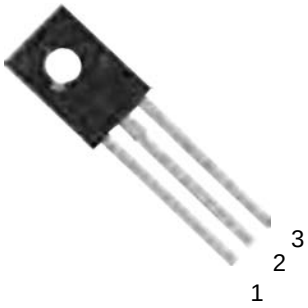
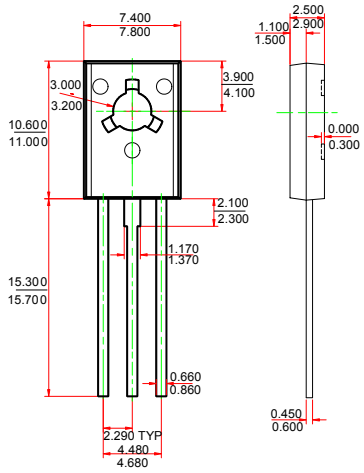
BD135/BD137/BD139(NPN)

TO-126 Transistor

TO-126



1. EMITTER
2. COLLECTOR
3. BASE



Dimensions in inches and (millimeters)

Features

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

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value			Units
		BD135	BD137	BD139	
V_{CBO}	Collector-Base Voltage	45	60	80	V
V_{CEO}	Collector-Emitter Voltage	45	60	80	V
V_{EBO}	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			℃
T_{stg}	Storage Temperature	-55-150			℃

ELECTRICAL CHARACTERISTICS(Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=100μA,I_E=0	BD135	45			V
			BD137	60			
			BD139	80			
Collector-emitter breakdown voltage	$V_{(BR)CEO*}$	Ic=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_{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=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	6	10	16
Range	40-100	63-160	100-250

Typical Characteristics

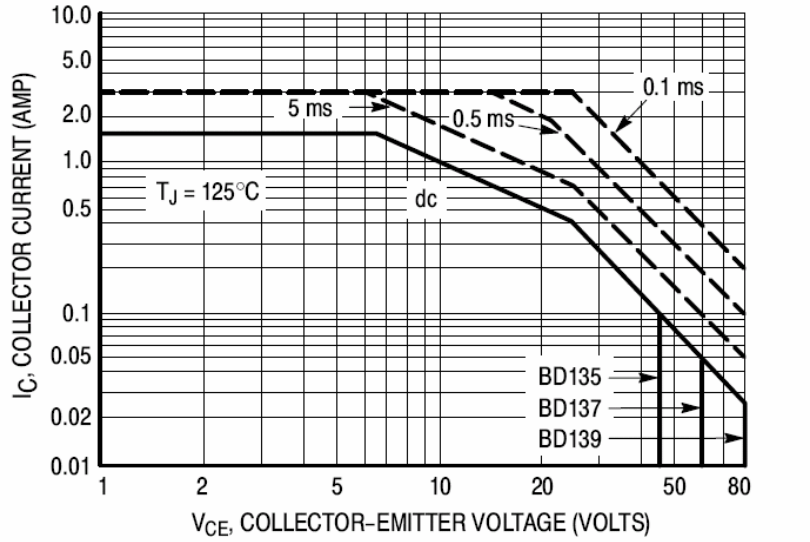


Figure 1. Active–Region Safe Operating Area