

# 2SC1953

## Silicon NPN epitaxial planar type

For audio system/pre-drive  
Complementary to 2SA0914

### ■ Features

- High collector-emitter voltage (Base open)  $V_{CEO}$
- Small collector output capacitance (Common base, input open circuited)  $C_{ob}$
- 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 $T_a = 25^\circ\text{C}$

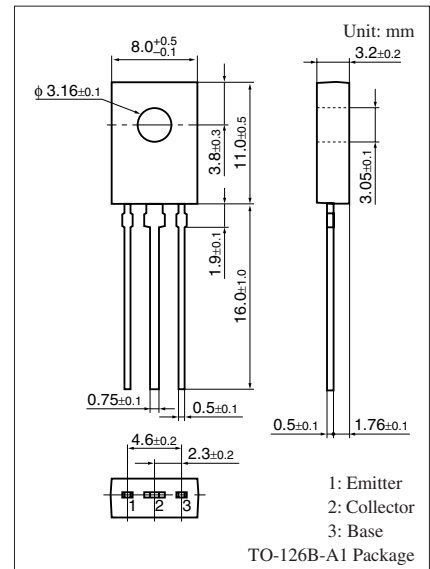
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	150	V
Collector-emitter voltage (Base open)	$V_{CEO}$	150	V
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V
Collector current	$I_C$	50	mA
Peak collector current	$I_{CP}$	100	mA
Collector power dissipation	$P_C$	1	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

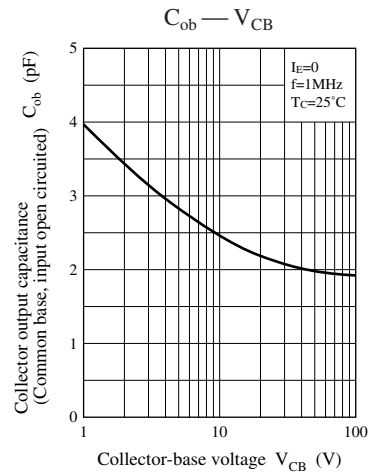
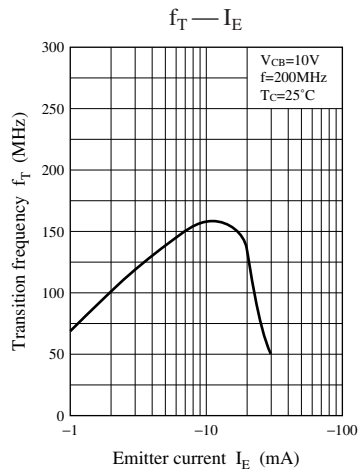
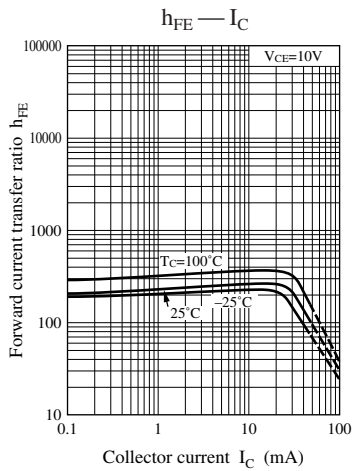
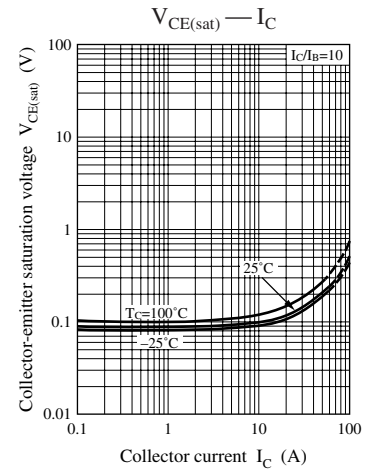
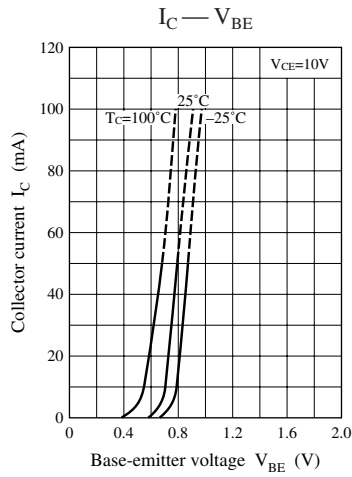
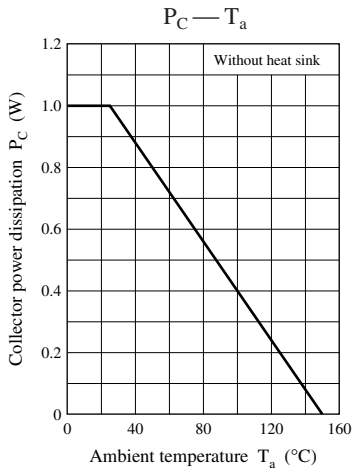
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

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

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.  
2. \*: Rank classification

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





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