

# 2SA2028

Silicon PNP epitaxial planer type

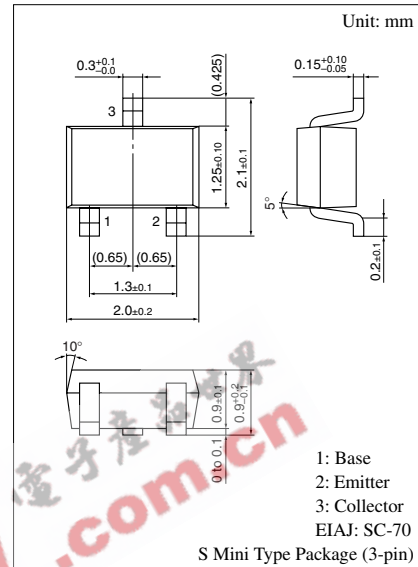
For DC-DC converter

## ■ Features

- Large current capacitance
- Low collector to emitter saturation voltage
- High-speed switching
- Small type package, allowing downsizing and thinning of the equipment.

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-20	V
Collector to emitter voltage	$V_{CEO}$	-20	V
Emitter to base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-3	A
Collector current	$I_C$	-1	A
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



Marking Symbol: AT

## ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = -10 \mu\text{A}$ , $I_E = 0$	-20			V
Collector to emitter voltage	$V_{CEO}$	$I_C = -1 \text{ mA}$ , $I_B = 0$	-20			V
Emitter to base voltage	$V_{EBO}$	$I_E = -10 \mu\text{A}$ , $I_C = 0$	-5			V
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = -2 \text{ V}$ , $I_C = -100 \text{ mA}$	160		560	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -200 \text{ mA}$ , $I_B = -10 \text{ mA}$		-40	-100	mV
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		20	30	pF
Transition frequency	$f_T$	$V_{CB} = -10 \text{ V}$ , $I_E = 10 \text{ mA}$ $f = 200 \text{ MHz}$		170		MHz