

# 2SD1272

## Silicon NPN epitaxial planar type

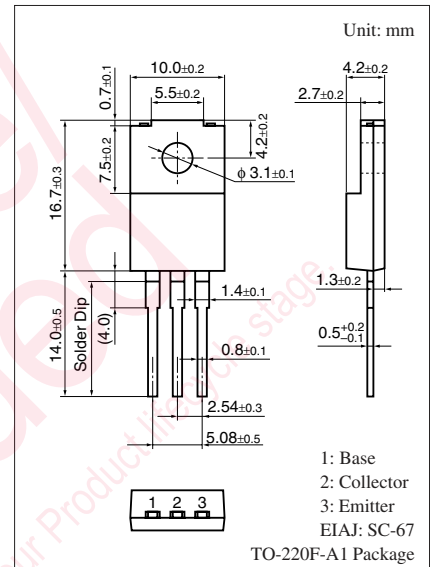
For high-speed switching and high current amplification ratio

### ■ Features

- High forward current transfer ratio  $h_{FE}$
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$
- Full-pack package which can be installed to the heat sink with one screw

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	200	V
Collector-emitter voltage (Base open)	$V_{CEO}$	150	V
Emitter-base voltage (Collector open)	$V_{EBO}$	6	V
Collector current	$I_C$	2.5	A
Peak collector current	$I_{CP}$	1	A
Collector power dissipation	$T_C = 25^\circ\text{C}$	$P_C$	40
			2.0
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



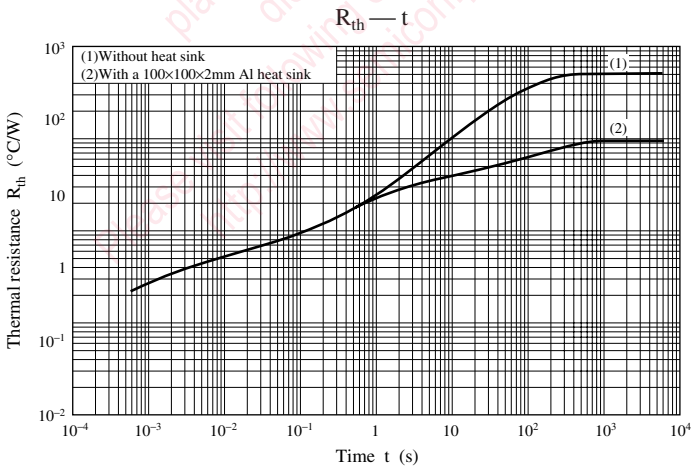
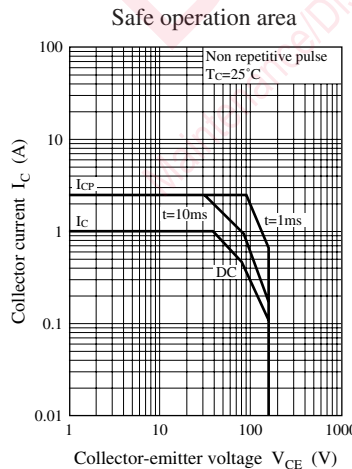
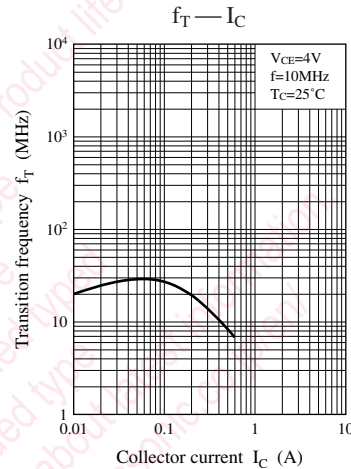
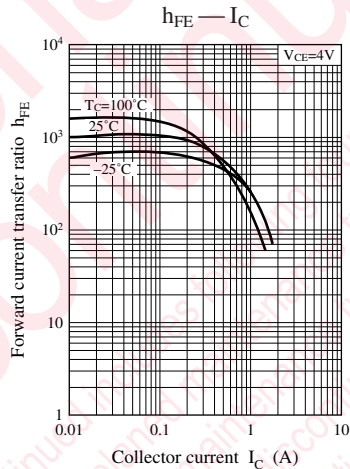
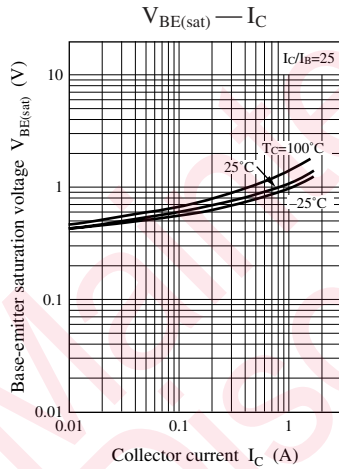
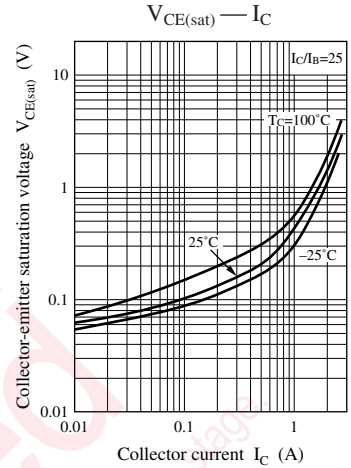
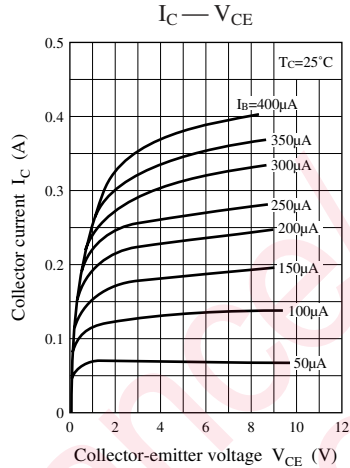
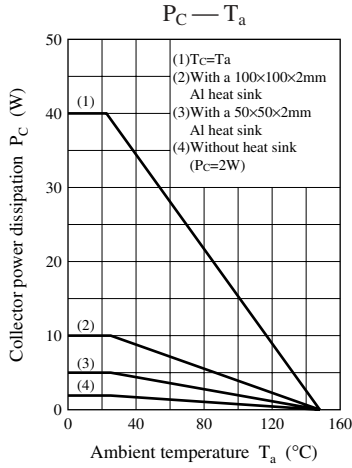
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 25 \text{ mA}, I_B = 0$	150			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 200 \text{ V}, I_E = 0$			100	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = 6 \text{ V}, I_C = 0$			100	$\mu\text{A}$
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = 4 \text{ V}, I_C = 0.2 \text{ A}$	500		2000	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5 \text{ A}, I_B = 0.02 \text{ A}$			1	V
Transition frequency	$f_T$	$V_{CE} = 4 \text{ V}, I_C = 0.1 \text{ A}, f = 10 \text{ MHz}$		25		MHz

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	Q	P
$h_{FE}$	500 to 1 200	800 to 2 000



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