

2SC3941

Silicon NPN triple diffusion planar type

For high breakdown voltage general amplification

For small TV video output

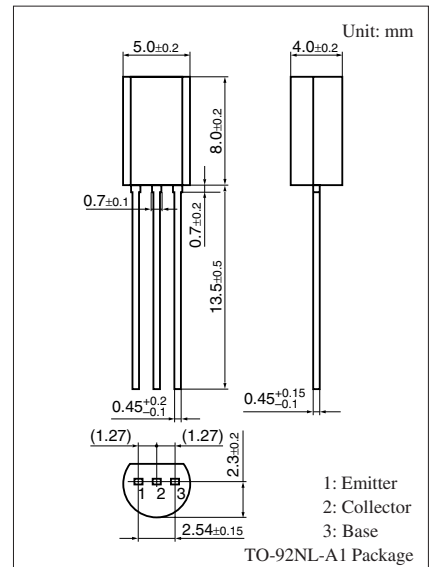
Complementary to 2SA1858

■ Features

- High collector-emitter voltage (Base open) V_{CEO}
- High transition frequency f_T
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	300	V
Collector-emitter voltage (Base open)	V_{CEO}	300	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	70	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	$^\circ\text{C}$



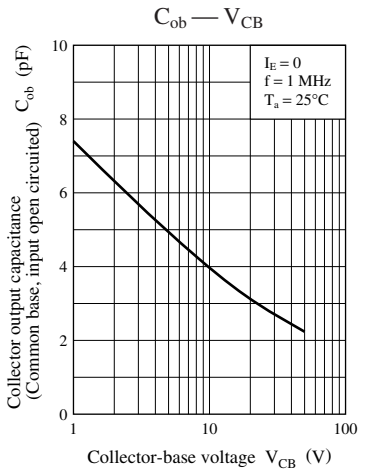
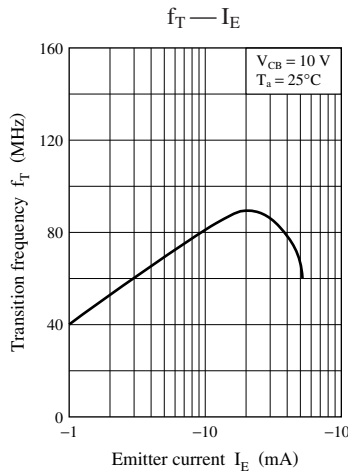
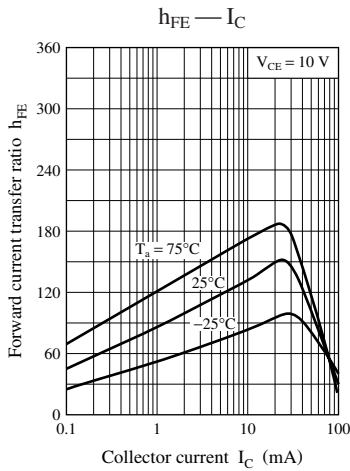
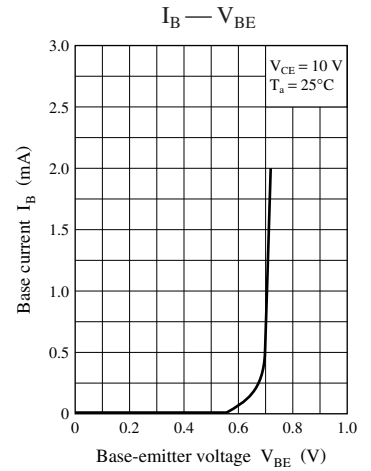
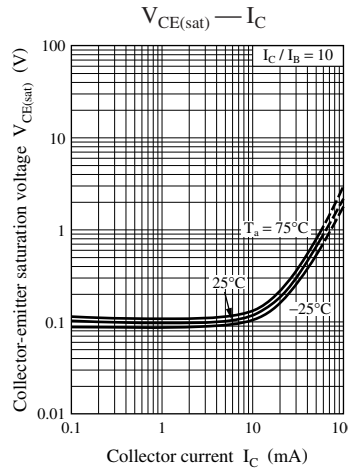
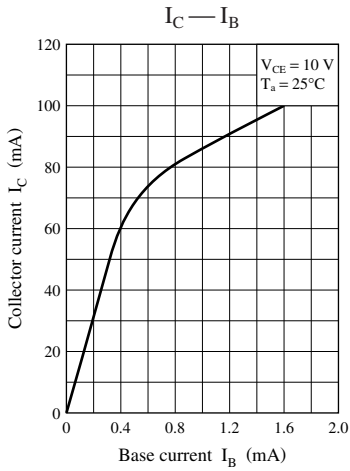
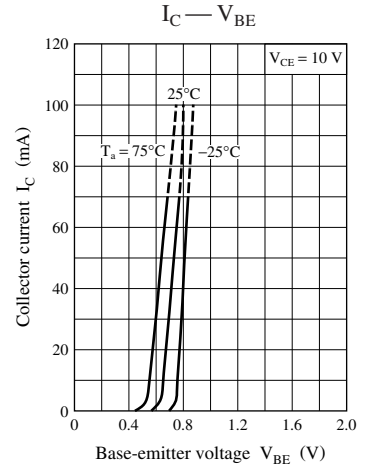
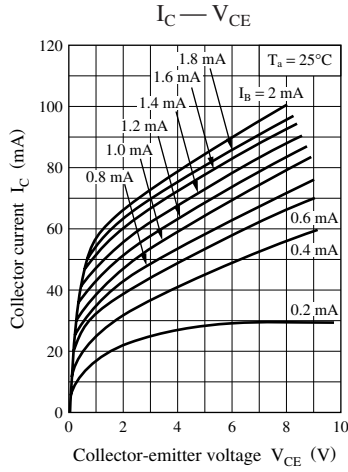
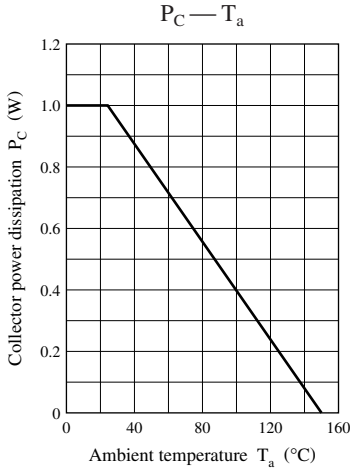
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

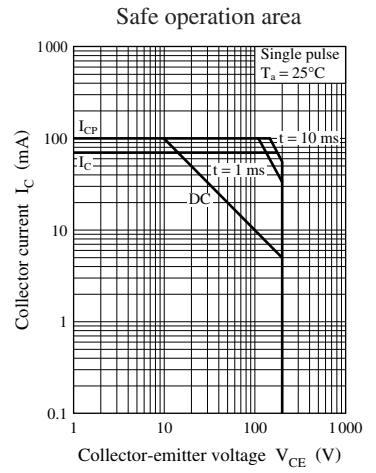
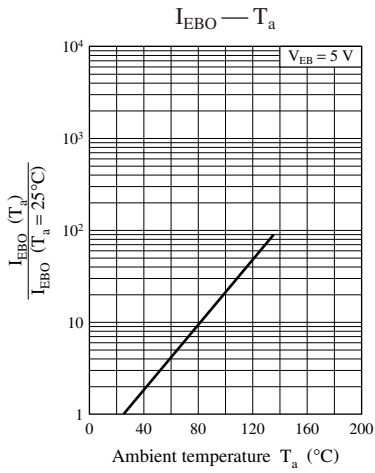
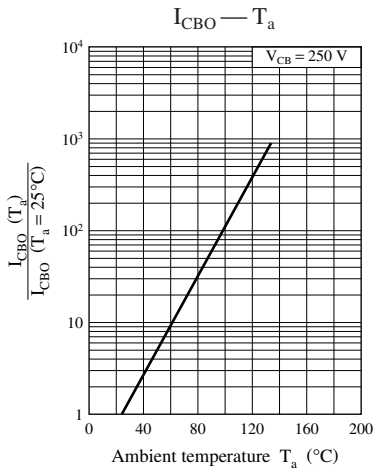
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 100 \mu\text{A}$, $I_B = 0$	300			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 1 \mu\text{A}$, $I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 100 \text{V}$, $I_E = 0$			2	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = 10 \text{V}$, $I_C = 5 \text{mA}$	30		220	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{mA}$, $I_B = 5 \text{mA}$			1.2	V
Transition frequency	f_T	$V_{CB} = 10 \text{V}$, $I_E = -10 \text{mA}$, $f = 200 \text{MHz}$	50	80		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10 \text{V}$, $I_E = 0$, $f = 1 \text{MHz}$		4	8	pF
Storage time	t_{stg}	$I_C = 100 \text{mA}$, $I_{B1} = 10 \text{mA}$, $I_{B2} = 0$		2.5		μs

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	P	Q	R
h_{FE}	30 to 100	60 to 150	100 to 220





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