

The documentation and process conversion measures necessary to comply with this revision shall be completed by 30 July 2003.

INCH-POUND

MIL-PRF-19500/498D
 30 April 2003
 SUPERSEDING
 MIL-PRF-19500/498C
 27 March 1998

PERFORMANCE SPECIFICATION

* SEMICONDUCTOR DEVICE, TRANSISTOR, NPN, SILICON, POWER
 TYPE 2N6306, 2N6306T1, 2N6306T3, 2N6308, 2N6308T1, 2N6308T3, JAN, JANTX AND JANTXV

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 NPN silicon, power transistors. Three levels of product assurance are provided for each device type as specified in MIL-PRF-19500.

* 1.2 Physical dimensions. See figure 1 (similar to TO-3), figure 2 (TO-254), and figure 3 (TO-257).

* 1.3 Maximum ratings.

Type	P_T $T_A = +25^\circ\text{C}$	P_T $T_C = +25^\circ\text{C}$ (1)	V_{CBO}	V_{CEO}	V_{EBO}	I_B	I_C	T_J and T_{STG}
	<u>W</u>	<u>W</u>	<u>V dc</u>	<u>V dc</u>	<u>V dc</u>	<u>A dc</u>	<u>A dc</u>	<u>°C</u>
2N6306	6	175	500	250	8.0	4.0	8.0	-65 to +200
2N6306T1	6	175	500	250	8.0	4.0	8.0	-65 to +200
2N6306T3	4 (2)	125	500	250	8.0	4.0	8.0	-65 to +200
2N6308	6	175	700	350	8.0	4.0	8.0	-65 to +200
2N6308T1	6	175	700	350	8.0	4.0	8.0	-65 to +200
2N6308T3	4 (2)	125	700	350	8.0	4.0	8.0	-65 to +200

(1) See figures 4 and 5 for temperature-power derating curves.

(2) For TO-257 devices with typical mounting and small footprint, conservatively rated at 125 W and 1.3°C/W only.

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, P.O. 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.

* 1.4 Primary electrical characteristics.

Type	hFE2		hFE3		V _{BE(sat)} (1)		V _{CE(sat)} (1)			
	V _{CE} = 5 V dc I _C = 3 A dc		V _{CE} = 5 V dc I _C = 8 A dc		I _C = 8 A dc I _B = (2)		I _C = 8 A dc I _B = 2		I _C = 3 A dc I _B = 0.6 A dc	
	Min	Max	Min	Max	Min	Max	Min V dc	Max V dc	Min V dc	Max V dc
2N6306	15	75	4			2.3		5		0.8
2N6306T1	15	75	4			2.3		5		0.8
2N6306T3	15	75	4			2.3		5		0.8
2N6308	12	60	3			2.5		5		1.5
2N6308T1	12	60	3			2.5		5		1.5
2N6308T3	12	60	3			2.5		5		1.5

Limit	h _{fe}	Cobo	R _{θJC}	R _{θJC}	Switching (4)	
	V _{CE} = 10 V dc I _C = 0.3 A dc f = 1 MHz	V _{CB} = 10 V dc I _E = 0 100 ≤ f ≤ 1 MHz	All devices except T3 suffix (3)	2N6306T3, 2N6308T3 (3)	t _{on}	t _{off}
Min		ρF	°C/W	°C/W	μs	μs
Max	5	250	1.0	1.3	0.6	3.0

(1) Pulsed (see 4.5.1).

(2) 2N6306, 2N6306T1, 2N6306T3 (I_B) = 2.0 A dc; 2N6308, 2N6308T1, 2N6308T3 (I_B) = 2.67 A dc.

(3) See figures 6 through 8, thermal impedance graphs.

(4) See figure 9 (pulse response circuit).

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.

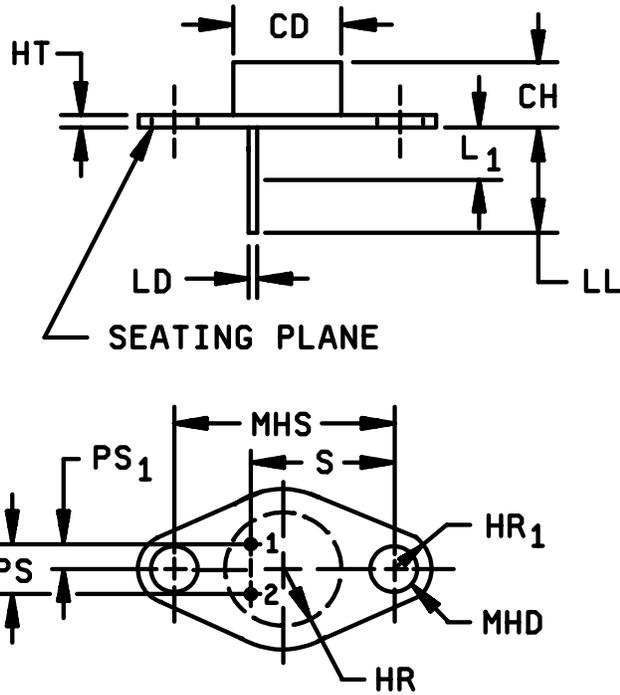
* (Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production Services (DAPS), Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

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 specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

- * 3.1 General. The individual item requirements shall be as specified in MIL-PRF-19500 and as modified herein.
- * 3.2 Qualification. Devices furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturer's list (QML) before contract award (see 4.2 and 6.3).
- * 3.3 Abbreviations, symbols, and definitions. Abbreviations, symbols, and definitions used herein shall be as specified in MIL-PRF-19500.
- * 3.4 Interface and physical dimensions. Interface and physical dimensions shall be as specified in MIL-PRF-19500, and on figure 1 (similar to T0-3), figure 2 (T0-254AA), and figure 3 (T0-257AA).
- * 3.4.1 Lead finish. Lead finish shall be solderable in accordance with MIL-PRF-19500, MIL-STD-750, and herein. Where a choice of lead finish is desired, it shall be specified in the acquisition document (see 6.2).
- * 3.5 Marking. Marking shall be in accordance with MIL-PRF-19500.
- * 3.6 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in 1.3, 1.4, and table I.
- * 3.7 Electrical test requirements. The electrical test requirements shall be table I, group A as specified herein.
- * 3.8 Workmanship. Semiconductor devices shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

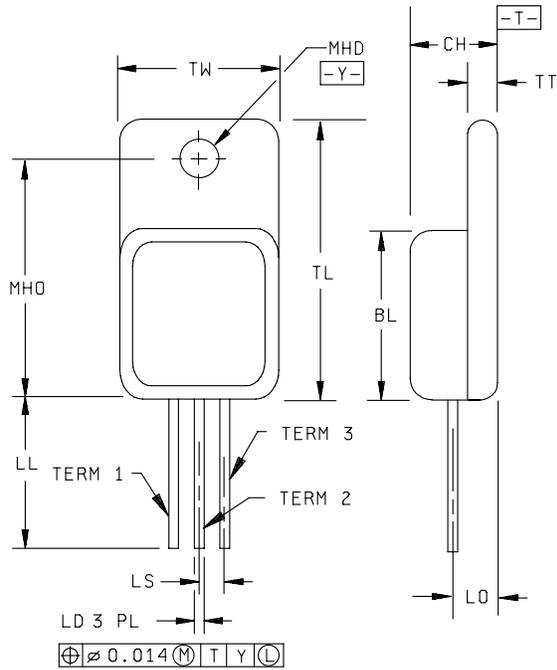
Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		.875		22.22	3
CH	.250	.450	6.35	11.43	
HR	.495	.525	12.57	13.34	
HR1	.131	.188	3.33	4.78	6
HT	.060	.135	1.52	3.43	
L1		.050		1.27	5, 9
LD	.038	.043	0.97	1.09	5, 9
LL	.312	.500	7.92	12.70	5
MHD	.151	.165	3.84	4.19	7
MHS	1.177	1.197	29.90	30.40	
PS	.420	.440	10.67	11.18	4
PS1	.205	.225	5.21	5.72	4, 5
S	.655	.675	16.64	17.14	4



Notes:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Body contour is optional within zone defined by CD
4. These dimensions shall be measured at points .050 inch (1.27 mm) to .055 inch (1.40 mm) below seating plane. When gauge is not used, measurement shall be made at seating plane.
5. Both terminals.
6. At both ends.
7. Two holes.
8. Terminal 1 is the emitter, terminal 2 is base. The collector shall be electrically connected to the case.
9. LD applies between L1 and LL. Diameter is uncontrolled in L1.
10. In accordance with ANSI Y14.5M, diameters are equivalent to ϕ x symbology.

* FIGURE 1. Physical dimensions for 2N6306 and 2N6308 (similar to T0-3).

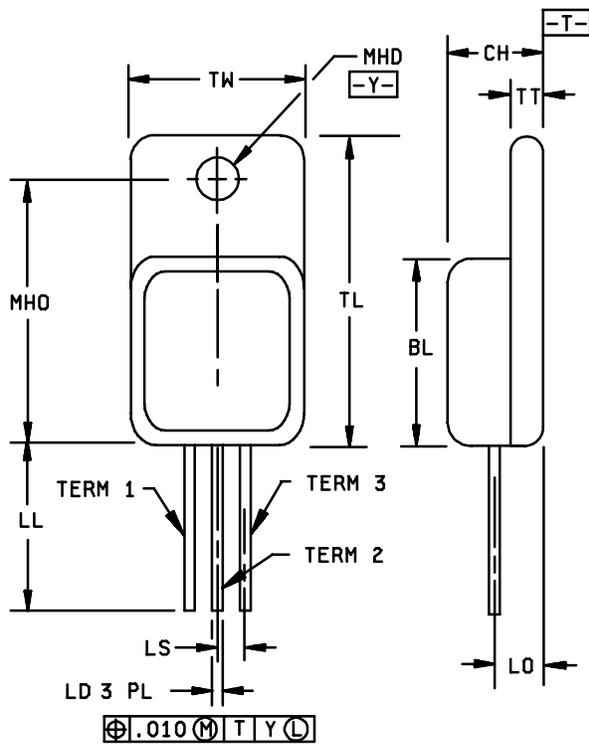


Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.535	.545	13.59	13.89
CH	.249	.260	6.32	6.60
LD	.035	.045	0.89	1.43
LL	.530	.550	13.46	13.97
LO	.150 BSC		3.81 BSC	
LS	.150 BSC		3.81 BSC	
MHD	.139	.149	3.53	3.78
MHO	.665	.685	16.89	17.40
TL	.790	.800	20.07	20.32
TT	.040	.050	1.02	1.27
TW	.535	.545	13.59	13.89
Term 1	Base			
Term 2	Collector			
Term 3	Emitter			

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All terminals are isolated from case. Methods used for electrical isolation of the terminals feedthroughs shall employ materials that contain a minimum of 90 percent AL₂O₃ (ceramic).
4. In accordance with ASME Y14.5M, diameters are equivalent to ϕ x symbology.

* FIGURE 2. Dimensions and configuration for 2N6306T1 and 2N6308T1 (T0-254AA).



Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	.410	.430	10.41	10.92
CH	.190	.200	4.83	5.08
LD	.025	.035	0.64	0.89
LL	.500	.750	12.70	19.05
LO	.120 BSC		3.05 BSC	
LS	.100 BSC		2.54 BSC	
MHD	.140	.150	3.56	3.81
MHO	.527	.537	13.39	13.63
TL	.645	.665	16.38	16.89
TT	.035	.045	0.89	1.14
TW	.410	.420	10.41	10.67
Term 1	Base			
Term 2	Collector			
Term 3	Emitter			

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All terminals are isolated from case. Methods used for electrical isolation of the terminal feedthroughs shall employ materials that contain a minimum of 90 percent AL₂O₃ (ceramic).
4. In accordance with ASME Y14.5M, diameters are equivalent to ϕ x symbology.

* FIGURE 3. Dimensions and configuration for 2N6306T3 and 2N6308T3 (T0-257AA).

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, and as specified herein.

* 4.2.1 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. 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)	Measurements
	JANTX, JANTXV levels
3a 3b 3c	Not applicable Not applicable Thermal impedance (transient), method 3131 of MIL-STD-750 (1)
11	I_{CEX1} and h_{FE3}
12	See 4.3.1
13	Subgroup 2 of table I herein; $\Delta I_{CEX1} \leq 100$ percent of initial value or 500 nA dc, whichever is greater. $\Delta h_{FE3} \leq 25$ percent of initial value.

(1) Thermal impedance ($Z_{\theta JC}$) limits shall not exceed figures 6, 7, and 8.

* 4.3.1 Power burn-in conditions. Power burn-in conditions are: $T_J = +175$ °C minimum, $V_{CB} \geq 10$ V dc; $T_A = +30$ °C maximum.

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

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

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the conditions specified for subgroup testing in table VIb (JAN, JANTX, and JANTXV) of MIL-PRF-19500. 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>
B3	1037	$V_{CB} \geq 10$ V dc; ΔT_J between cycles $\geq +100^\circ\text{C}$; $t_{on} = t_{off} \geq 1$ minute for 2,000 cycles.
B5	3131	See 4.5.2, $n = 22$, $c = 0$.

* 4.4.3 Group C inspection. Group C inspection shall be conducted in accordance with the conditions specified for subgroup testing in table V of MIL-PRF-19500. 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	1056	Test condition B.
C2	2036	For 2N6306 and 2N6308, test condition A, weight = 10 lbs, $t = 15$ seconds; for 2N6306T1 and 2N6308T1, test condition A, weight = 4.5 kg, $t = 10$ seconds.
C6	1037	$V_{CB} \geq 10$ V dc; ΔT_J between cycles $\geq +100^\circ\text{C}$; $t_{on} = t_{off} 1$ minute for 6,000 cycles. No heat sink or forced-air cooling on device shall be permitted.

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

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

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

* 4.5.2 Thermal resistance. Thermal resistance measurements shall be conducted in accordance with method 3131 of MIL-STD-750. The following details shall apply: $R_{\theta JC}$ = see figures 6, 7, and 8, thermal impedance curves.

- a. I_M measurement 10 mA.
- b. V_{CE} measurement voltage 15 V.
- c. I_H collector heating current 8 A.
- d. V_H collector-emitter heating voltage 15 V.
- e. t_H heating time Steady-state (see method 3131 of MIL-STD-750 for definition).
- f. t_{MD} measurement delay time 20 μs (maximum).
- g. t_{SW} sample window time 10 μs (maximum).

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* TABLE I. Group A inspection.

Inspection 1/	MIL-STD-750		Symbol	Limit		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical examination	2071					
<u>Subgroup 2</u>						
Collector to base breakdown voltage 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3011	Bias condition D, $I_C = 100$ mA dc; pulsed (see 4.5.1)	$V_{(BR)CEO}$	250 350		V dc V dc
Collector to emitter cutoff current 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3041	Bias condition D; $V_{CE} = 250$ V dc $V_{CE} = 350$ V dc	I_{CEO}		50	μ A dc
Emitter-base cutoff current	3061	Bias condition D $V_{EB} = 8$ V dc	I_{EBO}		5.0	μ A dc
Collector to emitter cutoff current 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3041	Bias condition A; $V_{BE} = 1.5$ V dc $V_{CE} = 500$ V dc $V_{CE} = 700$ V dc	I_{CEX1}		5.0 5.0	μ A dc μ A dc
Base emitter voltage 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3066	Test condition A; $I_C = 8.0$ A dc; pulsed (see 4.5.1) $I_B = 2.0$ A dc $I_B = 2.67$ A dc	$V_{BE(sat)}$		2.3 2.5	V dc V dc
Base emitter voltage 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3066	Test condition B; $I_C = 3.0$ A dc; $V_{CE} = 5.0$ V dc; pulsed (see 4.5.1)	$V_{BE(on)2}$		1.3 1.5	V dc V dc
Collector to emitter saturated voltage 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3071	$I_C = 8.0$ A dc; pulsed (see 4.5.1) $I_B = 2.0$ A dc $I_B = 2.67$ A dc	$V_{CE(sat)1}$		5.0	V dc
Collector to emitter saturated voltage 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3071	$I_C = 3.0$ A dc; $I_B = 0.6$ A dc; pulsed (see 4.5.1)	$V_{CE(sat)2}$		0.8 1.5	V dc V dc
Forward-current transfer ratio 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3076	$V_{CE} = 5$ V dc; $I_C = 3.0$ A dc; pulsed (see 4.5.1)	h_{FE1}	15 12	75 60	

See footnote at end of table.

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* TABLE I. Group A inspection - Continued.

Inspection <u>1</u> /	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 2</u> - Continued.						
Forward-current transfer ratio 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3076	$V_{CE} = 5 \text{ V dc}; I_C = 8.0 \text{ A dc};$ pulsed (see 4.5.1)	h_{FE2}	4		
Forward-current transfer ratio 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3076	$V_{CE} = 5 \text{ V dc}; I_C = 0.5 \text{ A dc};$ pulsed (see 4.5.1)	h_{FE3}	3		
				15		
				12		
<u>Subgroup 3</u>						
High-temperature operation		$T_A = +150^\circ\text{C}$				
Collector to emitter cutoff current 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3041	Bias condition A; $V_{BE} = 1.5 \text{ V dc}$ $V_{CE} = 450 \text{ V dc}$ $V_{CE} = 650 \text{ V dc}$ $T_A = -55^\circ\text{C}$	I_{CEX2}		300	$\mu\text{A dc}$
Low-temperature operation						
Forward-current transfer ratio 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3	3076	$V_{CE} = 5.0 \text{ V dc}; I_C = 3.0 \text{ A dc};$ pulsed (see 4.5.1)	h_{FE4}	6		
				5		
<u>Subgroup 4</u>						
Pulse response: Transfer ratio	3251	Test condition A except test circuit and pulse requirements in accordance with figure 9.				
Turn-on time		$V_{CC} = 125 \text{ V dc}; I_C = 3.0 \text{ A dc};$ $I_B = 0.6 \text{ A dc}$	t_{on}		0.6	μs
Turn-off time		$V_{CC} = 125 \text{ V dc}; I_C = 3.0 \text{ A dc};$ $I_{B1} = 0.6 \text{ A dc}; I_{B2} = 1.5 \text{ A dc}$	t_{off}		3.0	μs
Magnitude of common emitter small-signal short-circuit forward- current transfer ratio	3306	$V_{CE} = 10 \text{ V dc}; I_C = 0.3 \text{ A dc};$ $f = 1 \text{ MHz}$	$ h_{fe} $	5	30	
Open capacitance(open circuit)	3236	$V_{CB} = 10 \text{ V dc}; I_E = 0;$ $100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		250	pF
Small-signal short- circuit forward- current transfer ratio	3206	$V_{CE} = 4.0 \text{ V dc}; I_C = 0.5 \text{ A dc}; f =$ 1.0 kHz	h_{fe}	5		

See footnote at end of table.

* TABLE I. Group A inspection - Continued.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 5</u> Safe operating area (dc operation) <u>Test 1</u> (All device types) <u>Test 2</u> (All device types) <u>Test 3</u> 2N6306, 2N6306T1, 2N6306T3 2N6308, 2N6308T1, 2N6308T3 Electrical measurements <u>Subgroups 6 and 7</u> Not applicable	3051	$T_C = +25^\circ\text{C}$ $t = 1$ s; 1 cycle; (See figures 10 and 11) $V_{CE} = 15.6$ V dc; $I_C = 8$ A dc $V_{CE} = 37$ V dc; $I_C = 3.4$ A dc $V_{CE} = 200$ V dc; $I_C = 65$ mA dc $V_{CE} = 300$ V dc; $I_C = 25$ mA dc Table I, subgroup 2 herein				

For sampling plan see MIL-PRF 19500.

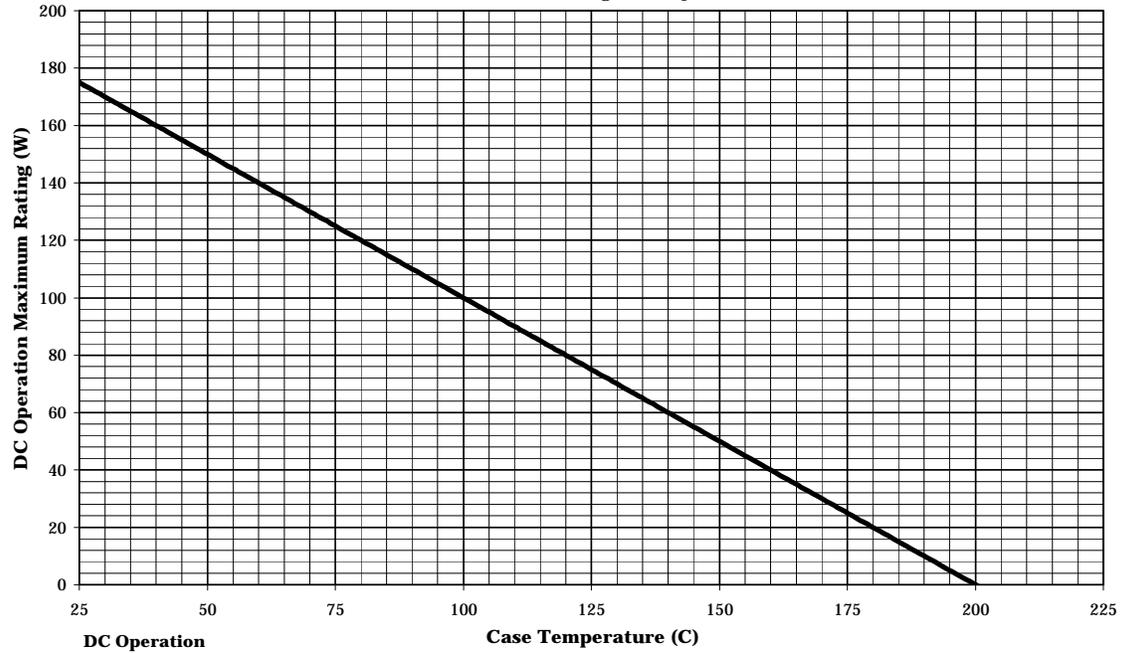
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* TABLE II. Group E inspection (all quality levels) - for qualification only.

Inspection	MIL-STD-750		Qualification
	Method	Conditions	
<u>Subgroup 1</u>			45 devices c = 0
Temperature cycling	1051	1,000 cycles.	
Hermetic seal	1071		
Fine leak			
Gross leak			
Electrical measurements		See table I, subgroup 2 herein.	
<u>Subgroup 2</u>			45 devices c = 0
Steady-state dc blocking life	1039 or 1049	Condition A; 340 hrs.	
Electrical measurements		See table I, subgroup 2 herein.	
<u>Subgroup 3</u>			3 devices c = 0
DPA	2102		
<u>Subgroup 4</u>			sample size N/A
Thermal impedance, thermal resistance curves		Each supplier shall submit their (typical) design thermal impedance curves. In addition, test conditions and $Z_{\theta JX}$ limit shall be provided to the qualifying activity in the qualification report.	
<u>Subgroup 5, 6 and 7</u>			
Not applicable			
<u>Subgroup 8</u>			45 devices c = 0
Reverse stability	1033	Condition A for devices ≥ 400 V, condition B for devices < 400 V.	

Temperature-Power Derating Curve

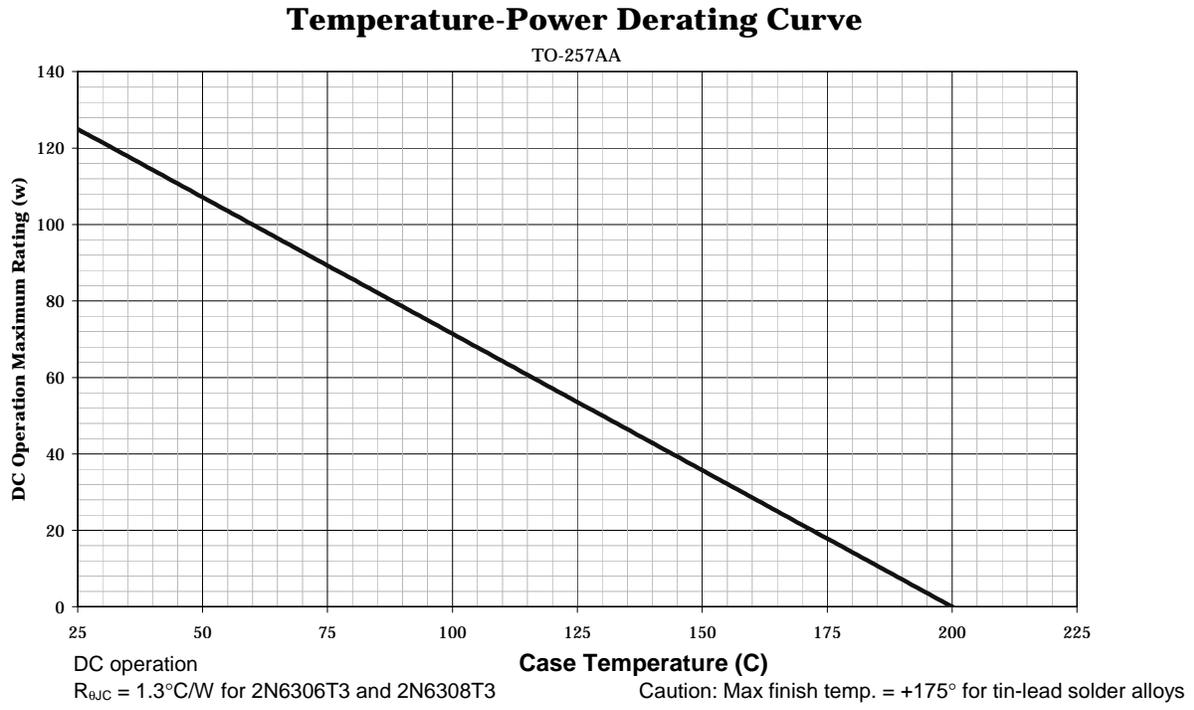
T_c=25C All Packages Except T3



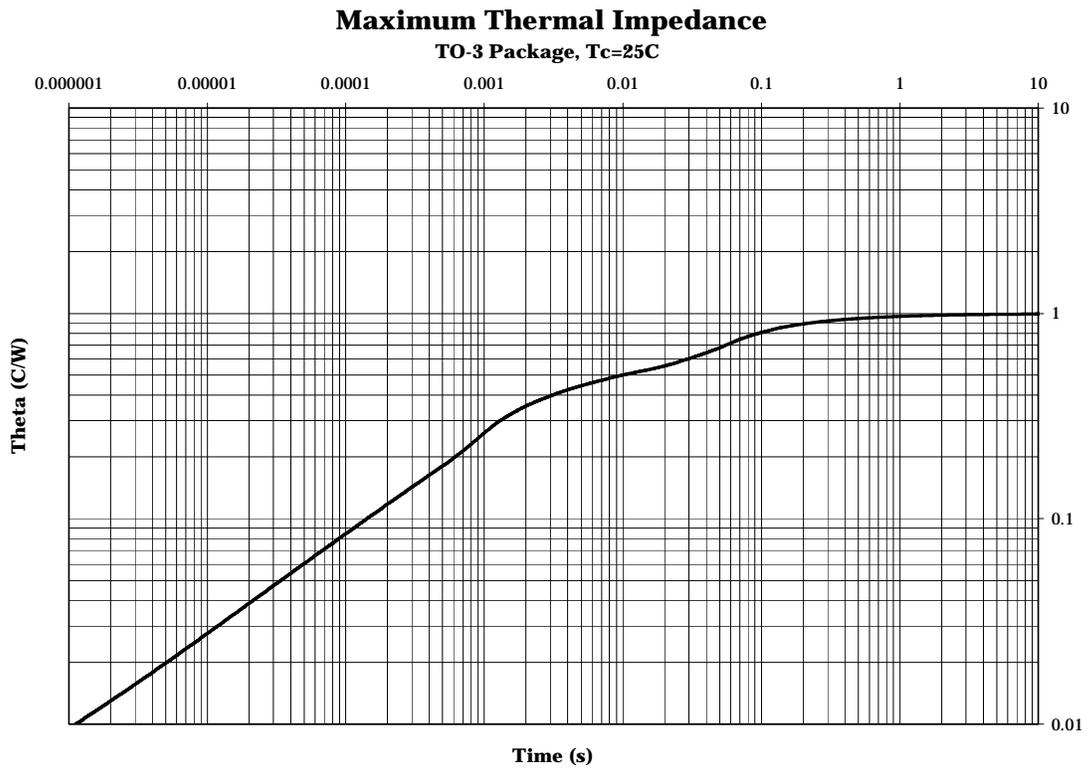
R_{θJC} = 1.0°C/W for all except T3 suffix,

Caution: Max finish temp. = +175° for tin-lead solder alloys

* FIGURE 4. Temperature derating graph (T0-3 and T0-254 packages).

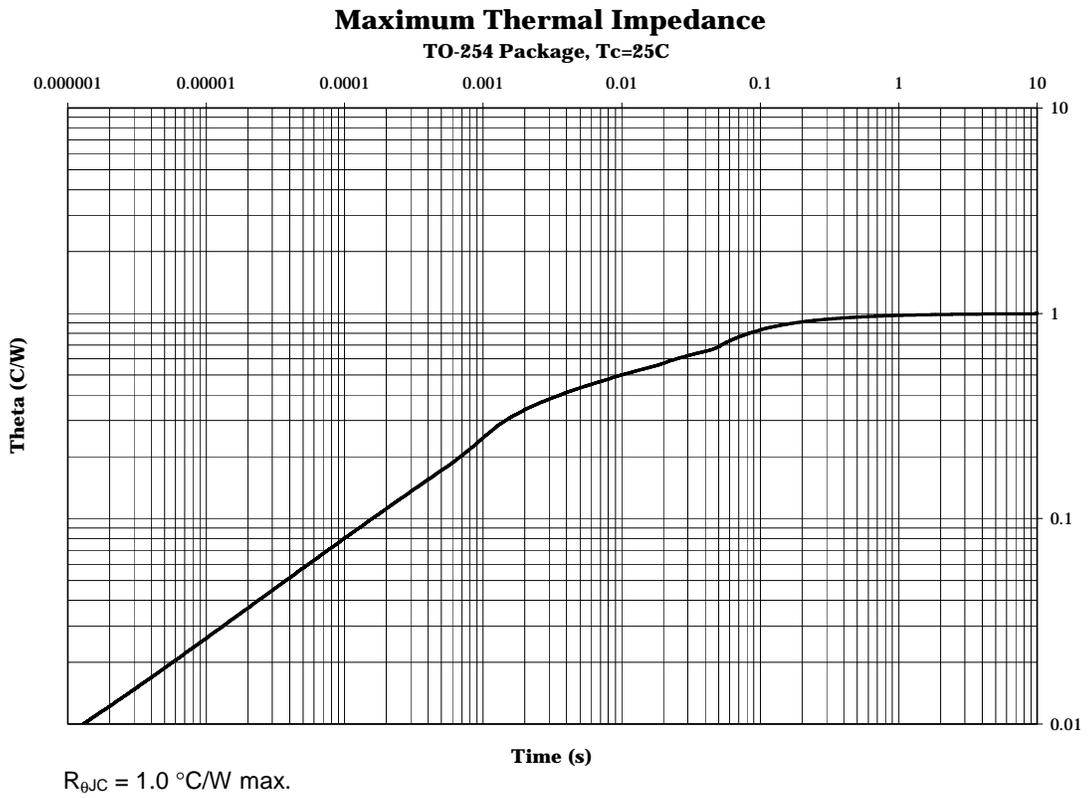


*FIGURE 5. Temperature derating graph for T3 (TO-257AA) packages.

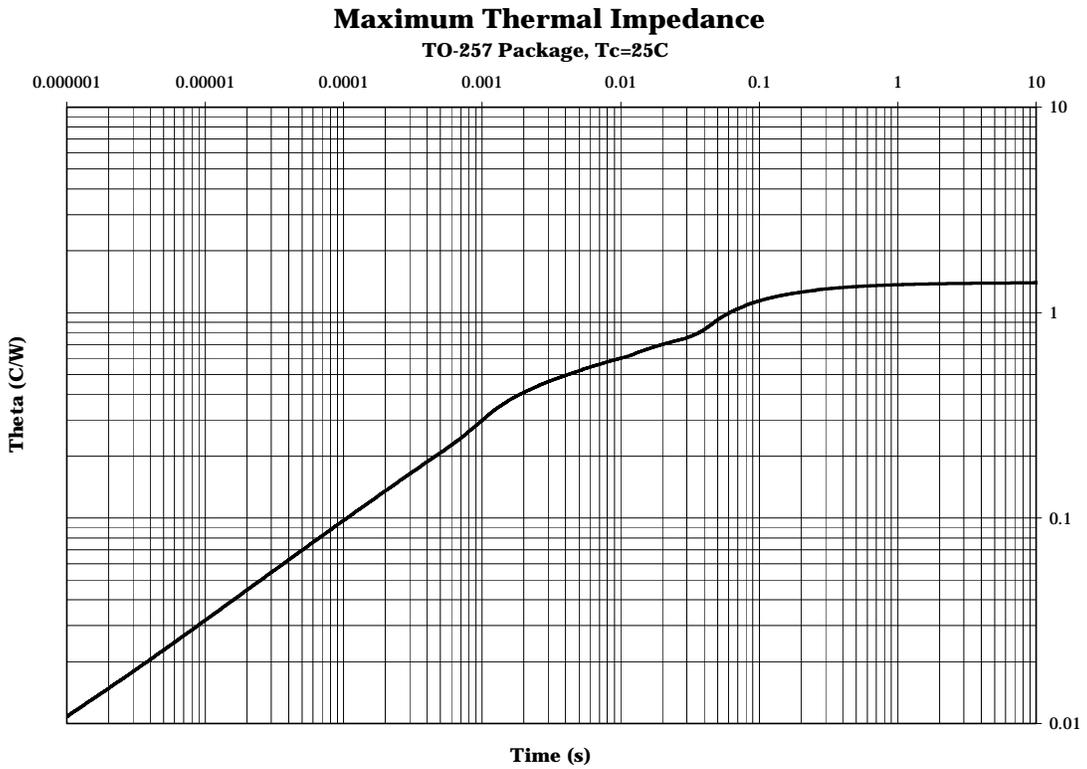


$R_{\theta JC} = 1.0 \text{ } ^\circ\text{C/W max.}$

* FIGURE 6. Thermal impedance graphs (2N6306 and 2N6308).

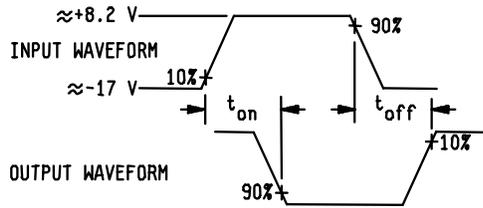
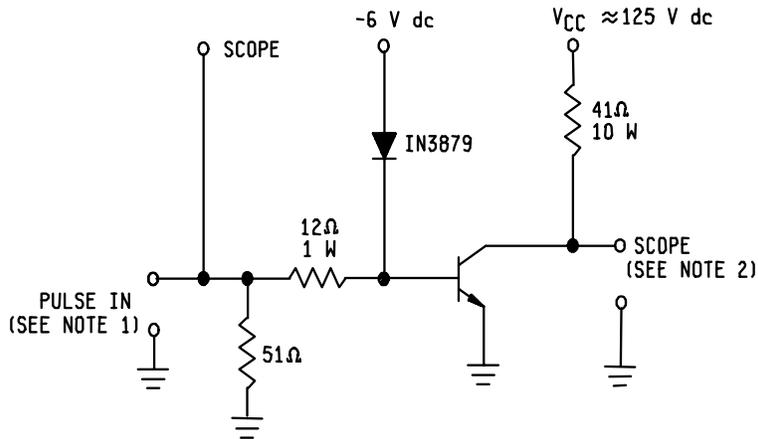


* FIGURE 7. Thermal impedance graphs (2N6306T1 and 2N6308T1).



$R_{\theta JC} = 1.3 \text{ } ^\circ\text{C/W max.}$

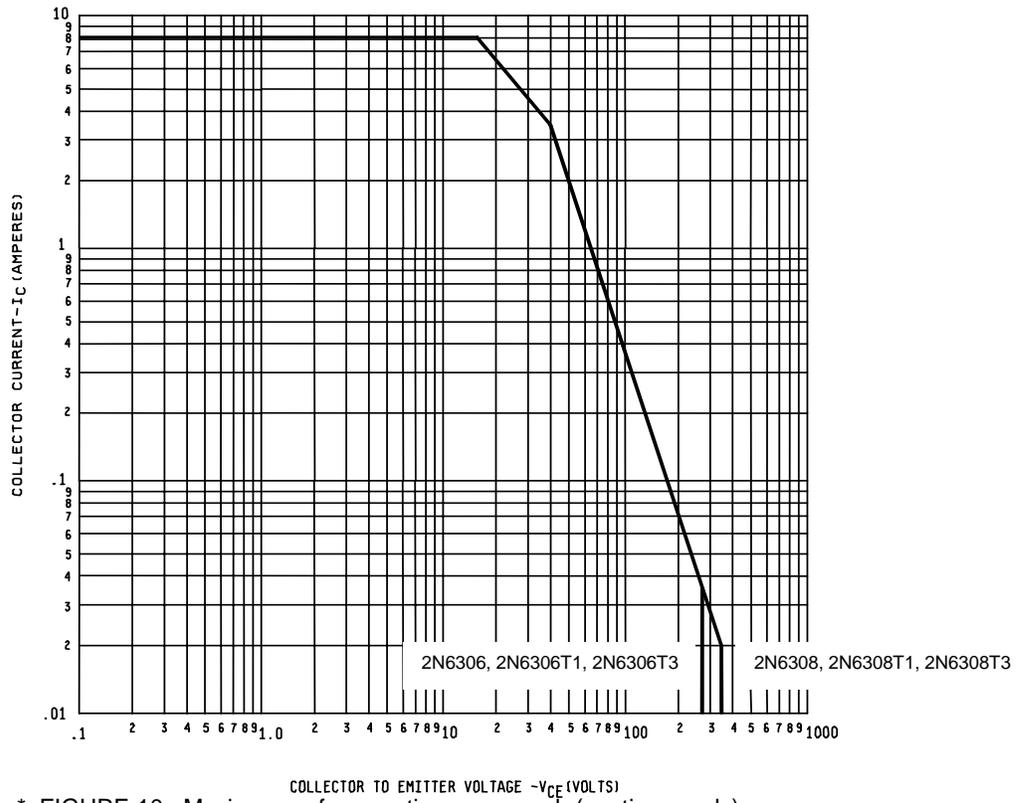
* FIGURE 8. Thermal impedance graphs (2N6306T3 and 2N6308T3).



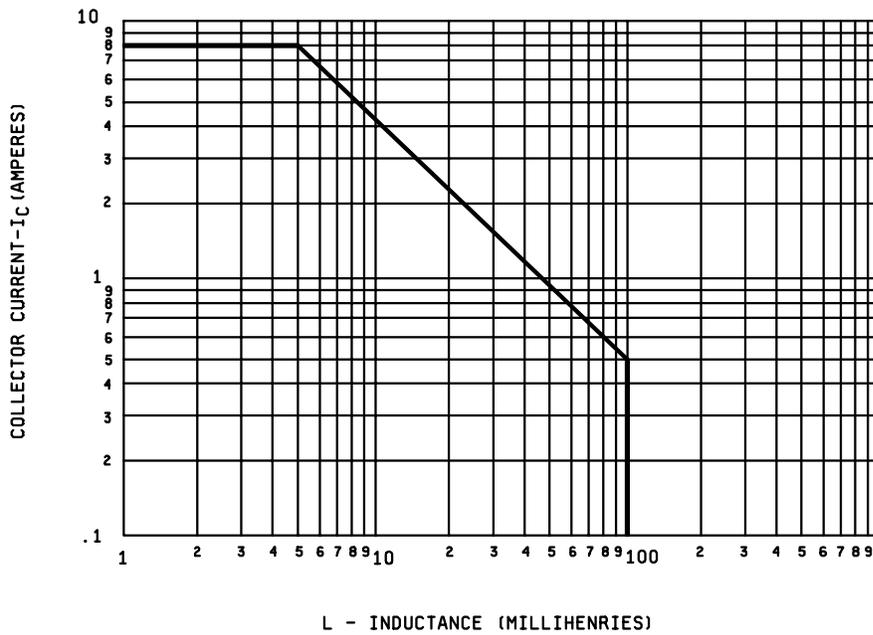
NOTES:

1. The rise time (t_r) and fall time (t_f) of the applied pulse shall be each ≤ 2 ns; duty cycle ≤ 1 percent; generator source impedance shall be 50Ω ; pulse width = $30 \mu\text{s}$.
2. Output sampling oscilloscope: $Z_{IN} \geq 20 \text{ k}\Omega$; $C_{IN} \leq 50 \text{ pF}$; rise time ≤ 0.2 ns.

* FIGURE 9. Pulse response test circuit.



* FIGURE 10. Maximum safe operating area graph (continuous dc).



* FIGURE 11. Safe operating area for switching between saturation and cutoff (unclamped inductive load).

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

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
- c. Packaging requirements (see 5.1).
- d. Lead finish (see 3.4.1).

* 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 Manufacturers' List (QML) 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 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:
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5961-2611)

Review activities:
Air Force - 19

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	2. DOCUMENT DATE
	MIL-PRF-19500/498D	30 April 2003

3. DOCUMENT TITLE
 SEMICONDUCTOR DEVICE, TRANSISTOR, NPN, SILICON, POWER TYPE 2N6306, 2N6306T1, 2N6306T3, 2N6308, 2N6308T1, AND 2N6308T3 JAN, JANTX AND JANTXV

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)	7. DATE SUBMITTED
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8. PREPARING ACTIVITY

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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