

2SB789, 2SB789A

Silicon PNP epitaxial planer type

For low-frequency driver amplification

Complementary to 2SD968 and 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	2SB789	V_{CBO}	−100	V
	2SB789A		−120	
Collector to emitter voltage	2SB789	V_{CEO}	−100	V
	2SB789A		−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	°C
Storage temperature		T_{stg}	−55 ~ +150	°C

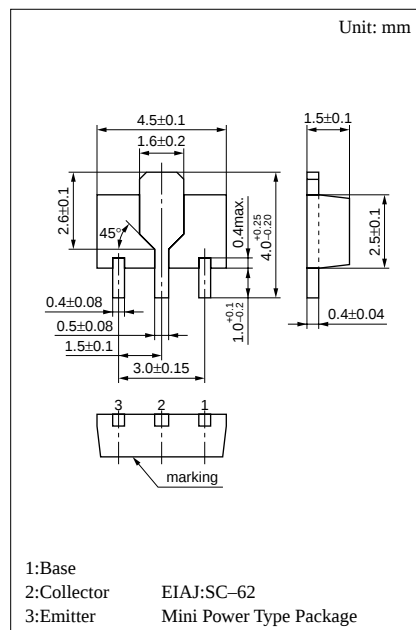
* Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

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

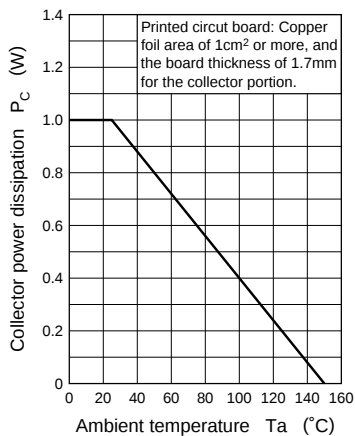
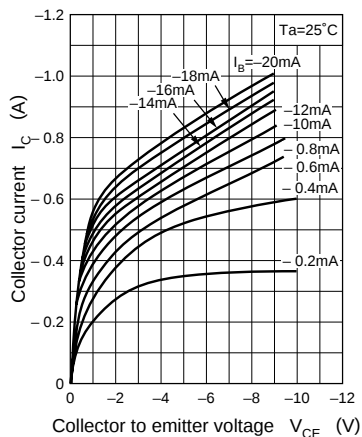
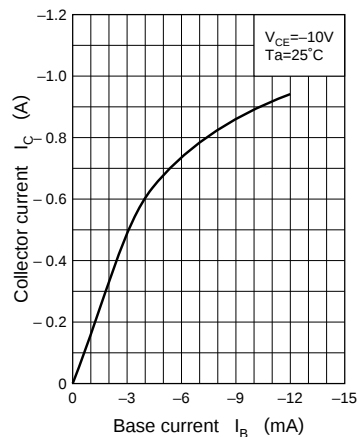
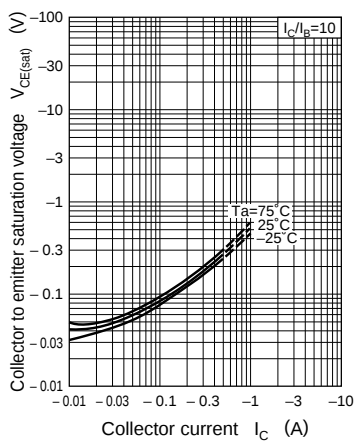
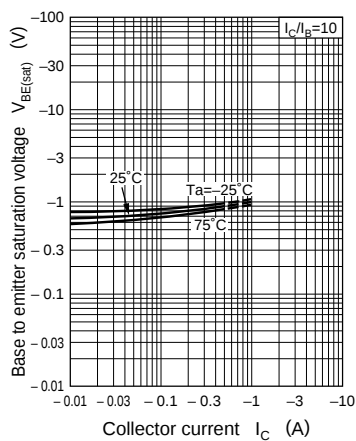
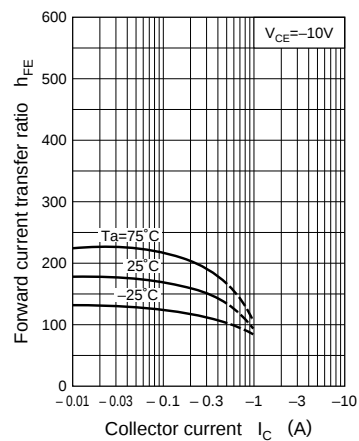
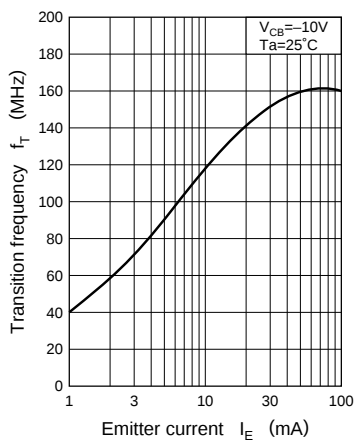
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = -100\mu\text{A}, I_B = 0$	-100			V
2SB789A			-120			
Collector to base voltage	V_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = -10\text{V}, I_C = -150\text{mA}$	90		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	Cob	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			30	pF

* h_{FE1} Rank classification

Rank	Q	R
h_{FE1}	90 ~ 155	130 ~ 220
Marking	2SB789 DQ	DR
Symbol	2SB789A EQ	ER



Marking symbol : D(2SB789)
E(2SB789A)

$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 