



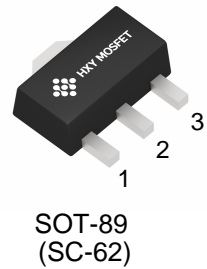
## Features

- Complementary to 2SC2873
- Small Flat Package
- Power Amplifier and Switching Applications
- Low Saturation Voltage
- High Speed Switching Time

1.BASE

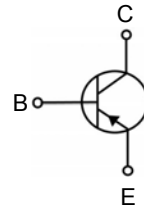
2.COLLECTOR

3.EMITTER



## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
2SA1213	SOT-89(SC-62)	NY	1000



## Maxmim Ratings (Ta=25 unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-2	A
$P_C$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	°C/W
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	°C

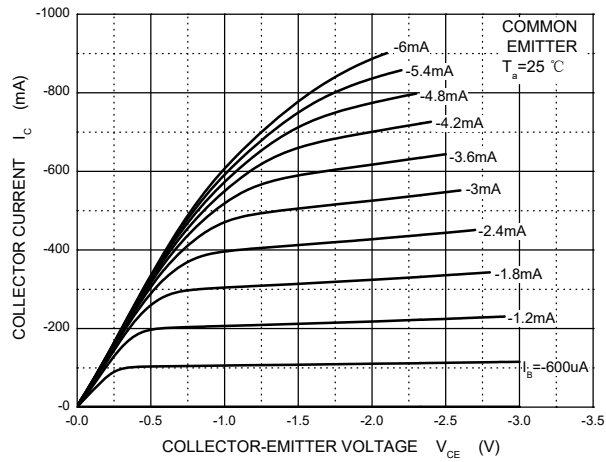
## Electrcal Charcteristics (Ta=25 unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -0.1mA, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -0.1mA, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-100	nA
DC current gain	$h_{FE}$	$V_{CE} = -2V, I_C = -500mA$	70		240	
		$V_{CE} = -2V, I_C = -2A$	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -50mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1A, I_B = -50mA$			-1.2	V
Collector output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		40		pF
Transition frequency	$f_T$	$V_{CE} = -2V, I_C = -0.5A$	100			MHz

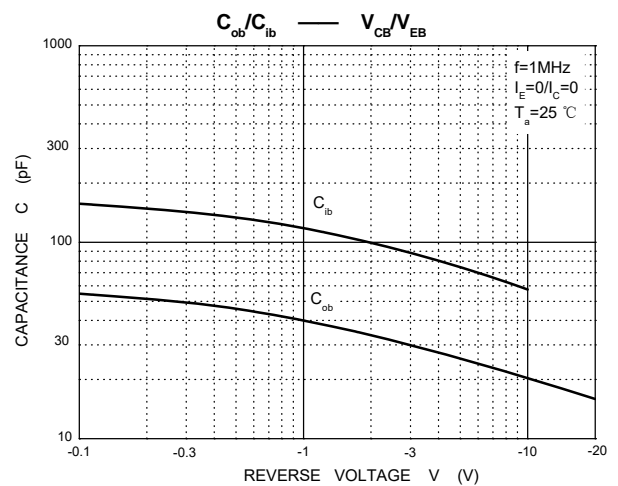
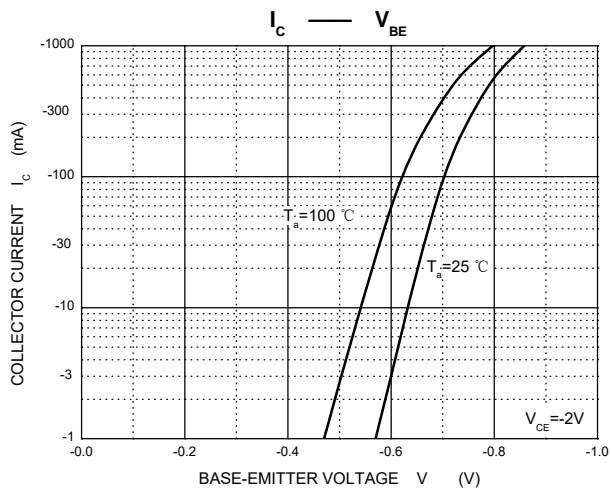
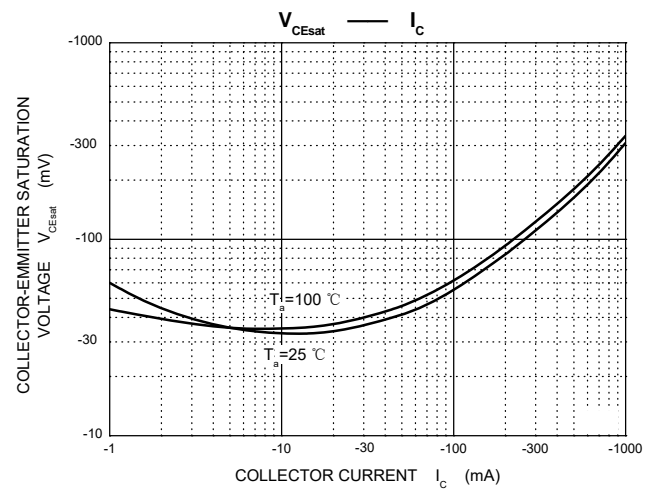
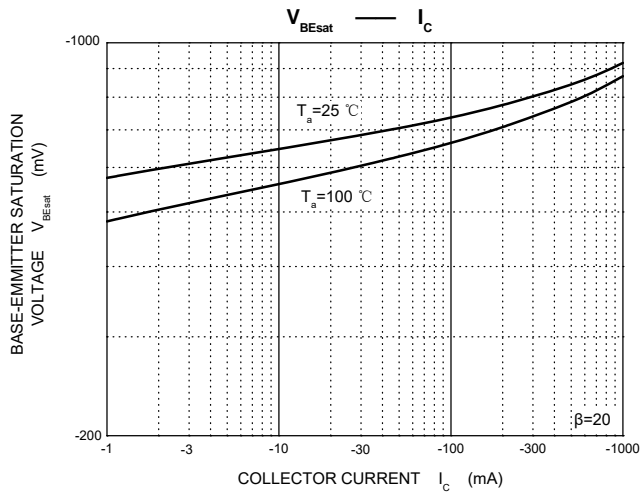
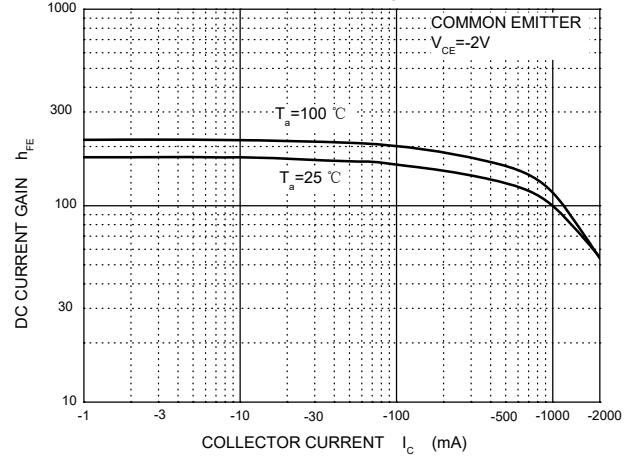


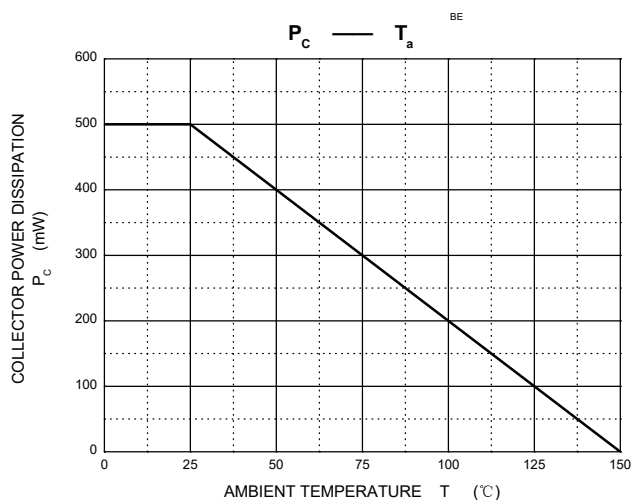
## Typical Characteristics

Static Characteristic

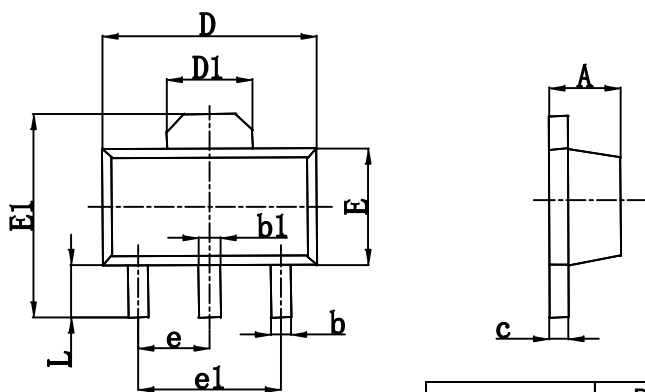


$h_{FE}$  —  $I_C$





### SOT-89(SC-62) Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047



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