

The documentation and process conversion measures necessary to comply with this revision shall be completed by 22 January 2003.

INCH-POUND

MIL-PRF-19500/385D
 AMENDMENT 2
 22 October 2002
 SUPERSEDING
 AMENDMENT 1
 28 November 2001

PERFORMANCE SPECIFICATION

SEMICONDUCTOR DEVICE, FIELD EFFECT TRANSISTORS, N-CHANNEL, SILICON
 TYPES 2N4856 THROUGH 2N4861, JAN, JANTX, JANTXV, JANS, AND UB

This amendment forms a part of MIL-PRF-19500/385D, dated 12 April 2001, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

TITLE; delete and substitute: "SEMICONDUCTOR DEVICE, FIELD EFFECT TRANSISTORS, N-CHANNEL, SILICON TYPES 2N4856 THROUGH 2N4861, 2N4856UB THROUGH 2N4861UB, JAN, JANTX, JANTXV AND JANS".

1.1, second sentence, delete: "Five" and substitute "Four".

1.2, delete and substitute: "1.2 Physical dimensions. See figure 1 (TO-18) and figure 2 (UB surface mount)."

1.3, table, delete and substitute:

P _T (1) T _A = +25°C	P _T (2) T _C = +25°C	V _{DS} , V _{DG}		V _{GS}		I _G	R _{θJA}	T _J and T _{STG}
		2N4856 2N4857 2N4858	2N4859 2N4860 2N4861	2N4856 2N4857 2N4858	2N4859 2N4860 2N4861			
<u>W</u>	<u>W</u>	<u>V_{dc}</u>	<u>V_{dc}</u>	<u>V_{dc}</u>	<u>V_{dc}</u>	<u>mA dc</u>	<u>°C/W</u>	<u>°C</u>
0.36	1.8	40	30	40	30	50	325	-65 to +200
0.40 All UB (3)							325	

- (1) Derate linearly 2.06 mW/°C for T_A > +25°C.
- (2) Derate linearly 10.3 mW/°C for T_C > +25°C.
- (3) Derate linearly 3.08 mW/°C above T_C = +70°C."

PAGE 2

1.4, after primary electrical characteristics, add "(1)".

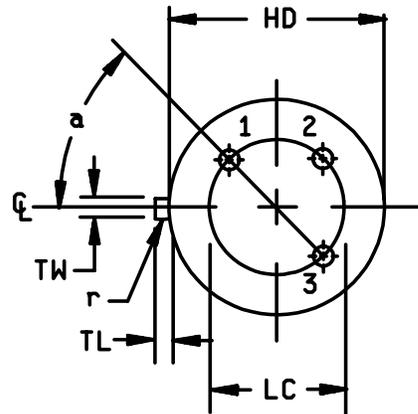
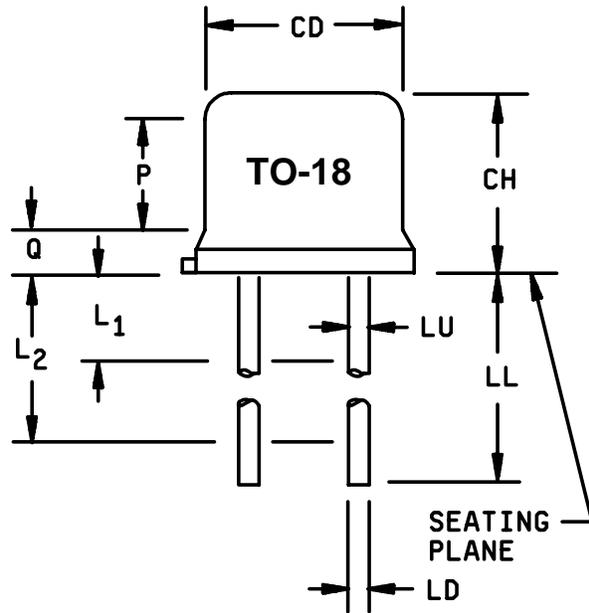
1.4, I_{DSS} column, delete "(1)" and substitute: "(2)".

1.4, note (1), delete and substitute: "(1) These characteristics applicable to all package styles."

1.4, add new note (2): "(2) Pulsed (see 4.5.1)".

* FIGURE 1. delete and substitute:

Symbol	Dimensions				Note
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	.178	.195	4.52	4.95	5
CH	.170	.210	4.32	5.33	
HD	.209	.230	5.31	5.84	4, 5
LC	.100 TP		2.54 TP		6
LD	.016	.021	0.41	0.53	7,8
LL	.500	.750	12.70	19.05	7,8
LU	.016	.019	0.41	0.48	7,8
L1		.050		1.27	7,8
L2	.250		6.35		7,8
Q		.030		0.76	5
TL	.028	.048	0.71	1.22	3,4
TW	.036	.046	0.91	1.17	
r		.010		0.25	3, 10
α	45° TP		45° TP		6
P	.100		2.54		



NOTES:

1. Dimension are in inches.
2. Metric equivalents are given for general information only.
3. Beyond r (radius) maximum, TL shall be held for a minimum length of .011 (0.28 mm).
4. Dimension TL measured from maximum HD.
5. Body contour optional within zone defined by HD, CD, and Q.
6. Leads at gauge plane .054 +.001 -.000 inch (1.37 +0.03 -0.00 mm) below seating plane shall be within .007 inch (0.18 mm) radius of true position (TP) at maximum material condition (MMC) relative to tab at MMC. The device may be measured by direct methods or by the gauge and gauging procedure shown in figure 2.
7. Dimension LU applies between L₁ and L₂. Dimension LD applies between L₂ and LL minimum. Diameter is uncontrolled in L₁ and beyond LL minimum.
8. All three leads.
9. The collector shall be internally connected to the case.
10. Dimension r (radius) applies to both inside corners of tab.
11. In accordance with ANSI Y14.5M, diameters are equivalent to ϕ x symbology.
12. Lead 1 = source, lead 2 = drain, lead 3 = gate.

FIGURE 1. Physical dimensions TO-206AA (formerly TO-18)."

MIL-PRF-19500/385D
AMENDMENT 2

PAGE 4

FIGURE 2, delete: "1 = base, 2 = emitter, 3 = collector" and substitute: "1 = drain, 2 = source, 3 = gate".

PAGE 5

3.5.1, Delete "MOS".

3.5.1.e, Delete "MOS".

* 3.8, delete and substitute "3.8 Marking Marking shall be in accordance with MIL-PRF-19500, except for the UB suffix package. Marking on the UB package shall consist of an abbreviated part number, the date code, and the manufacturers symbol or logo. The prefixes JAN, JANTX, JANTXV, and JANS can be abbreviated as J, JX, JV, and JS respectively."

The margins of this amendment are marked with an asterisk to indicate where changes from the previous amendment 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 amendment.

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

Preparing activity:
DLA - CC

(Project 5961-2668)

Review activities:
Army - MI
Air Force - 71, 99