

The documentation and process conversion measures necessary to comply with this document shall be completed by 14 November 2024.

INCH-POUND

MIL-PRF-19500/523E
w/AMENDMENT 1
14 June 2024
SUPERSEDING
MIL-PRF-19500/523E
6 February 2019

PERFORMANCE SPECIFICATION SHEET

TRANSISTOR, NPN, SILICON, POWER DARLINGTON
TYPES 2N6383, 2N6384, AND 2N6385, JAN, JANTX, AND JANTXV

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

The requirements for acquiring the product described herein shall consist of
this specification sheet and [MIL-PRF-19500](#).

1. SCOPE

1.1 Scope. This specification covers the performance requirements for NPN silicon, power Darlington transistors. Three levels of product assurance (JAN, JANTX, and JANTXV) are provided for each device type as specified in [MIL-PRF-19500](#).

1.2 Package outlines. The device package outlines are as follows: TO-204AA (formerly TO-3) in accordance with [figure 1](#) for all encapsulated device types.

1.3 Maximum ratings. Unless otherwise specified, $T_A = +25^{\circ}\text{C}$.

Types	P_T		$R_{\theta JC}$ max	V_{CB0} and V_{CE0}	V_{EB0}	I_B	I_C	T_J and T_{STG}
	$T_A = +25^{\circ}\text{C}$ (1)	$T_C = +25^{\circ}\text{C}$ (2)						
	<u>W</u>	<u>W</u>	<u>$^{\circ}\text{C/W}$</u>	<u>V dc</u>	<u>V dc</u>	<u>A dc</u>	<u>A dc</u>	<u>$^{\circ}\text{C}$</u>
2N6383	6.0	100	1.75	40	5.0	0.25	10	-55 to +175
2N6384	6.0	100	1.75	60	5.0	0.25	10	-55 to +175
2N6385	6.0	100	1.75	80	5.0	0.25	10	-55 to +175

(1) Derate linearly 34.2 mW/ $^{\circ}\text{C}$ above $T_A > +25^{\circ}\text{C}$.

(2) Derate linearly 571 mW/ $^{\circ}\text{C}$ above $T_C > +25^{\circ}\text{C}$.

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

Limit	h_{FE1} (1) $V_{CE} = 3.0\text{ V dc}$ $I_C = 5.0\text{ A dc}$	$V_{CE(sat)1}$ (1) $I_C = 5.0\text{ A dc}$ $I_B = 10\text{ mA dc}$	$V_{CE(sat)2}$ (1) $I_C = 10\text{ A dc}$ $I_B = 0.1\text{ A dc}$	$V_{BE(ON)1}$ (1) $V_{CE} = 3.0\text{ V dc}$ $I_C = 5.0\text{ A dc}$	C_{obo} $V_{CB} = 10\text{ V dc}$ $I_E = 0$ $100\text{ KHz} < f < 1\text{ MHz}$
		V dc	V dc	V dc	pF
Minimum	1,000				
Maximum	20,000	2.0	3.0	2.8	200

Limit	$ h_{fe} $ $V_{CE} = 5.0\text{ V dc}$ $I_C = 1.0\text{ A dc}$ $f = 1\text{ MHz}$	Pulse response (2) $V_{CC} = 30\text{ V dc}$ $I_{CC} = 5.0\text{ A dc}$, $I_{B1} = 20\text{ mA dc}$	
		t_{on}	t_{off}
		μS	μS
Minimum	20		
Maximum	300	2.5	10.0

(1) Pulsed (see 4.5.1).

(2) See figure 2 for pulse response circuits.

1.5 Part or Identifying Number (PIN). The PIN is in accordance with MIL-PRF-19500, and as specified herein. See 6.4 for PIN construction example and 6.5 for a list of available PINs.

1.5.1 JAN certification mark and quality level for encapsulated devices. The quality level designators for encapsulated devices that are applicable for this specification sheet from the lowest to the highest level are as follows: "JAN", "JANTX" and "JANTXV".

1.5.2 Device type. The designation system for the device types of transistors covered by this specification sheet are as follows.

1.5.2.1 First number and first letter symbols. The transistors of this specification sheet use the first number and letter symbols "2N".

1.5.2.2 Second number symbols. The second number symbols for the transistors covered by this specification sheet are as follows: "6383", "6384", and "6385".

1.5.3 Lead finish. The lead finishes applicable to this specification sheet are listed on QPDSIS-19500.

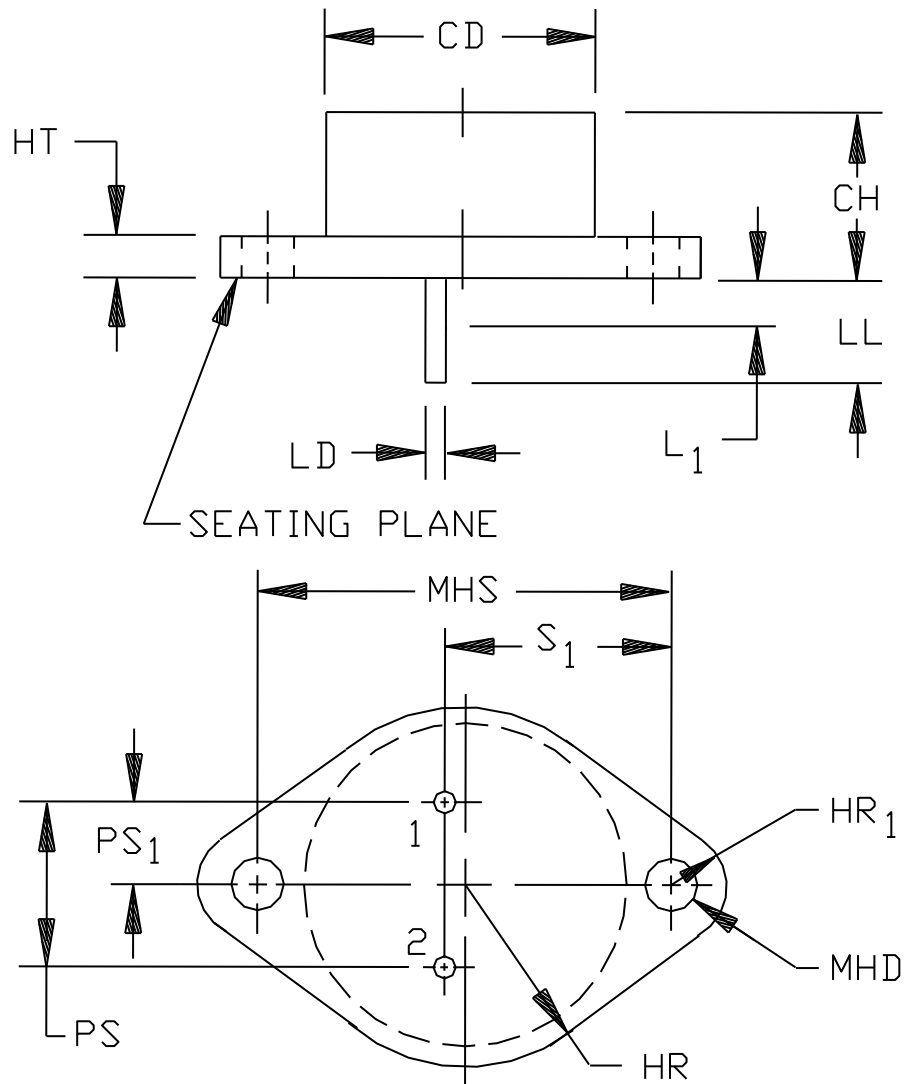


FIGURE 1. Physical dimensions (TO-204AA, formerly TO-3)

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Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		.875		22.23	5
CH	.250	.450	6.35	11.43	
HR	.495	.525	12.57	13.34	6
HR ₁	.131	.188	3.33	4.78	6
HT	.050	.135	1.27	3.43	
LD	.038	.043	0.97	1.09	7, 8, 9
LL	.312	.500	7.92	12.7	
L ₁		.050		1.27	
MHD	.151	.161	3.84	4.09	10
MHS	1.177	1.197	29.90	30.40	
PS	.420	.440	10.67	11.18	8
PS ₁	.205	.225	5.21	5.72	7, 8
S ₁	.655	.675	16.64	17.15	7, 8

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Terminal 1 is the emitter and terminal 2 is the base. The collector shall be electrically connected to the case.
3. The seating plane of the header shall be flat within .001 inch (0.03 mm) concave to .004 inch (0.10 mm) convex inside a .930 inch (23.62 mm) diameter circle on the center of the header and flat within .001 inch (0.03 mm) concave to .006 inch (0.15 mm) convex overall.
4. Mounting holes (MHD) shall be deburred on the seating plane side.
5. Body contour is optional within zone defined by dimension CD.
6. Applies to all sides (HR) or both ends (HR₁).
7. Applies to both terminals.
8. Measurement for this dimension shall be taken at points .050 inch (1.27 mm) to .055 inch (1.40 mm) below the seating plane. When gauge is not used, measurement shall be made at seating plane.
9. Lead diameter shall not exceed twice dimension LD within dimension L₁.
10. Applies to both holes.

* FIGURE 1. Physical dimensions (TO-204AA, formerly TO-3) - Continued.

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 of 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 cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

[MIL-PRF-19500](#) - Semiconductor Devices, General Specification for.

DEPARTMENT OF DEFENSE STANDARDS

[MIL-STD-750](#) - Test Methods for Semiconductor Devices.

(Copies of these documents are available online at <https://quicksearch.dla.mil/>).

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, 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 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-19500](#)) before contract award (see [4.2](#) and [6.3](#)).

3.3 Abbreviations, symbols, and definitions. The abbreviations, symbols, and definitions used herein shall be as specified in [MIL-PRF-19500](#) and as follows:

I_M	-	The measurement current applied to forward bias the junction for measurement of V_{BE} .
I_H	-	The collector current applied to the device under test during the heating period.
t_H	-	The duration of the applied heating power pulse.
t_{sw}	-	Sample window time during which final V_{BE} measurement is made.

3.4 Interface and physical dimensions. The interface and physical dimensions shall be as specified in [MIL-PRF-19500](#) and on [figure 1](#) herein.

3.4.1 Lead finish. The lead finish shall be solderable in accordance with [MIL-PRF-19500](#), [MIL-STD-750](#), and herein. Where a choice of lead finish is desired, it shall be specified in the acquisition document (see [6.2](#)).

3.4.2 Polarity. The identification of terminals of the device package shall be as shown on [figure 1](#). Terminal 1 shall be connected to the emitter, terminal 2 shall be connected to the base, and the collector shall be electrically connected to the case.

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

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3.6 Electrical test requirements. The electrical test requirements shall be as specified in [table I](#).

3.7 Marking. Marking shall be in accordance with [MIL-PRF-19500](#).

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.

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](#) and [tables I and II](#)).

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 specification sheet that did not request the performance of [table II](#) tests, the tests specified in [table II](#) herein that were not performed in the prior revision shall be performed on the first inspection lot of this revision to maintain qualification.

4.3 Screening (JANTX and JANTXV levels only). Screening shall be in accordance with table E-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	Measurements for JANTX and JANTXV levels only
3c (1)	Thermal impedance, see 4.3.1
11	I_{CEX1} and h_{FE1}
12	See 4.3.2
13	See table I , subgroup 2 herein. ΔI_{CEX1} = 100 percent of initial value or 10 μA dc, whichever is greater. Δh_{FE1} = ± 25 percent of initial value.

- (1) Thermal impedance shall be performed anytime after temperature cycling (screen 3a) and does not need to be repeated in screening requirements.

4.3.1 Thermal impedance. The thermal impedance measurements shall be performed in accordance with test method 3131 of [MIL-STD-750](#) using the guidelines in that method for determining I_M , I_H , t_H , t_{SW} , t_{MD} (and V_H where appropriate). The thermal impedance limit used in screen 3c and [table I](#), subgroup 2 herein shall be set statistically by the supplier. See [table II](#), subgroup 4 (group E) herein.

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4.3.2 Power burn-in conditions. The power burn-in conditions shall be as follows: $T_J = +162.5^{\circ}\text{C} \pm 12.5^{\circ}\text{C}$. The following details shall apply:

- a. $V_{CB} = 30\text{ V dc}$ for device type 2N6383.
- b. $V_{CB} = 40\text{ V dc}$ for device type 2N6384.
- c. $V_{CB} = 60\text{ V dc}$ for device type 2N6385.

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 table E-V of MIL-PRF-19500 and table I herein. Electrical measurements (end-points) shall be in accordance with table I, subgroup 2 herein.

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the tests and conditions specified for subgroup testing in table E-VIB (JAN, JANTX, and JANTXV) of MIL-PRF-19500 and as follows.

<u>Subgroup</u>	<u>Method</u>	<u>Conditions</u>
B3	1037	Intermittent operation life, for solder die attach: $V_{CB} \geq 10\text{ V dc}$, $T_A \leq +35^{\circ}\text{C}$.
B3	1027	Steady state life, 340 hours, for eutectic die attach: $V_{CB} \geq 10\text{ V dc}$, $T_A \leq +35^{\circ}\text{C}$ adjust P_T to achieve $T_J = +150^{\circ}\text{C}$ minimum.

4.4.3 Group C inspection. Group C inspection shall be conducted in accordance with the tests and conditions specified for subgroup testing in table E-VII of MIL-PRF-19500 and as follows.

<u>Subgroup</u>	<u>Method</u>	<u>Conditions</u>
C2	2036	Test condition A; weight = 10 pounds (4.54 Kg); time = 15 s.
C5	3131	Thermal resistance, see 4.3.1, $R_{\theta JC(max)} = 1.75^{\circ}\text{C/W}$.
C6	1037	Intermittent operation life, for solder die attach: $V_{CB} \geq 10\text{ V dc}$, $T_A \leq +35^{\circ}\text{C}$.
C6	1026	Steady state life, for eutectic die attach: $V_{CB} \geq 10\text{ V dc}$, $T_A \leq +35^{\circ}\text{C}$ adjust P_T to achieve $T_J = +150^{\circ}\text{C}$ minimum.

4.4.4 Group E inspection. Group E inspection shall be conducted in accordance with the tests and conditions specified for subgroup testing in appendix E, table E-IX of MIL-PRF-19500 and as specified in table II herein.

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

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

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TABLE I. Group A inspection.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limit		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 1</u>						
Visual and mechanical examination	2071					
<u>Subgroup 2</u>						
Thermal impedance <u>2/</u>	3131	See 4.3.1	$Z_{\theta JX}$			°C/W
Breakdown voltage collector to emitter	3011	Bias condition D, $I_C = 200$ mA dc, pulsed (see 4.5.1)	$V_{(BR)CEO}$			
2N6383				40		V dc
2N6384				60		V dc
2N6385				80		V dc
Breakdown voltage collector to emitter	3011	Bias condition B, $I_C = 200$ mA dc, $R_{BB} = 100\Omega$, pulsed (see 4.5.1)	$V_{(BR)CER}$			
2N6383				40		V dc
2N6384				60		V dc
2N6385				80		V dc
Collector to emitter cutoff current	3041	Bias condition D	I_{CEO}		1.0	mA
2N6383		$V_{CE} = 40$ V dc				
2N6384		$V_{CE} = 60$ V dc				
2N6385		$V_{CE} = 80$ V dc				
Emitter to base cutoff current	3061	Bias condition D, $V_{EB} = 5.0$ V dc	I_{EBO}		5.0	mA
Collector to emitter cutoff current	3041	Bias condition A, $V_{BE} = -1.5$ V dc	I_{CEX1}		100	μA dc
2N6383		$V_{CE} = 40$ V dc				
2N6384		$V_{CE} = 60$ V dc				
2N6385		$V_{CE} = 80$ V dc				
Collector to base cutoff current	3036	Bias condition D	I_{CBO1}		1.0	mA dc
2N6383		$V_{CE} = 40$ V dc				
2N6384		$V_{CE} = 60$ V dc				
2N6385		$V_{CE} = 80$ V dc				
Base emitter voltage (unsaturated)	3066	Test condition B $V_{CE} = 3.0$ V dc, $I_C = 5.0$ A dc	$V_{BE(on)1}$		2.8	V dc
Base emitter voltage (unsaturated)	3066	Test condition B $V_{CE} = 3.0$ V dc, $I_C = 10$ A dc pulsed (see 4.5.1)	$V_{BE(on)2}$		4.5	V dc

See footnotes at end of table.

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TABLE I. Group A inspection - Continued.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limit		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 2</u> - Continued.						
Saturation voltage and resistance	3071	I _C = 5.0 A dc, I _B = 10 mA dc, pulsed (see 4.5.1)	V _{CE(sat)1}		2.0	V dc
Saturation voltage and resistance	3071	I _C = 10 A dc, I _B = 0.1 A dc, pulsed (see 4.5.1)	V _{CE(sat)2}		3.0	V dc
Forward-current transfer ratio	3076	V _{CE} = 3 V dc, I _C = 5 A dc; pulsed (see 4.5.1)	h _{FE1}	1,000	20,000	
Forward current transfer ratio	3076	V _{CE} = 3.0 V dc, I _C = 10 A dc, pulsed (see 4.5.1)	h _{FE2}	100		
<u>Subgroup 3</u>						
High temperature operation:		T _A = +150°C				
Collector to emitter cutoff current	3041	Bias condition A, V _{BE} = -1.5 V dc	I _{CEx2}		3.0	mA dc
2N6383		V _{CE} = 40 V dc				
2N6384		V _{CE} = 60 V dc				
2N6385		V _{CE} = 80 V dc				
Low temperature operation:		T _A = -55°C				
Forward-current transfer ratio	3076	V _{CE} = 3.0 V dc, I _C = 5.0 A dc, pulsed (see 4.5.1)	h _{FE3}	200		
<u>Subgroup 4</u>						
Pulse response	3251	Test condition A, except test circuit and pulse requirements in accordance with figure 2				
Turn-on time		V _{CC} = 30 V dc, I _C = 5.0 A dc, I _{B1} = 20 mA dc	t _{on}		2.5	μs
Turn-off time		V _{CC} = 30 V dc, I _C = 5.0 A dc, I _{B1} = - I _{B2} = 20 mA dc	t _{off}		10	μs
Magnitude of small-signal short-circuit forward-current transfer ratio	3306	V _{CE} = 5 V dc; I _C = 1 A dc f = 1.0 MHz	h _{fe}	20	300	
Open-circuit output capacitance	3236	V _{CB} = 10 V dc; I _E = 0 100 kHz ≤ f ≤ 1 MHz	C _{obo}		200	pF

See footnotes at end of table.

Inspection 1/	MIL-STD-750		Symbol	Limit		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 5</u> Safe operating area (continuous dc) <u>Test 1</u> (All device types) <u>Test 2</u> (All device types) <u>Test 3</u> 2N6383 2N6384 2N6385 Electrical measurements	3051	$T_c = +25^{\circ}\text{C}$; $t = 1.0 \text{ s}$, 1 cycle See figure 3 $V_{CE} = 10 \text{ V dc}$; $I_c = 10 \text{ A dc}$ $V_{CE} = 30 \text{ V dc}$; $I_c = 3.33 \text{ A dc}$ $V_{CE} = 40 \text{ V dc}$, $I_c = 1.5 \text{ A dc}$ $V_{CE} = 60 \text{ V dc}$, $I_c = 0.4 \text{ A dc}$ $V_{CE} = 80 \text{ V dc}$, $I_c = 0.16 \text{ A dc}$ See of table I , subgroup 2 herein				
Safe operating area (switching) <u>Test 1</u> Electrical measurements <u>Test 2</u> Electrical measurements	3053	Load condition C (unclamped inductive load), see figure 4 . $T_c = 25^{\circ}\text{C}$, duty cycle ≤ 10 percent $R_s = 0.1 \Omega$ t_p approximately 1 ms (vary to obtain I_c); $R_{BB1} = 1 \text{ k}\Omega$; $V_{BB1} = 10 \text{ V dc}$; $R_{BB2} = \infty$; $V_{BB2} = 0 \text{ V}$; $V_{cc} = 30 \text{ V dc}$; $I_c = 10 \text{ A dc}$; $R_L \leq 0.5 \Omega$; $L = 1 \text{ mH}$ at 10 A dc See subgroup 2 of this table t_p approximately 1 ms (vary to obtain I_c); $R_{BB1} = 10 \text{ K}\Omega$; $V_{BB1} = 10 \text{ V dc}$; $R_{BB2} = \infty$; $V_{BB2} = 0 \text{ V}$; $V_{cc} = 30 \text{ V dc}$; $I_c = 0.2 \text{ A dc}$; $L = 100 \text{ mH}$ at 0.2 A dc ; $R_L \leq 0.5 \Omega$ See of table I , subgroup 2 herein				

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TABLE I. Group A inspection - Continued.

Inspection <u>1/</u>	MIL-STD-750		Symbol	Limit		Unit
	Method	Conditions		Min	Max	
<u>Subgroup 5</u> - Continued. Safe operating area (switching) 2N6383 2N6384 2N6385 Electrical measurements	3053	Load condition B (clamped inductive load) see figure 5 $T_A = +25^{\circ}\text{C}$, $t_r + t_f \leq 1.0 \mu\text{s}$, duty cycle ≤ 10 percent; $t_p = 5 \text{ ms}$ (vary to obtain I_c) $R_s = 0.1 \Omega$; $V_{cc} = 10 \text{ V dc}$; $I_c = 10 \text{ A dc}$ Clamp voltage = 40 V dc Clamp voltage = 60 V dc Clamp voltage = 80 V dc Device fails if clamp voltage is not reached See of table I , subgroup 2 herein				

1/ For sampling plan see [MIL-PRF-19500](#).

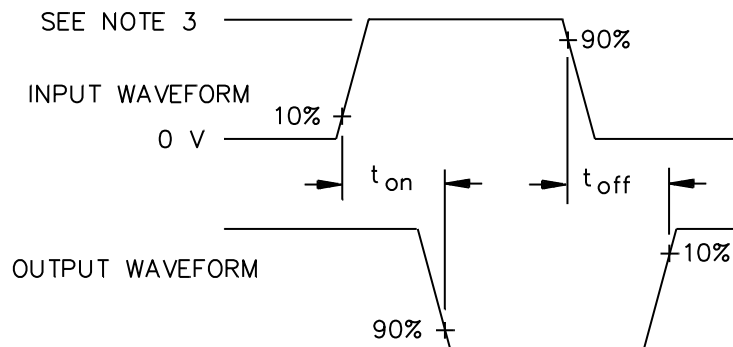
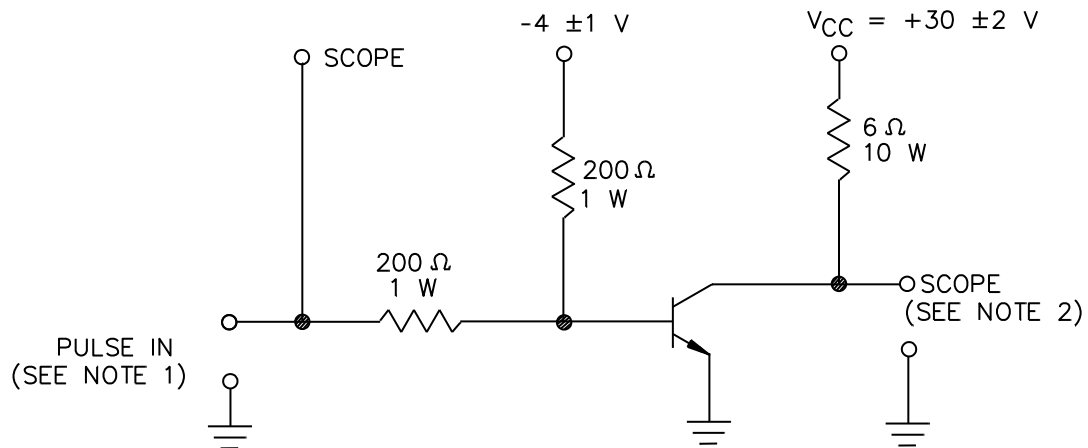
2/ For end-point measurements, this test is required for the following subgroups:
Group B, subgroups 2 and 3 (JAN, JANTX, and JANTXV).
Group C, subgroups 2 and 6.
Group E, subgroups 1 and 2.

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

Inspection	MIL-STD-750		Sample plan
	Method	Conditions	
<u>Subgroup 1</u>			45 devices; c = 0
Temperature cycling (air to air)	1051	Test condition G, 500 cycles.	
Hermetic seal	1071		
Fine leak			
Gross leak			
Electrical measurements		See of table I , subgroup 2 herein.	
<u>Subgroup 2</u>			45 devices; c = 0
Blocking life	1048	Test temperature = +125°C; V _{CB} = 80 percent of rated voltage; T = 1,000 hours.	
Electrical measurements		See of table I , subgroup 2 herein.	
<u>Subgroup 4</u>			Sample size N/A
Thermal impedance curves		See MIL-PRF-19500 .	
<u>Subgroup 8</u>			45 devices; c = 0
Reverse voltage leakage stability	1033	Condition A.	

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NOTES:

1. The rise time (t_r) and fall time (t_f) of the applied pulse shall be each < 20 nanoseconds; duty cycle < 2 percent, generator source impedance shall be 50Ω ; pulse width = $20 \mu s$.
2. Output sampling oscilloscope: $Z_{IN} > 100 k\Omega$; $C_{IN} < 50 pF$; rise time < 2 nanoseconds.
3. Pulse In shall be $10 V$ maximum.

FIGURE 2. Pulse response test circuit.

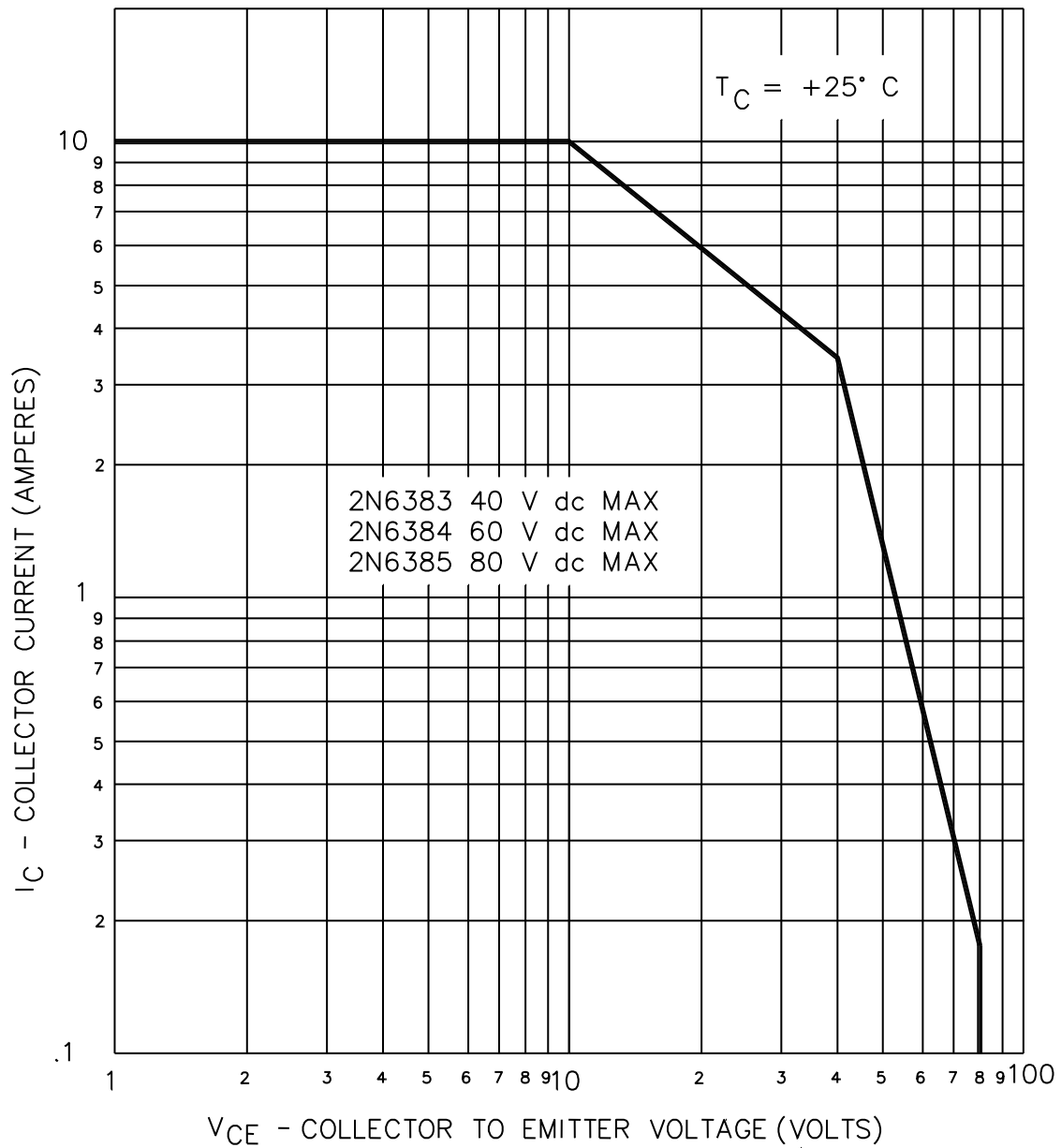


FIGURE 3. Maximum safe operating graph (continuous dc).

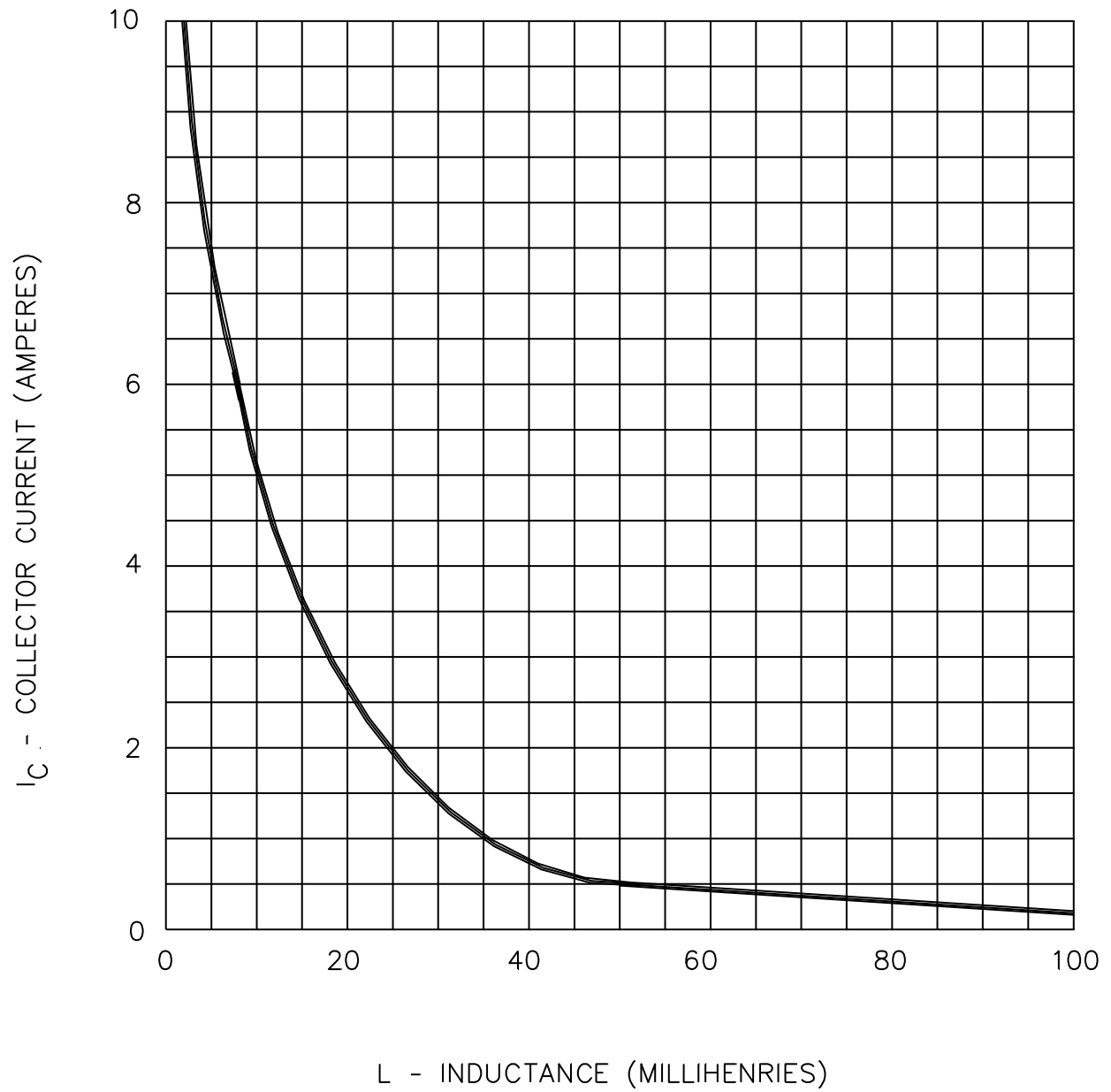
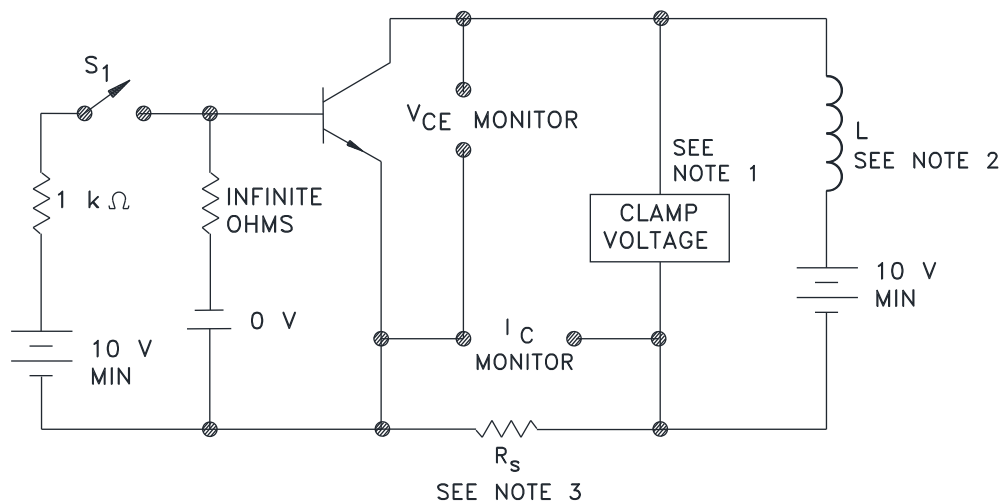


FIGURE 4. Safe operating area for switching between saturation and cutoff (unclamped inductive load).

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NOTES:

1. Either a clamping circuit or clamping diode may be used.
2. The coil used shall provide a minimum inductance of 1 mH at 10 A with a max dc resistance of 0.1 ohm.
3. $R_s \leq 0.1$ ohm. 12 W, 1 percent tolerance max (noninductive).
4. With switch S_1 closed, set the specified test conditions.
5. Open S_1 . Device fails if clamp voltage is not reached and maintained until the current returns to zero.
6. Perform specified end point tests.

FIGURE 5. Clamped inductive sweep test circuit.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the Military Service's system commands. 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. The notes specified in MIL-PRF-19500 are applicable to this specification.)

6.1 Intended use. Semiconductors conforming to this specification are intended for original equipment design applications and logistic support of existing equipment.

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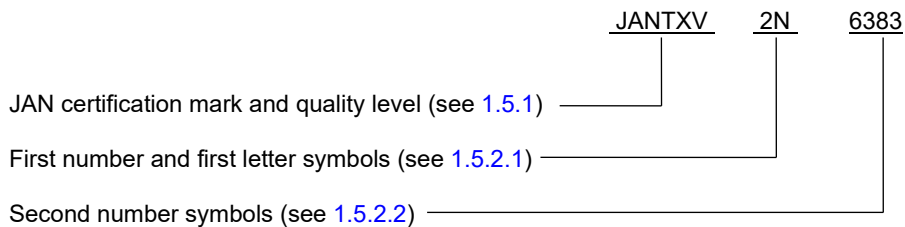
6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Packaging requirements (see 5.1).
- c. Lead finish (see 3.4.1).
- d. The complete PIN, see 1.5 and 6.5.

* 6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturers List (QML-19500) whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from DLA Land and Maritime, ATTN: VQE, P.O. Box 3990, Columbus, OH 43218-3990 or e-mail vqe.chief@dla.mil. An online listing of products qualified to this specification may be found in the Qualified Products Database (QPD) at <http://qpldocs.dla.mil>.

6.4 PIN construction example.

6.4.1 Encapsulated devices The PINs for encapsulated devices are constructed using the following form.



6.5 List of PINs. The following is a list of possible PINs available on this specification sheet.

PINs for devices of the base quality level	PINs for devices of the "TX" quality level	PINs for devices of the "TXV" quality level
JAN2N6383	JANTX2N6383	JANTXV2N6383
JAN2N6384	JANTX2N6384	JANTXV2N6384
JAN2N6385	JANTX2N6385	JANTXV2N6385

6.6 Request for new types and configurations. Requests for new device types or configurations for inclusions in this specification sheet should be submitted to: DLA Land and Maritime, ATTN: VAC, Post Office Box 3990, Columbus, OH 43218-3990 or by electronic mail at Semiconductor@dla.mil or by facsimile (614) 692-6939 or DSN 850-6939.

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* 6.7 Amendment notations. The margins of this specification are marked with asterisks to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army - CR
* Navy - SH
Air Force - 85
NASA - NA
DLA - CC

Preparing activity:
DLA - CC

(Project 5961-2024-050)

Review activities:

Army - MI

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.