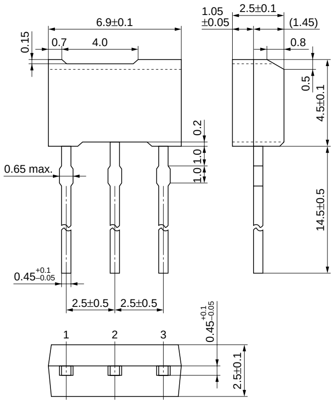
2SB1446

Silicon PNP epitaxial planer type

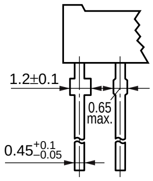
For low-frequency output amplification
Complementary to 2SD2179

Unit: mm



Note: In addition to the lead type shown in the upper figure, the type as shown in the lower figure is also available.

1:Emitter
2:Collector
3:Base
MT2 Type Package



(HW type)

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Allowing supply with the radial taping.

■ Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–50	V
Collector to emitter voltage	V_{CEO}	–50	V
Emitter to base voltage	V_{EBO}	–5	V
Peak collector current	I_{CP}	–7	A
Collector current	I_C	–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 (Ta=25˚C)

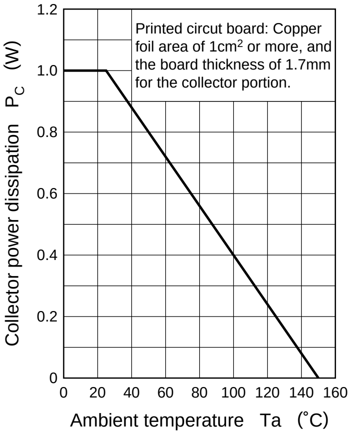
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = –20V, I_E = 0			– 0.1	µA
Collector to base voltage	V_{CBO}	I_C = –10µA, I_E = 0	–50			V
Collector to emitter voltage	V_{CEO}	I_C = –1mA, I_B = 0	–50			V
Emitter to base voltage	V_{EBO}	I_E = –10µA, I_C = 0	–5			V
Forward current transfer ratio	h_{FE1}*1	V_{CE} = –2V, I_C = –500mA*2	120		340	
	h_{FE2}	V_{CE} = –2V, I_C = –2.5A*2	60			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –2A, I_B = –100mA*2		– 0.2	– 0.3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = –2A, I_B = –100mA*2		– 0.85	–1.2	V
Transition frequency	f_T	V_{CB} = –10V, I_E = 50mA, f = 200MHz		70		MHz
Collector output capacitance	C_{ob}	V_{CB} = –10V, I_E = 0, f = 1MHz		90	120	pF

*2 Pulse measurement

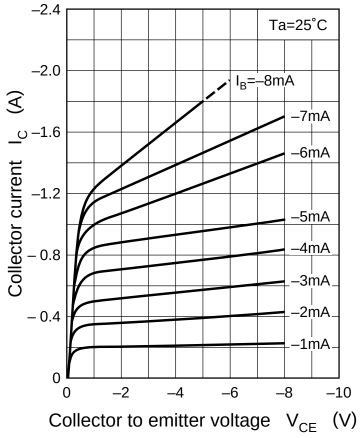
*1 h_{FE1} Rank classification

Rank	R	S
h_{FE1}	120 ~ 240	170 ~ 340

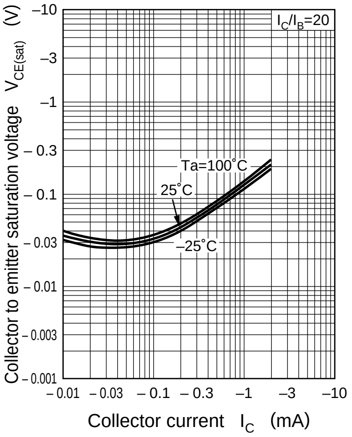
P_C — Ta



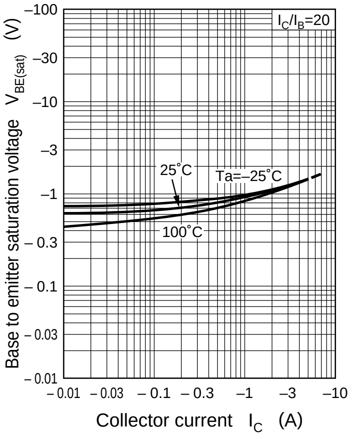
I_C — V_{CE}



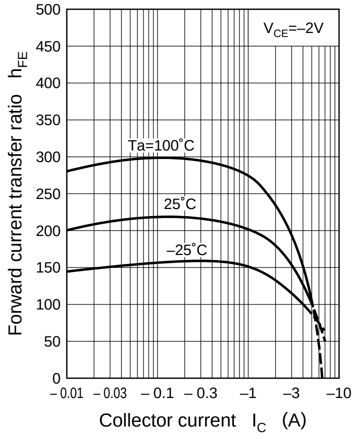
$V_{CE(sat)}$ — I_C



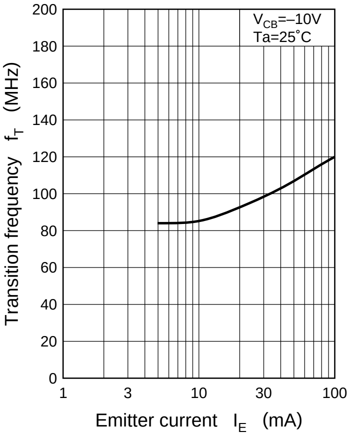
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}