

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3250
2N3250A
2N3251
2N3251A

PNP SILICON TRANSISTOR

JEDEC T0-18 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3250,A and 2N3251,A are silicon PNP transistors designed for small signal, general purpose, and switching applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	2N3250	2N3250A	UNITS
		2N3251	2N3251A	
Collector-Base Voltage	V _{CB0}	50	60	V
Collector-Emitter Voltage	V _{CEO}	40	60	V
Emitter-Base Voltage	V _{EBO}	5.0	5.0	V
Collector Current	I _C		200	mA
Power Dissipation	P _D		0.36	W
Power Dissipation (T _C =25°C)	P _D		1.2	W
Operating and Storage Junction Temperature	T _J , T _{STG}		-65 to +200	°C
Thermal Resistance, Junction to Case	θ _{JC}		145	W/°C
Thermal Resistance, Junction to Ambient	θ _{JA}		486	W/°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

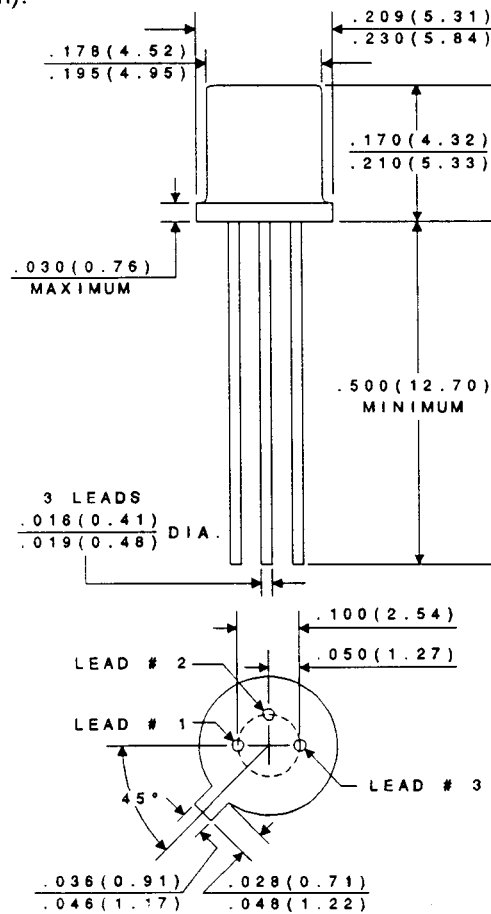
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CEV}	V _{CE} =40V, V _{EB(off)} =3.0V		20	nA
BV _{CB0}	I _C =10μA (2N3250, 2N3251)	50		V
	(2N3250A, 2N3251A)	60		V
BV _{CEO}	I _C =10mA (2N3250, 2N3251)	40		V
	(2N3250A, 2N3251A)	60		V
BV _{EBO}	I _E =10μA	5.0		V
V _{CE(s)}	I _C =10mA, I _B =1.0mA		0.25	V
V _{CE(s)}	I _C =50mA, I _B =5.0mA		0.5	V
V _{BE(s)}	I _C =10mA, I _B =1.0mA	0.6	0.9	V
V _{BE(s)}	I _C =50mA, I _B =5.0mA		1.2	V
h _{FE}	V _{CE} =1.0V, I _C =0.1mA (2N3250, 2N3250A)	40		
	(2N3251, 2N3251A)	80		
h _{FE}	V _{CE} =1.0V, I _C =1.0mA (2N3250, 2N3250A)	45		
	(2N3251, 2N3251A)	90		

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=10\text{mA}$ (2N3250, 2N3250A) (2N3251, 2N3251A)	50 100	150 300	
h_{FE}	$V_{CE}=1.0\text{V}$, $I_C=50\text{mA}$ (2N3250, 2N3250A) (2N3251, 2N3251A)	15 30		
f_T	$V_{CE}=20\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$ (2N3250, 2N3250A) (2N3251, 2N3251A)	250 300		MHz MHz
C_{obo}	$V_{CB}=10\text{V}$, $f=100\text{kHz}$		6.0	pF
C_{ibo}	$V_{CB}=1.0\text{V}$, $f=100\text{kHz}$		8.0	pF
NF	$V_{CE}=5.0\text{V}$, $I_C=100\mu\text{A}$, $R_S=1.0\text{K}\Omega$, $f=100\text{Hz}$		6.0	dB
t_{ON}	$V_{CC}=3.0\text{V}$, $V_{BE}=0.5\text{V}$, $I_C=10\text{mA}$, $I_{B1}=1.0\text{mA}$		70	ns
t_{OFF}	$V_{CC}=3.0\text{V}$, $I_C=10\text{mA}$, $I_{B1}=I_{B2}=1.0\text{mA}$ (2N3250, 2N3250A) (2N3251, 2N3251A)		225 250	ns ns

TO-18 MECHANICAL OUTLINE

All Dimensions in inches (mm).



LEAD CODE

- 1) EMITTER
- 2) BASE
- 3) COLLECTOR