

# 2SB0789, 2SB0789A (2SB789, 2SB789A)

## Silicon PNP epitaxial planar type

For low-frequency driver amplification

### ■ Features

- High collector-emitter voltage (Base open)  $V_{CEO}$
- Large collector power dissipation  $P_C$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SB0789	-100	V
	2SB0789A	-120	
Collector-emitter voltage (Base open)	2SB0789	-100	V
	2SB0789A	-120	
Emitter-base voltage (Collector open)	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.5	A
Peak collector current	$I_{CP}$	-1	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) \*: Print circuit board: Copper foil area of 1 cm<sup>2</sup> 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-emitter voltage (Base open)	2SB0789	$I_C = -100 \mu\text{A}, I_B = 0$	-100			V
	2SB0789A		-120			
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio *1	$h_{FE1}$ *2	$V_{CE} = -10 \text{ V}, I_C = -150 \text{ mA}$	90		220	—
	$h_{FE2}$	$V_{CE} = -5 \text{ V}, I_C = -500 \text{ mA}$	50			
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$		-0.2	-0.6	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	$f_T$	$V_{CB} = -10 \text{ V}, I_E = 50 \text{ mA}, f = 200 \text{ MHz}$		120		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			30	pF

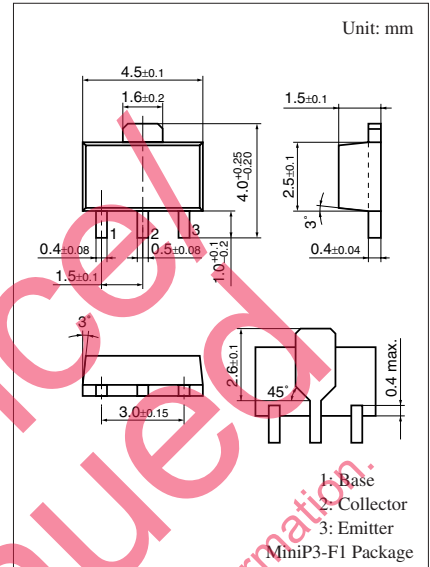
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Pulse measurement

\*2: Rank classification

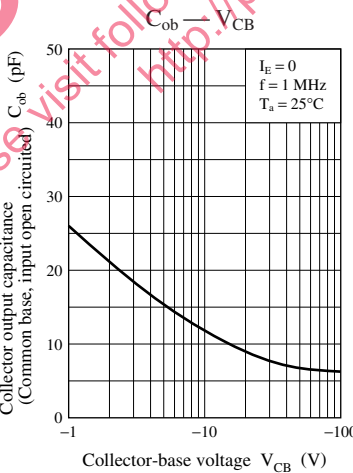
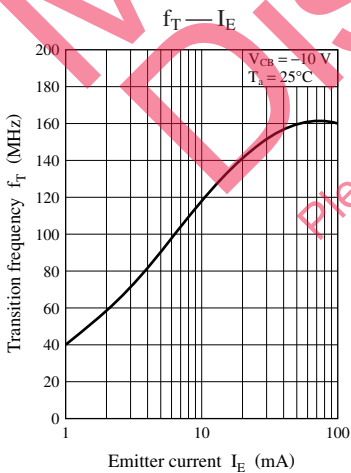
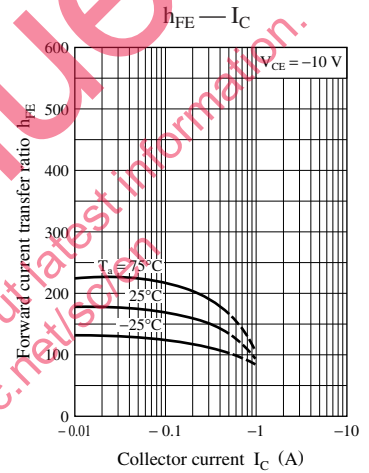
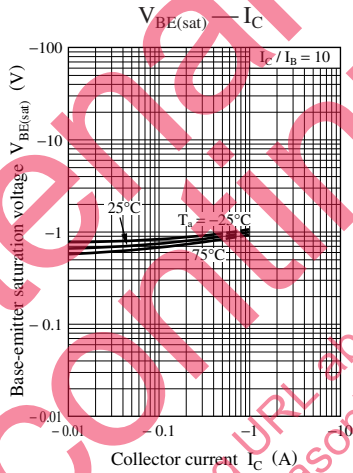
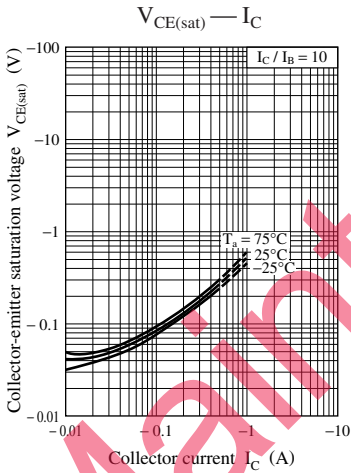
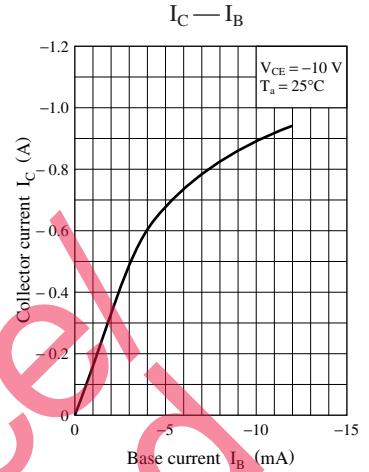
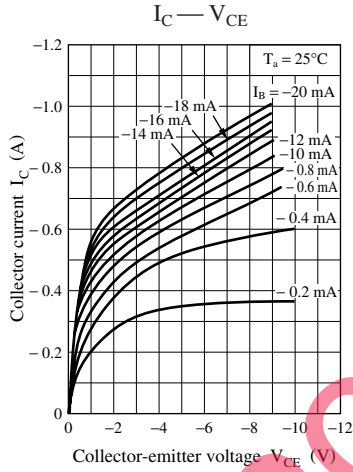
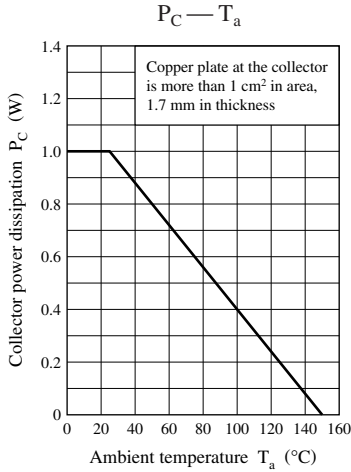
Rank	Q	R
$h_{FE1}$	90 to 155	130 to 220

Note) The part number in the parenthesis shows conventional part number.



Marking Symbol:

- 2SB0789: D
- 2SB0789A: E



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