

BD135, BD137, BD139

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

Characteristic	Symbol	Type	Min	Max	Unit
Collector–Emitter Sustaining Voltage* ($I_C = 0.03\text{ A}$, $I_B = 0$)	BV_{CEO}^*	BD 135 BD 137 BD 139	45 60 80	– – –	Vdc
Collector Cutoff Current ($V_{CB} = 30\text{ Vdc}$, $I_E = 0$) ($V_{CB} = 30\text{ Vdc}$, $I_E = 0$, $T_C = 125^\circ\text{C}$)	I_{CBO}		– –	0.1 10	μA dc
Emitter Cutoff Current ($V_{BE} = 5.0\text{ Vdc}$, $I_C = 0$)	I_{EBO}		–	10	μA dc
DC Current Gain ($I_C = 0.005\text{ A}$, $V_{CE} = 2\text{ V}$) ($I_C = 0.15\text{ A}$, $V_{CE} = 2\text{ V}$) ($I_C = 0.5\text{ A}$, $V_{CE} = 2\text{ V}$)	h_{FE}^*		25 40 25	– 250 –	–
Collector–Emitter Saturation Voltage* ($I_C = 0.5\text{ A}$, $I_B = 0.05\text{ A}$)	$V_{CE(sat)}^*$		–	0.5	Vdc
Base–Emitter On Voltage* ($I_C = 0.5\text{ A}$, $V_{CE} = 2.0\text{ Vdc}$)	$V_{BE(on)}^*$		–	1	Vdc

*Pulse Test: Pulse Width $\leq 300\text{ }\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

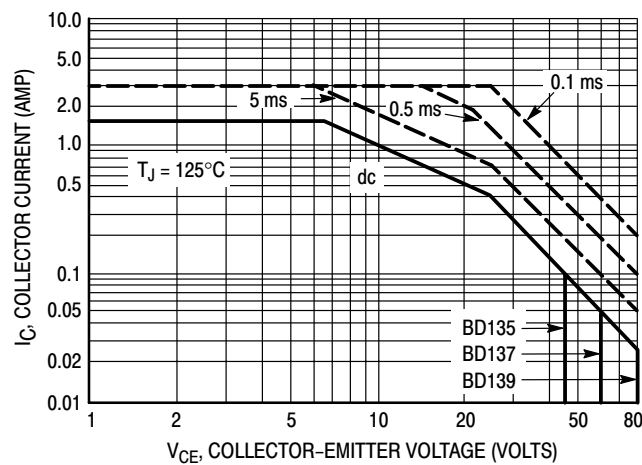
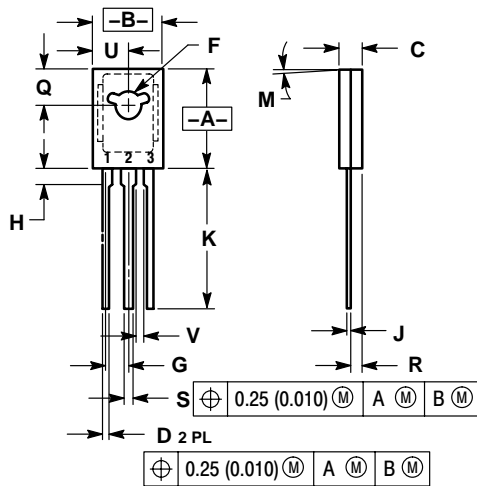


Figure 1. Active–Region Safe Operating Area

BD135, BD137, BD139

PACKAGE DIMENSIONS


TO-225AA
CASE 77-09
ISSUE Z



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. 077-01 THRU -08 OBSOLETE, NEW STANDARD 077-09.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.425	0.435	10.80	11.04
B	0.295	0.305	7.50	7.74
C	0.095	0.105	2.42	2.66
D	0.020	0.026	0.51	0.66
F	0.115	0.130	2.93	3.30
G	0.094 BSC		2.39 BSC	
H	0.050	0.095	1.27	2.41
J	0.015	0.025	0.39	0.63
K	0.575	0.655	14.61	16.63
M	5 ° TYP		5 ° TYP	
Q	0.148	0.158	3.76	4.01
R	0.045	0.065	1.15	1.65
S	0.025	0.035	0.64	0.88
U	0.145	0.155	3.69	3.93
V	0.040	---	1.02	---

- STYLE 1:
1. PIN 1. EMITTER
 2. COLLECTOR
 3. BASE

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