

PN2484

NPN SILICON TRANSISTOR



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR PN2484 type is an NPN silicon transistor designed for low noise 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}	60	V
V_{CE0}	60	V
V_{EB0}	6.0	V
I_C	50	mA
P_D	625	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
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_{CBO}	$V_{CB}=45\text{V}$		10	nA
I_{CBO}	$V_{CB}=45\text{V}, T_A=150^\circ\text{C}$		10	μA
I_{CEO}	$V_{CE}=5.0\text{V}$		2.0	nA
I_{EBO}	$V_{EB}=5.0\text{V}$		10	nA
BV_{CBO}	$I_C=10\mu\text{A}$	60		V
BV_{CEO}	$I_C=10\text{mA}$	60		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=100\mu\text{A}$		0.35	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	0.5	0.7	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\mu\text{A}$	30		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	100	500	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}, T_A=-55^\circ\text{C}$	20		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	175		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\mu\text{A}$	200		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	250		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$		800	
h_{fe}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	150	900	
f_T	$V_{CE}=5.0\text{V}, I_C=50\mu\text{A}, f=5.0\text{MHz}$	15		MHz
f_T	$V_{CE}=5.0\text{V}, I_C=0.5\text{mA}, f=30\text{MHz}$	60		MHz
h_{ie}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	3.5	24	k Ω
h_{oe}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$		40	μS
h_{re}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$		800	$\times 10^{-6}$
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$		6.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=140\text{kHz}$		6.0	pF

R0 (30-May 2012)

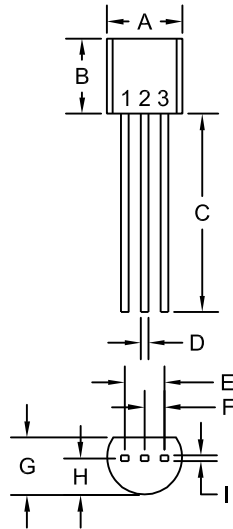
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MAX	UNITS
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$ $BW=15.7\text{kHz}$, 3.0dB PTS @ 10Hz, 10kHz	3.0	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=100\text{Hz}$, $BW=20\text{Hz}$	10	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=1.0\text{kHz}$, $BW=200\text{Hz}$	3.0	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=10\text{kHz}$, $BW=2.0\text{kHz}$	2.0	dB

TO-92 CASE - MECHANICAL OUTLINE



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

R1

R0 (30-May 2012)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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