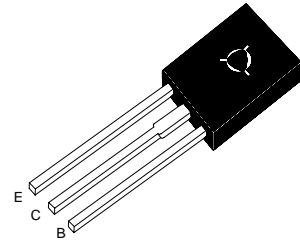


NPN SILICON EPITAXIAL POWER TRANSISTOR

These devices are designed as Audio Amplifier and Drivers Utilizing.



TO-126 Plastic Package

Absolute Maximum Ratings ($T_a=25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value			Unit
		BD135T	BD137T	BD139T	
Collector Emitter Voltage	V_{CEO}	45	60	80	V
Collector Emitter Voltage ($R_{BE} = 1\text{ K}\Omega$)	V_{CER}	45	60	100	V
Collector Base Voltage	V_{CBO}	45	60	100	V
Emitter Base Voltage	V_{EBO}	5			V
Collector Current - Continuous	I_C	1.5			A
Collector Current - Peak ¹⁾	I_{CM}	2			A
Base Current - Continuous	I_B	0.5			A
Total Power Dissipation @ $T_A=25\text{ }^\circ\text{C}$ Derate above $25\text{ }^\circ\text{C}$	P_D	1.25 10			W mW/ $^\circ\text{C}$
Total Power Dissipation @ $T_C=25\text{ }^\circ\text{C}$ Derate above $25\text{ }^\circ\text{C}$	P_D	12.5 100			W mW/ $^\circ\text{C}$
Total Power Dissipation @ $T_C=70\text{ }^\circ\text{C}$	P_D	8			W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150			$^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	100			$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	10			$^\circ\text{C}/\text{W}$

Characteristics at $T_a=25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $V_{CE} = 2\text{ V}$, $I_C = 5\text{ mA}$	h_{FE}	25	-	-
at $V_{CE} = 2\text{ V}$, $I_C = 500\text{ mA}$	h_{FE}	25	-	-
at $V_{CE} = 2\text{ V}$, $I_C = 150\text{ mA}$	h_{FE}	40	100	-
	h_{FE}	63	160	-
	h_{FE}	100	250	-
	h_{FE}	160	400	-
Collector Emitter Sustaining Voltage				
at $I_C = 30\text{ mA}$	$V_{CEO(sus)}$	45	-	V
	$V_{CEO(sus)}$	60	-	V
	$V_{CEO(sus)}$	80	-	V
Collector Cutoff Current				
at $V_{CB} = 30\text{ V}$	I_{CBO}	-	0.1	μA
Emitter Cutoff Current				
at $V_{EB} = 5\text{ V}$	I_{EBO}	-	10	μA
Collector Emitter Saturation Voltage				
at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	0.5	V
Base Emitter On Voltage				
at $I_C = 500\text{ mA}$, $V_{CE} = 2\text{ V}$	$V_{BE(on)}$	-	1	V