

2SB1589

Silicon PNP epitaxial planer type

For low-frequency output amplification

Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Large collector power dissipation P_C .
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-10	V
Collector to emitter voltage	V_{CEO}	-10	V
Emitter to base voltage	V_{EBO}	-7	V
Peak collector current	I_{CP}	-2	A
Collector current	I_C	-1.5	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

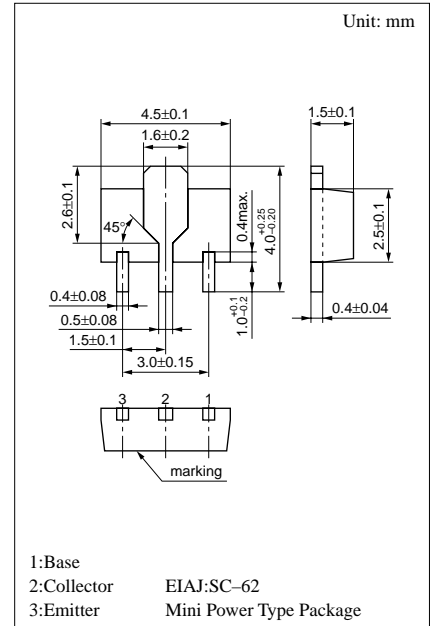
* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -7V, I_E = 0$			-1	μA
Collector to base voltage	V_{CBO}	$I_C = -10\mu A, I_E = 0$	-10			V
Collector to emitter voltage	V_{CEO}	$I_C = -1mA, I_B = 0$	-10			V
Emitter to base voltage	V_{EBO}	$I_E = -10\mu A, I_C = 0$	-7			V
Forward current transfer ratio	h_{FE}	$V_{CE} = -1V, I_C = -400mA^{*2}$	200		700	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -25mA^{*2}$		-0.24	-0.35	V
Transition frequency	f_T	$V_{CB} = -6V, I_E = 50mA, f = 200MHz$		190		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		65		pF
Forward voltage	V_F^{*1}	$I_F = -500mA$			-1.3	V

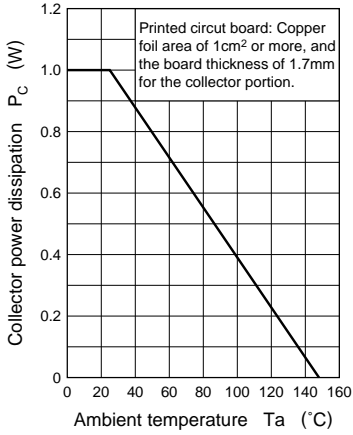
*1 Applicable to the built-in diode.

*2 Pulse measurement

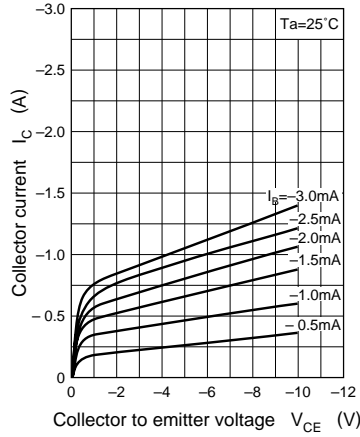


Marking symbol : 1U

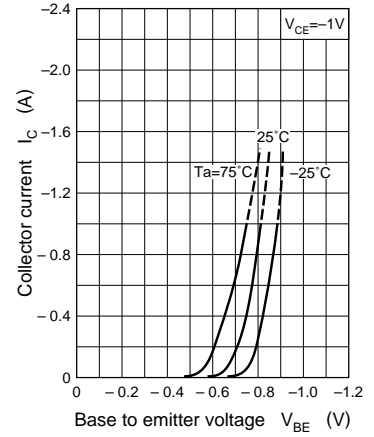
$P_C - T_a$



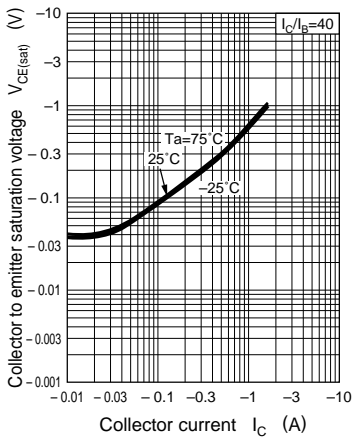
$I_C - V_{CE}$



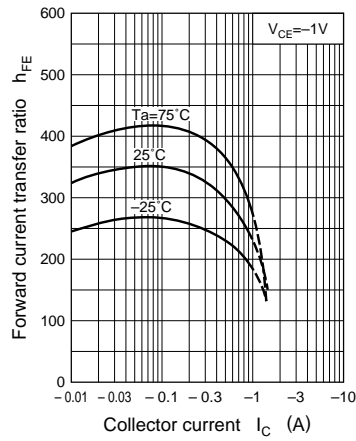
$I_C - V_{BE}$



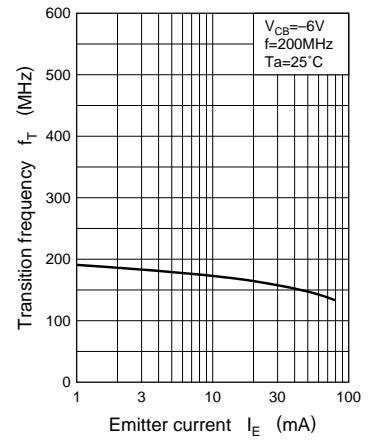
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

