

PN4209

PNP SILICON TRANSISTOR



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR PN4209 is a PNP Silicon 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
Thermal Resistance

SYMBOL

V_{CBO} 15
 V_{CEO} 15
 V_{EBO} 4.5
 I_C 200
 P_D 625
 T_J, T_{stg} -65 to +150
 θ_{JA} 200

UNITS

V
V
V
mA
mW
 $^\circ\text{C}$
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CES}	$V_{CE}=8.0\text{V}$		10	nA
I_{CES}	$V_{CE}=8.0\text{V}, T_A=125^\circ\text{C}$		5.0	μA
BV_{CBO}	$I_C=100\mu\text{A}$	15		V
BV_{CES}	$I_C=100\mu\text{A}$	15		V
BV_{CEO}	$I_C=3.0\text{mA}$	15		V
BV_{EBO}	$I_E=100\mu\text{A}$	4.5		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=100\mu\text{A}$		0.15	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.18	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.60	V
$V_{BE(SAT)}$	$I_C=1.0\text{mA}, I_B=100\mu\text{A}$		0.80	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	0.69	0.86	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.5	V
h_{FE}	$V_{CE}=0.5\text{V}, I_C=1.0\text{mA}$	35		
h_{FE}	$V_{CE}=0.3\text{V}, I_C=10\text{mA}$	50	120	
h_{FE}	$V_{CE}=0.3\text{V}, I_C=10\text{mA}, T_A=-55^\circ\text{C}$	20		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	40		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	850		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0$		7.0	pF
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0$		7.0	pF

R0 (1-December 2011)

PN4209

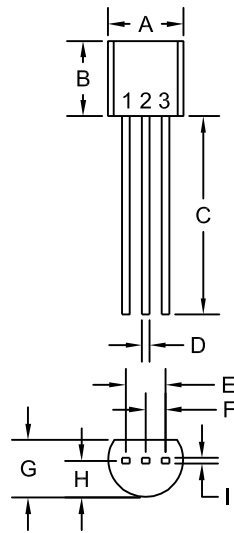
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
t_{on}	$V_{CC}=1.5\text{V}$, $I_C=10\text{mA}$, $I_{B1}=1.0\text{mA}$		20	ns
t_{off}	$V_{CC}=1.5\text{V}$, $I_C=10\text{mA}$, $I_{B1}=I_{B2}=1.0\text{mA}$		20	ns

TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
SYMBOL	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 (1-December 2011)