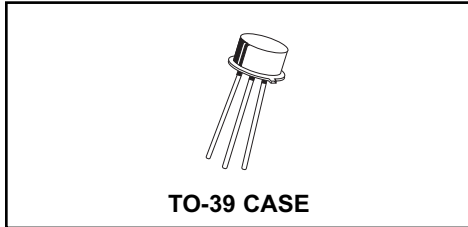


2N5333
PNP SILICON POWER TRANSISTOR



CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5333 is a PNP Silicon Power Transistor manufactured by the epitaxial planar process, mounted in a hermetically sealed metal case, designed for amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)

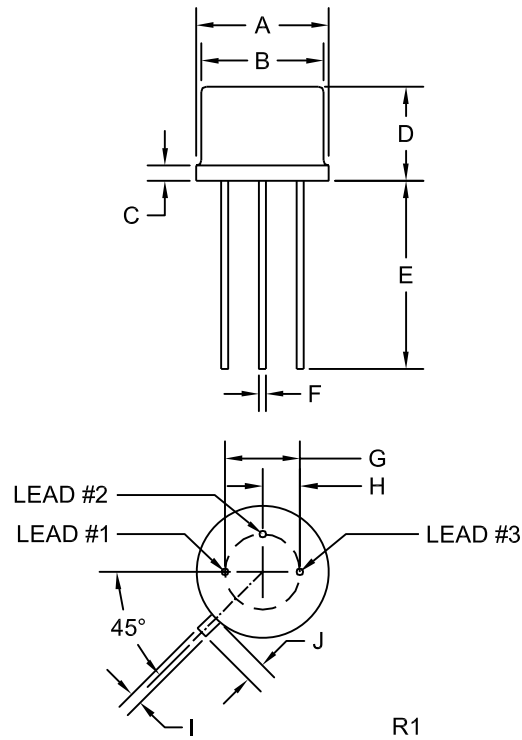
| |
|--|
| Collector-Base Voltage |
| Collector-Emitter Voltage |
| Emitter-Base Voltage |
| Continuous Collector Current |
| Peak Collector Current ($t_p \leq 0.3\text{ms}$) |
| Continuous Base Current |
| Power Dissipation ($T_A=25^\circ\text{C}$) |
| Operating and Storage Junction Temperature |
| Thermal Resistance |

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{CBO} | 100 | V |
| V_{CEO} | 80 | V |
| V_{EBO} | 6.0 | V |
| I_C | 2.0 | A |
| I_{CM} | 5.0 | A |
| I_B | 1.0 | A |
| P_D | 1.0 | W |
| T_J, T_{stg} | -65 to +200 | $^\circ\text{C}$ |
| Θ_{JA} | 175 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---------------|--|-----|-----|------|---------------|
| I_{CES} | $V_{CE}=90\text{V}$ | | | 10 | μA |
| I_{CES} | $V_{CE}=50\text{V}$ ($T_C=150^\circ\text{C}$) | | | 500 | μA |
| I_{CEO} | $V_{CE}=40\text{V}$ | | | 50 | μA |
| I_{EBO} | $V_{EB}=4.0\text{V}$ | | | 1.0 | μA |
| I_{EBO} | $V_{EB}=6.0\text{V}$ | | | 100 | μA |
| BV_{CEO} | $I_C=30\text{mA}$ | 80 | | | V |
| $V_{CE(SAT)}$ | $I_C=1.0\text{A}, I_B=100\text{mA}$ | | | 0.45 | V |
| $V_{CE(SAT)}$ | $I_C=2.0\text{A}, I_B=400\text{mA}$ | | | 1.0 | V |
| $V_{BE(ON)}$ | $V_{CE}=4.0\text{V}, I_C=2.0\text{A}$ | | | 1.5 | V |
| h_{FE} | $V_{CE}=4.0\text{V}, I_C=1.0\text{A}$ | 30 | | 120 | |
| h_{FE} | $V_{CE}=4.0\text{V}, I_C=2.0\text{A}$ | 10 | | | |
| h_{fe} | $V_{CE}=10\text{V}, I_C=1.0\text{A}, f=1\text{KHz}$ | 30 | | | |
| f_T | $V_{CE}=10\text{V}, I_C=1.0\text{A}$ | 30 | | | MHz |
| t_{on} | { $I_C=1.0\text{A}, I_{B1}=I_{B2}=100\text{mA}$ $V_{BE(OFF)}=3.7\text{V}, R_L=20\Omega$ } | | 150 | | ns |
| t_{off} | | | 450 | | ns |

TO-39 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.335 | 0.370 | 8.51 | 9.40 |
| B (DIA) | 0.315 | 0.335 | 8.00 | 8.51 |
| C | - | 0.040 | - | 1.02 |
| D | 0.240 | 0.260 | 6.10 | 6.60 |
| E | 0.500 | - | 12.70 | - |
| F (DIA) | 0.016 | 0.021 | 0.41 | 0.53 |
| G (DIA) | 0.200 | | 5.08 | |
| H | 0.100 | | 2.54 | |
| I | 0.028 | 0.034 | 0.71 | 0.86 |
| J | 0.029 | 0.045 | 0.74 | 1.14 |

TO-39 (REV: R1)

LEAD CODE:

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

MARKING: FULL PART NUMBER