

PN5134

NPN SILICON TRANSISTOR



TO-92 CASE

Central
Semiconductor Corp.

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

	SYMBOL		UNITS
Collector-Base Voltage	V_{CB0}	20	V
Collector-Emitter Voltage	V_{CEO}	10	V
Emitter-Base Voltage	V_{EBO}	3.5	V
Continuous Collector Current	I_C	500	mA
Power Dissipation	P_D	625	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{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	μA
I_{CBO}	$V_{CB}=15\text{V}, T_A=65^\circ\text{C}$		10	μA
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)

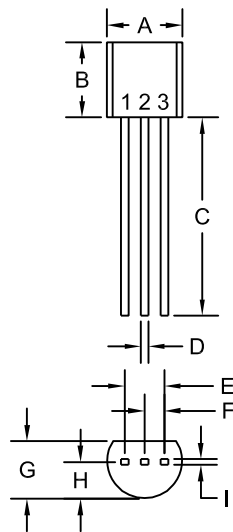
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

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)