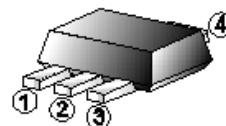


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Collector-Emitter Saturation Voltage
- High Breakdown Voltage

SOT-89



MARKING

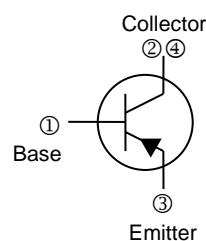
A44

PACKAGE INFORMATION

Package	MPQ	Reel Size
SOT-89	1K	7 inch

ORDER INFORMATION

Part Number	Type
BCPA44-C	Lead (Pb)-free and Halogen-free



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	400	V
Collector-Emitter Voltage	V _{CE0}	400	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	200	mA
Collector Current-Pulsed	I _{CM}	300	mA
Collector Power Dissipation	P _C	500	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	250	°C / W
Junction and Storage Temperature	T _J , T _{STG}	-55~150	°C

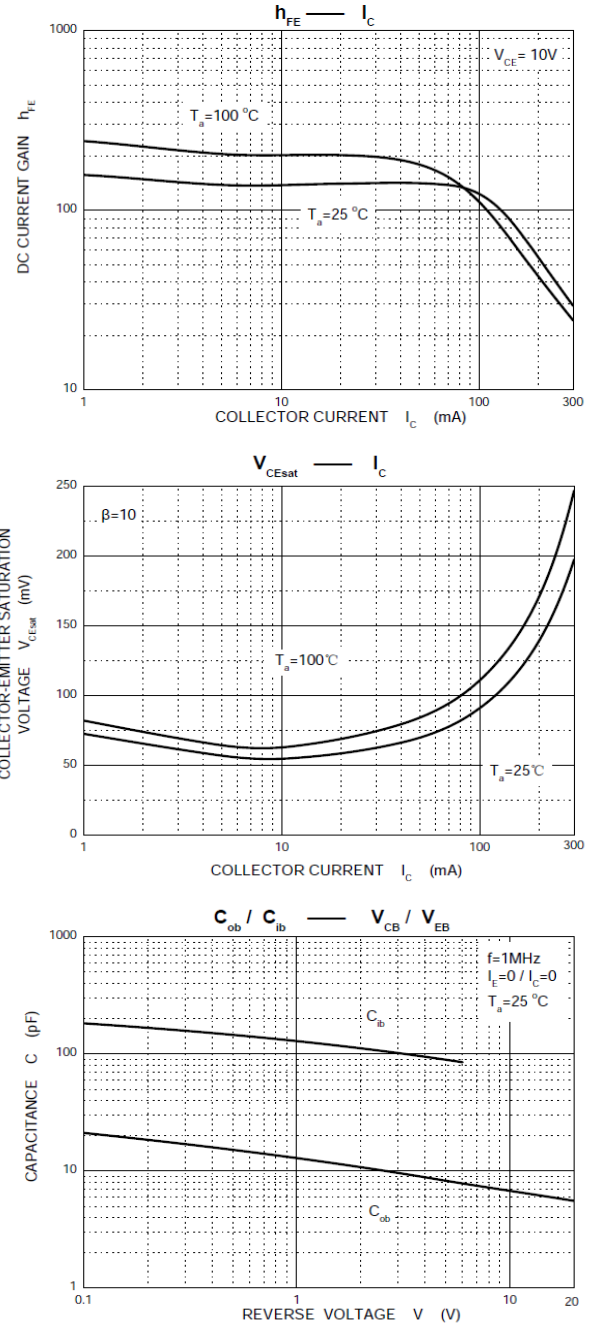
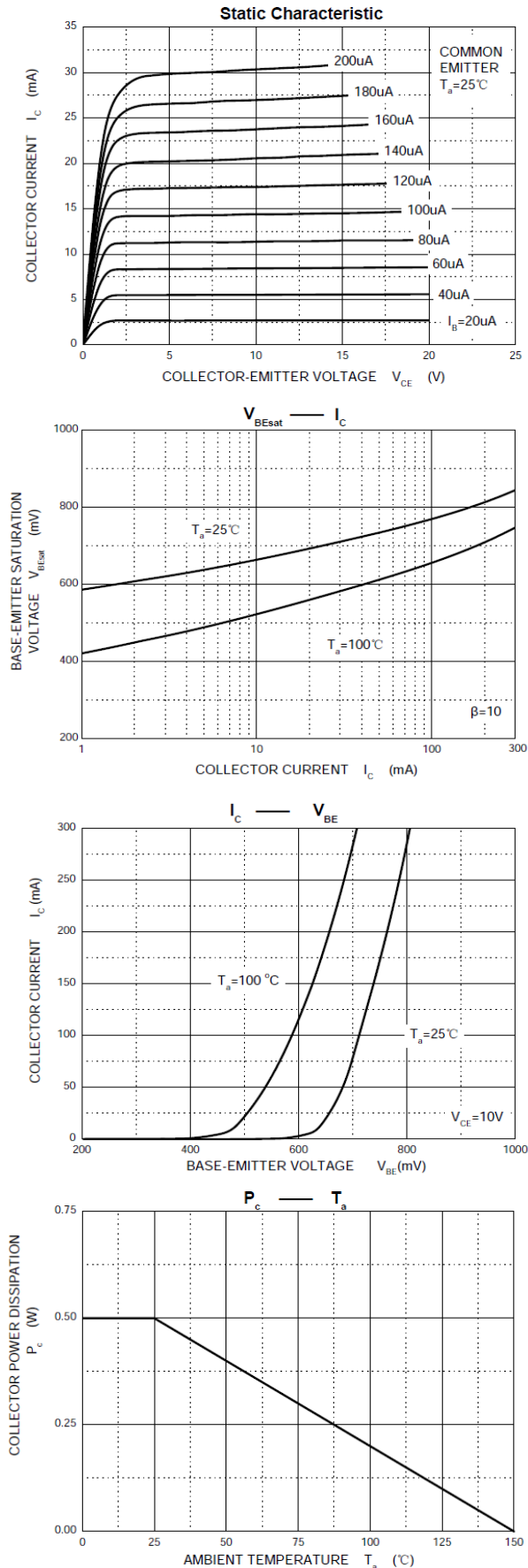
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	400	-	-	V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	400	-	-	V	$I_C=1\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=400\text{V}$, $I_E=0$
Emitter Cut-Off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=4\text{V}$, $I_C=0$
DC Current Gain ¹	h_{FE}	40	-	-	V	$V_{CE}=10\text{V}$, $I_C=1\text{mA}$
		50	-	200		$V_{CE}=10\text{V}$, $I_C=10\text{mA}$
		45	-	-		$V_{CE}=10\text{V}$, $I_C=50\text{mA}$
		40	-	-		$V_{CE}=10\text{V}$, $I_C=100\text{mA}$
Collector-Emitter Saturation Voltage ¹	$V_{CE(sat)}$	-	-	0.4	V	$I_C=1\text{mA}$, $I_B=0.1\text{mA}$
		-	-	0.5		$I_C=10\text{mA}$, $I_B=1\text{mA}$
		-	-	0.75		$I_C=50\text{mA}$, $I_B=5\text{mA}$
Base-Emitter Saturation Voltage ¹	$V_{BE(sat)}$	-	-	0.75	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
Collector output capacitance	C_{ob}	-	-	7	P_F	$V_{CB}=20\text{V}$, $I_E=0$, $f=1\text{MHz}$
Emitter input capacitance	C_{ib}	-	-	130		$V_{BE}=0.5\text{V}$, $I_C=0$, $f=1\text{MHz}$

Note:

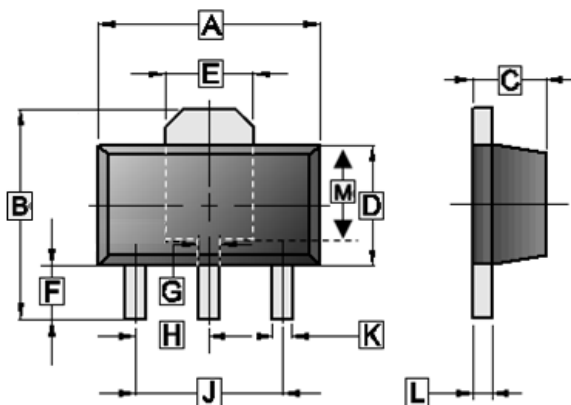
1. Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.

TYPICAL CHARACTERISTIC CURVES



PACKAGE OUTLINE DIMENSIONS

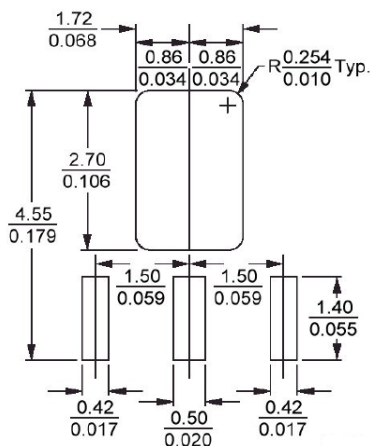
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REF.	Millimeter	
	Min.	Max.
A	4.40	4.60
B	3.94	4.25
C	1.40	1.60
D	2.25	2.60
E	1.55 TYP.	
F	0.89	1.20
G	0.40	0.58
H	1.50 TYP.	
J	3.00 TYP.	
K	0.32	0.52
L	0.35	0.44
M	1.75 REF.	

MOUNTING PAD LAYOUT

SOT-89



*Dimensions in millimeters