The documentation and process conversion measures necessary to comply with this revision shall be completed by 29 July 2019.

INCH-POUND

MIL-PRF-19500/391R
28 March 2019
SUPERSEDING
MIL-PRF-19500/391P
w/AMENDMENT 1
14 October 2016

PERFORMANCE SPECIFICATION SHEET

TRANSISTOR, NPN, SILICON, LOW-POWER, DEVICE TYPES 2N3019, 2N3057A, AND 2N3700, ENCAPSULATED (THROUGH-HOLE AND SURFACE MOUNT) AND UNENCAPSULATED, RADIATION HARDNESS ASSURANCE, QUALITY LEVELS JAN, JANTX, JANTXV, JANS, JANHC, AND JANKC

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, low-power transistors. Four levels of product assurance (JAN, JANTX, JANTXV and JANS) are provided for each device type as specified in MIL-PRF-19500. Two levels of product assurance (JANHC and JANKC) are provided for each unencapsulated device type. Provisions for radiation hardness assurance (RHA) to eight radiation levels is provided for quality levels JANTXV, JANS, JANHC, and JANKC.

1.2 Physical dimensions.

1.2.1 Package outlines. The device packages for the encapsulated device types are as follows: TO-205AA and TO-205AD (formerly TO-5 and TO-39) in accordance with figure 1, TO-206AB (formerlyTO-46) in accordance with figure 2, three terminal round metal can TO-206AA (formerly TO-18) in accordance with figure 3, and four terminal SMD package UB in accordance with figure 4.

1.2.2 Unencapsulated die. The dimensions and topography for JANHC and JANKC unencapsulated die are as follows: The A version die (JANHCA and JANKCA) is in accordance with figure 5, the B version die (JANHCB and JANKCB) is in accordance with figure 6, and the C version die (JANHCC and JANKCC) is in accordance with figure 7.

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

Types	I_C	V_{CBO}	V_{EBO}	V_{CEO}	T_J and T_{STG}
	A dc	V dc	V dc	V dc	°C
All devices	1	140	7	80	-65 to +200

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.

AMSC N/A

FSC 5961