

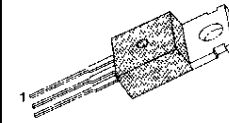
**MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS**
**LOW SATURATION VOLTAGE**

- Complement to BD534, BD536 and BD538 respectively

**ABSOLUTE MAXIMUM RATINGS**

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage : BD533	$V_{CBO}$	45	V
: BD535		60	V
: BD537		80	V
Collector Emitter Voltage : BD533	$V_{CES}$	45	V
: BD535		60	V
: BD537		80	V
Collector Emitter Voltage : BD533	$V_{CEO}$	45	V
: BD535		60	V
: BD537		80	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current (DC)	$I_C$	8	A
Emitter Current	$I_E$	8	A
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

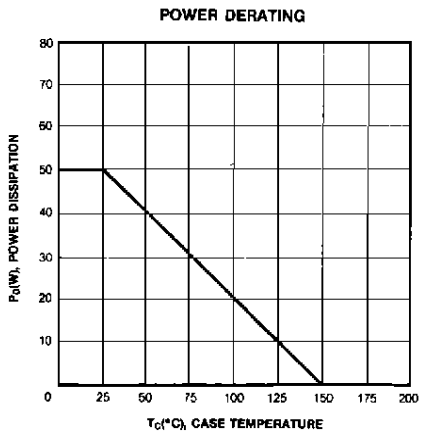
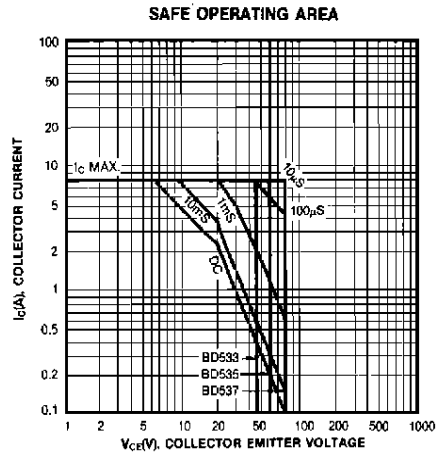
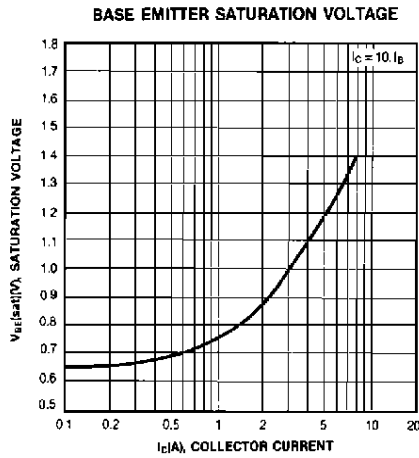
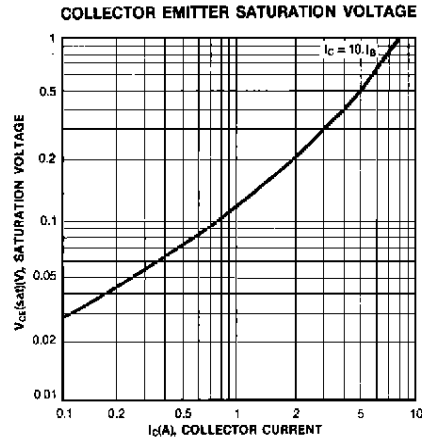
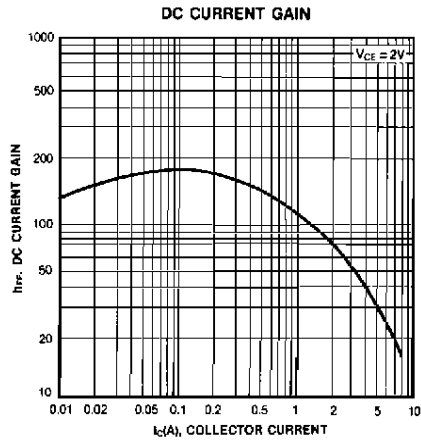


1.Base 2.Collector 3.Emitter

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current : BD533	$I_{CBO}$	$V_{CB} = 45\text{V}, I_E = 0$			100	$\mu\text{A}$
: BD535		$V_{CB} = 60\text{V}, I_E = 0$			100	$\mu\text{A}$
: BD537		$V_{CB} = 80\text{V}, I_E = 0$			100	$\mu\text{A}$
Collector Cutoff Current : BD533	$I_{CES}$	$V_{CE} = 45\text{V}, V_{BE} = 0$			100	$\mu\text{A}$
: BD535		$V_{CE} = 60\text{V}, V_{BE} = 0$			100	$\mu\text{A}$
: BD537		$V_{CE} = 80\text{V}, V_{BE} = 0$			100	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$			1	mA
*DC Current Gain : BD533/535	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	20			
: BD537			15			
: ALL DEVICE		$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	40			
: BD533/535		$V_{CE} = 2\text{V}, I_C = 2\text{A}$	25			
: BD537			15			
$h_{FE}$ Groups J : ALL DEVICE	$h_{FE}$	$V_{CE} = 2\text{V}, I_C = 2\text{A}$	30		75	
		$V_{CE} = 2\text{V}, I_C = 3\text{A}$	15			
K : ALL DEVICE		$V_{CE} = 2\text{V}, I_C = 2\text{A}$	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 $\mu\text{s}$ , duty Cycle =1.5% Pulsed



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