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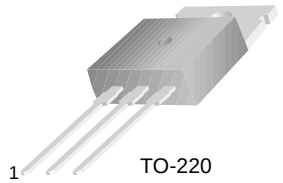
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD SEMICONDUCTOR™

BD243/A/B/C

Medium Power Linear and Switching Applications

- Complement to BD244, BD244A, BD244B and BD244C respectively



TO-220

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage		
	: BD243	45	V
	: BD243A	60	V
	: BD243B	80	V
	: BD243C	100	V
V_{CEO}	Collector-Emitter Voltage		
	: BD243	45	V
	: BD243A	60	V
	: BD243B	80	V
	: BD243C	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					
	: BD243	I_C=30mA, I_B=0	45			V
	: BD243A		60			V
	: BD243B		80			V
	: BD243C		100			V
I_{CEO}	Collector Cut-off Current : BD243/243A	V_{CE} = 30V, I_B = 0			0.7	mA
	: BD243B/243C	V_{CE} = 60V, I_B = 0			0.7	mA
I_{CES}	Collector Cut-off Current : BD243	V_{CE} = 45V, V_{BE} = 0			0.4	mA
	: BD243A	V_{CE} = 60V, V_{BE} = 0			0.4	mA
	: BD243B	V_{CE} = 80V, V_{BE} = 0			0.4	mA
	: BD243C	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<20% Pulsed

Typical Characteristics

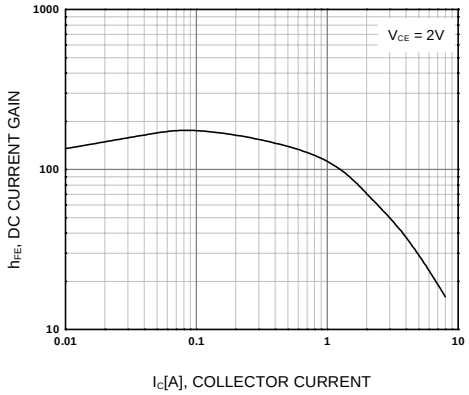


Figure 1. DC current Gain

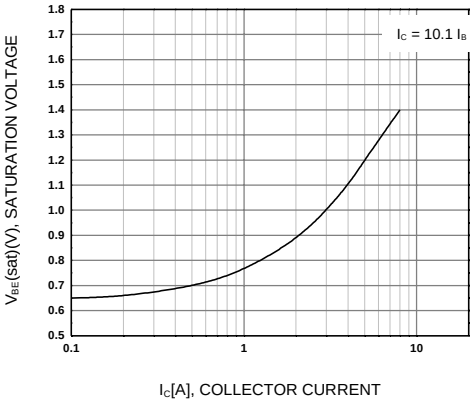


Figure 2. Base-Emitter Saturation Voltage

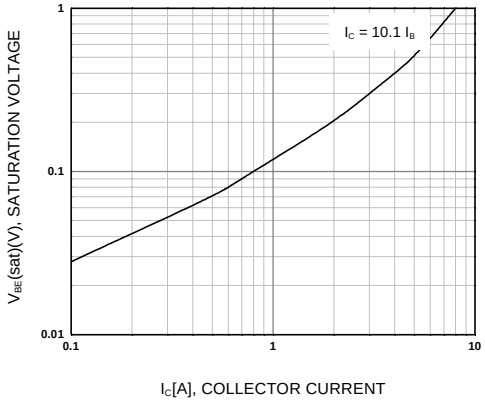


Figure 3. Collector-Emitter Saturation Voltage

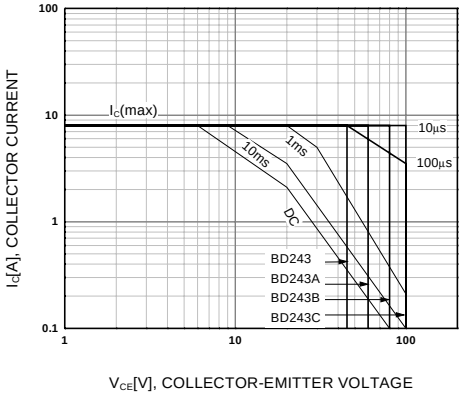


Figure 4. Safe Operating Area

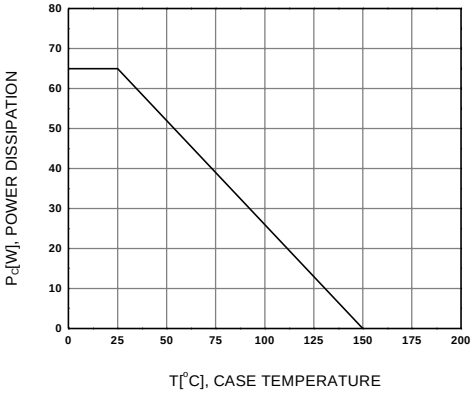
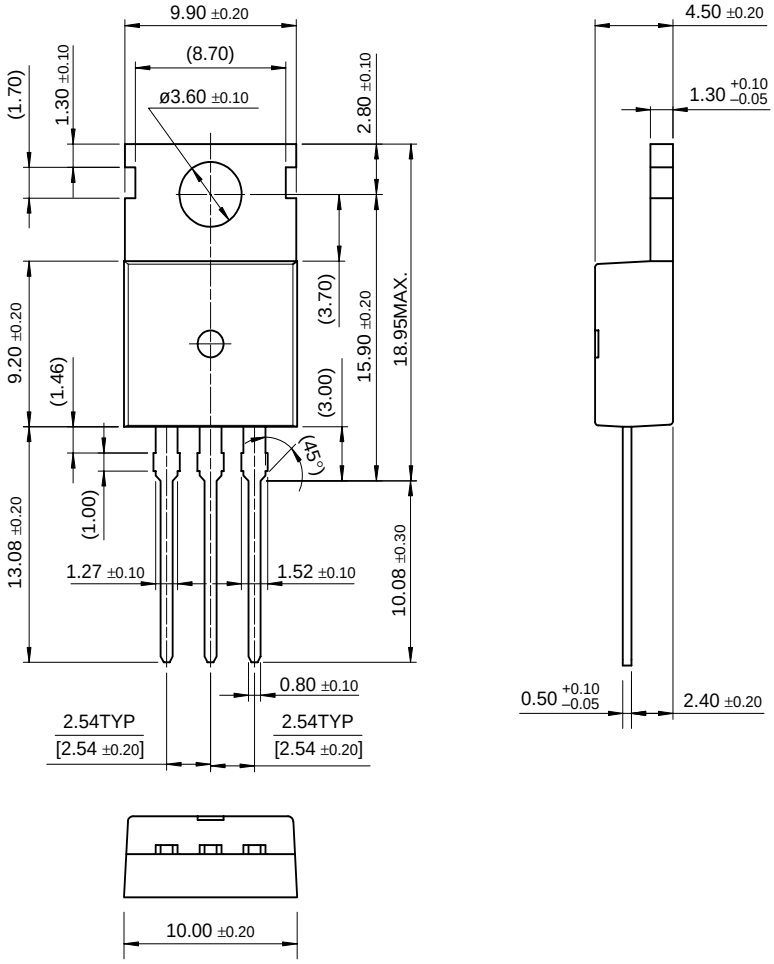


Figure 5. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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