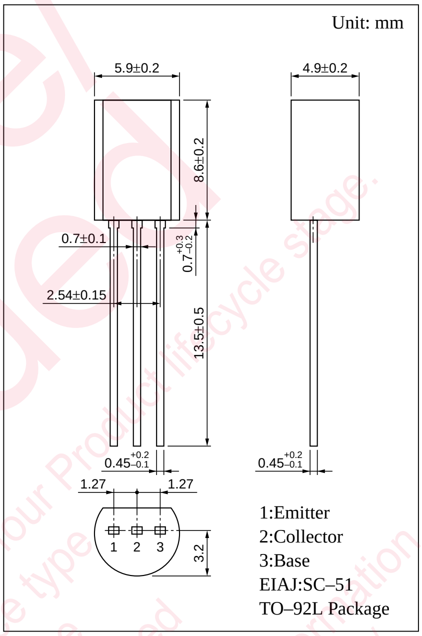
2SB987

Silicon PNP epitaxial planer type

For low-frequency output amplification
Complementary to 2SD1211



Features

- Extremely satisfactory linearity of the forward current transfer ratio h_{FE}.
- High transition frequency f_T.
- Makes up a complementary pair with 2SD1211, which is optimum for the pre-driver stage of a 40 to 60W output amplifier.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–120	V
Collector to emitter voltage	V_{CEO}	–120	V
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

Electrical Characteristics (Ta=25˚C)

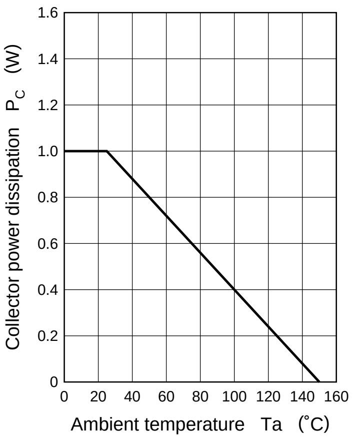
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	I_C = –0.1mA, I_B = 0	–120			V
Emitter to base voltage	V_{EBO}	I_E = –10μA, I_C = 0	–5			V
Forward current transfer ratio	h_{FE1} *1	V_{CE} = –10V, I_C = –150mA *2	90		220	
	h_{FE2}	V_{CE} = –5V, I_C = –500mA *2	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –300mA, I_B = –30mA *2			–1.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = –300mA, I_B = –30mA *2			–1.2	V
Transition frequency	f_T	V_{CB} = –10V, I_E = 50mA, f = 200MHz		250		MHz
Collector output capacitance	C_{ob}	V_{CB} = –10V, I_E = 0, f = 1MHz			30	pF

*2 Pulse measurement

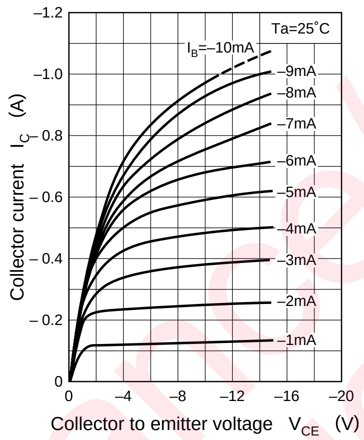
*1 h_{FE1} Rank classification

Rank	Q	R
h_{FE1}	90 ~ 155	130 ~ 220

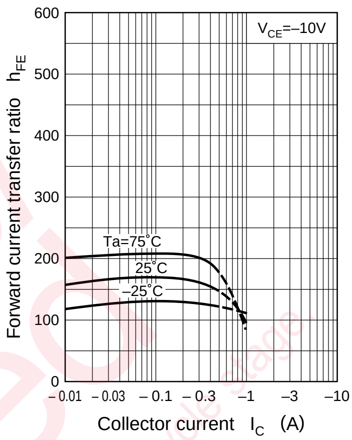
P_C — Ta



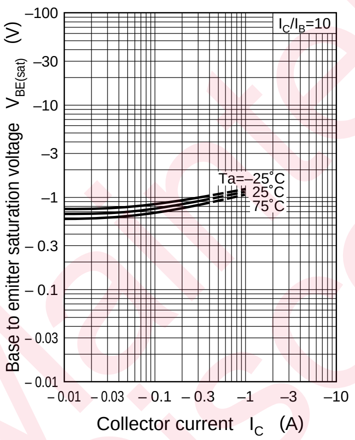
I_C — V_{CE}



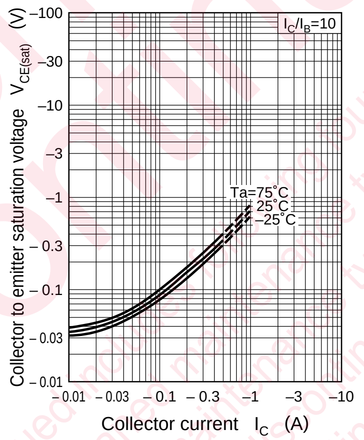
h_{FE} — I_C



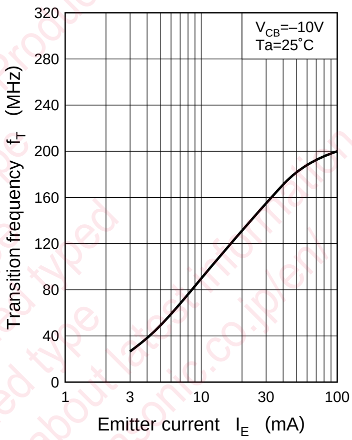
$V_{BE(sat)}$ — I_C



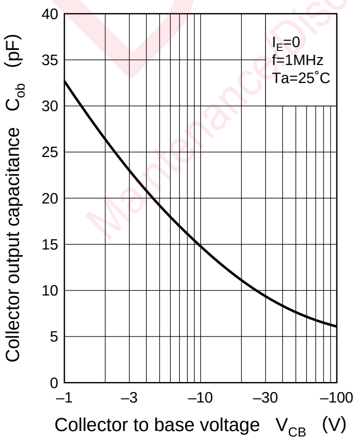
$V_{CE(sat)}$ — I_C



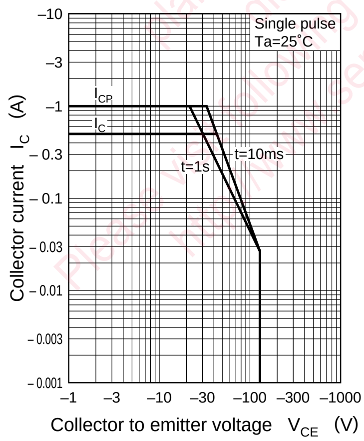
f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)



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