

PN5134

NPN SILICON TRANSISTOR



TO-92 CASE

**Central**  
Semiconductor Corp.

[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR PN5134 is a small signal NPN silicon transistor designed for general purpose amplifier 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  
Thermal Resistance

SYMBOL		UNITS
$V_{CB0}$	20	V
$V_{CEO}$	10	V
$V_{EBO}$	3.5	V
$I_C$	500	mA
$P_D$	625	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JA}$	200	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CES}$	$V_{CB}=15\text{V}$		0.4	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=15\text{V}, T_A=65^\circ\text{C}$		10	$\mu\text{A}$
$BV_{CES}$	$I_C=10\mu\text{A}$	20		V
$BV_{CBO}$	$I_C=10\mu\text{A}$	20		V
$BV_{CEO}$	$I_C=10\text{mA}$	10		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	3.5		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.25	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=3.3\text{mA}$		0.20	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.70	0.9	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=3.3\text{mA}$	0.72	1.1	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	20	150	
$h_{FE}$	$V_{CE}=0.4\text{V}, I_C=30\text{mA}$	15		
$C_{ob}$	$V_{CB}=5.0\text{V}, I_E=0, f=1.0\text{MHz}$		4.0	pF
$h_{fe}$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	2.5		

R0 (6-April 2011)

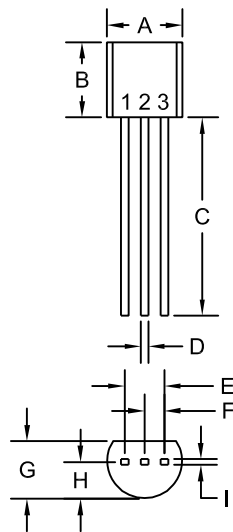
**PN5134**  
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$t_{on}$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=3.3\text{mA}$		18	ns
$t_d$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=3.3\text{mA}$		14	ns
$t_r$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=3.3\text{mA}$		12	ns
$t_{off}$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=I_{B2}=3.3\text{mA}$		18	ns
$t_s$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=I_{B2}=3.3\text{mA}$		13	ns
$t_f$	$V_{CC}=3.0\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=I_{B2}=3.3\text{mA}$		13	ns

**TO-92 CASE - MECHANICAL OUTLINE**



R1

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

**LEAD CODE:**

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

**MARKING:**  
**FULL PART NUMBER**

R0 (6-April 2011)