-PRF-19500 are as follows:

- a. Subgroup 2, see table II herein, steps 1 and 2.
- b. Subgroup 6 see table II herein, steps 1, 2, 3 and 4.

4/ The electrical measurements for table VII of MIL-PRF-19500 are as follows:

- a. Subgroup 2 and 3, see table II herein, steps 1, 2, and 3 for JANS and steps 1 and 2 for JANTX and JANTXV.
- b. Subgroup 9, see table II herein, steps 1 and 2 for all levels.

5/ Column references are to table III.

6/ Devices which exceed the group A limits for this test shall not be accepted.

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TABLE III. Characteristics and ratings.

Col 1	Col 2		Col 3	Col 4	Col 5	Col 6	Col 7		Col 8	Col 9	Col 10
Type	Breakdown voltage		Test current $I_{(BR)}$	Working peak reverse voltage V_{WM}	Maximum standby current I_D	Maximum clamping voltage V_C at I_{PP}	Maximum peak pulse current (I_{PP})		Maximum temperature coefficient of $V_{(BR)}$ $\alpha V_{(BR)}$	Minimum breakdown voltage at $I_{(BR)}$ $T_A = -55^\circ C$	Breakdown current $I_{(BR)}$ Maximum dc current $T_A = +25^\circ C$
	Min V dc	Max V dc					$t_p = 20 \mu s$ $t_r = 8 \mu s$	$t_p = 1 ms$ $t_r = 10 \mu s$			
1N6036A	7.13	7.88	10	6.0	1000	11.3	750	132.0	0.061	6.66	125.0
1N6037A	7.79	8.61	10	7.0	500	12.1	700	124.0	0.065	7.24	115.0
1N6038A	8.65	9.55	10	7.5	200	13.4	630	112.0	0.068	8.01	104.0
1N6039A	9.50	10.50	1	8.5	50	14.5	585	103.	0.073	8.75	95.0
1N6040A	10.50	11.60	1	9.0	10	15.6	545	96.0	0.075	9.65	86.0
1N6041A	11.40	12.60	1	10.0	5	16.7	510	90.0	0.078	10.40	73.0
1N6042A	12.40	13.70	1	11.0	5	18.2	465	82.0	0.081	11.30	70.0
1N6043A	14.30	15.80	1	12.0	5	21.2	400	71.0	0.084	13.00	63.0
1N6044A	15.20	16.80	1	13.0	5	22.5	375	67.0	0.086	13.70	59.0
1N6045A	17.10	18.90	1	15.0	5	25.2	335	59.5	0.088	15.40	53.0
1N6046A	19.00	21.00	1	17.0	5	27.7	305	54.0	0.090	17.10	47.0
1N6047A	20.90	23.10	1	18.0	5	30.6	275	49.0	0.092	18.80	43.0
1N6048A	22.80	25.20	1	20.0	5	33.2	255	45.0	0.094	20.50	39.0
1N6049A	25.70	28.40	1	22.0	5	37.5	225	40.0	0.096	23.00	35.0
1N6050A	28.50	31.50	1	25.0	5	41.4	205	36.0	0.097	25.50	31.0
1N6051A	31.40	34.70	1	28.0	5	45.7	185	33.0	0.098	29.00	28.0
1N6052A	34.20	37.80	1	30.0	5	49.9	170	30.0	0.098	30.50	26.0
1N6053A	37.10	41.00	1	33.0	5	53.9	155	28.0	0.100	33.10	24.0
1N6054A	40.90	45.20	1	36.0	5	59.3	145	25.3	0.101	36.40	22.0
1N6055A	44.70	49.40	1	40.0	5	64.8	130	23.2	0.101	39.80	20.0
1N6056A	48.50	53.60	1	43.0	5	70.1	120	21.4	0.102	43.10	18.0
1N6057A	53.20	58.80	1	47.0	5	77.0	110	19.5	0.103	47.30	17.0
1N6058A	58.90	68.20	1	53.0	5	85.0	100	17.7	0.104	52.30	15.0
1N6059A	64.60	71.40	1	58.0	5	92.0	90	16.3	0.104	57.30	14.0
1N6060A	71.30	78.80	1	64.0	5	103.0	82	14.6	0.105	63.20	12.0
1N6061A	77.90	86.10	1	70.0	5	113.0	75	13.3	0.105	69.00	11.0
1N6062A	86.50	95.50	1	75.0	5	125.0	68	12.0	0.106	76.50	10.0
1N6063A	95.00	105.00	1	82.0	5	137.0	62	11.0	0.106	84.10	9.5
1N6064A	105.00	116.00	1	94.0	5	152.0	55	9.9	0.107	92.80	8.5
1N6065A	114.00	126.00	1	100.0	5	168.0	50	8.9	0.107	100.00	7.5
1N6066A	124.00	137.00	1	110.0	5	182.0	47	8.2	0.107	109.00	7.0
1N6067A	143.00	158.00	1	128.0	5	213.0	40	7.0	0.108	126.00	6.0
1N6068A	162.00	179.00	1	145.0	5	245.0	36	6.1	0.108	143.00	5.5
1N6069A	171.00	189.00	1	150.0	5	261.0	34	5.7	0.108	151.00	5.2
1N6070A	181.00	200.00	1	160.0	5	278.0	32	5.4	0.108	157.00	5.0
1N6071A	190.00	210.00	1	170.0	5	294.0	30	5.1	0.108	169.00	4.7
1N6072A	209.00	231.00	1	185.0	5	328.0	25	4.6	0.108	184.00	4.3

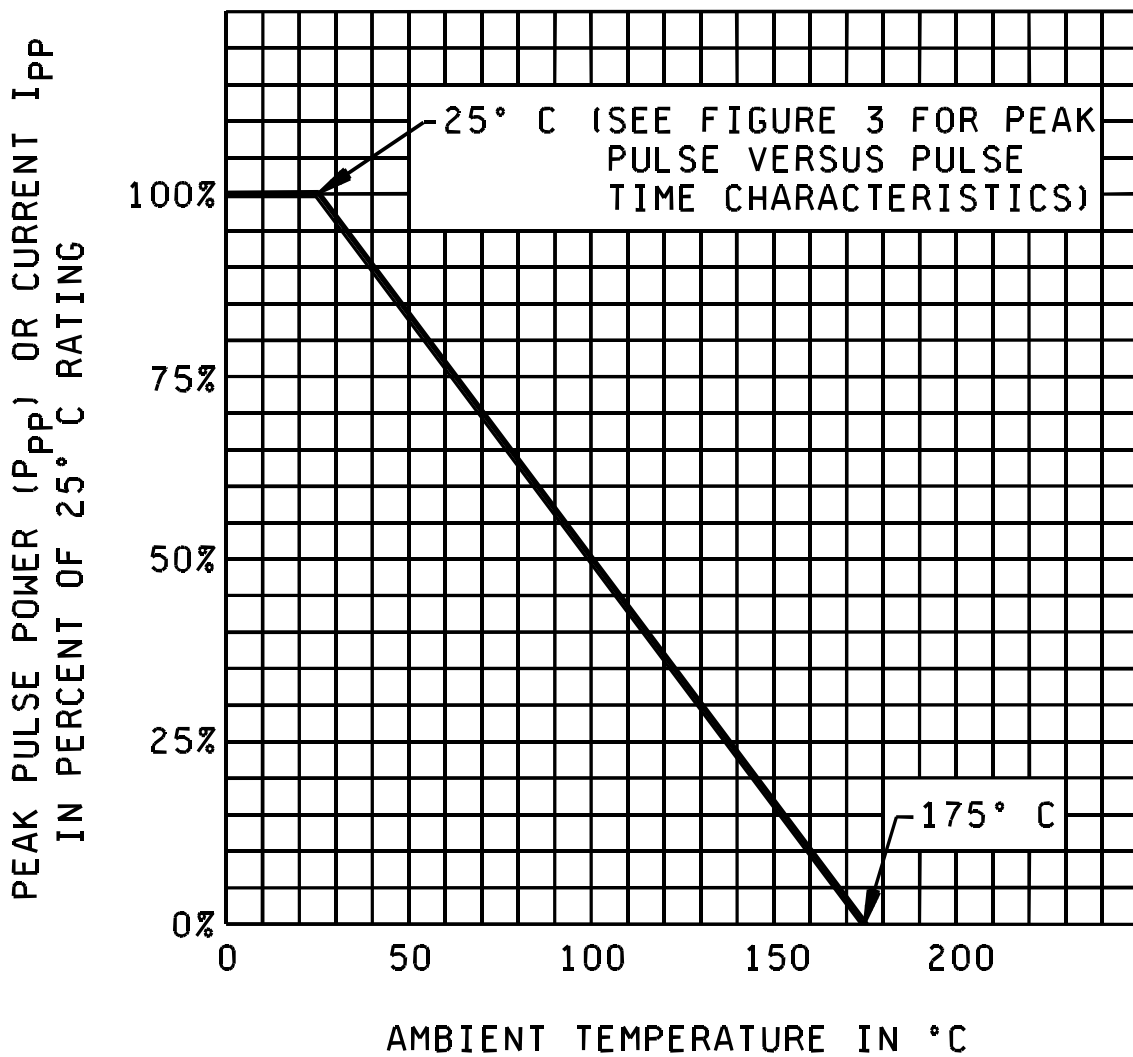


FIGURE 2. Derating curve.

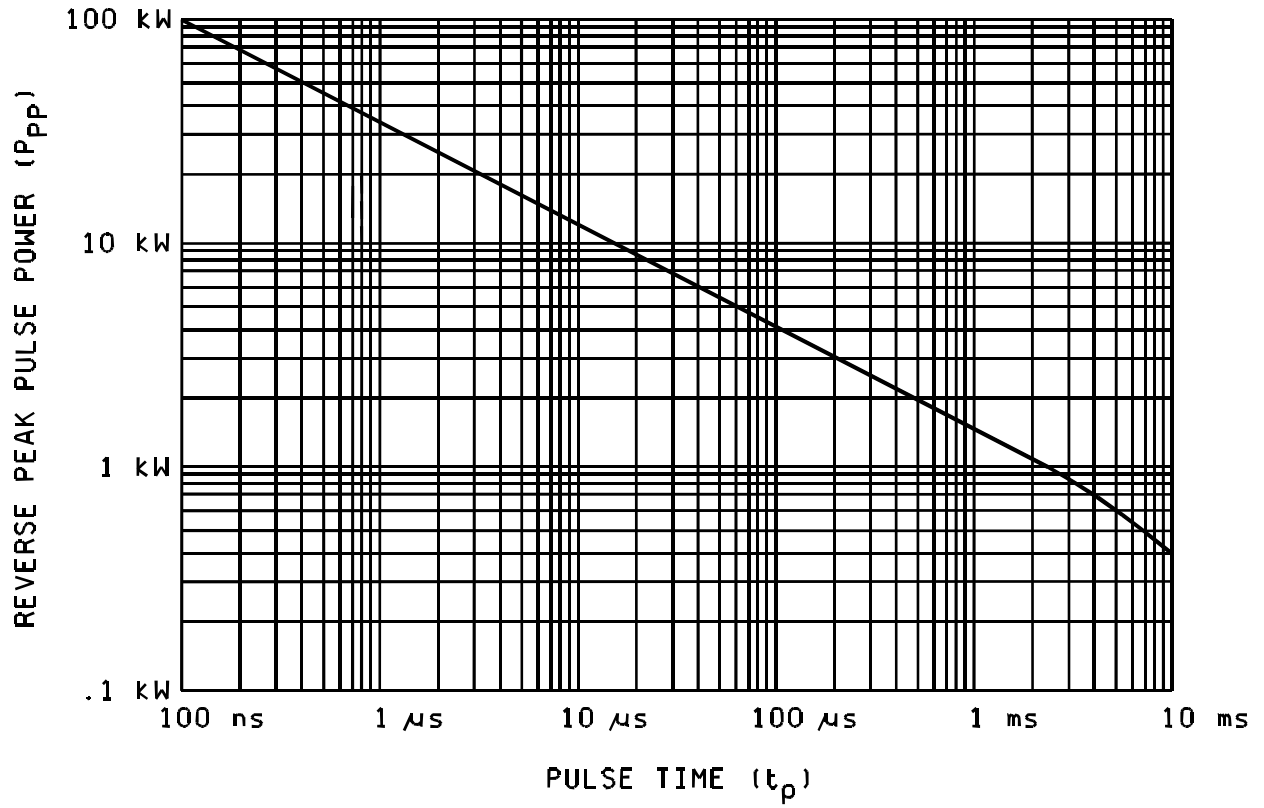
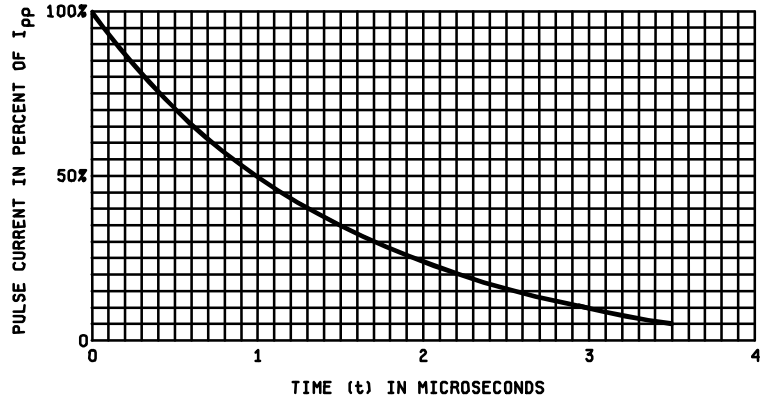
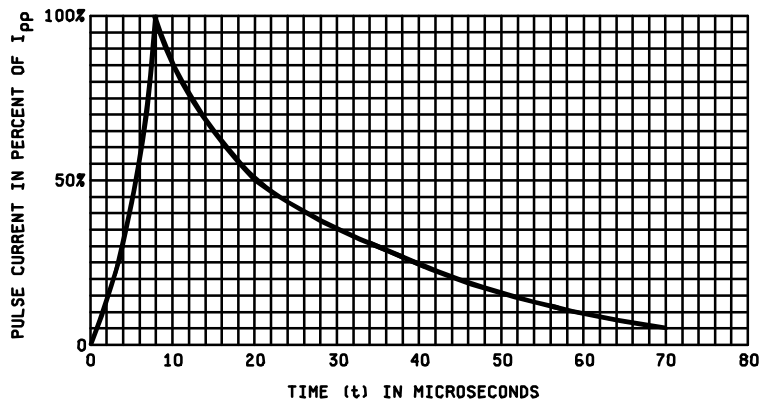


FIGURE 3. Peak pulse power versus pulse time.



NOTE: Pulse time duration is defined as that point where the pulse current decays to 50 percent of I_{PP}. (Rise time to 100 percent of I_{PP} = 10 μs).

FIGURE 4. Current impulse waveform.



NOTE: Pulse time duration is defined as that point where the pulse current decays to 50 percent of I_{PP}. (Rise time to 100 percent of I_{PP} = 8 μs).

FIGURE 5. Current impulse waveform.

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 Departments' 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 must specify the following:

- a. Issue of DODISS to be cited in the solicitation (see 2.1.1).
- b. The lead finish as specified (see 3.3.2).
- c. Type designation and quality assurance level.
- d. Packaging requirements (see 5.1).

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 Manufacturer's List QML No.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 Commander, Defense Supply Center Columbus, DSCC-VQE, Columbus, OH 43216-5000.

6.4 Steady state power rating. This rating is not relevant for most applications.

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.

Custodians:

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

Preparing activity:
DLA - CC

(Project 5961 -2068)

Review activities:

Army - MI
Air Force - 19, 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-19500/507C	2. DOCUMENT DATE 990912

3. **DOCUMENT TITLE**
SEMICONDUCTOR DEVICE, DIODE, SILICON, BIPOLAR TRANSIENT VOLTAGE SUPPRESSOR TYPES 1N6036A THROUGH 1N6072A JAN, JANTX, JANTXV, AND JANS

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

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c. ADDRESS Defense Supply Center Columbus, ATTN: DSCC-VAC, 3990 East Broad Street, 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