

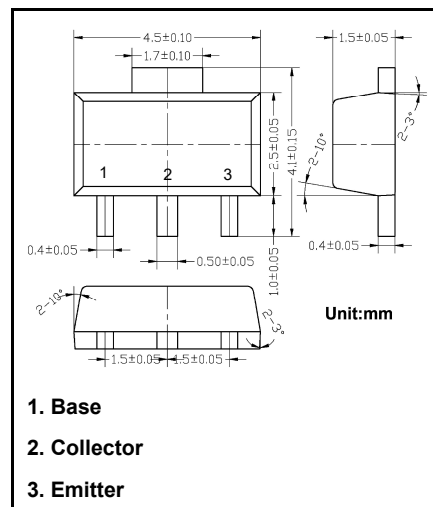
SOT-89 Plastic-Encapsulate Transistors

2SA1213

PNP Transistors

Features

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



Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	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
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 ~ +150	$^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	$^\circ\text{C/W}$

Electrical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CB0}$	Collector-base breakdown voltage	$I_c = -100\mu\text{A}$, $I_E = 0$	-50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_c = -10\text{mA}$, $I_B = 0$	-50			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu\text{A}$, $I_c = 0$	-5			V
I_{CBO}	Collector cut-off current	$V_{CB} = -50\text{V}$, $I_E = 0$			-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5\text{V}$, $I_c = 0$			-100	nA
$h_{FE(1)}$	DC current gain	$V_{CE} = -2\text{V}$, $I_c = -500\text{mA}$	70		240	
$h_{FE(2)}$		$V_{CE} = -2\text{V}$, $I_c = -2\text{A}$	20			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_c = -1\text{A}$, $I_B = -50\text{mA}$			-0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_c = -1\text{A}$, $I_B = -50\text{mA}$			-1.2	V
f_r	Transition frequency	$V_{CE} = -2\text{V}$, $I_c = -0.5\text{A}$	100			MHz
C_{ob}	Collector output capacitance	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		40		pF

Classification OF $h_{FE(1)}$

Rank	O	Y
Range	70-140	120-240

Typical Characteristics

