



September 2007

BC337A

NPN Medium Power Transistor

- This device is designed for general purpose amplifier application at collector currents to 800m.
- Sourced from process 38.



Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CES}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	800	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ 150	$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/ $^\circ\text{C}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	$^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C}/\text{W}$

*Device mounted on FR-4 PCB 1.6" X 1.6" X 0.06".

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$	60			V
BV_{CES}	Collector-Emitter Cutoff Voltage	$I_C = 100\mu\text{A}$	60			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 100\mu\text{A}$	5			V
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}$			10	μA
I_{CBO}	Collector Cut-off Current	$V_{CB} = 20\text{V}, T = 25^\circ\text{C}$ $T = 150^\circ\text{C}$			0.1 5	μA
h_{FE}	DC Current Gain	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$ $V_{CE} = 1\text{V}, I_C = 500\text{mA}$	100 40	400		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500\text{mA}, I_B = 50\text{mA}$			0.7	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 5\text{V}, I_C = 2\text{mA}$			1.2	V

Notes:

1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. These ratings are based on a maximum junction temperature of 150degrees C.





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