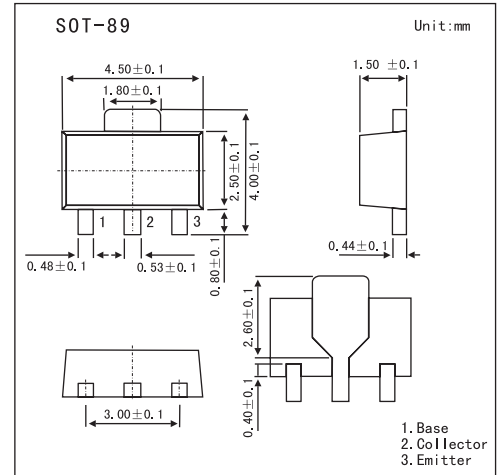


## Silicon NPN Epitaxial Planar Type

## 2SD875

## ■ Features

- Large collector power dissipation  $P_C$ .
- High collector-emitter voltage (Base open)  $V_{CEO}$ .
- 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	$V_{CBO}$	80	V
Collector-emitter voltage	$V_{CEO}$	80	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	0.5	A
Peak collector current	$I_{CP}$	1	A
Collector power dissipation	$P_C$	1	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base voltage	$V_{CBO}$	$I_C = 10 \mu\text{A}$ , $I_E = 0$	80			V
Collector-emitter voltage	$V_{CEO}$	$I_C = 100 \mu\text{A}$ , $I_B = 0$	80			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	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 10 \text{V}$ , $I_C = 150 \text{mA}$	130		330	?
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 300 \text{mA}$ , $I_B = 30 \text{mA}$		0.2	0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 300 \text{mA}$ , $I_B = 30 \text{mA}$		0.85	1.2	V
Transition frequency	$f_T$	$V_{CB} = 10 \text{V}$ , $I_E = -50 \text{mA}$ , $f = 200 \text{MHz}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{V}$ , $I_E = 0$ , $f = 1 \text{MHz}$		11	20	pF

■  $h_{FE}$  Classification

Marking	X	
Rank	R	S
$h_{FE}$	130~220	185~330