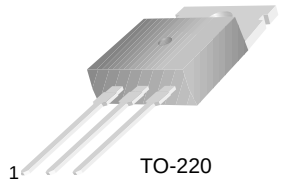
FAIRCHILD SEMICONDUCTOR™

BD534/536/538

Medium Power Linear and Switching Applications

- Low Saturation Voltage
- Complement to BD533, BD535 and BD537 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	: BD534	- 45	V
		: BD536	- 60	V
		: BD538	- 80	V
V_{CEO}	Collector-Emitter Voltage	: BD534	- 45	V
		: BD536	- 60	V
		: BD538	- 80	V
V_{EBO}	Emitter-Base Voltage		- 5	V
I_C	Collector Current (DC)		- 8	A
I_B	Base Current		- 1	A
P_C	Collector Dissipation (T_C=25°C)		50	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
I_{CBO}	Collector Cut-off Current	: BD534	V_{CB} = - 45V, I_E = 0			- 100	μA
		: BD536	V_{CB} = - 60V, I_E = 0			- 100	μA
		: BD538	V_{CB} = - 80V, I_E = 0			- 100	μA
I_{CES}	Collector Cut-off Current	: BD534	V_{CE} = - 45V, V_{BE} = 0			- 100	μA
		: BD536	V_{CE} = - 60V, V_{BE} = 0			- 100	μA
		: BD538	V_{CE} = - 80V, V_{BE} = 0			- 100	μA
I_{EBO}	Emitter Cut-off Current		V_{EB} = - 5V, I_C = 0			- 1	mA
h_{FE}	* DC Current Gain	: ALL DEVICE	V_{CE} = -2 V, I_C = - 500mA	40			
		: BD534/536	V_{CE} = - 5V, I_C = - 10mA	20			
		: BD538		15			
		: BD534/536	V_{CE} = - 2V, I_C = - 2A	25			
		: BD538		15			
h_{FE}	h_{FE} Groups						
	J	: ALL DEVICE	V_{CE} = - 2V, I_C = - 2A	30		75	
			V_{CE} = - 2V, I_C = - 3A	15			
	K	: ALL DEVICE	V_{CE} = -2V, I_C = - 2A	40		100	
			V_{CE} = - 2V, I_C = - 3A	20			
V_{CE}(sat)	* Collector-Emitter Saturation Voltage		I_C = - 2A, I_B = - 0.2A			- 0.8	V
			I_C = - 6A, I_B = - 0.6A		- 0.8		V
V_{BE}(on)	* Base-Emitter ON Voltage		V_{CE} = - 2V, I_C = - 2A			- 1.5	V
f_T	Current Gain Bandwidth Product		V_{CE} = - 1V, I_C = - 500mA	3	12		MHz

* Pulse Test: PW =300μs, duty Cycle =1.5% Pulsed

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Typical Characteristics

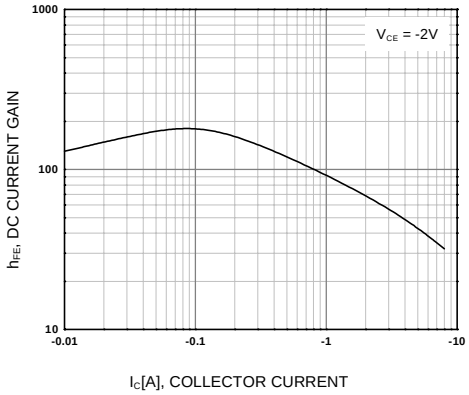


Figure 1. DC current Gain

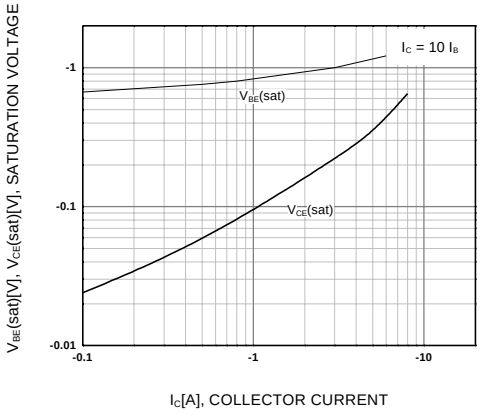


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

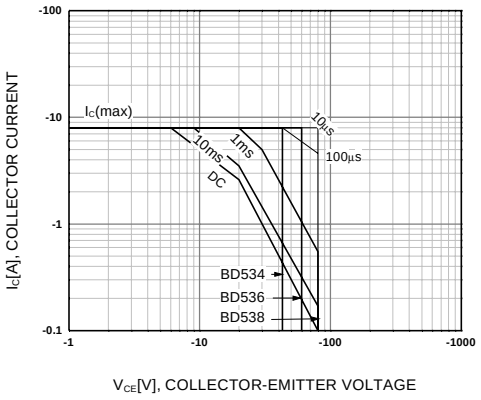


Figure 3. Safe Operating Area

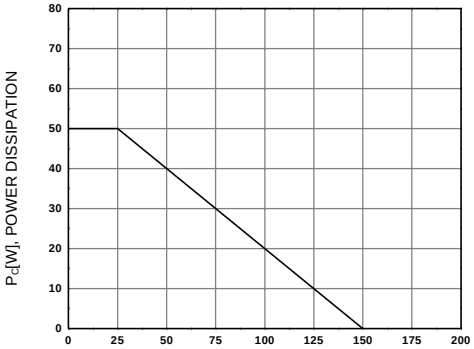
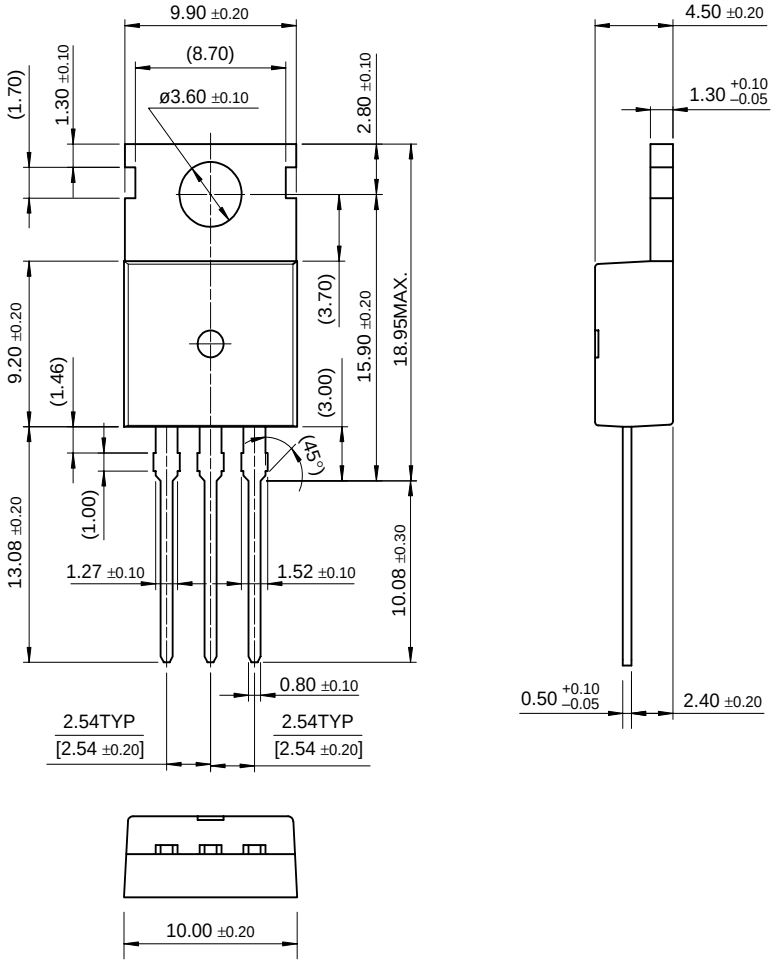


Figure 4. Power Derating

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Package Demensions

TO-220



Dimensions in Millimeters

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