

BC182

NPN General Purpose Amplifier

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



1. Collector 2. Base 3. Emitter

Absolute Maximum Ratings T_C=25°C unless otherwise noted

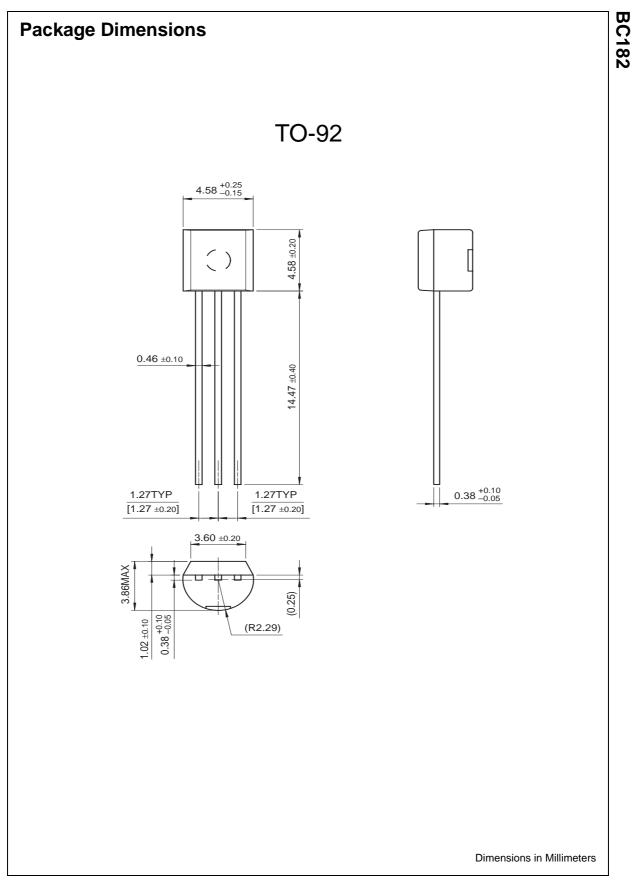
Symbol	Parameter	Value	Units	
V _{CEO}	Collector-Emitter Voltage	50	V	
V _{CBO}	Collector-Base Voltage	60	V	
V _{EBO}	Emitter-Base Voltage	6	V	
I _C	Collector Current - Continuous	100	mA	
T _{J,} T _{STG}	Storage Junction Temperature Range	- 55 ~ 150	°C	

Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
Off Characteristics						
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	$I_{\rm C} = 2{\rm mA}, I_{\rm B} = 0$	50			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	$I_{\rm C} = 10 \mu {\rm A}, \ I_{\rm E} = 0$	60			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	$I_{\rm E} = 10 \mu A, I_{\rm C} = 0$	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	$V_{CE} = 5V, I_{C} = 10\mu A$	40			
		$V_{CE} = 5V, I_C = 2mA$	120		500	
		$V_{CE} = 5V, I_{C} = 100mA$	80			
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = 10mA, I _B = 0.5mA			0.25	V
		I _C = 100mA, I _B = 5mA			0.6	
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	$V_{CE} = 5V, I_{C} = 2mA, f = 1KHz$	125		500	
NF	Noise Figure	$V_{CE} = 5V, I_{C} = 0.2mA$			10	dB
		$R_S = 2K\Omega$, f = 1KHz				

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	Thermal Characteristics T _A =25°C unless otherwise noted			
Symbol	Parameter	Max.	Units	
` D	Total Device Dissipation @T _A =25°C	350	mW	
-	Derate above 25°C	2.8	mW/°C	
R _{eja}	Thermal Resistance, Junction to Ambient 357		mW/°C	
$R_{\theta JC}$	Thermal Resistance, Junction to Case	ermal Resistance, Junction to Case 125 °C/		



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