

2N3114

NPN SILICON TRANSISTOR



TO-39 CASE

**Central**  
Semiconductor Corp.

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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N3114 is a NPN Silicon Transistor, mounted in a hermetically sealed package, designed for general purpose amplifier applications.

**MARKING: FULL PART NUMBER**

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CB0}$	150	V
Collector-Emitter Voltage	$V_{CEO}$	150	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	200	mA
Power Dissipation	$P_D$	0.8	W
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$	5.0	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +200	$^\circ\text{C}$

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

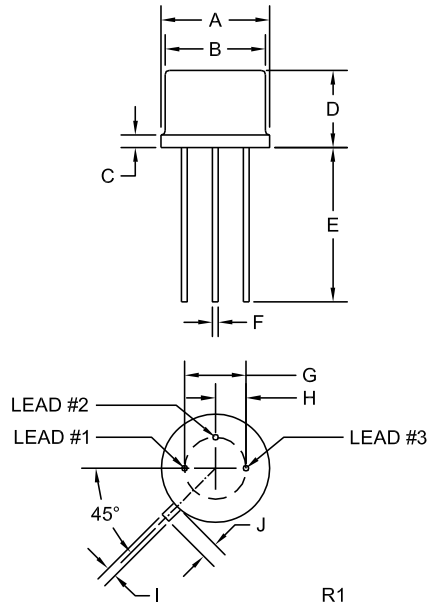
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=100\text{V}$		10	nA
$I_{CBO}$	$V_{CB}=100\text{V}, T_A=150^\circ\text{C}$		10	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	150		V
$BV_{CEO}$	$I_C=30\text{mA}$	150		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.9	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	15		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=30\text{mA}$	30	120	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=30\text{mA}, T_A=-55^\circ\text{C}$	12		
$f_T$	$V_{CE}=10\text{V}, I_C=30\text{mA}, f=20\text{MHz}$	40		MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=140\text{kHz}$		9.0	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=140\text{kHz}$		80	pF

R0 (4-November 2010)

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**TO-39 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING: FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

R0 (4-November 2010)