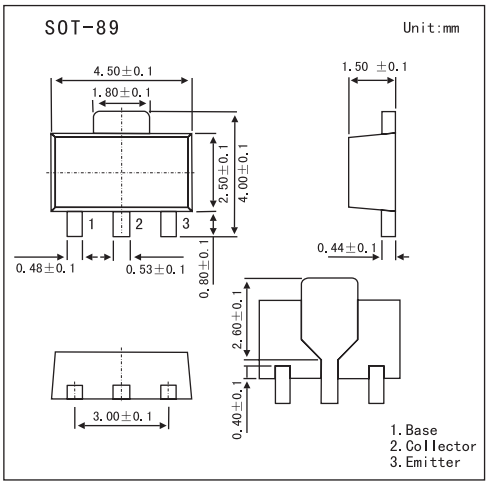
Silicon NPN Epitaxial Planar Type

2SD874,2SD874A



■ Features

- Large collector power dissipation PC.
- 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 Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage	2SD874	V_{CBO}	30	V
	2SD874A		60	V
Collector-emitter voltage	2SD874	V_{CEO}	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	℃
Storage temperature		T_{stg}	-55 to +150	℃

2SD874,2SD874A

■ Electrical Characteristics Ta = 25℃

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

■ h_{FE} Classification

Marking	2SD874:Z, 2SD874A:Y		
Rank	Q	R	S
h_{FE}	85～170	120～240	170～340