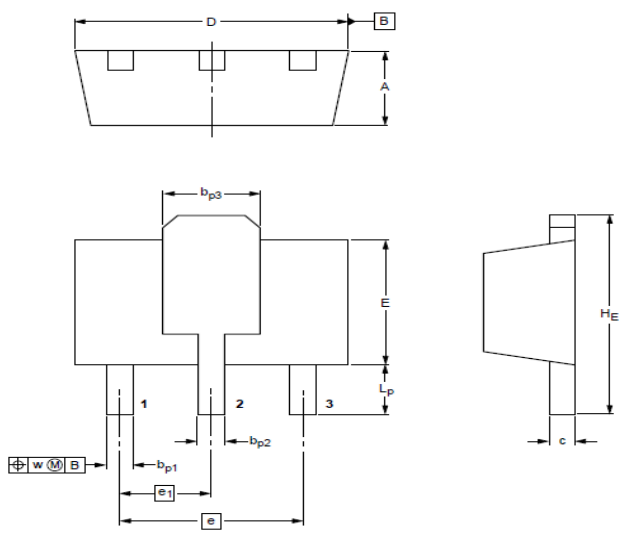


## PNP Transistors

Primary characteristics			
Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-base voltage	--50	V
$V_{CE0}$	Collector-emitter voltage	-50	V
$V_{EB0}$	Emitter-base voltage	-5	V
$P_C$	Collector power dissipation	500	mW

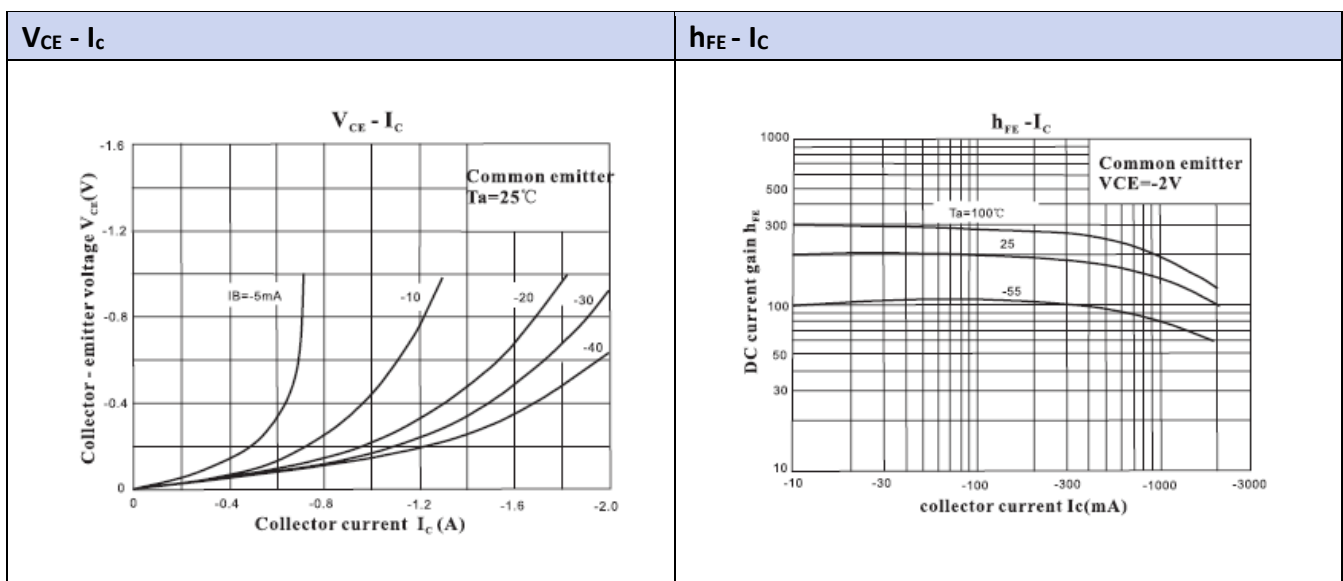
### Features

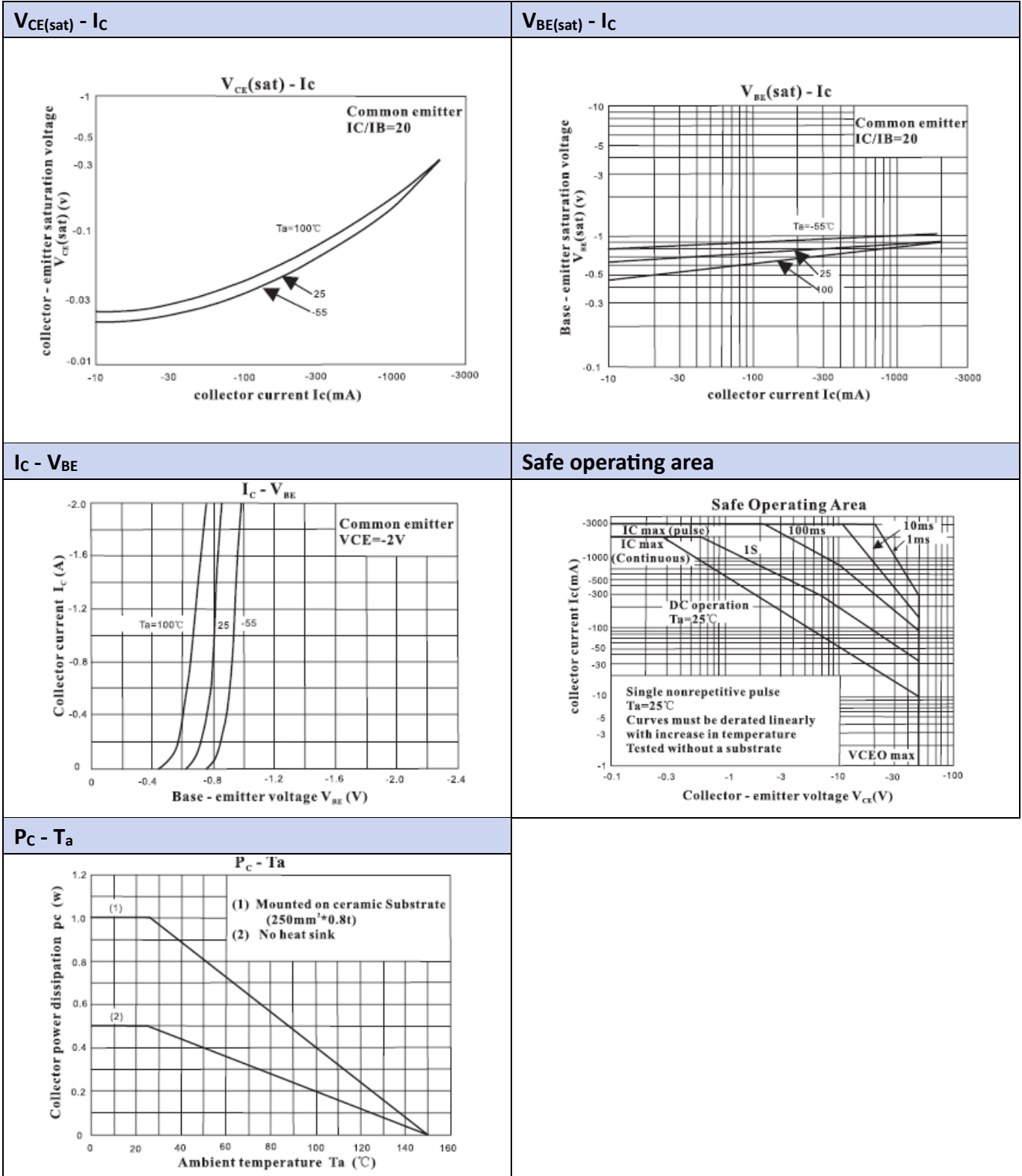
- **SOT-89** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Small flat package
- Complementary to **2SC2873**
- High speed switching time

Case dimensions												
												
SOT-89												
Unit	A	b <sub>p1</sub>	b <sub>p2</sub>	b <sub>p3</sub>	c	D	E	e	e <sub>1</sub>	H <sub>e</sub>	L <sub>p</sub>	w
mm	1.6 ±0.2	0.48 ±0.13	0.53 ±0.13	0.1.8 ±0.4	0.44 ±0.21	4.6 ±0.2	2.6 ±0.2	3.0	1.5	4.25 ±0.5	1.2 ±0.05	0.2

Absolute maximum ratings (T <sub>a</sub> = 25°C)			
Parameter	Symbol	Value	Unit
Collector-base voltage	$V_{CB0}$	-50	V
Collector-emitter voltage	$V_{CE0}$	-50	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-2	A
Power dissipation	$P_{tot}$	500	mW
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{STG}$	-55 ~ 150	

Characteristics ( $T_a = 25^\circ\text{C}$ )						
Parameter	Symbol	Test conditions	Value			Unit
			Min	Typ.	Max	
DC current gain	hFE(1)	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	70	-	240	-
	hFE(2)	$V_{CE} = -2\text{V}, I_C = -2\text{A}$	20	-	-	
Collector-base cutoff current	$I_{CBO}$	$V_{CB} = -50\text{V}, I_E = 0$	-	-	-100	nA
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$				V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_E = 0$	-50	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_C = -100\mu\text{A}, I_C = 0$	-5.0	-	-	V
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5.0\text{V}, I_C = 0$	-	-	-100	nA
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -50\text{mA}$	-	-	-1.2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -50\text{mA}$	-	-	-0.5	
Transition frequency	$f_T$	$V_{CE} = -2.0\text{V}, I_C = -0.5\text{A}$	-	120	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0$ $f = 1.0\text{MHz}$	-	40	-	pF





Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
2SA1213	SOT-89	1000	Tape/Reel, 7"

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