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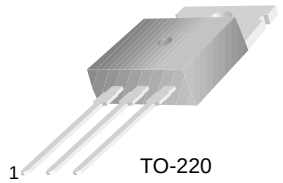
FAIRCHILD SEMICONDUCTOR™

# BD244/A/B/C

## Medium Power Linear and Switching Applications

- Complement to BD243, BD243A, BD243B and BD243C respectively



TO-220

1.Base 2.Collector 3.Emitter

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | | |
| | : BD244 | - 45 | V |
| | : BD244A | - 60 | V |
| | : BD244B | - 80 | V |
| | : BD244C | - 100 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | | |
| | : BD244 | - 45 | V |
| | : BD244A | - 60 | V |
| | : BD244B | - 80 | V |
| | : BD244C | - 100 | V |
| $V_{EBO}$ | Emitter-Base Voltage | - 5 | V |
| $I_C$ | Collector Current (DC) | - 6 | A |
| $I_{CP}$ | *Collector Current (Pulse) | - 10 | A |
| $I_B$ | Base Current | - 2 | A |
| $P_C$ | Collector Dissipation ($T_C$=25°C) | 65 | W |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | - 65 ~ 150 | °C |

### Electrical Characteristics $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $V_{CEO}$(sus) | * Collector-Emitter Sustaining Voltage | | | | | |
| | : BD244 | $I_C$ = - 30mA, $I_B$ = 0 | - 45 | | | V |
| | : BD244A | | - 60 | | | V |
| | : BD244B | | - 80 | | | V |
| | : BD244C | | - 100 | | | V |
| $I_{CEO}$ | Collector Cut-off Current : BD244/244A | $V_{CE}$ = - 30V, $I_B$ = 0 | | | - 0.7 | mA |
| | : BD244B/244C | $V_{CE}$ = - 60V, $I_B$ = 0 | | | - 0.7 | mA |
| $I_{CES}$ | Collector Cut-off Current : BD244 | $V_{CE}$ = - 45V, $V_{BE}$ = 0 | | | - 0.4 | mA |
| | : BD244A | $V_{CE}$ = - 60V, $V_{BE}$ = 0 | | | - 0.4 | mA |
| | : BD244B | $V_{CE}$ = - 80V, $V_{BE}$ = 0 | | | - 0.4 | mA |
| | : BD244C | $V_{CE}$ = - 100V, $V_{BE}$ = 0 | | | - 0.4 | mA |
| $I_{EBO}$ | Emitter Cut-off Current | $V_{EB}$ = - 5V, $I_C$ = 0 | | | - 1 | mA |
| $h_{FE}$ | * DC Current Gain | $V_{CE}$ = - 4V, $I_C$ = - 0.3A | 30 | | | |
| | | $V_{CE}$ = - 4V, $I_C$ = - 3A | 15 | | | |
| $V_{CE}$(sat) | * Collector-Emitter Saturation Voltage | $I_C$ = - 6A, $I_B$ = - 1A | | | - 1.5 | V |
| $V_{BE}$(on) | * Base-Emitter ON Voltage | $V_{CE}$ = - 4V, $I_C$ = - 6A | | | - 2 | V |

* Pulse Test: PW =300μs, duty Cycle =2% Pulsed

# Typical Characteristics

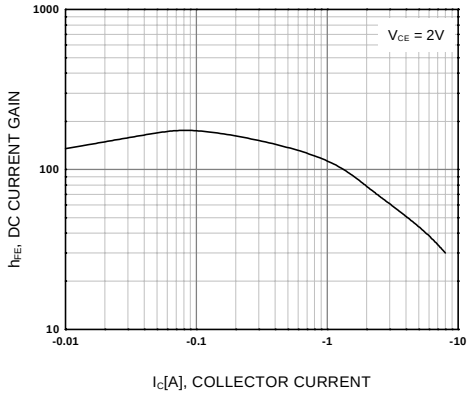



**Figure 1. DC current Gain**

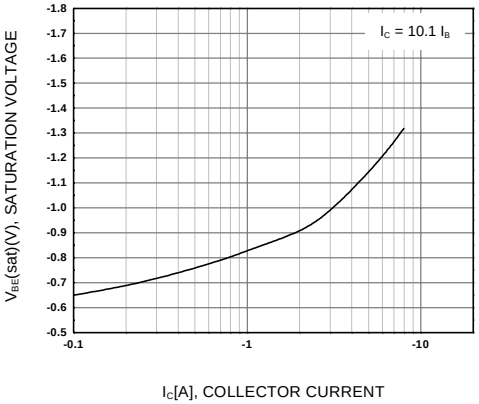



**Figure 2. Base-Emitter Saturation Voltage**

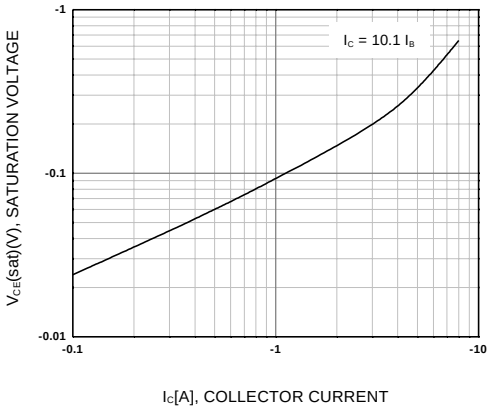



**Figure 3. Collector-Emitter Saturation Voltage**

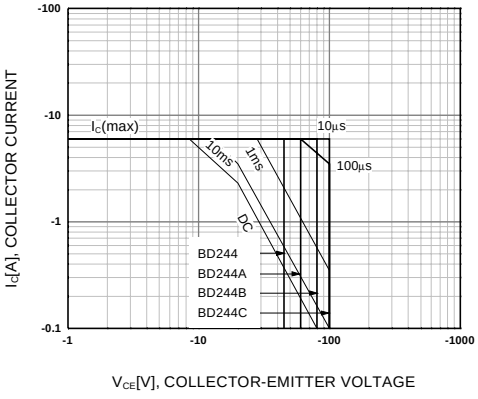



**Figure 4. Safe Operating Area**

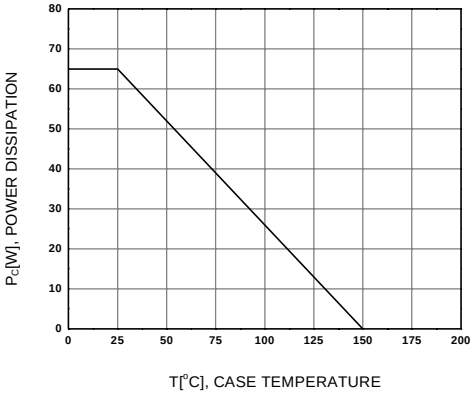
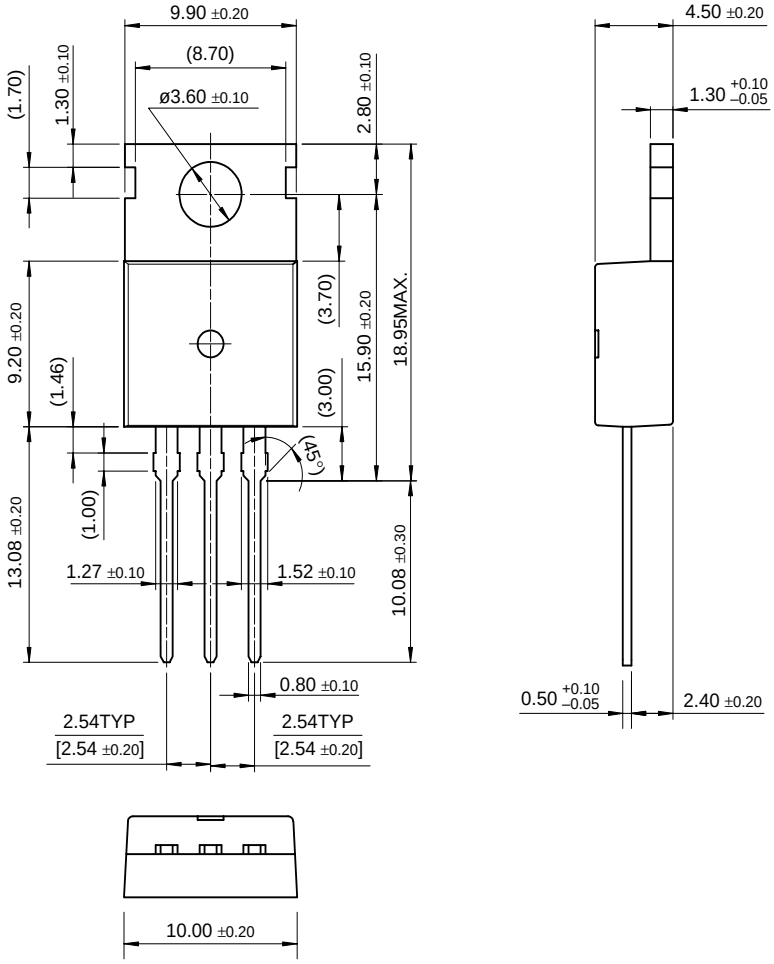



**Figure 5. Power Derating**

## Package Demensions

# TO-220




Dimensions in Millimeters

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