

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

Silicon PNP epitaxial planer type

For low-frequency driver amplification

Complementary to 2SD0968 (2SD968) and 2SD0968A (2SD968A)

Features

- High collector to emitter voltage V_{CEO} .
- Large collector power dissipation P_C .

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–100	V
2SB0789			
2SB0789A		–120	
Collector to emitter voltage	V_{CEO}	–100	V
2SB0789			
2SB0789A		–120	
Emitter to base voltage	V_{EBO}	–5	V
Peak collector current	I_{CP}	–1	A
Collector current	I_C	–0.5	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	–55 ~ +150	$^\circ\text{C}$

* Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

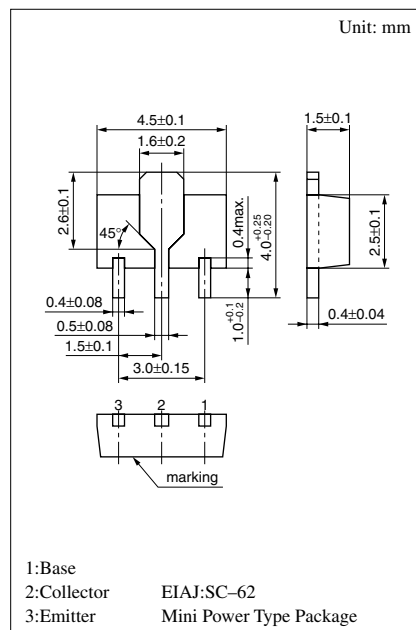
Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = -100\mu\text{A}, I_B = 0$	–100			V
2SB0789						
2SB0789A			–120			
Collector to base voltage	V_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	–5			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = -10\text{V}, I_C = -150\text{mA}$	90		220	
	h_{FE2}	$V_{CE} = -5\text{V}, I_C = -500\text{mA}$	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		–0.2	–0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		–0.85	–1.2	V
Transition frequency	f_T	$V_{CB} = -10\text{V}, I_E = 50\text{mA}, f = 200\text{MHz}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			30	pF

* h_{FE1} Rank classification

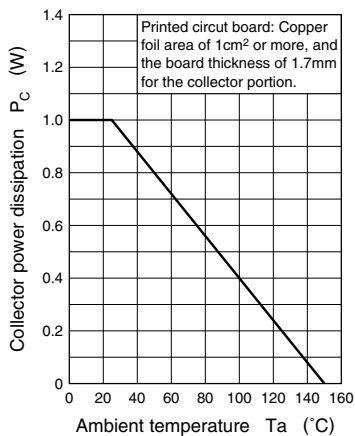
Rank	Q	R
h_{FE1}	90 ~ 155	130 ~ 220
Marking	2SB0789	DQ
Symbol	2SB0789A	EQ
		DR
		ER

Note.) The Part numbers in the Parenthesis show conventional part number.

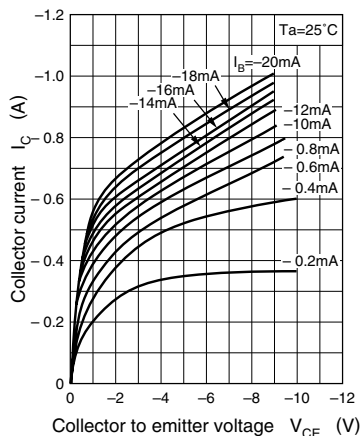


Marking symbol : D(2SB0789)
E(2SB0789A)

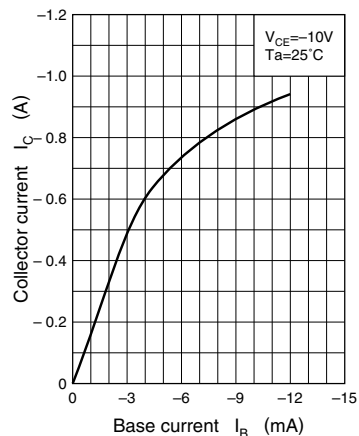
$P_C - T_a$



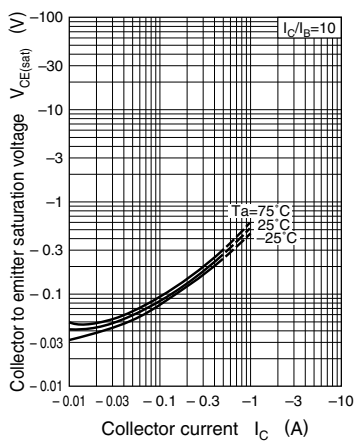
$I_C - V_{CE}$



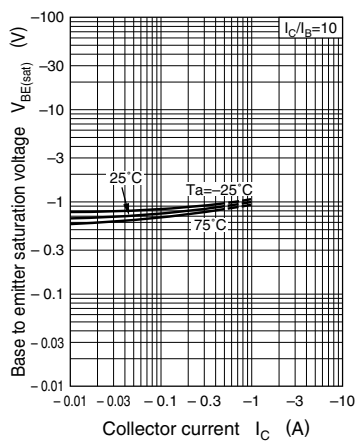
$I_C - I_B$



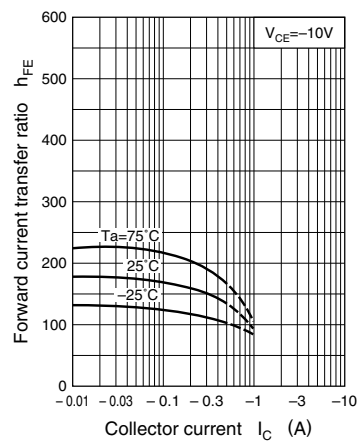
$V_{CE(sat)} - I_C$



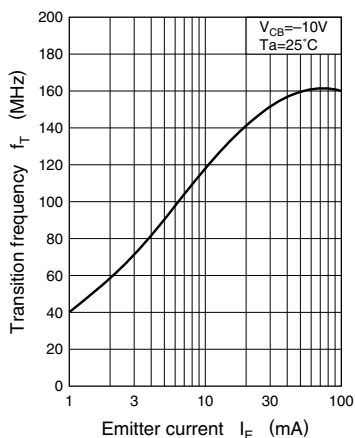
$V_{BE(sat)} - I_C$



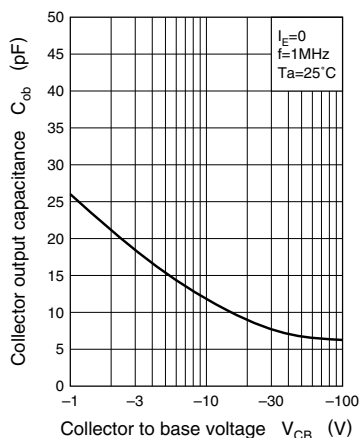
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



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