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BD533/535/537 NPN EPITAXIAL SILICON TRANSISTOR

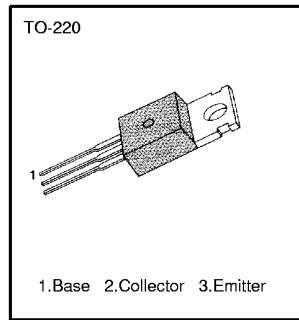
MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

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	$^\circ\text{C}$



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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current : BD533	I_{CBO}	$V_{CB} = 45V, I_E = 0$			100	μA
: BD535		$V_{CB} = 60V, I_E = 0$			100	μA
: BD537		$V_{CB} = 80V, I_E = 0$			100	μA
Collector Cutoff Current : BD533	I_{CES}	$V_{CE} = 45V, V_{BE} = 0$			100	μA
: BD535		$V_{CE} = 60V, V_{BE} = 0$			100	μA
: BD537		$V_{CE} = 80V, V_{BE} = 0$			100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			1	mA
*DC Current Gain : BD533/535	h_{FE}	$V_{CE} = 5V, I_C = 10\text{mA}$	20			
: BD537			15			
: ALL DEVICE		$V_{CE} = 2V, I_C = 500\text{mA}$	40			
: BD533/535		$V_{CE} = 2V, I_C = 2A$	25			
: BD537		15				
h_{FE} Groups J : ALL DEVICE	h_{FE}	$V_{CE} = 2V, I_C = 2A$	30		75	
		$V_{CE} = 2V, I_C = 3A$	15			
		$V_{CE} = 2V, I_C = 2A$	40		100	
		$V_{CE} = 2V, I_C = 3A$	20			
*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	$V_{CE} = 1V, I_C = 500\text{mA}$	3	12		MHz

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

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