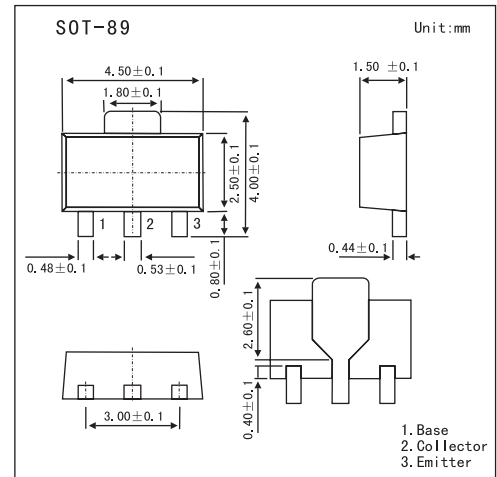


Silicon NPN Epitaxial Planar Type

2SD874,2SD874A

■ Features

- Large collector power dissipation P_C .
- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Mini power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	2SD874	30	V
	2SD874A	60	V
Collector-emitter voltage	2SD874	25	V
	2SD874A	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Peak collector current	I_{CP}	1.5	A
Collector power dissipation	P_C	1	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SD874,2SD874A■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base voltage	2SD874	$I_c = 10\ \mu\text{A}, I_E = 0$	30			V
	2SD874A		60			V
Collector-emitter voltage	2SD874	$I_c = 2\ \text{mA}, I_B = 0$	25			V
	2SD874A		50			V
Emitter-base voltage	V_{EBO}	$I_E = 10\ \mu\text{A}, I_c = 0$	5			V
Collector-base cutoff current	I_{CBO}	$V_{CB} = 20\ \text{V}, I_B = 0$			0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10\ \text{V}, I_c = 500\ \text{mA}$	85		340	?
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 500\ \text{mA}, I_B = 50\ \text{mA}$		0.2	0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c = 500\ \text{mA}, I_B = 50\ \text{mA}$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10\ \text{V}, I_E = -50\ \text{mA}, f = 200\ \text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$			20	pF

■ hFE Classification

Marking	2SD874:Z, 2SD874A:Y		
Rank	Q	R	S
hFE	85~170	120~240	170~340