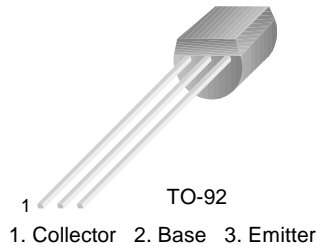


BC517

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

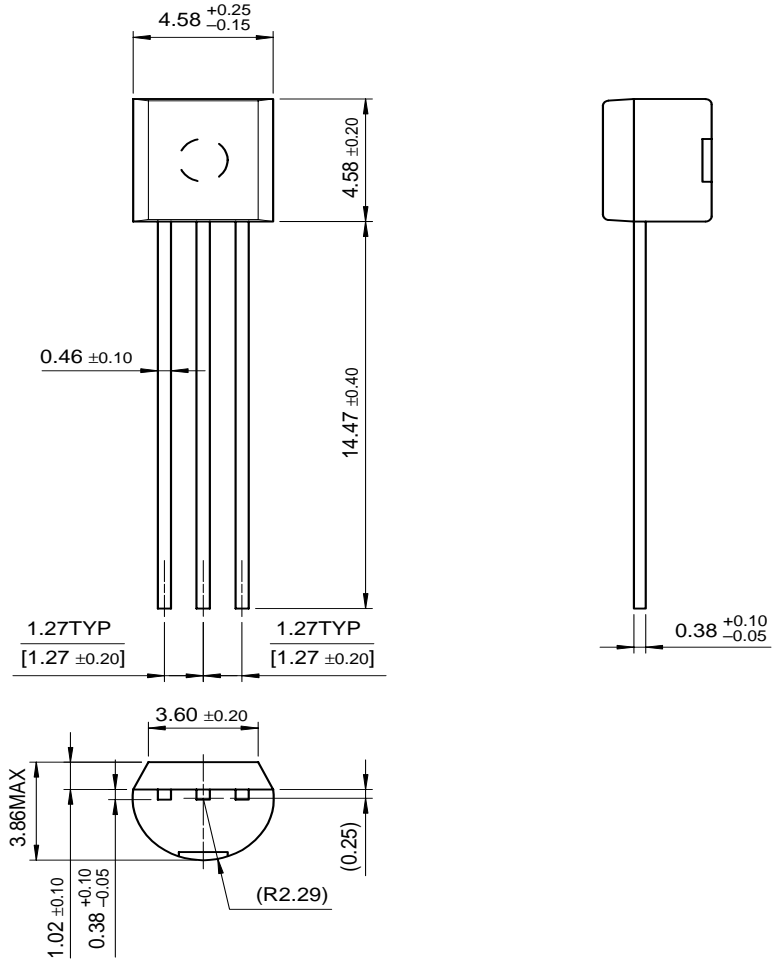
Symbol	Parameter	Conditions	Min.	Max	Units
Off Characteristics					
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage *	I _C = 2.0mA, I _B = 0	30		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 10μA, I _E = 0	40		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 100nA, I _C = 0	10		V
I _{CBO}	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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E ² CMOS™	ꝑC™	MSX™	QT Optoelectronics™	TinyLogic®
EnSigna™	i-Lo™	MSXPro™	Quiet Series™	TINYOPTO™
FACT™	ImpliedDisconnect™	OCX™	RapidConfigure™	TruTranslation™
FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
Across the board. Around the world.™		OPTOLOGIC®	µSerDes™	UltraFET®
The Power Franchise®		OPTOPLANAR™	SILENT SWITCHER®	UniFET™
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