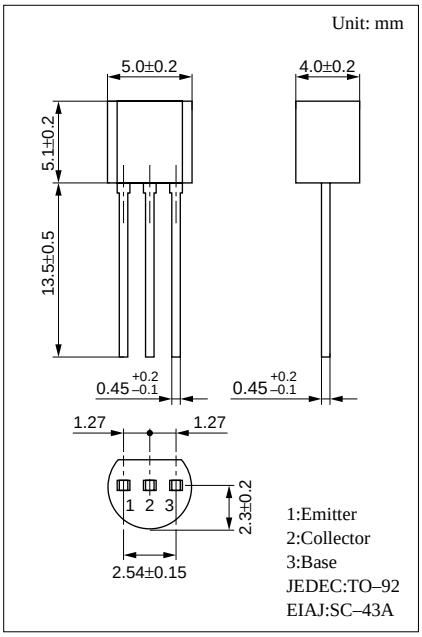
2SA1123

Silicon PNP epitaxial planer type

For low-frequency high breakdown voltage amplification
Complementary to 2SC2631



Features

- Satisfactory foward current transfer ratio h_{FE} collector current I_C characteristics.
- High collector to emitter voltage V_{CEO}.
- Small collector output capacitance C_{ob}.
- Makes up a complementary pair with 2SC2631, which is optimum for the pre-driver stage of a 20 to 40W output amplifier.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–150	V
Collector to emitter voltage	V_{CEO}	–150	V
Emitter to base voltage	V_{EBO}	–5	V
Peak collector current	I_{CP}	–100	mA
Collector current	I_C	–50	mA
Collector power dissipation	P_C	750	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

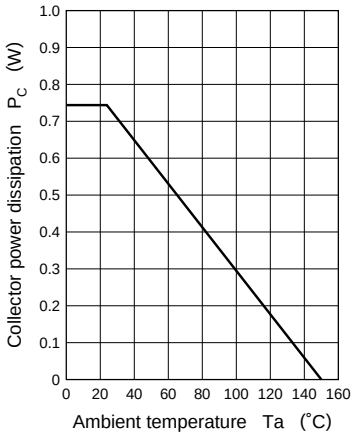
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = –100V, I_E = 0			–1	μA
Collector to emitter voltage	V_{CEO}	I_C = –0.1mA, I_B = 0	–150			V
Emitter to base voltage	V_{EBO}	I_E = –10μA, I_C = 0	–5			V
Forward current transfer ratio	h_{FE}*	V_{CE} = –5V, I_C = –10mA	130		450	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –30mA, I_B = –3mA			–1	V
Transition frequency	f_T	V_{CB} = –10V, I_E = 10mA, f = 200MHz		200		MHz
Collector output capacitance	C_{ob}	V_{CB} = –10V, I_E = 0, f = 1MHz			5	pF
Noise voltage	NV	V_{CE} = –10V, I_C = –1mA, G_V = 80dB R_g = 100kΩ, Function = FLAT		150	300	mV

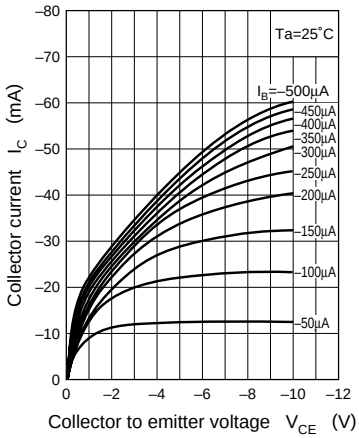
*h_{FE} Rank classification

Rank	R	S	T
h_{FE}	130 ~ 220	185 ~ 330	260 ~ 450

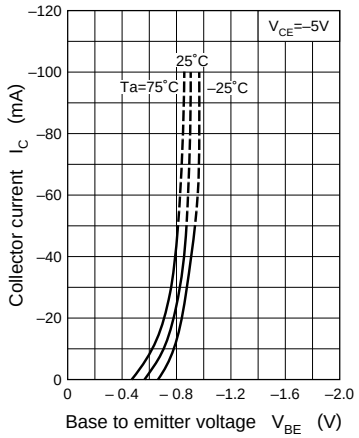
P_C — Ta



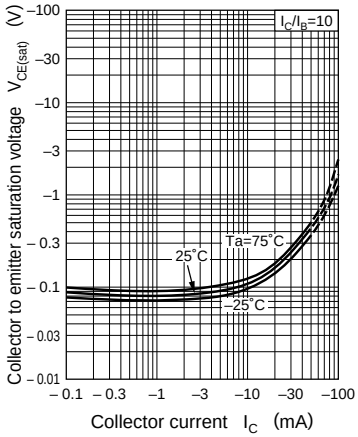
I_C — V_{CE}



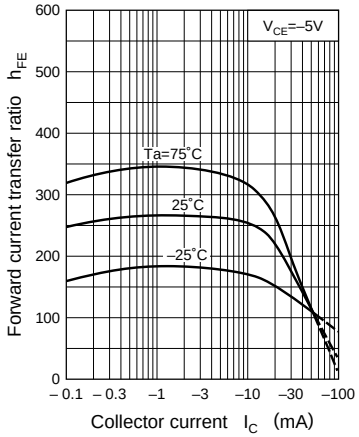
I_C — V_{BE}



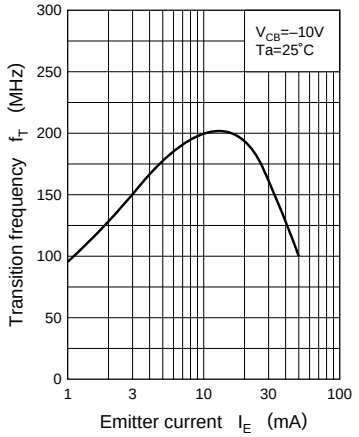
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}