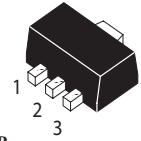


PNP Silicon Medium Power Transistors

 Lead(Pb)-Free

SOT-89



1. BASE
2. COLLECTOR
3. EMITTER

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

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-32	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-2	A
Collector Power Dissipation	P_D	0.5 (2.0*)	W
Junction & Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

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

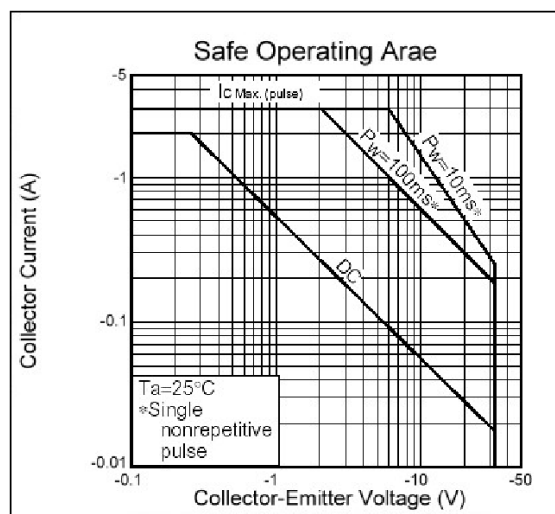
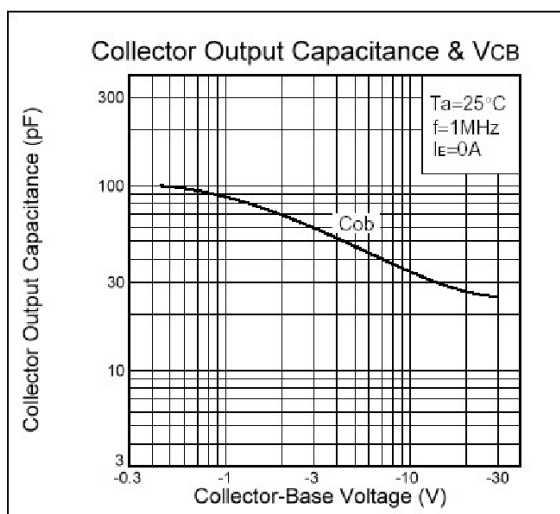
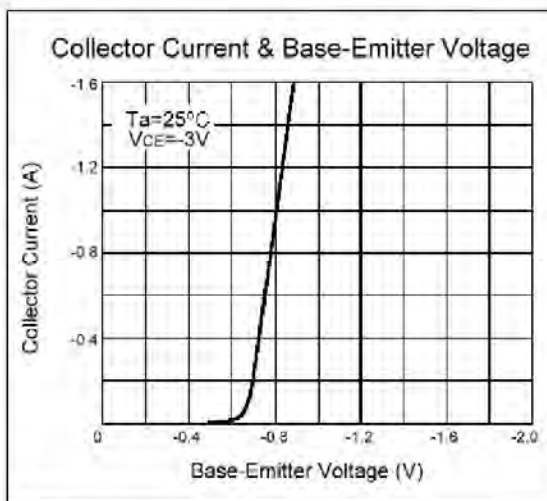
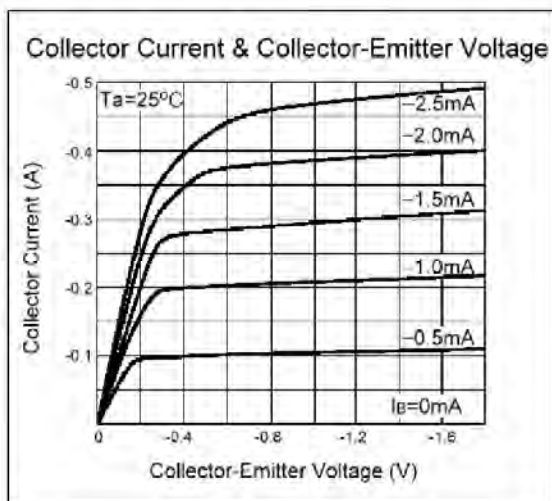
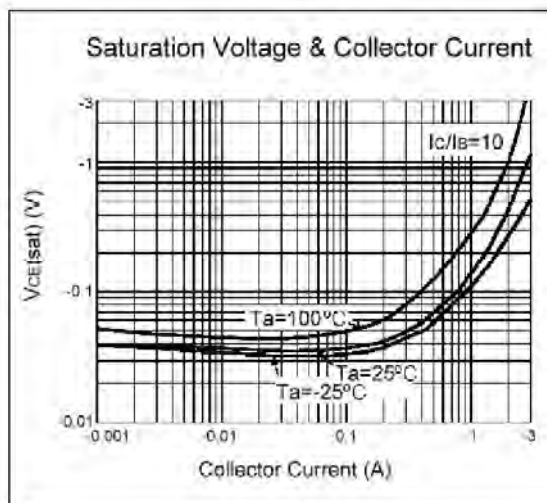
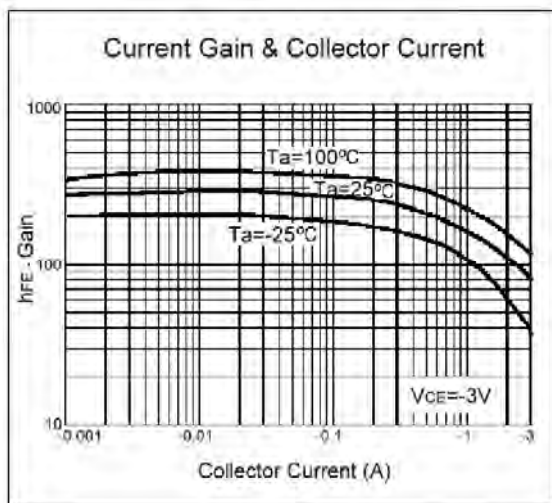
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-40	-	-	V	$I_C = -50\mu\text{A}, I_E = 0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-32	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -50\mu\text{A}, I_C = 0$
Collector cut-off current	I_{CBO}	-	-	-1	μA	$V_{CB} = -20\text{V}, I_E = 0$
Emitter cut-off current	I_{EBO}	-	-	-1	μA	$V_{EB} = -4\text{V}, I_C = 0$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-500	-800	mV	$I_C = -2\text{A}, I_B = -200\text{mA}$
DC current gain	h_{FE}	82	-	~90	-	$V_{CE} = -3\text{V}, I_C = -500\text{mA}$
Transition frequency	f_T	-	150	-	MHz	$V_{CE} = -5\text{V}, I_C = -500\text{mA}, f = 30\text{MHz}$
Output Capacitance	C_{OB}	-	50	-	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$

* Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

CLASSIFICATION OF h_{FE}

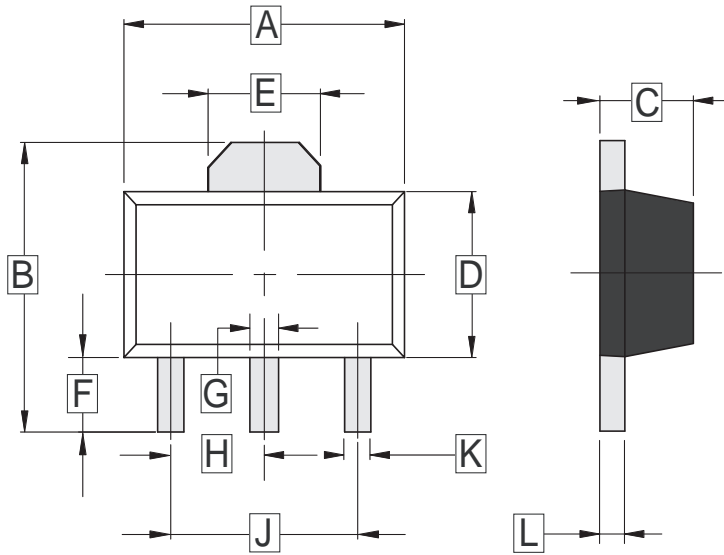
Marking	BCP	BCQ	BCR
Rank	P	Q	R
Range	82-180	120-270	180-390

CHARACTERISTIC CURVES



SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	4.400	4.600
B	3.940	4.250
C	1.400	1.600
D	2.300	2.600
E	1.500	1.700
F	0.890	1.200
G	0.400	0.580
H	1.500TYP	
J	3.000TYP	
K	0.320	0.520
L	0.350	0.440