

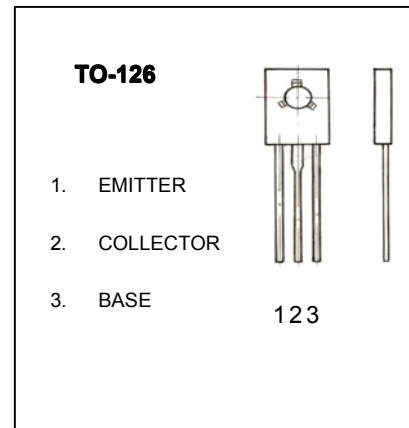


DONGGUAN NANJING ELECTRONICS LTD.,
TO-126 Plastic-Encapsulate Transistors

BD135/BD137/BD139 TRANSISTOR (NPN)

FEATURES

- High Current(1.5A)
- Low Voltage(80V)



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

Symbol	Parameter	Value			Units
		BD135	BD137	BD139	
V _{CB0}	Collector-Base Voltage	45	60	80	V
V _{CE0}	Collector-Emitter Voltage	45	60	80	V
V _{EB0}	Emitter-Base Voltage	5			V
I _c	Collector Current -Continuous	1.5			A
P _c	Collector power dissipation	1.25			W
T _J	Junction Temperature	150			°C
T _{stg}	Storage Temperature	-55-150			°C

ELECTRICAL CHARACTERISTICS(T_{amb}=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _c =100μA, I _E =0	BD135	45		V
			BD137	60		
			BD139	80		
Collector-emitter breakdown voltage	V _{(BR)CEO*}	I _c =30mA, I _b =0	BD135	45		V
			BD137	60		
			BD139	80		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _c =0	5			V
Collector cut-off current	I _{CB0}	V _{CB} =30V, I _E =0			0.1	μA
Emitter cut-off current	I _{EB0}	V _{EB} =5V, I _c =0			10	μA
DC current gain	h _{FE(1)}	V _{CE} =2V, I _c =5mA	25			
	h _{FE(2)}	V _{CE} =2V, I _c =150mA	40		250	
	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**

CLASSIFICATION OF h_{FE(2)}

Rank			
Range	40-100	100-200	200-300

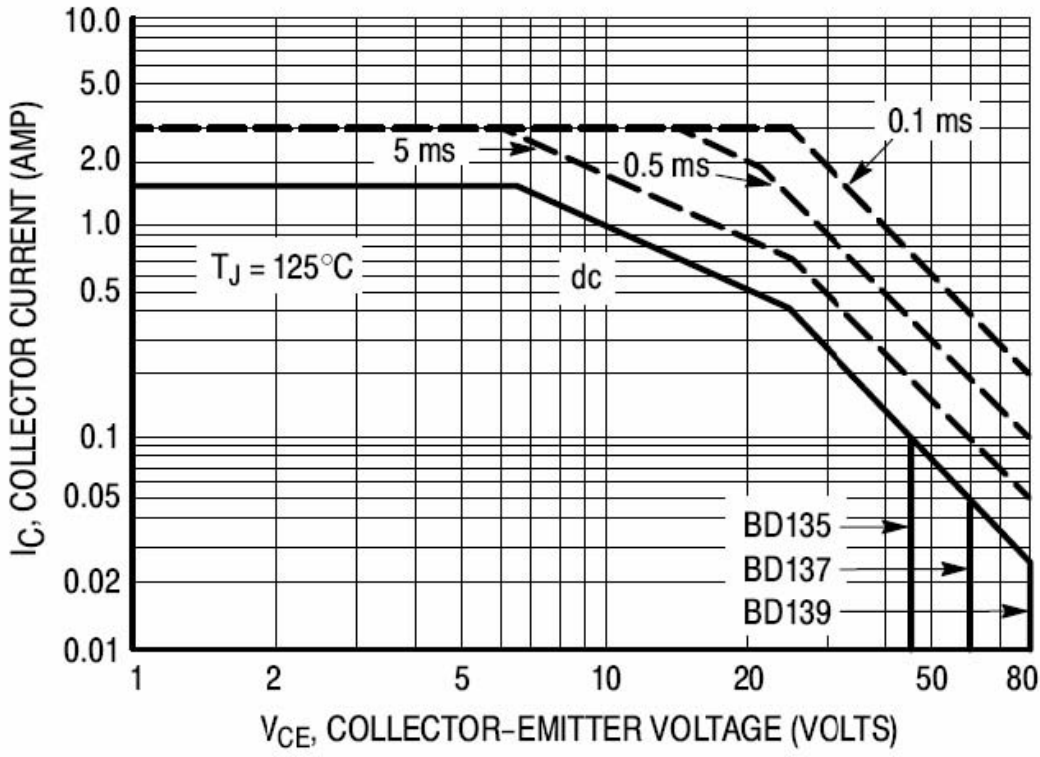


Figure 1. Active-Region Safe Operating Area