

**2N834A**  
**SILICON**  
**NPN TRANSISTOR**



**TO-18 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N834A is a silicon NPN transistor designed for high speed switching applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Collector-Base Voltage	
Collector-Emitter Voltage	
Emitter-Base Voltage	
Continuous Collector Current	
Power Dissipation	
Operating and Storage Junction Temperature	

SYMBOL		UNITS
$V_{CBO}$	40	V
$V_{CES}$	30	V
$V_{EBO}$	5.0	V
$I_C$	200	mA
$P_D$	300	mW
$T_J, T_{stg}$	-65 to +200	$^\circ\text{C}$

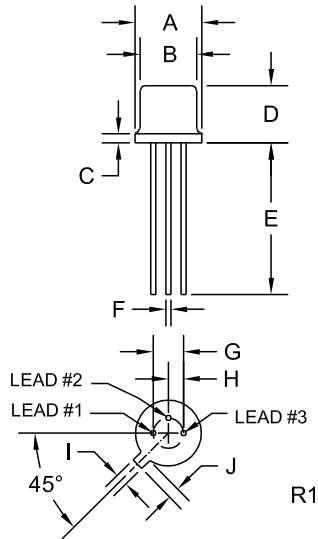
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=20\text{V}$		500	nA
$I_{CBO}$	$V_{CB}=20\text{V}, T_A=150^\circ\text{C}$		30	$\mu\text{A}$
$I_{CES}$	$V_{CE}=30\text{V}$		10	$\mu\text{A}$
$BV_{CBO}$	$I_C=10\mu\text{A}$	40		V
$BV_{CES}$	$I_C=1.0\text{mA}$	30		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.25	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.40	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.90	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	25		
$f_T$	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	500		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		4.0	pF
$t_{on}$	$I_C=10\text{mA}, I_{B1}=3.0\text{mA}, I_{B2}=1.0\text{mA}$		33	ns
$t_{off}$	$I_C=10\text{mA}, I_{B1}=3.0\text{mA}, I_{B2}=1.0\text{mA}$		75	ns

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TO-18 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

**LEAD CODE:**

- 1) Emitter
- 2) Base
- 3) Collector

**MARKING:**

FULL PART NUMBER

R0 (15-January 2014)