

The documentation and process conversion measures necessary to comply with this amendment shall be completed by 21 March 2002.

INCH-POUND

MIL-PRF-19500/441F
AMENDMENT 1
21 December 2001

PERFORMANCE SPECIFICATION

SEMICONDUCTOR DEVICE, TRANSISTOR, PNP, SILICON, POWER TYPES 2N3740 AND 2N3741, JAN, JANTX, JANTXV, JANS, JANHC, AND JANKC

This amendment forms a part of MIL-PRF-19500/441F, dated 6 June 2001, and is approved for use by all Departments and Agencies of the Department of Defense.

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3.5, delete "At the option of the manufacturer, marking may be omitted from the body, but shall be retained on the initial container."

4.2, after MIL-PRF-19500, add "and table II herein."

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4.4.3, delete "Electrical measurements (end-points) and delta requirements shall be in accordance with group A, subgroup 2 and 4.5.4 herein." and substitute "Electrical measurements (end-points) shall be in accordance with group A, subgroup 2. Delta requirements shall be in accordance with 4.5.4 herein."

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4.4.4, after "MIL-PRF-19500 and", add "table II".

4.4.4, delete "and 4.5.3 herein."

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4.5.4, notes below table, delete and substitute:

- " (1) The delta measurements for table VIa (JANS) of MIL-PRF-19500 are as follows:
 - a. Subgroup 4, see 4.5.4, steps 3, 4.
 - b. Subgroup 5, see 4.5.4, steps 1, 2, 3, 4.
- (2) The delta measurements for table VIb (JANTX and JANTXV) of MIL-PRF-19500 are as follows: Subgroup 3, see 4.5.4, step 4.
- (3) The delta measurements for table VII of MIL-PRF-19500 are as follows: Subgroup 6, see 4.5.4, steps 1, 2, and 4 (JANS only).
- (4) SOA testing may be performed in lieu of thermal response testing herein provided that appropriate conditions of temperature, time, current, and voltage to achieve die attach integrity are submitted to the qualifying activity."

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TABLE I, subgroup 5, end-point electrical measurements, conditions column, delete "See table II, steps 1 and 3" and substitute "See table I, group A, subgroup 2 herein".

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TABLE I, subgroup 5, end-point electrical measurements, conditions column, delete "See table II, steps 1 and 3" and substitute "See table I, group A, subgroup 2 herein".

After table I, add:

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

Inspection	MIL-STD-750		Qualification inspection
	Method	Conditions	
<u>Subgroup 1</u>			22 devices c = 0
Temperature cycling (air to air)	1051	Test condition C, 500 cycles	
Hermetic seal Fine leak Gross leak	1071		
Electrical measurements		See group A, subgroup 2.	
<u>Subgroup 2</u>			22 devices, c = 0
Intermittent life	1037	Intermittent operation life: $V_{CB} = 10$ V dc, 6,000 cycles	
Electrical measurements		See group A, subgroup 2.	
<u>Subgroup 3</u>			
Not applicable			
<u>Subgroup 4</u>			22 devices, c = 0
Thermal resistance	3131	$R_{\theta JC} = 7^{\circ}\text{C/W}$ maximum, see 4.5.2	

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5961-2524)

Review activities:
Army - AR, AV, MI, SM
Navy - AS, MC
Air Force - 19, 71, 99