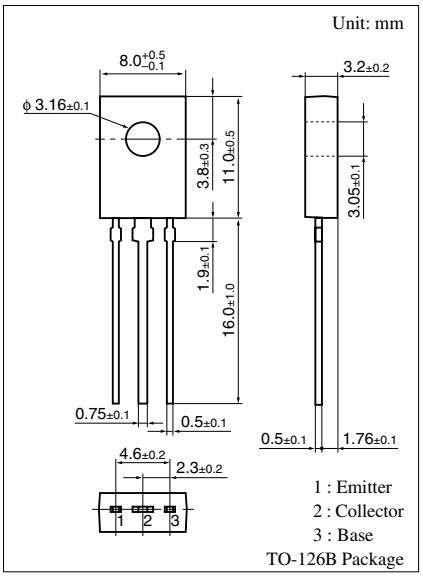
2SC1953

Silicon NPN epitaxial planar type

For low-frequency power pre-amplification
Complementary to 2SA0914 (2SA914)



■ Features

- High collector to emitter voltage V_{CEO}
- Small collector output capacitance C_{ob}
- A complementary pair with 2SA0914, is optimum for the pre-driver stage of a 60 W to 100 W output amplifier
- TO-126B package which requires no insulation plate for installation to the heat sink

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter	Symbol	Rating	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	1.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

Note) ∗: Without heat sink

■ Electrical Characteristics $T_C = 25°C$

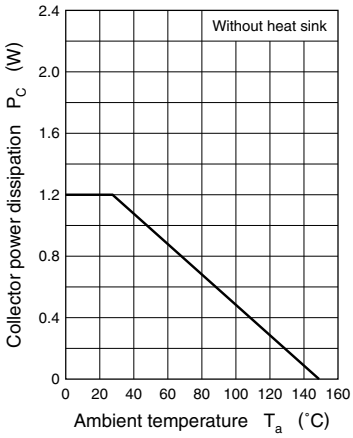
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 100 V, I_E = 0			1	µA
Collector to emitter voltage	V_{CEO}	I_C = 100 µA, I_B = 0	150			V
Emitter to base voltage	V_{EBO}	I_E = 10 µA, I_C = 0	5			V
Forward current transfer ratio *	h_{FE}	V_{CE} = −5 V, I_C = 10 mA	130		330	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 30 mA, I_B = 3 mA			1	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = −10 mA, f = 200 MHz	70			MHz
Collector output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz			3	pF

Note) ∗: Rank classification

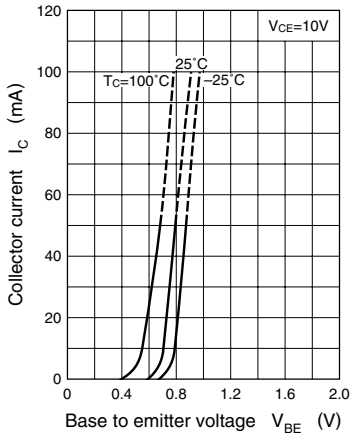
Rank	Q	R
h_{FE}	130 to 220	185 to 330

Note) The part number in the parenthesis shows conventional part number.

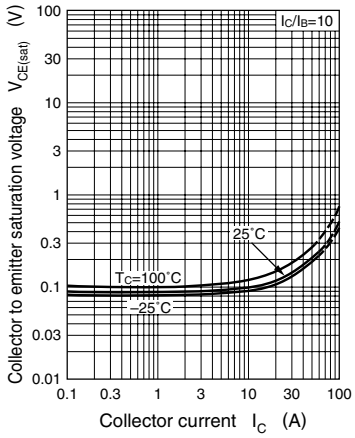
P_C — T_a



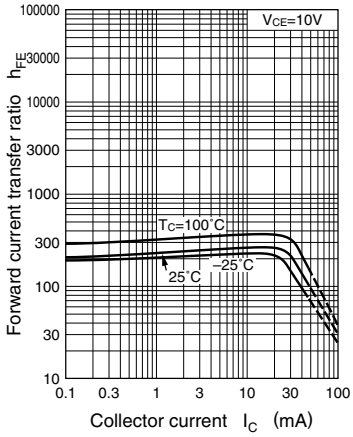
I_C — V_{BE}



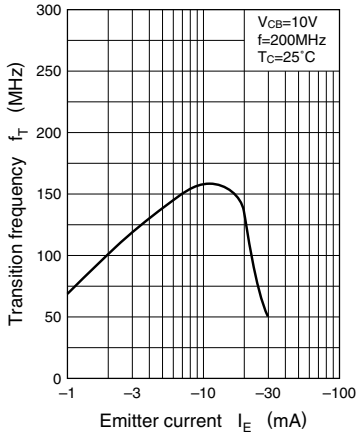
$V_{CE(sat)}$ — I_C



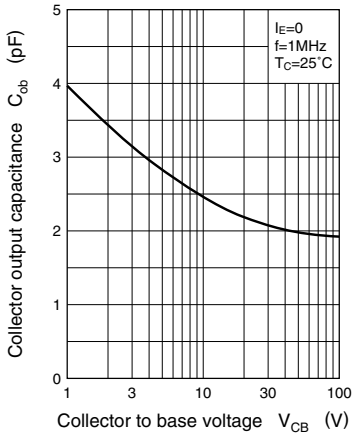
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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