

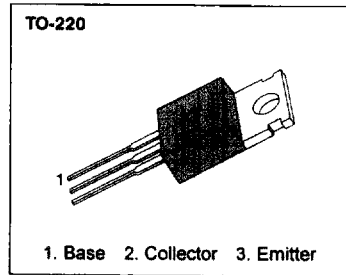
**MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS**

**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 ( $T_C=25^\circ C$ )	$P_C$	- 50	W
Junction Temperature	$T_J$	- 150	$^\circ C$
Storage Temperature	$T_{STG}$	-65 ~ 150	$^\circ C$



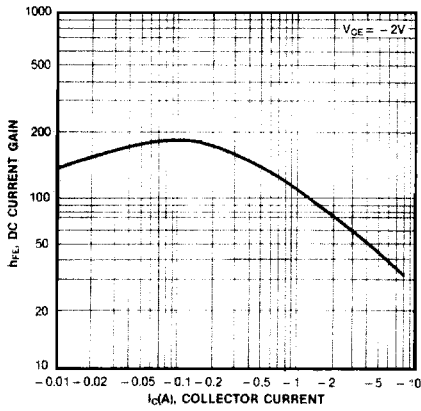
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**ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ C$ )**

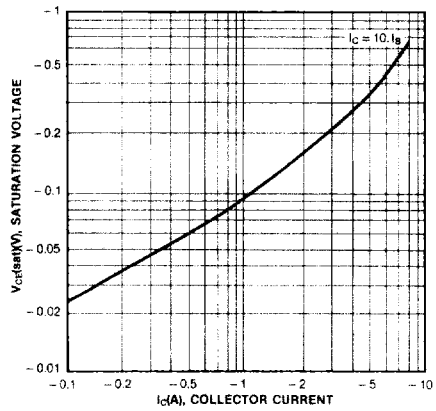
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current : BD534	$I_{CBO}$	$V_{CB} = - 45V, I_E = 0$			- 100	$\mu A$
: BD536		$V_{CB} = - 60V, I_E = 0$			- 100	$\mu A$
: BD538		$V_{CB} = - 80V, I_E = 0$			- 100	$\mu A$
Collector Cutoff Current : BD534	$I_{CES}$	$V_{CE} = - 45V,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

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

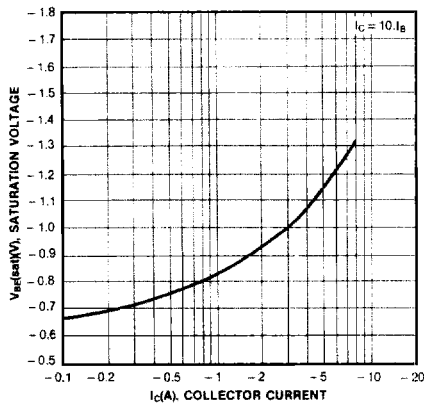
DC CURRENT GAIN



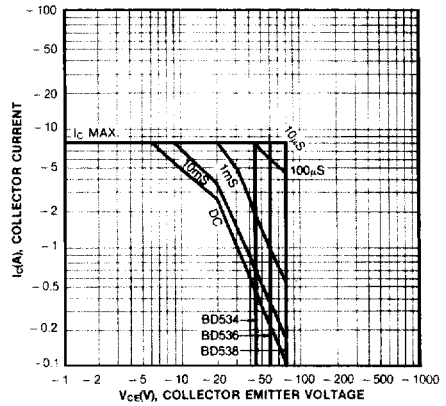
COLLECTOR EMITTER SATURATION VOLTAGE



BASE EMITTER SATURATION VOLTAGE



SAFE OPERATING AREA



POWER DERATING

