

# 2SB0766, 2SB0766A (2SB766, 2SB766A)

## Silicon PNP epitaxial planar type

For low-frequency output amplification

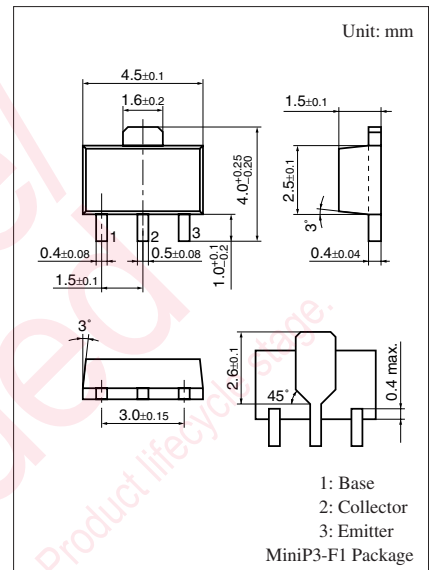
Complementary to 2SD0874 (2SD874), 2SD0874A (2SD874A)

### ■ Features

- Large collector power dissipation  $P_C$
- Mini 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)	2SB0766	$V_{CBO}$	-30	V
	2SB0766A		-60	
Collector-emitter voltage (Base open)	2SB0766	$V_{CEO}$	-25	V
	2SB0766A		-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	$^\circ\text{C}$	



Marking Symbol:

- 2SB0766: A
- 2SB0766A: B

Note) \*: Print 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)	2SB0766	$I_C = -10\ \mu\text{A}$ , $I_E = 0$	-30			V
	2SB0766A		-60			
Collector-emitter voltage (Base open)	2SB0766	$I_C = -2\ \text{mA}$ , $I_B = 0$	-25			V
	2SB0766A		-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	—
	$h_{FE2}$	$V_{CE} = -5\ \text{V}$ , $I_C = -1\ \text{A}$	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		-1.20	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	30	pF

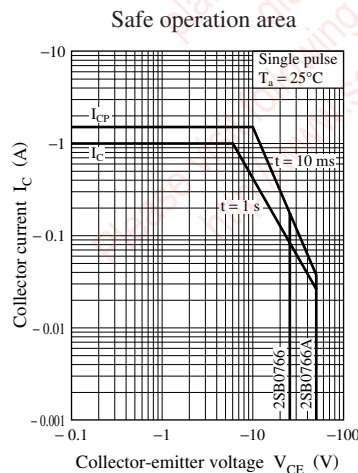
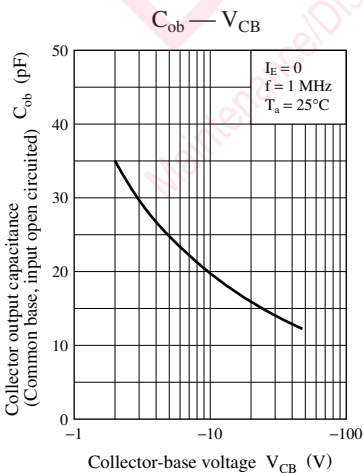
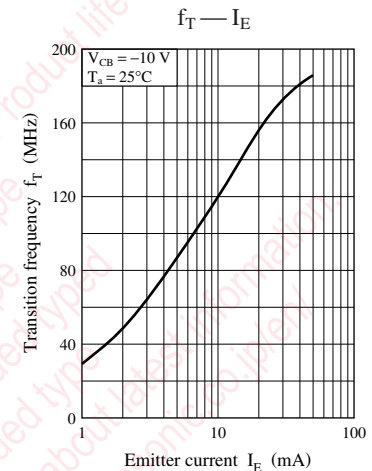
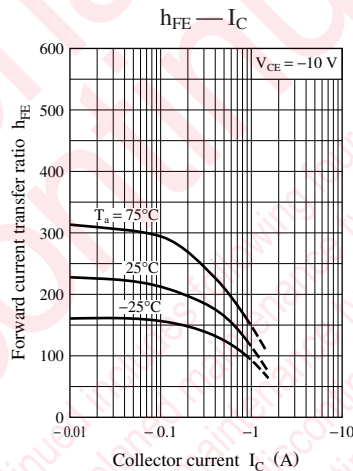
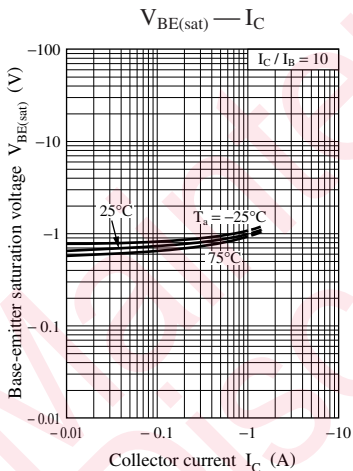
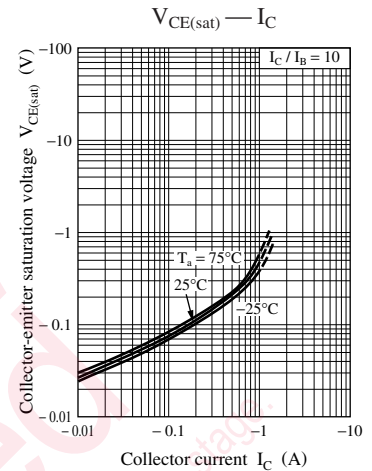
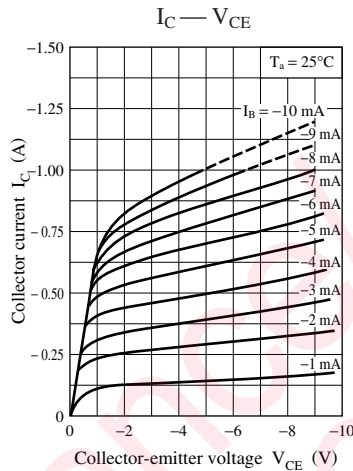
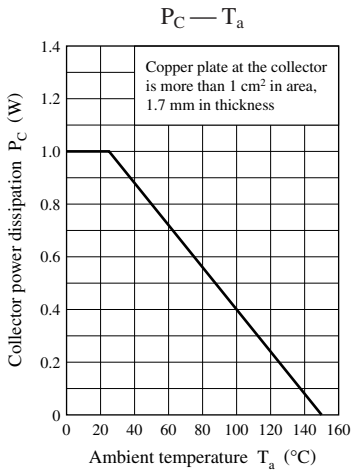
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

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.



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