

## NPN SILICON LOW POWER TRANSISTOR

Qualified per MIL-PRF-19500/313

### DEVICES

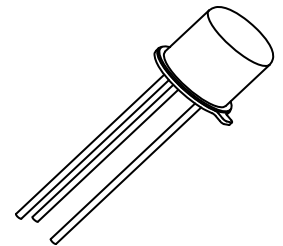
**2N2432**                      **2N2432UB**  
**2N2432A**                    **2N2432AUB**

### LEVELS

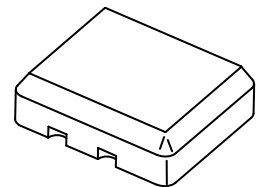
**JAN**  
**JANTX**  
**JANTXV**

### ABSOLUTE MAXIMUM RATINGS ( $T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	2N2432 2N2432UB	2N2432A 2N2432AUB	Unit
Collector-Emitter Voltage	$V_{CEO}$	30	45	Vdc
Collector -Base Voltage	$V_{CBO}$	30	45	Vdc
Emitter-Collector Voltage	$V_{ECO}$	15	18	Vdc
Collector Current	$I_C$	100		mAdc
Total Power Dissipation @ $T_A = +83^\circ\text{C}$ 2N2432 - 2N2432A	$P_T$	360		mW
$T_C = +150^\circ\text{C}$ 2N2432 - 2N2432A		360		mW
$T_{SP} = +165^\circ\text{C}$ 2N2432UB - 2N2432AUB		360		mW
Operating & Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +200		$^\circ\text{C}$
Thermal Resistance, Junction-to-Case 2N2432 - 2N2432A	$R_{\theta JC}$	150		$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Solder Pads 2N2432UB - 2N2432AUB	$R_{\theta JSP}$	95		$^\circ\text{C/W}$



TO-18 (TO-206AA)



UB Package

### NOTES:

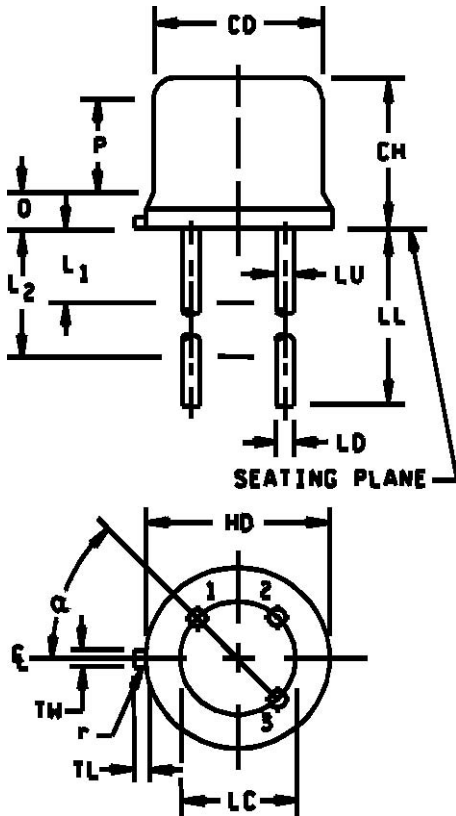
- Derate linearly 2.0 mW/ $^\circ\text{C}$  above  $T_A = +25^\circ\text{C}$ .
- Derate linearly 3.08 mW/ $^\circ\text{C}$  above  $T_C = +83^\circ\text{C}$ .

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^\circ\text{C}$ , unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
<b>OFF CHARACTERISTICS</b>				
Emitter-Collector Breakdown Voltage $I_E = 100\mu\text{Adc}, I_B = 0$ 2N2432 - 2N2432UB 2N2432A - 2N2432AUB	$V_{(BR)ECO}$	15		Vdc
$I_E = 10\text{mAdc}, I_B = 0$ Both		18		
Collector-Emitter Breakdown Voltage $I_C = 10\text{mAdc}$ 2N2432 - 2N2432UB 2N2432A - 2N2432AUB	$V_{(BR)CEO}$	30	45	Vdc
Collector-Emitter Cutoff Current $V_{CB} = 25\text{Vdc}$ 2N2432 - 2N2432UB $V_{CB} = 40\text{Vdc}$ 2N2432A - 2N2432AUB	$I_{CES}$		10	$\eta\text{Adc}$



## PACKAGE DIMENSIONS

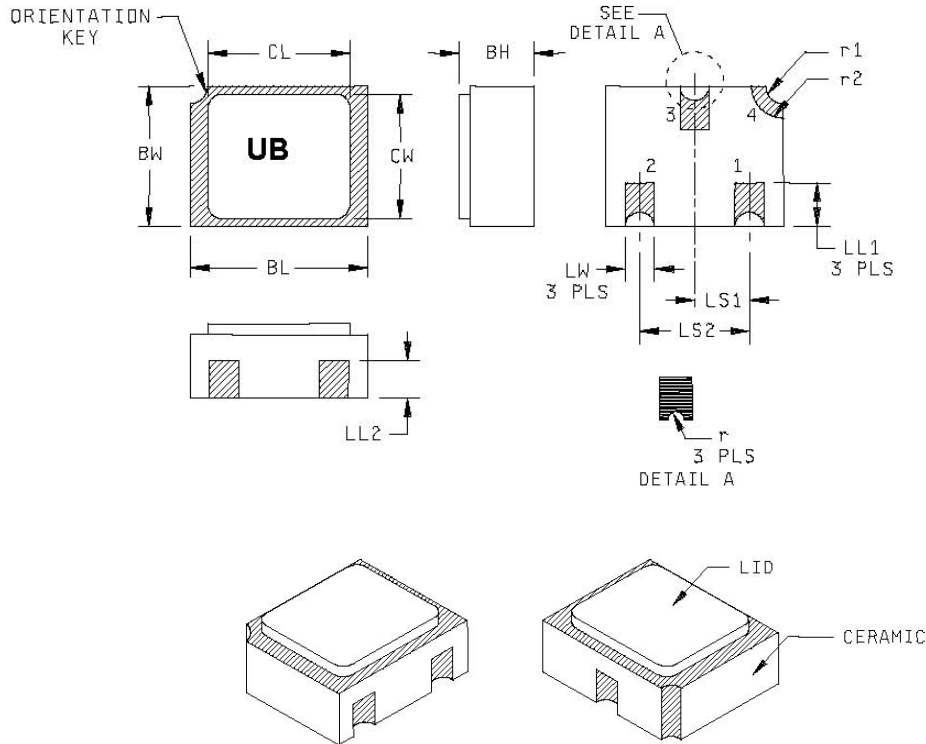


Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	.178	.195	4.52	4.95	
CH	.170	.210	4.32	5.33	
HD	.209	.230	5.31	5.84	
LC	.100 TP		2.54 TP		6
LD	.016	.021	0.41	0.53	7,8
LL	.500	.750	12.70	19.05	7,8,13
LU	.016	.019	0.41	0.48	7,8
L <sub>1</sub>		.050		1.27	7,8
L <sub>2</sub>	.250		6.35		7,8
P	.100		2.54		
Q		.030		0.76	5
TL	.028	.048	0.71	1.22	3,4
TW	.036	.046	0.91	1.17	3
R		.010		0.25	10
α	45° TP		45° TP		6

**NOTES:**

1. Dimension are in inches.
2. Millimeters are given for general information only.
3. Beyond r (radius) maximum, TW 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 -.000 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.
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 ASME Y14.5M, diameters are equivalent to φx symbology.
12. Lead 1 = emitter, lead 2 = base, lead 3 = collector.

**FIGURE 1.** Physical dimensions (similar to TO-18).



Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BH	.046	.056	1.17	1.42	
BL	.115	.128	2.92	3.25	
BW	.085	.108	2.16	2.74	
CL	.115	.128	2.92	3.25	
CW	.085	.108	2.16	2.74	
LL <sub>1</sub>	.022	.038	0.56	0.96	
LL <sub>2</sub>	.017	.035	0.43	0.89	

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
LS <sub>1</sub>	.035	.039	0.89	0.99	
LS <sub>2</sub>	.071	.079	1.80	2.01	
LW	.016	.024	0.41	0.61	
r		.008		.20	
r <sub>1</sub>		.012		.31	
r <sub>2</sub>		.022		.56	

**NOTES:**

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Hatched areas on package denote metallized areas.
4. Pad 1 = Base, Pad 2 = Emitter, Pad 3 = Collector, Pad 4 = Shielding connected to the lid.
5. In accordance with ASME Y14.5M, diameters are equivalent to  $\phi x$  symbology.

**FIGURE 2.** Physical dimensions - surface mount (AUB and UB version).