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BC182L

NPN General Purpose Amplifier

- This device is designed for general purpose amplifier application at collector currents to 100mA.
- Sourced from process 10.

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	50	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current - Continuous	100	mA
T_J, T_{STG}	Storage Junction Temperature Range	- 55 ~ 150	°C

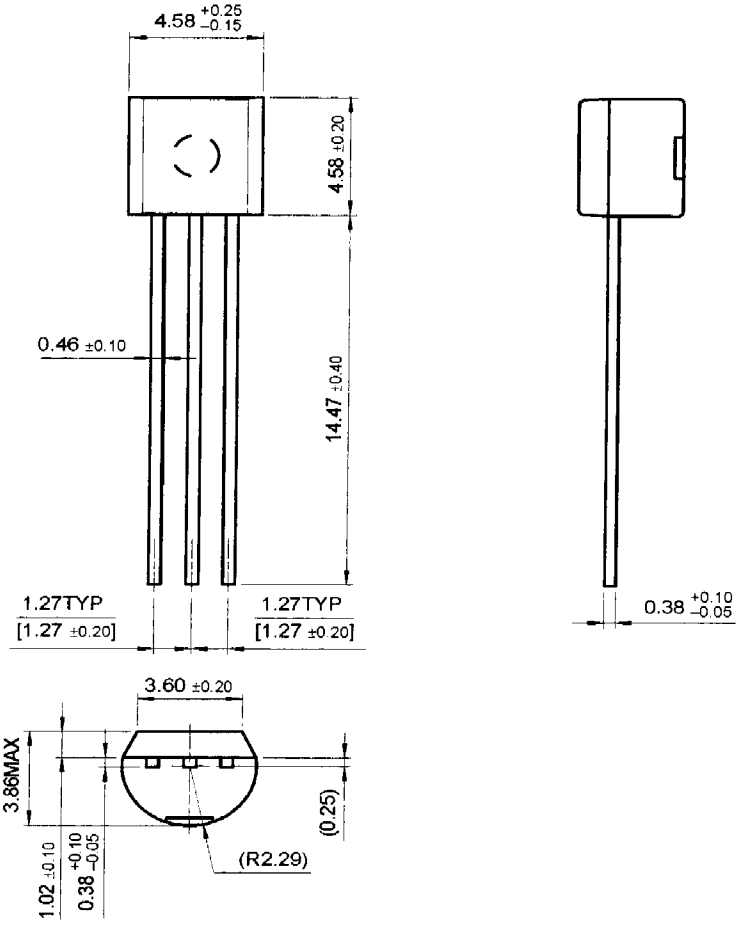
Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 2mA, I_B = 0	50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 10μA, I_E = 0	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 100μA, I_C = 0	6			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 50V, V_{BE} = 0			15	nA
I_{EBO}	Emitter-Base Leakage Current	V_{EB} = 4V, I_E = 0			15	nA
On Characteristics						
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 10μA V_{CE} = 5V, I_C = 2mA V_{CE} = 5V, I_C = 100mA	40 120 80		 500	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 0.5mA I_C = 100mA, I_B = 5mA			0.25 0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 100mA, I_B = 5mA			1.2	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 2mA	0.55		0.7	V
Dynamic Characteristics						
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 10mA, f = 100MHz	150			MHz
C_{ob}	Output Capacitance	V_{CE} = 10V, I_C = 0, f = 1MHz			5	pF
h_{fe}	Small Signal Current Gain	V_{CE} = 5V, I_C = 2mA, f = 1KHz	240		500	
NF	Noise Figure	V_{CE} = 5V, I_C = 0.2mA R_S = 2KΩ, f = 1KHz, BW = 200Hz			10	dB

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation @T_A=25°C Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W

TO-92


4.58 +0.25 −0.15
4.58 ±0.20
0.46 ±0.10
14.47 ±0.40
1.27TYP
[1.27 ±0.20]
1.27TYP
[1.27 ±0.20]
0.38 +0.10 −0.05
3.60 ±0.20
3.86MAX
(0.25)
(R2.29)
1.02 ±0.10
0.38 +0.10 −0.05