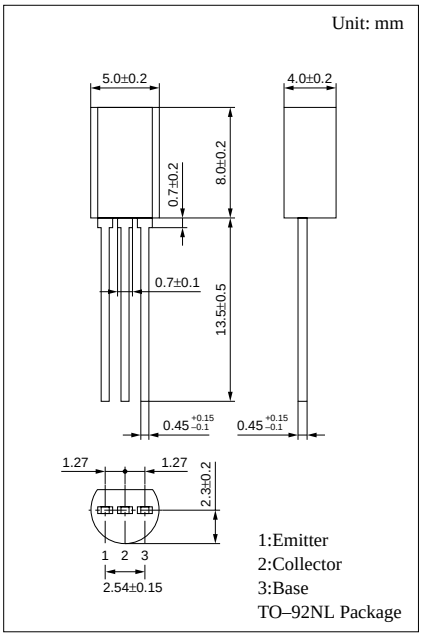
2SD1937

Silicon NPN epitaxial planer type

For low-frequency amplification
Complementary to 2SB1297



Features

- High collector to emitter voltage V_{CEO}.
- Optimum for the driver-stage of a low-frequency and 40 to 60W output amplifier.
- Allowing supply with the radial taping.

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

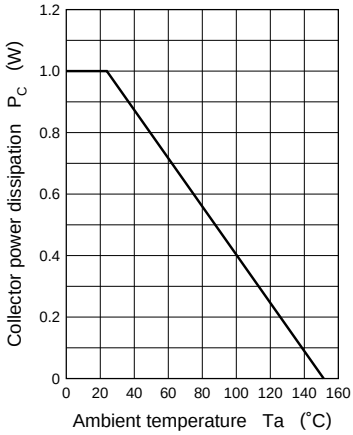
Electrical Characteristics (Ta=25˚C)

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}*	V_{CE} = 10V, I_C = 150mA	130		330	
	h_{FE2}	V_{CE} = 5V, I_C = 500mA	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 300mA, I_B = 30mA			1	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 300mA, I_B = 30mA			1.2	V
Transition frequency	f_T	V_{CB} = 10V, I_E = –50mA, f = 200MHz		200		MHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz			20	pF

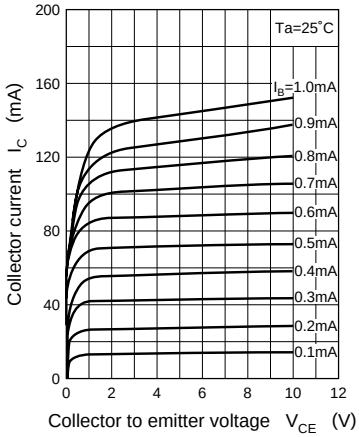
*h_{FE1} Rank classification

Rank	R	S
h_{FE1}	130 ~ 220	185 ~ 330

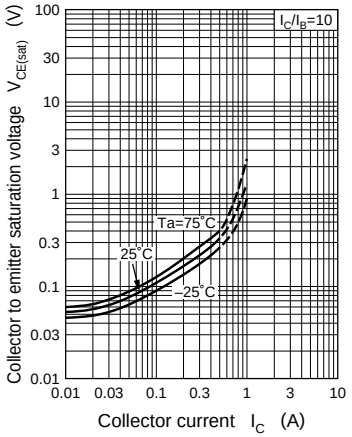
P_C — Ta



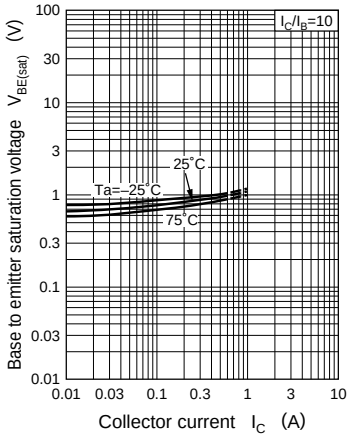
I_C — V_{CE}



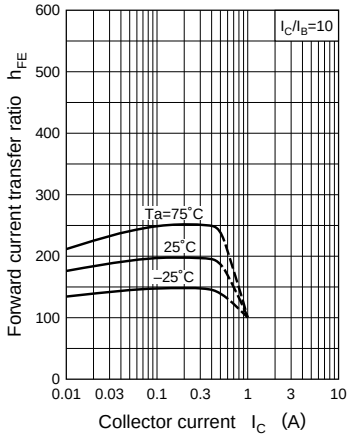
$V_{CE(sat)}$ — I_C



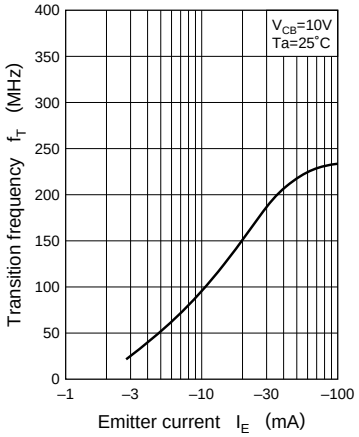
$V_{BE(sat)}$ — I_C



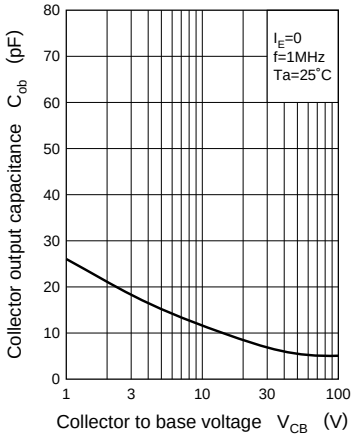
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)