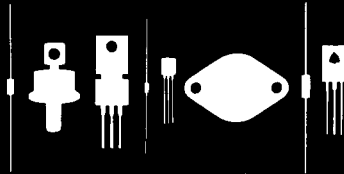


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145 Adams Avenue
Hauppauge, New York 11788



2N5832
2N5833

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5832, 2N5833 types are Silicon NPN Small Signal Transistors designed for high voltage general purpose amplifier applications.

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

	<u>SYMBOL</u>	<u>2N5832</u>	<u>2N5833</u>	<u>UNIT</u>
Collector-Base Voltage	V_{CB0}	160	200	V
Collector-Emitter Voltage	V_{CE0}	140	180	V
Emitter-Base Voltage	V_{EB0}	5.0	6.0	V
Collector Current	I_C	600	600	mA
Power Dissipation	P_D	625	625	mW
Power Dissipation ($T_C=25^{\circ}\text{C}$)	P_D	1.0	1.0	$\frac{\text{W}}{^{\circ}\text{C}}$
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 TO +150		$^{\circ}\text{C}$
Thermal Resistance	θ_{JA}	0.2		$^{\circ}\text{C}/\text{mW}$
Thermal Resistance	θ_{JC}	125		$^{\circ}\text{C}/\text{W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>2N5832</u>		<u>2N5833</u>		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
I_{CB0}	$V_{CB}=120\text{V}$		50	-		nA
I_{CB0}	$V_{CB}=160\text{V}$		-	10		nA
I_{CB0}	$V_{CB}=120\text{V}, T_A=100^{\circ}\text{C}$		25	-		μA
I_{CB0}	$V_{CB}=160\text{V}, T_A=100^{\circ}\text{C}$		-	25		μA
I_{EB0}	$V_{EB}=4.0\text{V}$		50	-		nA
I_{EB0}	$V_{EB}=5.0\text{V}$		-	50		nA
BV_{CB0}	$I_C=100\mu\text{A}$	160		200		V
BV_{CE0}	$I_C=1.0\text{mA}$	140		180		V
BV_{EB0}	$I_E=10\mu\text{A}$	5.0		6.0		V
$V_{CE}(\text{SAT})$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.15		0.15	V
$V_{CE}(\text{SAT})$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.2		0.2	V
$V_{CE}(\text{SAT})$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.25		0.25	V
$V_{BE}(\text{SAT})$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$		0.8		0.8	V
$V_{BE}(\text{SAT})$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.0		1.0	V
$V_{BE}(\text{SAT})$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.0		1.0	V
$V_{BE}(\text{ON})$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$		0.8		0.8	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	125		50		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	175	500	50	250	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	150		50		
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	125		50		
h_{ie}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$		6.0		6.0	$\text{k}\Omega$
h_{oe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$		40		40	μmho
f_T	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=100\text{MHz}$	100	500	100	500	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		4.0		4.0	pF