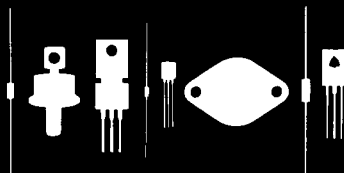


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145 Adams Avenue
Hauppauge, New York 11788



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)

| | SYMBOL | 2N5832 | 2N5833 | UNIT |
|--|----------------|-------------|--------|------------------------------|
| 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 | W |
| 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)

| SYMBOL | TEST CONDITIONS | 2N5832 | | 2N5833 | | UNIT |
|----------------------|--|--------|------|--------|------|------------------|
| | | MIN | MAX | MIN | MAX | |
| 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 |

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