

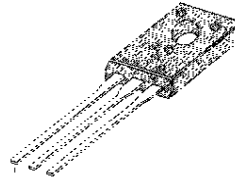
MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

• Complement to BD136 and BD140 respectively

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage : BD135	V_{CBO}	45	V
: BD137		60	V
: BD139		80	V
Collector Emitter Voltage : BD135	V_{CEO}	45	V
: BD137		60	V
: BD139		80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	1.5	A
Collector Current (Pulse)	I_C	3.0	A
Base Current	I_B	0.5	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	12.5	W
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	12.5	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~150	$^\circ\text{C}$

TO-18



1. Emitter 2. Collector 3. Base

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Sustaining Voltage : BD135	$V_{CEO(sus)}$	$I_C=30\text{mA}, I_B=0$	45			V
: BD137			60			V
: BD139			I_{CBO}	$V_{CB}=30\text{V}, I_E=0$	80	
Collector Cutoff Current	I_{EBO}	$V_{EB}=2\text{V}, I_C=0$			0.1	μA
Emitter Cutoff Current	h_{FE1}	$V_{CE}=2\text{V}, I_C=5\text{mA}$			10	μA
DC Current Gain : ALL DEVICE	h_{FE2}	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	25			
: BD135	h_{FE3}	$V_{CE}=2\text{V}, I_C=150\text{mA}$	25			
: BD137, BD139	$V_{CE(Sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	40		250	V
Collector Emitter Saturation Voltage	$V_{BE(on)}$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	40		160	V
Base Emitter On Voltage					0.5	V
					1	

 $h_{FE(3)}$ CLASSIFICATION

Classification	6	10	16
$h_{FE 3}$	40-100	63-160	100-250

Rev. B

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