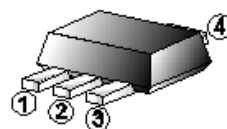


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- 60V V_{CE0}
- 3A continuous current
- Low saturation voltage

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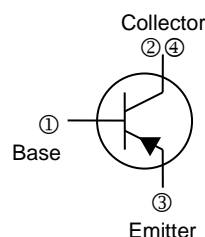


PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch

ORDER INFORMATION

Part Number	Type
BCP157-C	Lead (Pb)-free and Halogen-free



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	DC	-3
		Pulse ¹	-6
Collector Power Dissipation ²	P_C	0.5	W
		2	
Junction & Storage temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

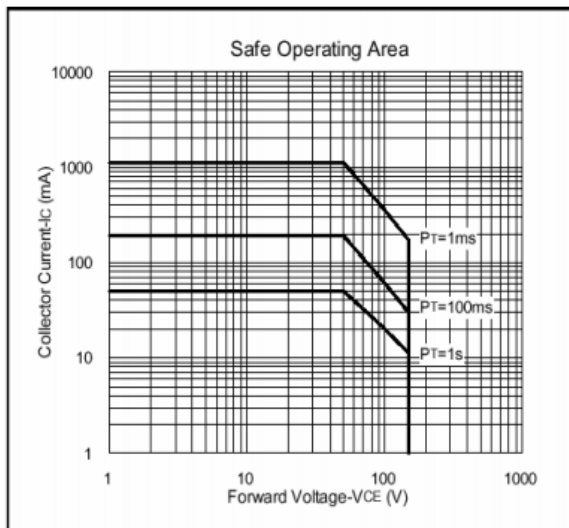
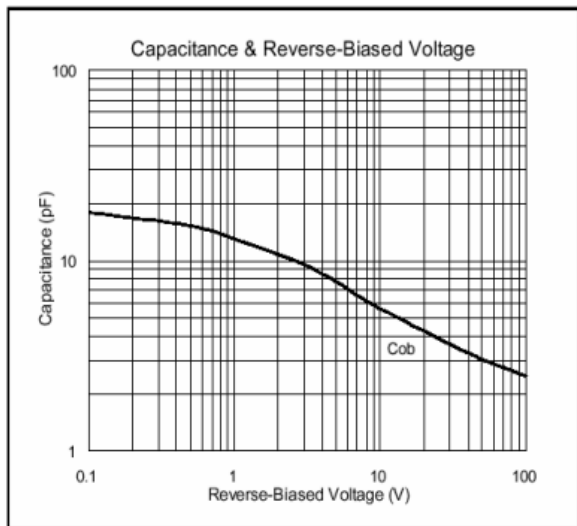
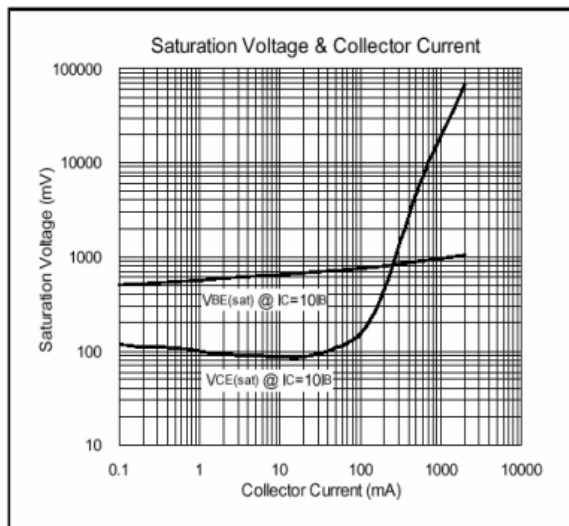
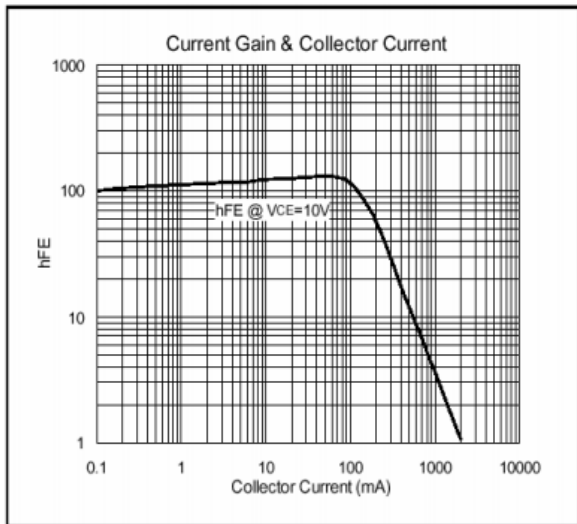
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-80	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60	-	-	V	$I_C = -10\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -100\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -4\text{V}, I_C = 0$
DC Current Gain	h_{FE}	70	200	-		$V_{CE} = -2\text{V}, I_C = -50\text{mA}$
		100	200	300		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$
		80	170	-		$V_{CE} = -2\text{V}, I_C = -1\text{A}$
		40	150	-		$V_{CE} = -2\text{V}, I_C = -2\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-150	-300	mV	$I_C = -1\text{A}, I_B = -100\text{mA}$
		-	-450	-600		$I_C = -3\text{A}, I_B = -300\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-0.9	-1.25	V	$I_C = -1\text{A}, I_B = -100\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(on)}$	-	-0.8	-1	V	$I_C = -1\text{A}, V_{CE} = -2\text{V}$
Output Capacitance	C_{CO}	-	-	30	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Transition Frequency	f_T	100	140	-	MHz	$V_{CE} = -5\text{V}, I_C = -100\text{mA}, f = 100\text{MHz}$
Switching Time	T_{on}	-	40	-	nS	$V_{CC} = -10\text{V}, I_C = -500\text{mA}, I_{B1} = -I_{B2} = -50\text{mA}$
	T_{off}	-	450	-		

Note:

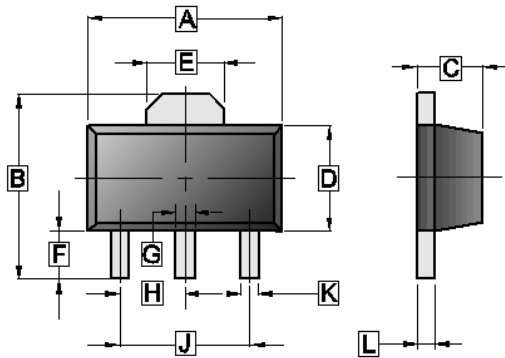
- Measured under pulse condition. Pulse width < 300us, Duty cycle < 2%.

CHARACTERISTIC CURVES



PACKAGE OUTLINE DIMENSIONS

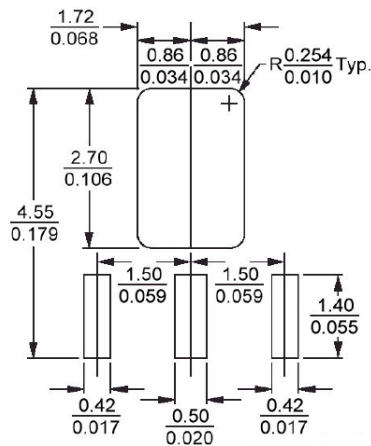
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REF.	Millimeter	
	Min.	Max.
A	4.40	4.60
B	3.94	4.25
C	1.40	1.60
D	2.25	2.60
E	1.55 TYP.	
F	0.89	1.20
G	0.40	0.58
H	1.50 TYP.	
J	3.00 TYP.	
K	0.32	0.52
L	0.35	0.44

MOUNTING PAD LAYOUT

SOT-89



*Dimensions in millimeters