

2SB1209

Silicon PNP triple diffusion planer type

For low-frequency amplification

Features

- High collector to base voltage V_{CBO} .
- High collector to emitter voltage V_{CEO} .
- Low collector to emitter saturation voltage $V_{CE(sat)}$.

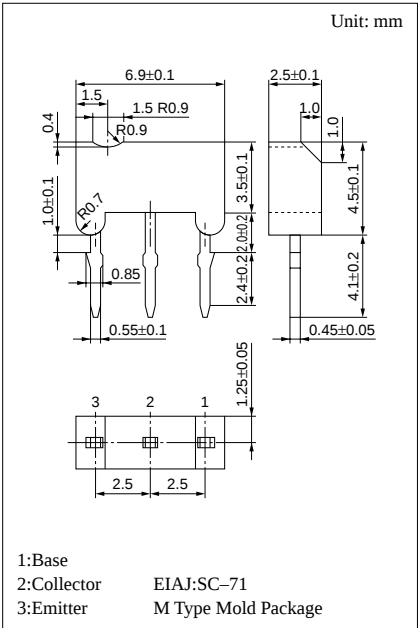
Absolute Maximum Ratings (Ta=25°C)

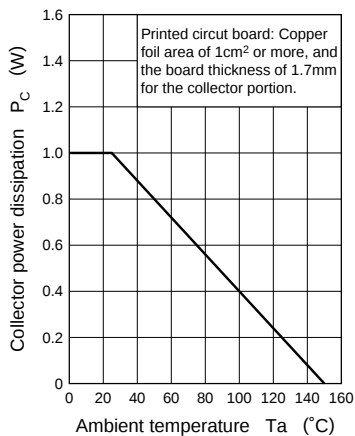
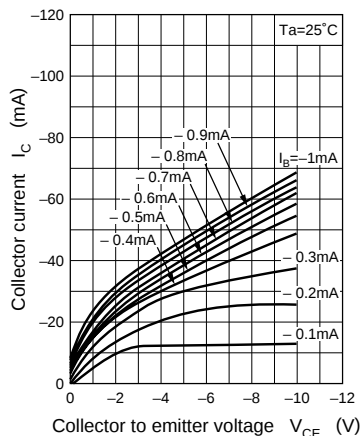
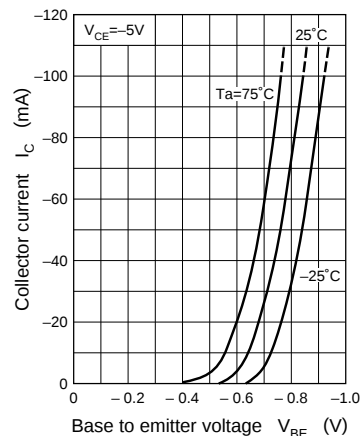
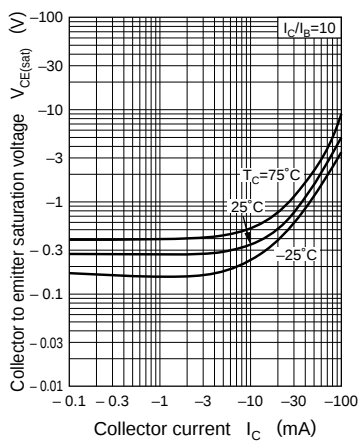
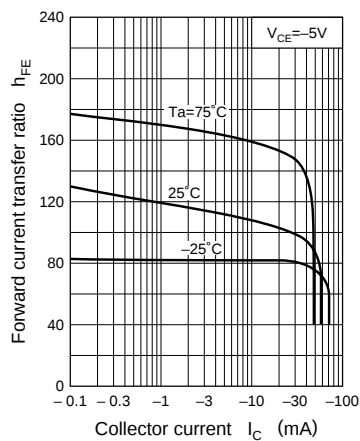
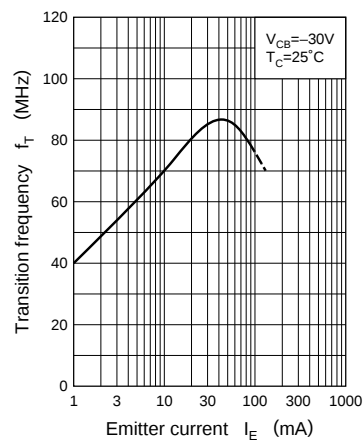
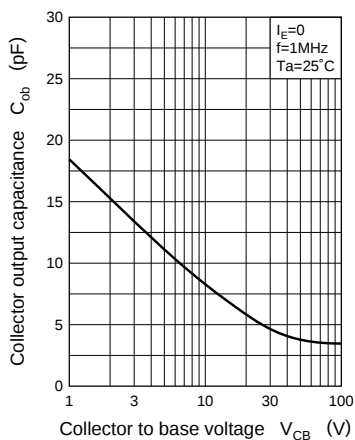
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-400	V
Collector to emitter voltage	V_{CEO}	-400	V
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-200	mA
Collector current	I_C	-100	mA
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = -100\mu A, I_E = 0$	-400			V
Collector to emitter voltage	V_{CEO}	$I_C = -500\mu A, I_B = 0$	-400			V
Emitter to base voltage	V_{EBO}	$I_E = -100\mu A, I_C = 0$	-5			V
Forward current transfer ratio	h_{FE}	$V_{CE} = -5V, I_C = -30mA$	40			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10mA, I_B = -1mA$			-0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50mA, I_B = -5mA$			-1.5	V
Transition frequency	f_T	$V_{CB} = -30V, I_E = 20mA, f = 200MHz$		50		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -30V, I_E = 0, f = 1MHz$			9	pF



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

Area of safe operation (ASO)

