

MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

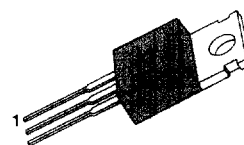
LOW SATURATION VOLTAGE

- Complement to BD533, BD535 and BD537 respectively

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage : BD534	V_{CBO}	- 45	V
: BD536		- 60	V
: BD538		- 80	V
Collector Emitter Voltage : BD534	V_{CES}	- 45	V
: BD536		- 60	V
: BD538		- 80	V
Collector Emitter Voltage : BD534	V_{CEO}	- 45	V
: BD536		- 60	V
: BD538		- 80	V
Emitter Base Voltage	V_{EBO}	- 5	V
Collector Current (DC)	I_C	- 8	A
Emitter Current	I_E	- 8	V
Base Current	I_B	- 1	A
Collector Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	- 50	W
Junction Temperature	T_J	- 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^{\circ}\text{C}$

TO-220



1. Base 2. Collector 3. Emitter

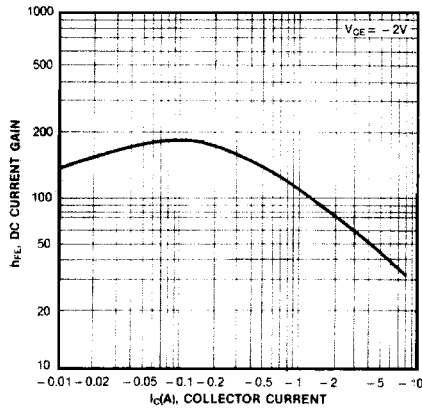
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ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

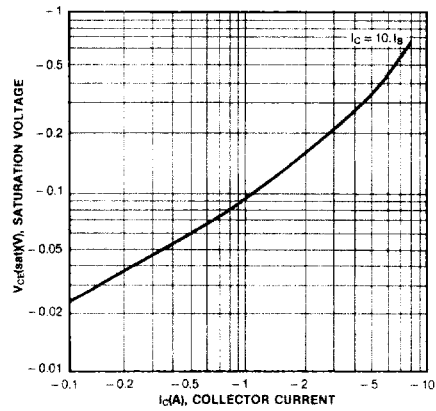
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current : BD534	I_{CBO}	$V_{CB} = -45\text{V}, I_E = 0$			- 100	μA
: BD536		$V_{CB} = -60\text{V}, I_E = 0$			- 100	μA
: BD538		$V_{CB} = -80\text{V}, I_E = 0$			- 100	μA
Collector Cutoff Current : BD534	I_{CES}	$V_{CE} = -45\text{V}, V_{BE} = 0$			- 100	μA
: BD536		$V_{CE} = -60\text{V}, V_{BE} = 0$		1	- 100	μA
: BD538		$V_{CE} = -80\text{V}, V_{BE} = 0$			- 100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			- 1	mA
*DC Current Gain : BD534/536	h_{FE}	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	20			
: BD538			15			
: ALL DEVICE		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	40			
: BD534/536		$V_{CE} = -2\text{V}, I_C = -2\text{A}$	25			
: BD538			15			
h_{FE} Groups J : ALL DEVICE	h_{FE}	$V_{CE} = -2\text{V}, I_C = -2\text{A}$	30		75	
		$V_{CE} = -2\text{V}, I_C = -\text{A}$	15			
		$V_{CE} = -2\text{V}, I_C = -2\text{A}$	40		100	
		$V_{CE} = -2\text{V}, I_C = -3\text{A}$	20			
*Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$			-0.8	V
		$I_C = -6\text{A}, I_B = -0.6\text{A}$		-0.8		V
*Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = -2\text{V}, I_C = -2\text{A}$			-1.5	V
Transition Frequency	f_T	$V_{CE} = -1\text{V}, I_C = -500\text{mA}$	3	12		MHz

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

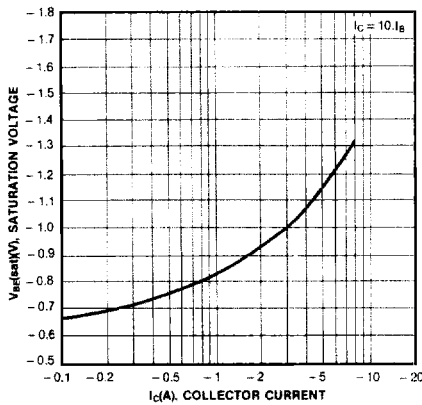
DC CURRENT GAIN



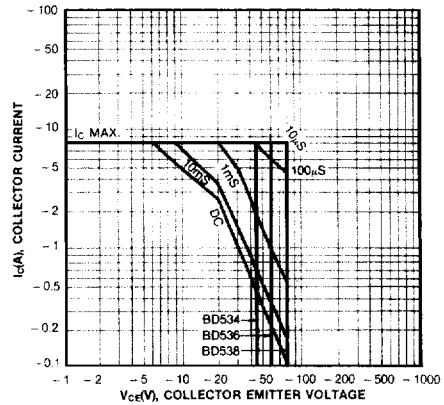
COLLECTOR-EMITTER SATURATION VOLTAGE



BASE-EMITTER SATURATION VOLTAGE



SAFE OPERATING AREA



POWER DERATING

