

TO-126 Plastic-Encapsulate Transistors

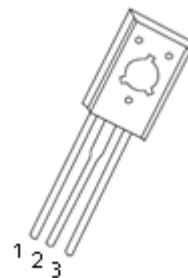
BD135/137/139 TRANSISTOR (NPN)

FEATURES

- High Current
- Complement To BD136, BD138 And BD140

TO – 126

1. EMITTER
2. COLLECTOR
3. BASE



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	BD135	45
		BD137	60
		BD139	80
V _{CEO}	Collector-Emitter Voltage	BD135	45
		BD137	60
		BD139	80
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	1.5	A
P _C	Collector Power Dissipation	1.25	W
R _{θJA}	Thermal Resistance From Junction To Ambient	100	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 0.1mA, I _E =0				V
			BD135	45		
			BD137	60		
BD139	80					
Collector-emitter sustaining voltage	V _{CEO(SUS)} *	I _C =0.03A, I _B =0				V
			BD135	45		
			BD137	60		
BD139	80					
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =0.1mA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA
DC current gain	h _{FE(1)} *	V _{CE} =2V, I _C =150mA	40		250	
	h _{FE(2)} *	V _{CE} =2V, I _C =5mA	25			
	h _{FE(3)} *	V _{CE} =2V, I _C =500mA	25			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =500mA, I _B =50mA			0.5	V
Base-emitter voltage	V _{BE} *	V _{CE} =2V, I _C =500mA			1	V

*Pulse test: pulse width ≤350μs, duty cycles ≤ 2.0%.

CLASSIFICATION OF h_{FE(1)}

RANK	6	10	16
RANGE	40-100	63-160	100-250

