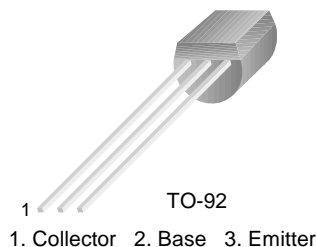


BC517

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°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	°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°C unless otherwise noted

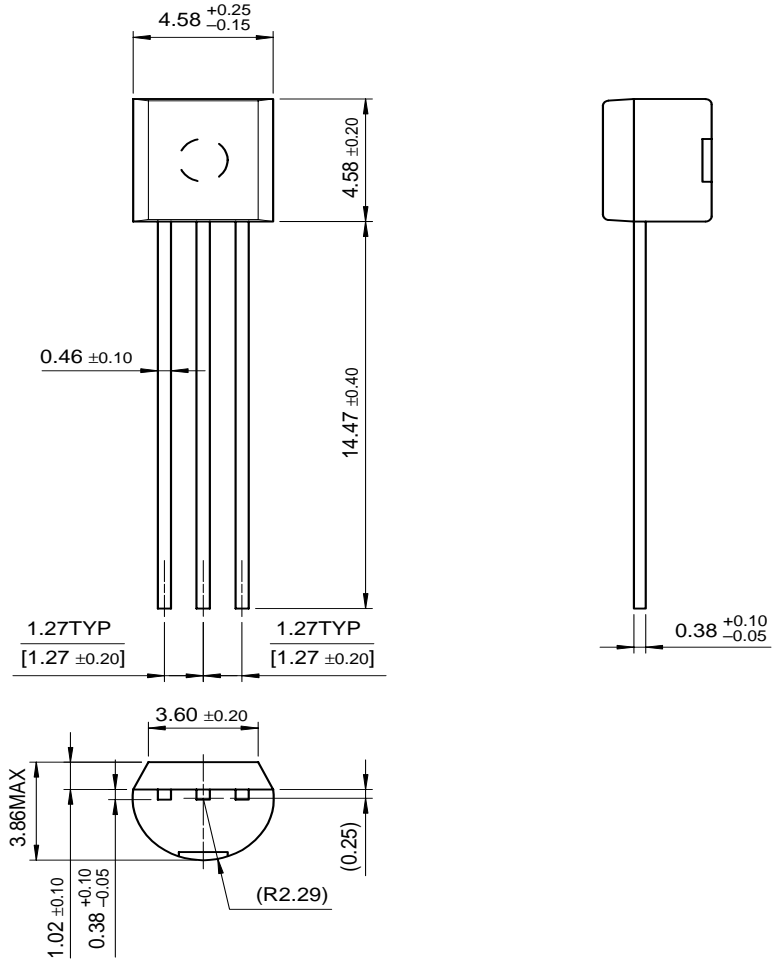
Symbol	Parameter	Conditions	Min.	Max	Units
Off Characteristics					
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage *	I _C = 2.0mA, I _B = 0	30		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 10μA, I _E = 0	40		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 100nA, I _C = 0	10		V
I _{CBO}	Collector Cut-off Current	V _{CB} = 30V, I _E = 0		100	nA
On Characteristics *					
h _{FE}	DC Current Gain	V _{CE} = 2.0V, I _C = 20mA	30,000		
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 100mA, I _B = 0.1mA		1	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 10mA, V _{CE} = 5.0V		1.4	V

Thermal Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P _D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
R _{θJC}	Thermal Resistance, Junction to Case	83.3	°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	200	°C/W

Mechanical Dimensions

TO-92



Dimensions in Millimeters

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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BC517

NPN Darlington Transistor

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Features

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

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Product status/pricing/packaging

BUY

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
BC517	Full Production	 Full Production	\$0.055	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517
BC517_D26Z	Full Production	 Full Production	N/A	TO-92	3	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517
BC517_D27Z	Full Production	 Full Production	N/A	TO-92	3	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517
BC517_D74Z	Full Production		N/A	TO-92	3	AMMO	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code)

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BC517_D75Z	Full Production		N/A	TO-92	3	AMMO	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517
BC517_J35Z	Full Production		N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517
BC517_L34Z	Lifetime Buy		N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC517

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product BC517 is available. [Click here for more information](#).

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Qualification Support

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