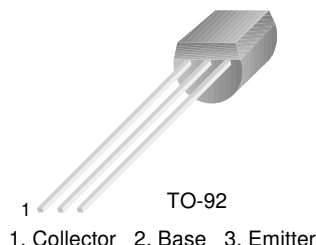


# BC517

## NPN Darlington Transistor

- This device is designed for applications requiring extremely high current gain at currents to 1.0A.
- Sourced from process 05.



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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	10	V
$I_C$	Collector Current - Continuous	1.2	A
$T_J, T_{STG}$	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.

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

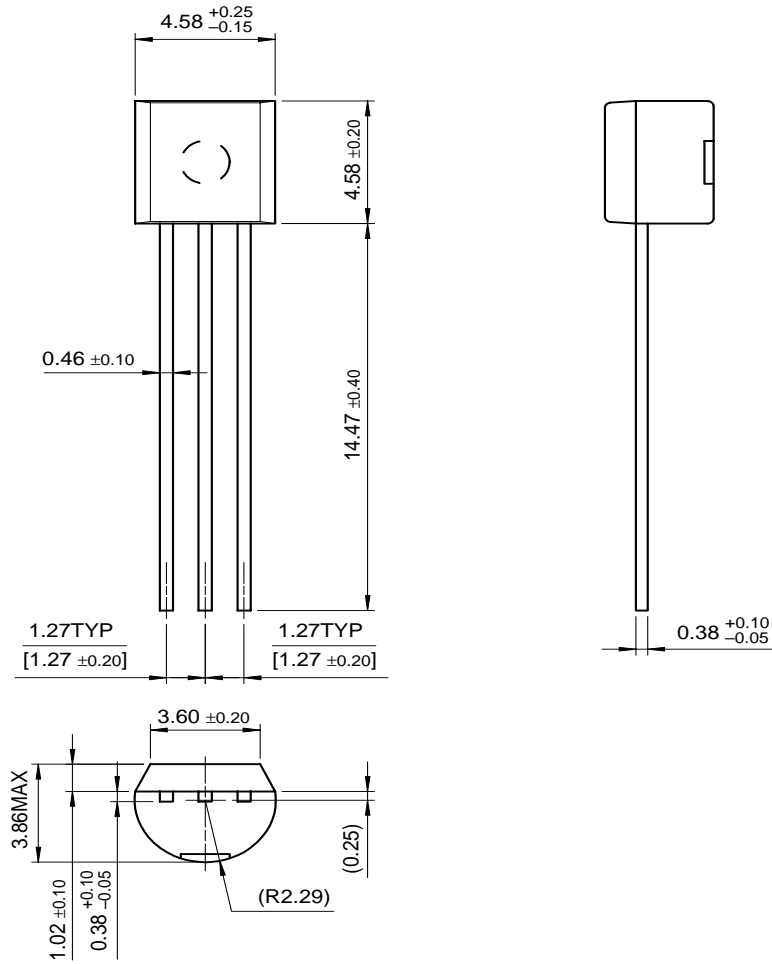
Symbol	Parameter	Conditions	Min.	Max	Units
<b>Off Characteristics</b>					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage *	$I_C = 2.0\text{mA}, I_B = 0$	30		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\mu\text{A}, I_E = 0$	40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 100\text{nA}, I_C = 0$	10		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 30\text{V}, I_E = 0$		100	nA
<b>On Characteristics *</b>					
$h_{FE}$	DC Current Gain	$V_{CE} = 2.0\text{V}, I_C = 20\text{mA}$	30,000		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 100\text{mA}, I_B = 0.1\text{mA}$		1	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 10\text{mA}, V_{CE} = 5.0\text{V}$		1.4	V

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

Symbol	Parameter	Value	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	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C/W}$

# Mechanical Dimensions

TO-92



Dimensions in Millimeters

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FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
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