

## BD243/A/B/C

### Medium Power Linear and Switching Applications

- Complement to BD244, BD244A, BD244B and BD244C respectively



1.Base 2.Collector 3.Emitter

### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage : BD243 : BD243A : BD243B : BD243C	45	V
		60	V
		80	V
		100	V
$V_{CEO}$	Collector-Emitter Voltage : BD243 : BD243A : BD243B : BD243C	45	V
		60	V
		80	V
		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 ( $T_C=25^\circ\text{C}$ )	65	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	- 65 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage : BD243 : BD243A : BD243B : BD243C	$I_C=30\text{mA}, I_B=0$	45			V
			60			V
			80			V
			100			V
$I_{CEO}$	Collector Cut-off Current : BD243/243A : BD243B/243C	$V_{CE} = 30\text{V}, I_B = 0$			0.7	mA
		$V_{CE} = 60\text{V}, I_B = 0$			0.7	mA
$I_{CES}$	Collector Cut-off Current : BD243 : BD243A : BD243B : BD243C	$V_{CE} = 45\text{V}, V_{BE} = 0$			0.4	mA
		$V_{CE} = 60\text{V}, V_{BE} = 0$			0.4	mA
		$V_{CE} = 80\text{V}, V_{BE} = 0$			0.4	mA
		$V_{CE} = 100\text{V}, V_{BE} = 0$			0.4	mA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			1	mA
$h_{FE}$	*DC Current Gain	$V_{CE} = 4\text{V}, I_C = 0.3\text{A}$	30			
		$V_{CE} = 4\text{V}, I_C = 3\text{A}$	15			
$V_{CE(sat)}$	*Collector-Emitter Saturation Voltage	$I_C = 6\text{A}, I_B = 1\text{A}$			1.5	V
$V_{BE(on)}$	*Base-Emitter ON Voltage	$V_{CE} = 4\text{V}, I_C = 6\text{A}$			2	V

\* Pulse Test :PW=300 $\mu\text{s}$ , duty Cycle<20% Pulsed

# Typical Characteristics

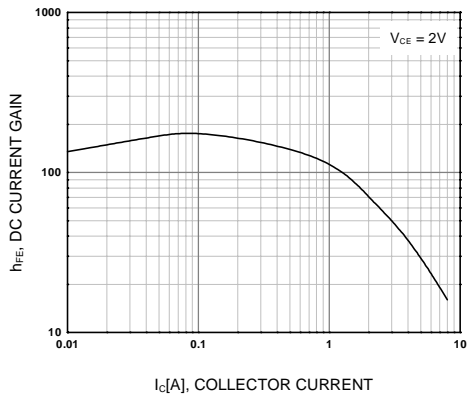


Figure 1. DC current Gain

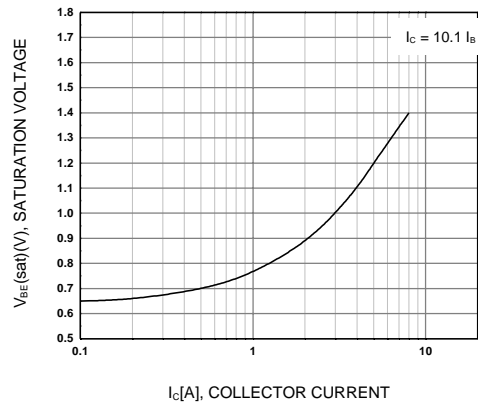


Figure 2. Base-Emitter Saturation Voltage

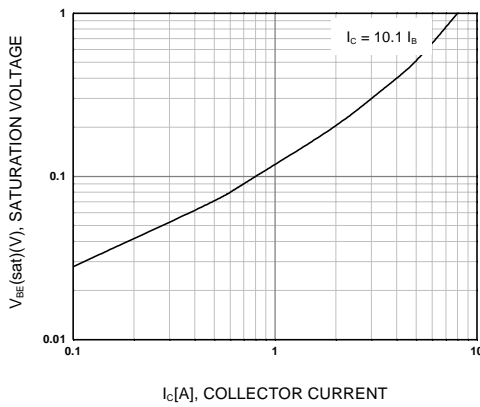


Figure 3. Collector-Emitter Saturation Voltage

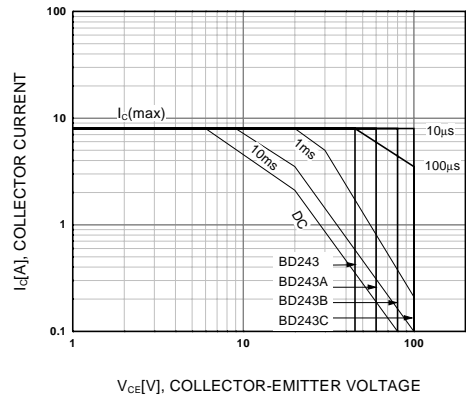


Figure 4. Safe Operating Area

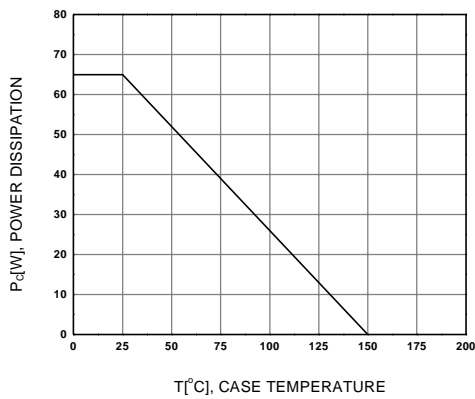


Figure 5. Power Derating

# Package Dimensions

BD243/A/B/C

## TO-220



Dimensions in Millimeters

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