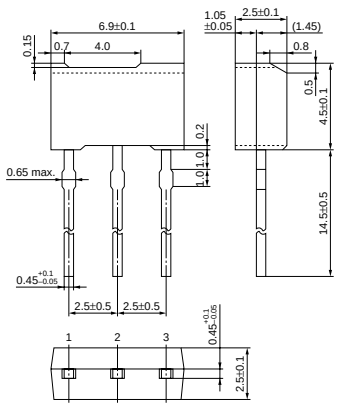
2SB1398

Silicon PNP epitaxial planer type

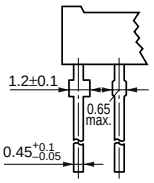
For low-frequency output amplification

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 $V_{CE(sat)}$.
- Large collector current I_C.
- Allowing supply with the radial taping.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–30	V
Collector to emitter voltage	V_{CEO}	–25	V
Emitter to base voltage	V_{EBO}	–7	V
Peak collector current	I_{CP}	–8	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)

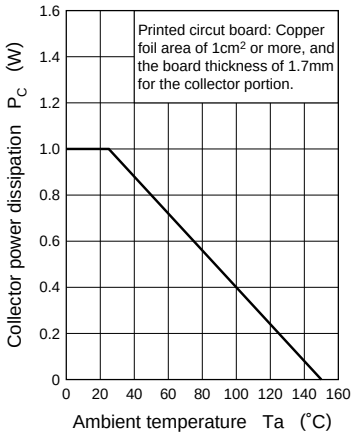
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = –10V, I_E = 0			–100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = –5V, I_C = 0			–100	nA
Collector to emitter voltage	V_{CEO}	I_C = –1mA, I_B = 0	–25			V
Emitter to base voltage	V_{EBO}	I_E = –10μA, I_C = 0	–7			V
Forward current transfer ratio	h_{FE} *1	V_{CE} = –2V, I_C = –2A*2	90		205	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –3A, I_B = –0.1A*2			–1	V
Transition frequency	f_T	V_{CB} = –6V, I_E = 50mA, f = 200MHz		120		MHz
Collector output capacitance	C_{ob}	V_{CB} = –20V, I_E = 0, f = 1MHz			85	pF

*2 Pulse measurement

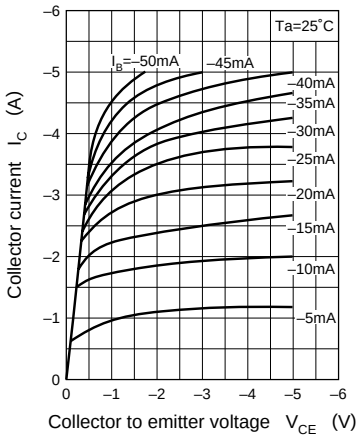
*1h_{FE} Rank classification

Rank	P	Q
h_{FE}	90 ~ 135	120 ~ 205

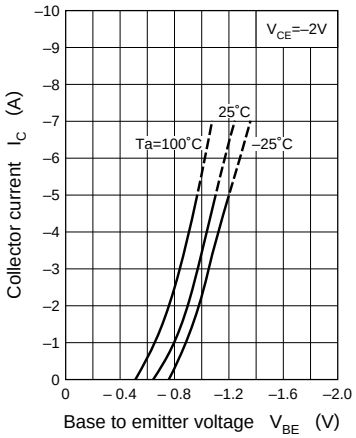
P_C — Ta



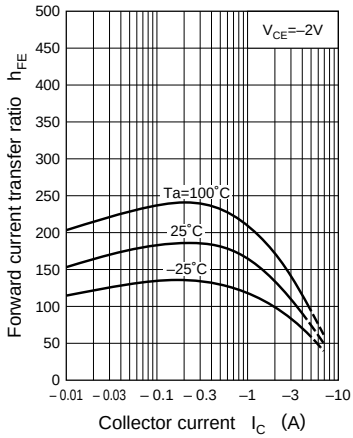
I_C — V_{CE}



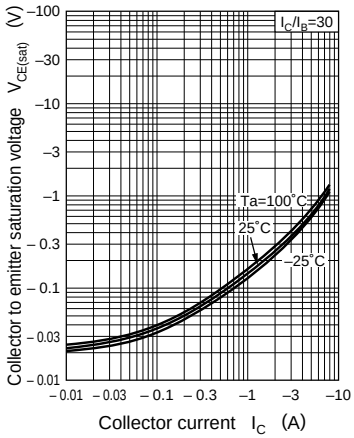
I_C — V_{BE}



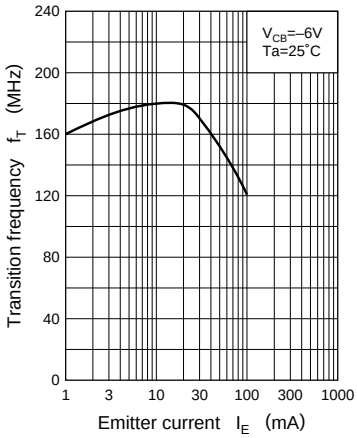
h_{FE} — I_C



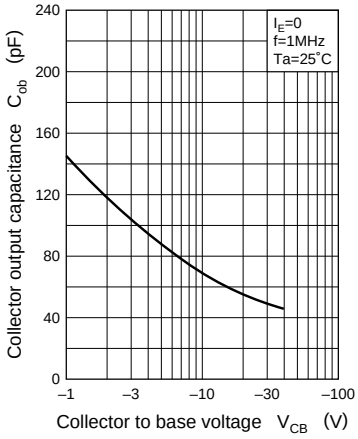
$V_{CE(sat)}$ — I_C



f_T — I_E



C_{ob} — V_{CB}



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