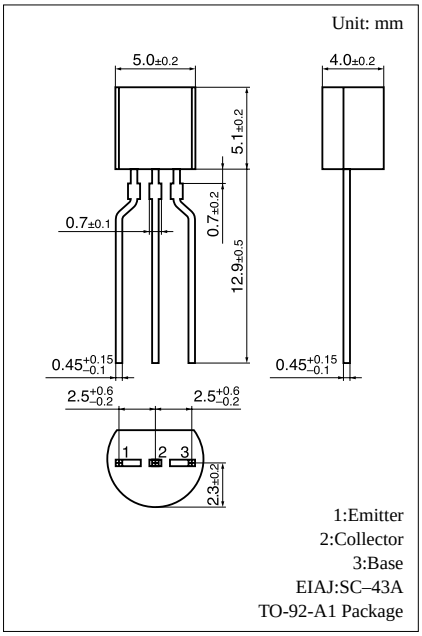
2SC1980

Silicon NPN epitaxial planer type

For high breakdown voltage low-noise amplification
Complementary to 2SA921



Features

- High collector to emitter voltage V_{CEO}.
- Low noise voltage NV.

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}	7	V
Peak collector current	I_{CP}	50	mA
Collector current	I_C	20	mA
Collector power dissipation	P_C	250	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

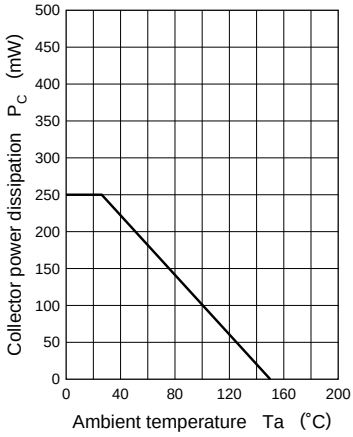
Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 50$_V$, I_E = 0			0.1	μA
	I_{CEO}	V_{CE} = 50V, I_B = 0			1	μA
Collector to base voltage	V_{CBO}	I_C = 10μA, I_E = 0	120			V
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	120			V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	7			V
Forward current transfer ratio	h_{FE}*	V_{CE} = 5V, I_C = 2mA	180		700	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 20mA, I_B = 2mA			0.6	V
Transition frequency	f_T	V_{CB} = 5V, I_E = –2mA, f = 200MHz		200		MHz
Noise voltage	NV	V_{CE} = 40V, I_C = 1mA, G_V = 80dB R_g = 100kΩ, Function = FLAT			150	mV

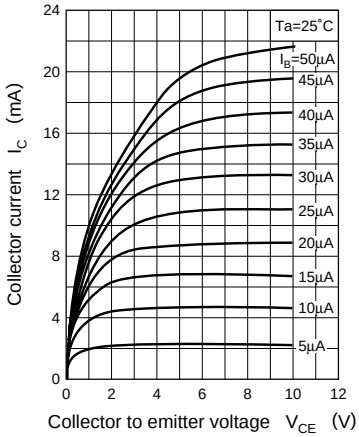
*h_{FE} Rank classification

Rank	R	S	T
h_{FE}	180 ~ 360	260 ~ 520	360 ~ 700

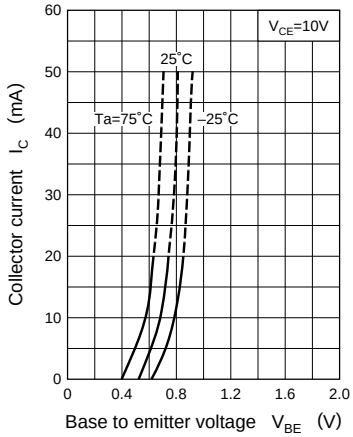
P_C — Ta



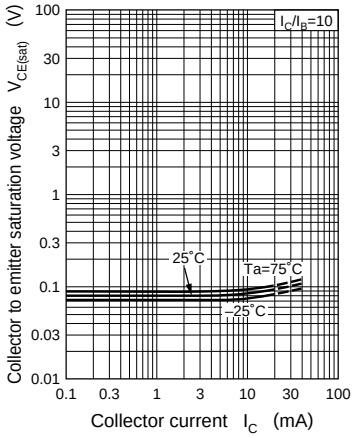
I_C — V_{CE}



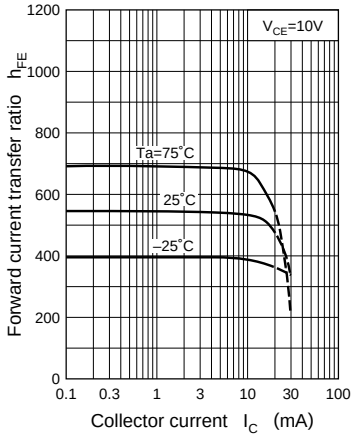
I_C — V_{BE}



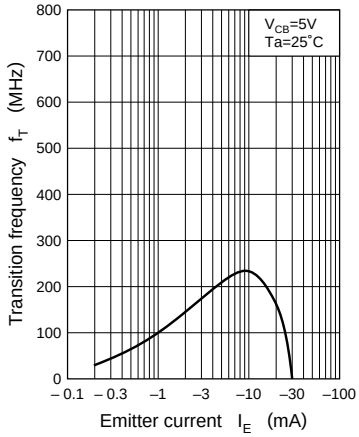
$V_{CE(sat)}$ — I_C



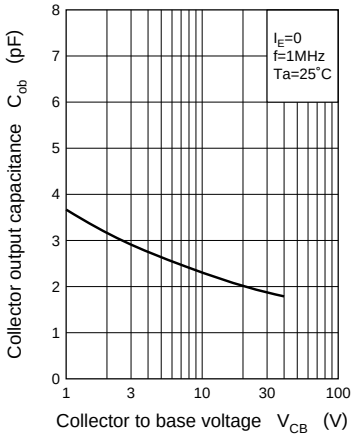
h_{FE} — I_C



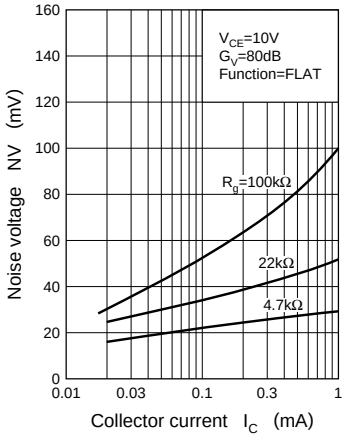
f_T — I_E



C_{ob} — V_{CB}



NV — I_C



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