The documentation and process conversion measures necessary to comply with this revision shall be completed by 12 March 2015.

INCH-POUND

MIL-PRF-19500/509E
12 December 2014
SUPERSEDING
MIL-PRF-19500/509D
9 October 2009

PERFORMANCE SPECIFICATION SHEET

TRANSISTOR, NPN, SILICON, POWER, TYPES 2N6338 AND 2N6341, JAN, JANTX, JANTXV, AND JANS

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 transistors for use in particular power-switching applications. Four levels of product assurance (JAN, JANTX, JANTXV, and JANS) are provided for each device type as specified in MIL-PRF-19500.

1.2 Package outlines. The device package for this specification sheet is similar to TO-204AA (formally TO-3) in accordance with figure 1 for all packaged device types.

1.3 Maximum ratings. Unless otherwise specified, T_A = +25°C.

Types	P_T (1) (2) T_A = +25°C	P_T (1) (2) T_C = +25°C	P_T T_C = +100°C	$R_{\theta JA}$	$R_{\theta JC}$ (3)	V_{CBO}	V_{CEO}	V_{EBO}	I_C	I_B	T_{STG} and T_{OP}
	W	W	W	°C/W	°C/W	V dc	V dc	V dc	A dc	A dc	°C
2N6338	3.5	200	112	50	0.875	120	100	6.0	25	10	-65 to +200
2N6341	3.5	200	112	50	0.875	180	150	6.0	25	10	

(1) Between T_C = +25°C and T_C = +200°C, linear derating factor (average) = 1.14 W/°C.
(2) Maintain voltage and current according to the safe operating area as shown on figures 2 and 3 and appropriate mounting conditions.
(3) See figure 4 for thermal impedance graphs.

Comments, suggestions, or questions on this document should be addressed to DLA Land and Maritime, ATTN: VAC, P.O. Box 3990, Columbus, OH 43218-3990, or emailed to Semiconductor@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil/.

1.4 Primary electrical characteristics. Unless otherwise specified, T_A = +25°C.

Limit	h_{FE1} (1)		$V_{BE(SAT)}$	$V_{CE(SAT)}$		C_{obo}
	I_C = 25 A dc V_{CE} = 2.0 V dc	I_C = 10 A dc V_{CE} = 2.0 V dc	I_C = 10 A dc I_B = 1.0 V dc	I_C = 25 A dc I_B = 2.5 A dc	I_C = 10 A dc I_B = 1.0 A dc	1 MHz ≤ f ≤ 1 MHz V_{CB} = 10 V dc I_E = 0
			V dc	V dc	V dc	pF
Min	12	30				
Max		120	1.8	1.8	1.0	450

Limit	$\|h_{FE}\|$	Pulse response		$R_{\theta JC}$
	f = 10 MHz I_C = 1.0 A dc V_{CE} = 10 V dc	t_{on}	t_{off}	
		µs	µs	°C/W
Minimum	4			
Maximum	12	0.5	1.25	.875

(1) Pulsed, (see 4.5.1).

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 6.6 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”, “JANTXV” and "JANS".

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 are identified by 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: "6338" and "6341".

1.5.2.3 Suffix letters. Suffix letters are not applicable for this specification sheet.

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

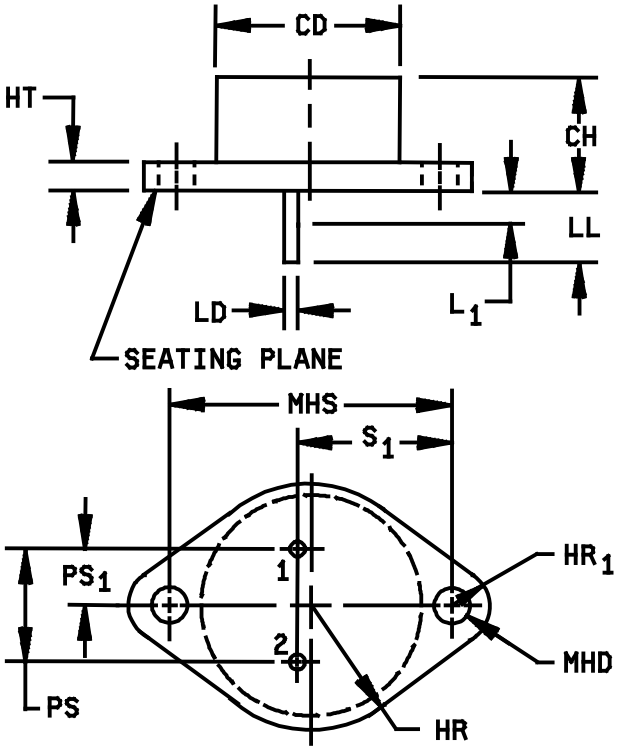


FIGURE 1. Physical dimensions (similar to TO-204AA formally TO-3).

Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		.875		22.23	
CH	.250	.360	6.35	9.14	
HR	.495	.525	12.57	13.33	4
HR_1	.131	.188	3.33	4.78	4
HT	.060	.135	1.52	3.43	
LD	.038	.043	0.97	1.09	4, 6
LL	.312	.500	7.92	12.7	
L_1		.050		1.27	6
MHD	.151	1.65	3.83	41.91	4
MHS	1.177	1.197	29.90	30.40	
PS	.420	.440	10.67	11.18	3
PS_1	.205	.225	5.21	5.72	3
S_1	.655	.675	16.64	17.15	
Notes	1, 2, 5, 7		1, 2, 5, 7		

NOTES:
1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. These dimensions should be measured at points .050 inch (1.27 mm) +.005 inch (0.13 mm) -.000 inch (0.00 mm) below seating plane. When gauge is not used, measurement will be made at the seating plane.
4. Two places.
5. 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.
6. Lead diameter shall not exceed twice LD within L_1.
7. Lead designation shall be as follows:

Lead Number	
1	Emitter
2	Base
Case	Collector

FIGURE 1. Physical dimensions (similar to TO-204AA formally TO-3) - Continued.

2. APPLICABLE DOCUMENTS

2.1 Government 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 http://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 manufacturers list 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 requirements and physical dimensions. The Interface requirements and physical dimensions shall be as specified in MIL-PRF-19500 and figure 1 (similar to TO-204AA formally TO-3) herein.

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 contract or purchase order (see 6.2).

3.4.2 Pin-out. The pin-out of the device types shall be as shown on figure 1. Terminal 1 is the emitter, terminal 2 is base. The collector shall be electrically connected to the case.

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 as specified in table I.

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. 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 (see table E-IV of MIL-PRF-19500)	Measurement	
	JANS level	JANTX and JANTXV levels
(1) 3c	Thermal impedance, method 3131 of MIL-STD-750 (see 4.3.2)	Thermal impedance, method 3131 of MIL-STD-750 (see 4.3.2)
9	I_{CEX1} and h_{FE2}	Not applicable
11	I_{CEX1} = 100 percent of initial value or 1 μA dc, whichever is greater; Δh_{FE2} = ±25 percent of initial value	I_{CEX1} and h_{FE2}
12	See 4.3.1	See 4.3.1
13	Subgroups 2 and 3 of table I herein; ΔI_{CEX1} = 100 percent of initial value or 1 μA dc, whichever is greater; Δh_{FE2} = ±25 percent of initial value	Subgroup 2 of table I herein; ΔI_{CEX1} = 100 percent of initial value or 1 μA dc, whichever is greater; Δh_{FE2} = ±25 percent of initial value

(1) Shall be performed anytime after temperature cycling, screen 3a; JANTX and JANTXV levels do not need to be repeated in screening requirements.

4.3.1 Power burn-in conditions. Power burn-in conditions are as follows: $V_{CB} \geq 20$ V dc minimum; T_J = +187.5°C ±12.5°C The selected I_C and V_{CE} values used for burn-in should fall within the safe operating area of 1.3 herein and on figures 2 and 3 herein.

4.3.2 Thermal impedance. The thermal impedance measurements shall be performed in accordance with method 3131 of MIL-STD-750 using the guidelines in that method for determining I_M, I_H, t_H, t_{SW} (V_C and V_H where appropriate). Measurement delay time (t_{MD}) = 70 μs max. See table II, group E, subgroup 4 herein.

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 sublot.

4.4.1 Group A inspection. Group A inspection shall be conducted in accordance with 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 conditions specified for subgroup testing in table E-VIA (JANS) and table E-VIB (JAN, JANTX, and JANTXV) of MIL-PRF-19500 and 4.4.2.1 and 4.4.2.2 herein.

4.4.2.1 Quality level JANS (table E-VIA of MIL-PRF-19500).

Subgroup	Method	Condition
B3	2037	Test condition D, all internal leads for each device shall be pulled separately.
B4	1037	V_{CE} = 20 V dc.
B5	1027	V_{CE} = 20 V dc minimum; T_J = +275°C minimum; t = 96 hours.

4.4.2.2 Quality levels JAN, JANTX and JANTXV (table E-VIB of MIL-PRF-19500).

Subgroup	Method	Condition
B3	2037	Test condition D, all internal leads for each device shall be pulled separately.
B3	1037	For solder die attach: $V_{CE} \geq 20$ V dc.
B3	1027	For eutectic die attach: $V_{CE} \geq 20$ V dc adjust P_T to achieve $T_J = +175°C$ minimum.

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

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

Subgroup	Method	Condition
C2	2036	Test condition A; weight = 10 pounds.; time = 15 s.
C5	3131	Thermal resistance, see 4.5.2.
C6	1037	For solder die attach: $V_{CE} \geq 20$ V dc.
C6	1027	For eutectic die attach: $V_{CE} \geq 20$ V dc, adjust P_T to achieve $T_J = +175°C$ minimum.

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

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

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

4.5.2 Thermal resistance. Thermal resistance measurements shall be performed in accordance with test method 3131 of MIL-STD-750 using the guide lines in that method for determining I_M, I_H, t_H, and t_{sw}. The maximum limit for $R_{\theta JC}$ shall be 0.875°C/W.

TABLE I. Group A inspection.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 1						
Visual and mechanical examination	2071					
Subgroup 2						
Thermal impedance	3131	See 4.3.2	$Z_{\theta JX}$			°C/W
Breakdown voltage, collector to emitter	3011	Bias condition D, I_C = 50 mA dc Pulsed (see 4.5.1)	$V_{(BR)CEO}$			
2N6338				100		V dc
2N6341				150		V dc
Collector to emitter cutoff current	3041	Bias condition D	I_{CEO}		50	µA dc
2N6338		V_{CE} = 50 V dc				
2N6341		V_{CE} = 75 V dc				
Emitter to base cutoff current	3061	Bias condition D, V_{EB} = 6 V dc	I_{EBO}		100	µA dc
collector to emitter cutoff current	3041	Bias condition A, V_{BE} = -1.5 V dc	I_{CEX1}			
2N6338		V_{CB} = 100 V dc			10	µA dc
2N6341		V_{CB} = 150 V dc			10	µA dc
Collector to base cutoff current	3036	Bias condition D	I_{CBO}			
2N6338		V_{CB} = 120 V dc			10	µA dc
2N6341		V_{CB} = 180 V dc			10	µA dc
Base to emitter saturation voltage	3066	Test condition A; I_B = 1.0 A dc; I_C = 10 A dc; pulsed (see 4.5.1)	$V_{BE(SAT)}$		1.8	V dc
Collector to emitter saturation voltage	3071	I_B = 1.0 A dc; I_C = 10 A dc; pulsed (see 4.5.1)	$V_{CE(SAT)1}$		1.0	V dc
Collector to emitter saturation voltage	3071	I_B = 2.5 A dc; I_C = 25 A dc; pulsed (see 4.5.1)	$V_{CE(SAT)2}$		1.8	V dc

See footnotes at end of table.

TABLE I. Group A inspection - Continued.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 2 - Continued						
Forward-current transfer ratio	3076	V_{CE} = 2 V dc; I_C = 0.5 A dc; pulsed (see 4.5.1)	h_{FE1}	40		
Forward-current transfer ratio	3076	V_{CE} = 2 V dc; I_C = 10 A dc; pulsed (see 4.5.1)	h_{FE2}	30	120	
Forward-current transfer ratio	3076	V_{CE} = 2 V dc; I_C = 25 A dc; pulsed (see 4.5.1)	h_{FE3}	12		
Subgroup 3 2/						
High temperature operation:		T_A = +150°C				
Collector to emitter cutoff current	3041	Bias condition A, V_{BE} = -1.5 V dc	I_{CEX2}			
2N6338		V_{CE} = 100 V dc			1.0	mA dc
2N6341		V_{CE} = 150 V dc			1.0	mA dc
Low temperature operation:		T_A = -55°C				
Forward-current transfer ratio	3076	V_{CE} = 2.0 V dc; I_C = 10 A dc; pulsed (see 4.5.1)	h_{FE4}	10		
Subgroup 4						
Pulse response	3251	Test condition A, except test circuit and pulse requirements in accordance with figure 2.				
Turn-on time		$V_{CC} \approx$ 80 V; I_C = 10 A dc I_{B1} = 1.0 A dc	t_{on}		0.5	µs
Turn-off time		$V_{CC} \approx$ 80 V; I_C = 10 A dc $I_{B1} = I_{B2}$ = 1.0 A dc	t_{off}		1.25	µs
Storage time		$V_{CC} \approx$ 80 V; I_C = 10 A dc $I_{B1} = I_{B2}$ = 1.0 A dc	t_s		1.0	µs

See footnotes at end of table.

TABLE I. Group A inspection - Continued.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 5						
Magnitude of common emitter, small-signal short-circuit, forward-current transfer ratio	3306	V_{CE} = 10 V dc; I_C = 1.0 A dc; f = 10 MHz	$\|h_{FE}\|$	4.0	12	
Open capacitance open circuit	3236	V_{CB} = 10 V dc; I_E = 0; 0.1 MHz ≤ f ≤ 1 MHz	C_{obo}		450	pF
Safe operating area (dc operation)	3051	T_C = +25°C; t = 1 s; 1 cycle (see figure 3)				
Test 1						
(Both device types)		I_C = 25 A dc; V_{CE} = 8 V dc				
Test 2						
(Both device types)		I_C = 14 A dc; V_{CE} = 14 V dc				
Test 3						
2N6338		I_C = 100 mA dc; V_{CE} = 100 V dc				
2N6341		I_C = 66 mA dc; V_{CE} = 150 V dc				
Safe operating area (switching)	3053	Load condition C; (unclamped inductive load) see figure 5				
		T_C = +25°C; duty cycle ≤ 10 percent; R_S = 0.1Ω; $t_r = t_f \leq 500$ ns				
Test 1		$t_p \approx$ 5 ms (vary to obtain I_C); R_{BB1} = 10 Ω; V_{BB1} = 20 V dc; R_{BB2} = ∞; V_{BB2} = 0; V_{CC} = 50 V dc; I_C = 20 A dc L = 3 μH				
Test 2		$t_p \approx$ 5 ms (vary to obtain I_C); R_{BB1} = 100 Ω; V_{BB1} = 10 V dc; R_{BB2} = ∞; V_{BB2} = 0; V_{CC} = 50 V dc; I_C = 200 mA dc L = 10 mH				

See footnotes at end of table.

TABLE I. Group A inspection - Continued.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 5 - Continued						
Safe operating area (switching)	3053	Clamped inductive load; Condition C, T_A = +25°C; duty cycle ≤ 5 percent; $t_p \approx$ 1.5 ms (vary to obtain I_C); $V_{CC} \approx$ 50 V dc; $I_C \approx$ 25 A dc; (see figure 6)				
2N6338		Clamped voltage = 100 V dc				
2N6341		Clamped voltage = 150 V dc				
Electrical measurements		See table I, subgroup 2 herein.				

1/ For sampling plan see MIL-PRF-19500.
2/ The sample units subjected to the high-temperature operation test shall be permitted to return to and be stabilized at room ambient temperature prior to their being subjected to the low-temperature operation test.

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

Inspection	MIL-STD-750		Sample plan
	Method	Conditions	
Subgroup 1			45 devices c = 0
Temperature cycling	1051	Test condition C, 500 cycles	
Hermetic seal	1071		
Fine leak Gross leak			
Electrical measurements		See table I, subgroup 2 herein	
Subgroup 2			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 table I, subgroup 2 herein	
Subgroup 4			Sample size N/A
Thermal impedance curves		See table E-IX of MIL-PRF-19500, group E, subgroup 4	
Subgroup 8			45 devices c = 0
Reverse stability	1033	Condition B	

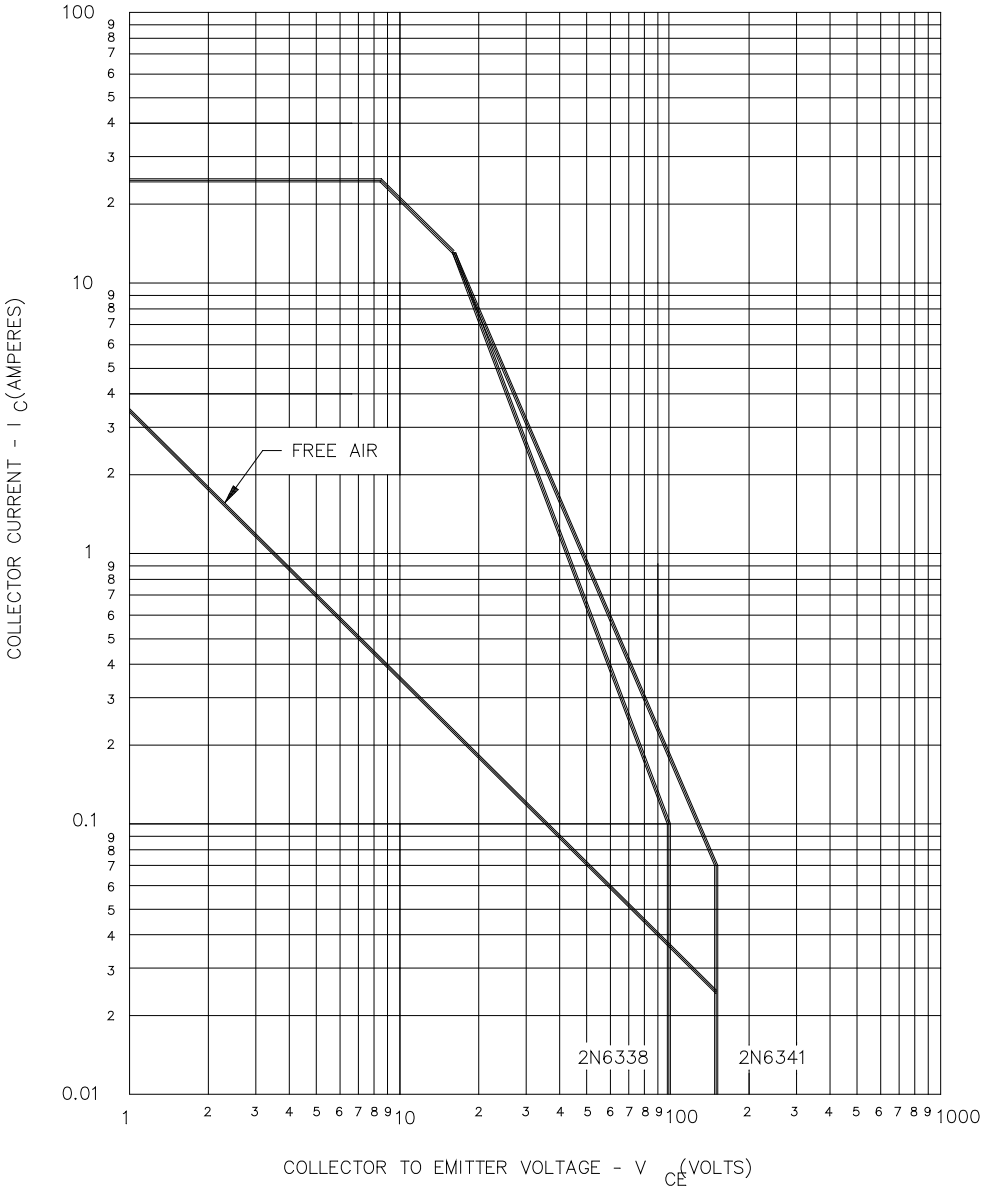


FIGURE 2. Maximum safe operating area graph (continuous dc) for types 2N6338 and 2N6341.

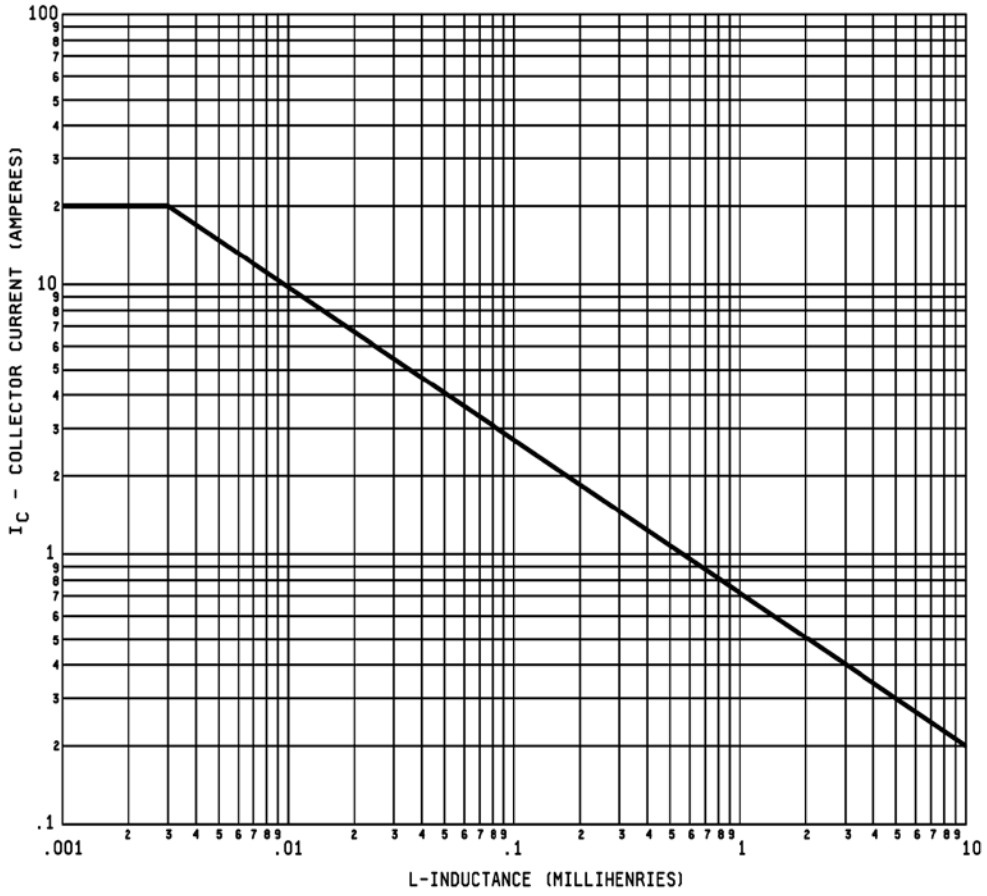
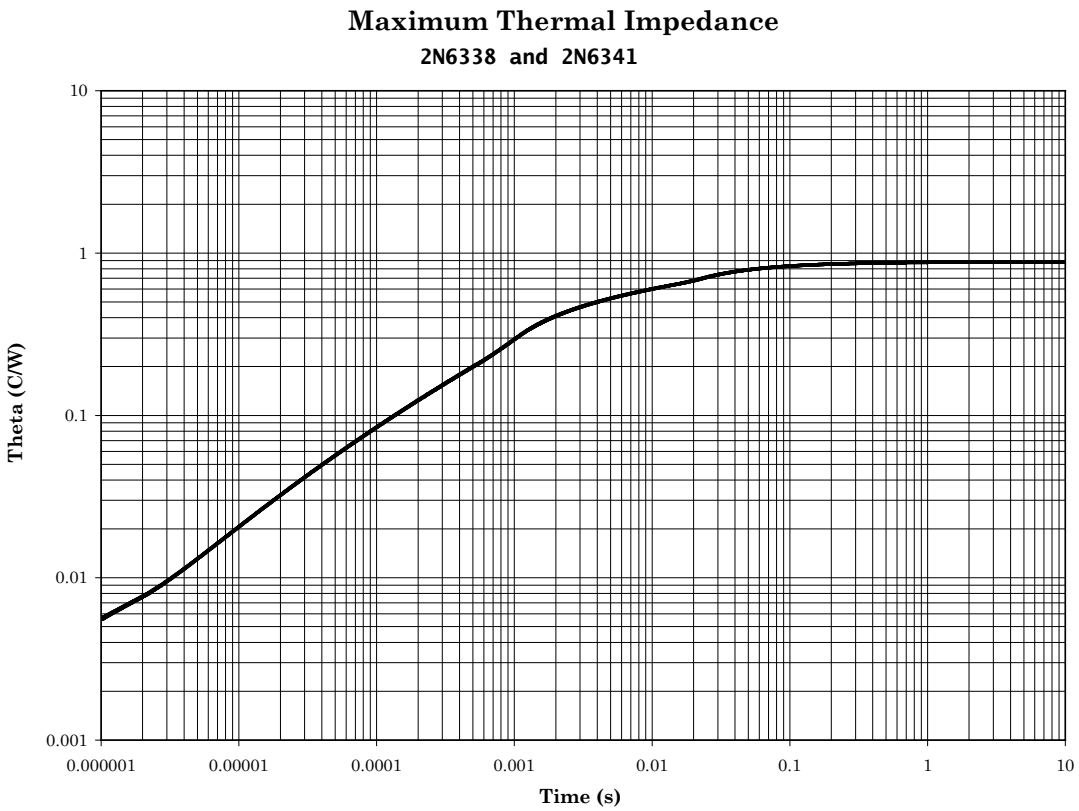


FIGURE 3. Safe operating area for switching between saturation and cutoff - unclamped inductive load.



T_c = 25°C. Thermal resistance = 0.875°C/W.

FIGURE 4. Thermal impedance graph ($R_{\theta JC}$) for 2N6338 and 2N6341 (similar to TO-204AA).

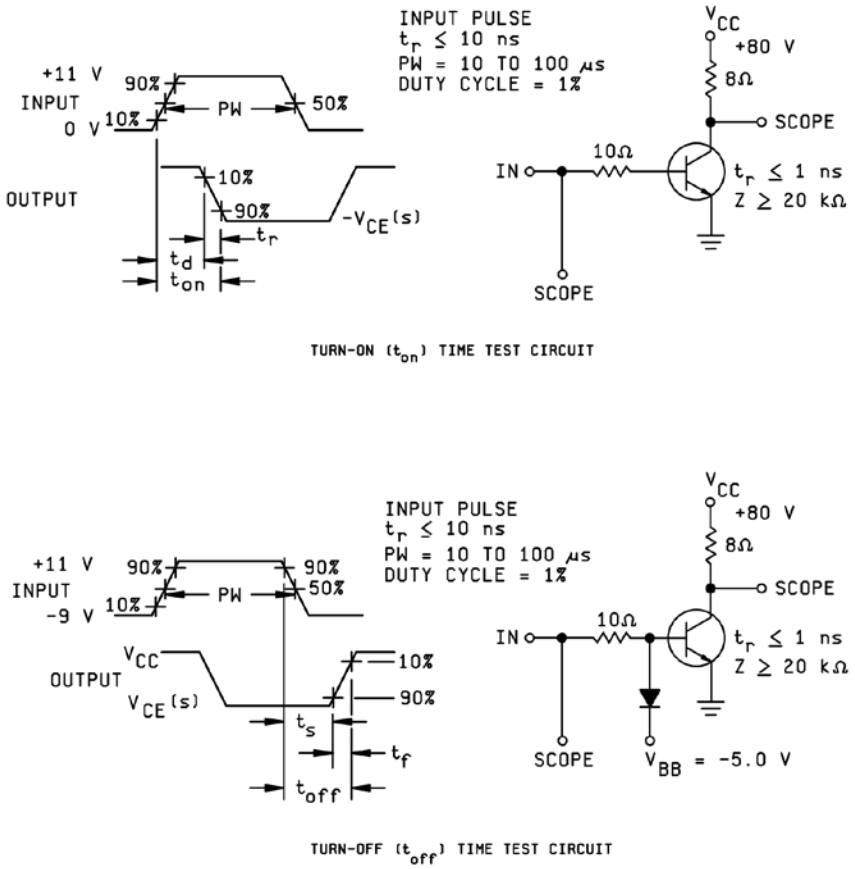
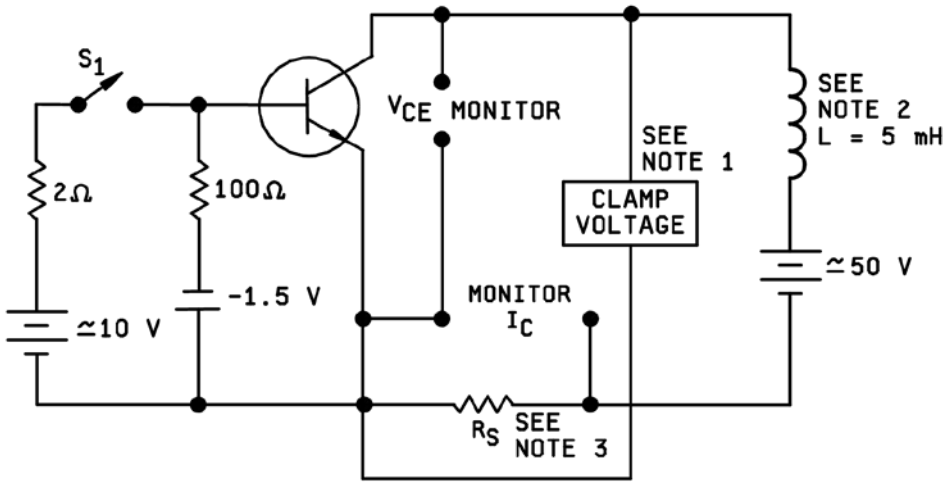


FIGURE 5. Switching time test circuits.



Procedure:

1. With switch S_1 closed, set the specified test conditions.
2. Open S_1. Device fails if clamp voltage not reached and maintained until the current returns to zero.
3. Perform specified end-point tests.

NOTES:

1. Either a clamping circuit or clamping diode may be used.
2. The coil used shall provide a minimum inductance of 5 mH at 25 A with a maximum dc resistance of .1Ω. For reference only: 4 Triad C-48U; (20 mH windings in parallel) or equivalent.
3. $R_S \leq .1\Omega$, 12 W, 1 percent tolerance maximum (noninductive).

FIGURE 6. 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.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.

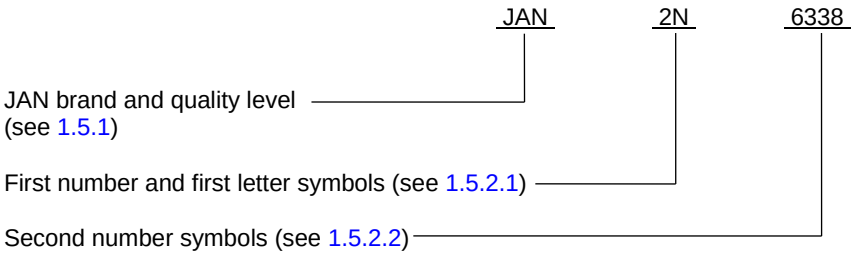
b. Packaging requirements (see 5.1).

c. Lead finish (see 3.4.1).

d. The complete Part or Identifying Number (PIN), see 1.5 and 6.4.

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 https://assist.dla.mil .

6.4 PIN construction example. The PINs for encapsulated devices are construction using the following form.



6.5 Design and application guidance. The following PNP type transistors are complementary to the NPN devices listed herein.

Transistor (NPN)	Complementary (PNP) transistor types
2N6338	2N6437
2N6341	2N6438

6.6 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	PINs for devices of the "S" quality level
JAN2N6338	JANTX2N6338	JANTXV2N6338	JANS2N6338
JAN2N6341	JANTX2N6341	JANTXV2N6341	JANS2N6341

6.7 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
Air Force - 85
NASA - NA
DLA - CC

Review activities:
Air Force - 19, 99

Preparing activity:
DLA - CC

(Project 5961-2014-130)

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/.