



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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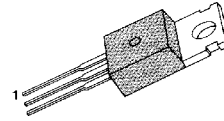
**MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS**
**LOW SATURATION VOLTAGE**

- 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			40				
: BD533/535			25				
: BD537			15				
$h_{FE}$ Groups J : ALL DEVICE	$h_{FE}$	$V_{CE} = 2\text{V}, I_C = 2\text{A}$	30		75		
K : ALL DEVICE			$V_{CE} = 2\text{V}, I_C = 3\text{A}$	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 $\mu\text{s}$ , duty Cycle = 1.5% Pulsed

