

# 2SD0874, 2SD0874A (2SD874, 2SD874A)

## Silicon NPN epitaxial planar type

For low-frequency power amplification

Complementary to 2SB0766 (2SB766) and 2SB0766A (2SB766A)

### ■ 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 (Emitter open)	2SD0874	$V_{CBO}$	30	V
	2SD0874A		60	
Collector-emitter voltage (Base open)	2SD0874	$V_{CEO}$	25	V
	2SD0874A		50	
Emitter-base voltage (Collector open)	$V_{EBO}$	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	$^\circ\text{C}$	

Note) \*: Printed circuit board: Copper foil area of  $1\text{ cm}^2$  or more, and the board thickness of 1.7 mm for the collector portion

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	2SD0874	$I_C = 10\ \mu\text{A}, I_E = 0$	30			V
	2SD0874A		60			
Collector-emitter voltage (Base open)	2SD0874	$I_C = 2\ \text{mA}, I_B = 0$	25			V
	2SD0874A		50			
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10\ \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 20\ \text{V}, I_E = 0$			0.1	$\mu\text{A}$
Forward current transfer ratio *1	$h_{FE1}$ *2	$V_{CE} = 10\ \text{V}, I_C = 500\ \text{mA}$	85		340	—
		$V_{CE} = 5\ \text{V}, I_C = 1\ \text{A}$	50			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = 500\ \text{mA}, I_B = 50\ \text{mA}$		0.2	0.4	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = 500\ \text{mA}, I_B = 50\ \text{mA}$		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 (Common base, input open circuited)	$C_{ob}$	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$			20	pF

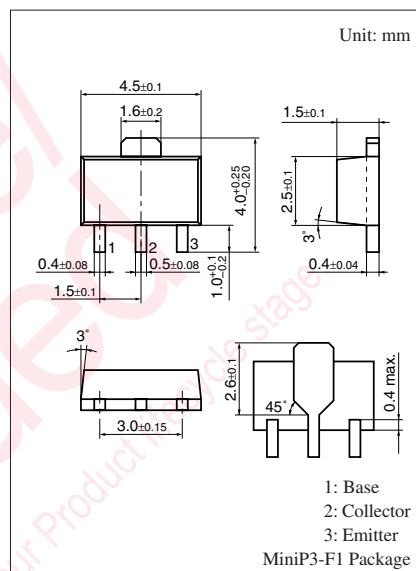
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Pulse measurement

\*2: Rank classification

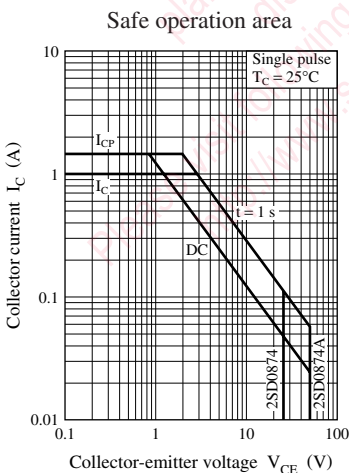
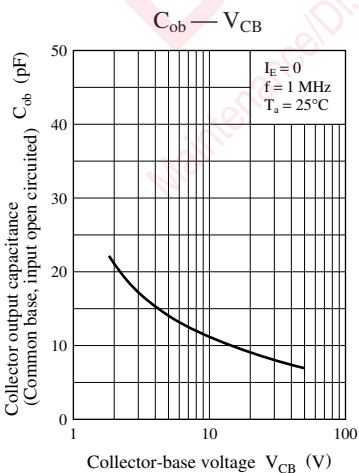
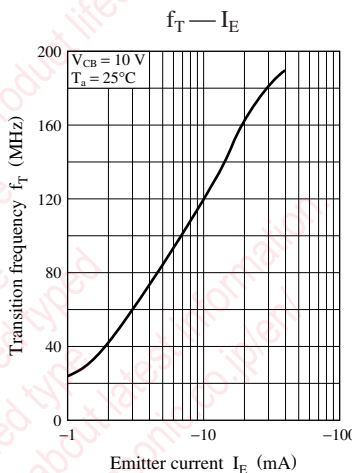
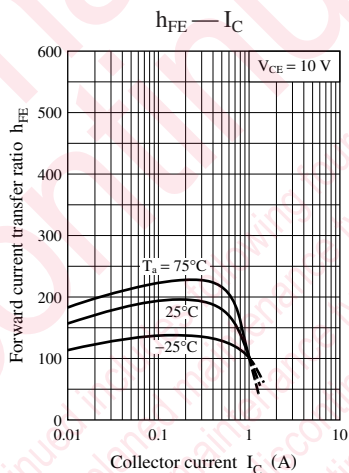
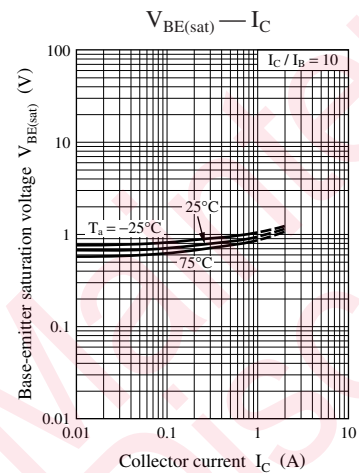
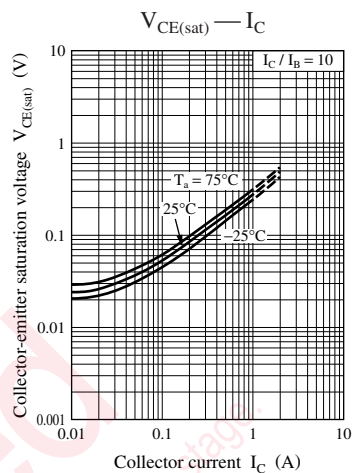
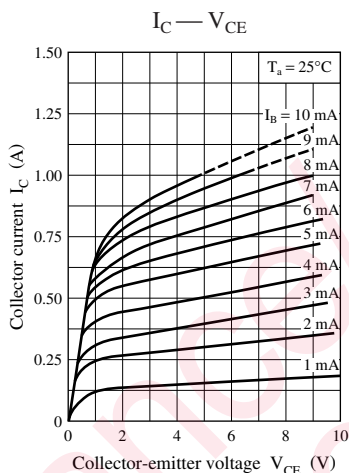
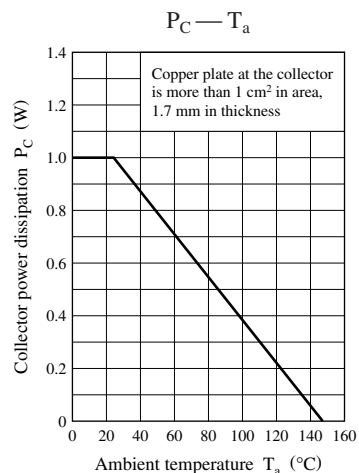
Rank	Q	R	S
$h_{FE1}$	85 to 170	120 to 240	170 to 340

Note) The part numbers in the parenthesis show conventional part number.



Marking Symbol:

- 2SD0874: Z
- 2SD0874A: Y



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