

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Ratings		Symbol	2N2432	2N2432A	Unit
Collector-Emitter Voltage		V_{CE0}	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	@ $T_A = +25^\circ\text{C}^{(1)}$	P_T	300		mW
	@ $T_C = +25^\circ\text{C}^{(2)}$		600		
Storage Junction Temperature Range		T_{stg}	-65 to +200		$^\circ\text{C}$
Operating Junction Temperature Range		T_J	-65 to +175		$^\circ\text{C}$
THERMAL CHARACTERISTICS					
Characteristics		Symbol	Max.		Unit
Thermal Resistance, Junction-to-Case		$R_{\theta JC}$	0.25		mW/ $^\circ\text{C}$

Note 1: Derate linearly 2.0mW/ $^\circ\text{C}$ above $T_A > 25^\circ\text{C}$.

Note 2: Derate linearly 4.0mW/ $^\circ\text{C}$ above $T_C > 25^\circ\text{C}$.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristics		Symbol	Min.	Max.	Unit	
OFF CHARACTERISTICS						
Emitter-Collector Breakdown Voltage $I_E = 100 \mu\text{Adc}, I_B = 0$	2N2432	$V_{(BR)ECO}$	15	-	Vdc	
	2N2432A		18	-		
	Both		10	-		
Collector-Emitter Breakdown Voltage $I_C = 10 \text{ mAdc}$	2N2432	$V_{(BR)CEO}$	30	-	Vdc	
	2N2432A		45	-		
Collector-Emitter Cutoff Current $V_{CE} = 25 \text{ Vdc}$	2N2432	I_{CES}	-	10	nAdc	
	2N2432A		-	10		
Collector-Base Cutoff Current $V_{CB} = 30 \text{ Vdc}$	2N2432	I_{CBO}	-	100	μAdc	
	2N2432		-	10		nAdc
	2N2432A		-	100		
	2N2432A		-	10		nAdc
Emitter-Collector Cutoff Current $V_{EC} = 15 \text{ Vdc}, V_{BC} = 0 \text{ Vdc}$		I_{ECS}	-	2.0	nAdc	
Emitter-Base Cutoff Current $V_{EB} = 15 \text{ Vdc}$		I_{EBO}	-	2.0	nAdc	
ON-CHARACTERISTICS ⁽³⁾						
Forward-Current Transfer Ratio $I_C = 10 \mu\text{Adc}, V_{CE} = 5.0 \text{ Vdc}$		h_{FE}	30	-	-	
			$I_C = 1.0 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$	80		400
Forward-Current Transfer Ratio (Inverted Connection) $I_C = 0.2 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$	2N2432	$h_{FE(inv)}$	2.0	-	-	
	2N2432A		3.0	-		

2N2432(A)

SILICON NPN LOW POWER TRANSISTORS

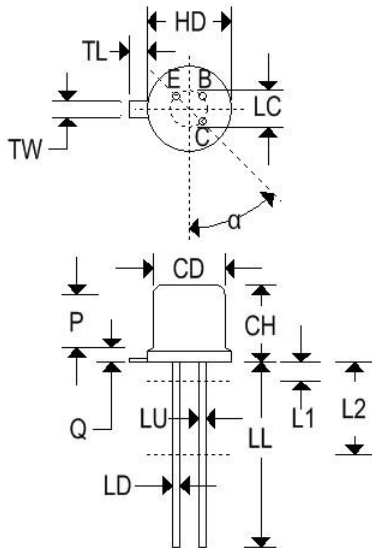
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristics		Symbol	Min.	Max.	Unit
Collector-Emitter Saturation Voltage $I_C = 10 \text{ mA}$, $I_B = 0.5 \text{ mA}$		$V_{CE(sat)}$	-	0.15	Vdc
Emitter-Collector Offset Voltage $I_E = 0 \text{ mA}$, $I_B = 200 \mu\text{A}$ $I_E = 0 \text{ mA}$, $I_B = 1.0 \text{ mA}$	2N2432	$V_{EC(ofs)}$	-	0.5	mVdc
	2N2432A		-	0.4	
	2N2432		-	1.0	
	2N2432A		-	0.7	
DYNAMIC CHARACTERISTICS					
Forward-Current Transfer Ratio $I_C = 1.0 \text{ mA}$, $V_{CE} = 5.0 \text{ V}$, $f = 20 \text{ MHz}$		$ h_{fe} $	2.0	10	
Output Capacitance $V_{CB} = 0 \text{ V}$, $I_E = 0$, $100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$		C_{obo}	-	12	pF
Input Capacitance $V_{EB} = 0 \text{ V}$, $I_C = 0$, $100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$		C_{ibo}	-	12	pF

Note 1: Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

MECHANICAL CHARACTERISTICS

Case	TO-18
Marking	Alpha-numeric
Polarity	See below



Dim	TO-18			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	0.178	0.195	4.520	4.950
CH	0.170	0.210	4.320	5.330
HD	0.209	0.230	5.310	5.840
LC	0.100 TP		2.540 TP	
LD	0.016	0.021	0.410	0.530
LL	0.500	0.750	12.700	19.050
LU	0.016	0.019	0.410	0.480
L1	-	0.050	-	1.270
L2	0.250	-	6.350	-
P	0.100	-	2.540	-
Q	-	0.040	-	1.020
TL	0.028	0.048	0.710	1.220
TW	0.036	0.046	0.910	1.170
r	-	0.010	-	0.025
α	45°TP		45°TP	