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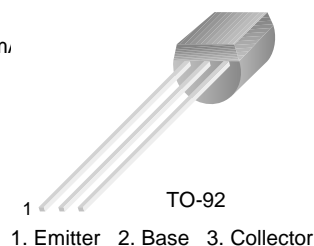


September 2007

# BC318C

## PNP Epitaxial Silicon 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
$V_{CBO}$	Collector-Base Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	100	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 $^\circ\text{C}$	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
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\mu\text{A}$	30			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}$	20			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 100\mu\text{A}$	5			V
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C = 100\mu\text{A}$	30			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 20\text{V}$ $T = 25^\circ\text{C}$ $T = 100^\circ\text{C}$			30 15	nA $\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE} = 5\text{V}, I_C = 10\mu\text{A}$ $V_{CE} = 5\text{V}, I_C = 2\text{mA}$	100 420		800	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$ $I_C = 100\text{mA}, I_B = 5\text{mA}$			0.2 0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 5\text{V}, I_C = 2\text{mA}$ $V_{CE} = 5\text{V}, I_C = 10\text{mA}$	0.57		0.72 0.77	V
$C_{cb}$	Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$			4	pF




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