

2SA1533

Silicon PNP epitaxial planar type

For low-frequency driver amplification

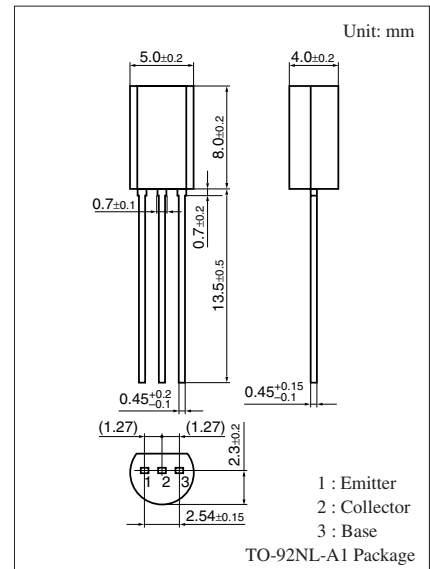
Complementary to 2SC3939

■ Features

- Low collector-emitter voltage (Base open) V_{CEO}
- Optimum for the driver stage of a low-frequency and 25 W to 30 W output amplifier.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-80	V
Collector-emitter voltage (Base open)	V_{CEO}	-80	V
Emitter-base voltage (Collector open)	V_{EBO}	-5	V
Collector current	I_C	-0.5	A
Peak collector current	I_{CP}	-1	A
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



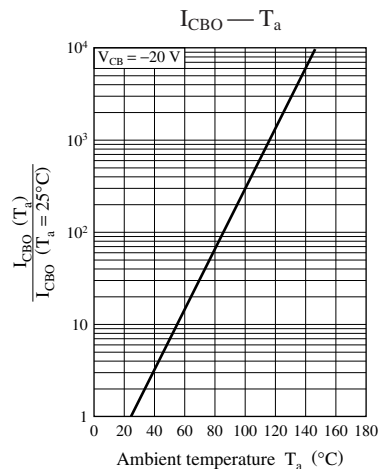
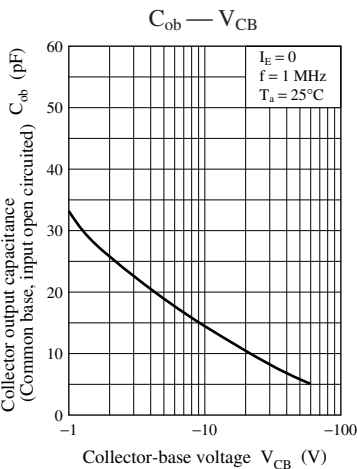
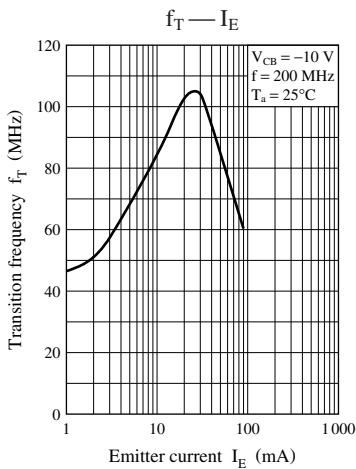
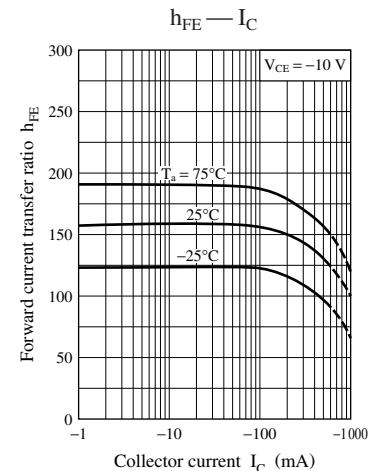
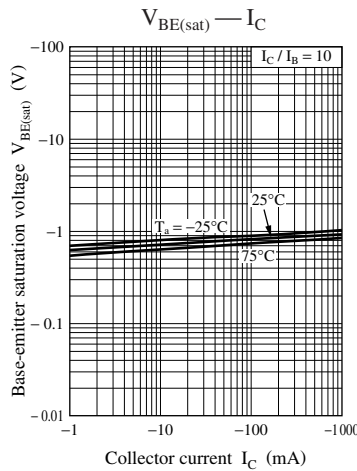
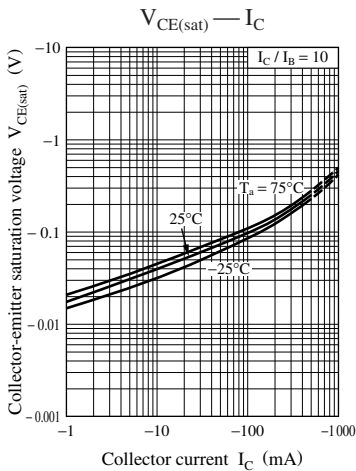
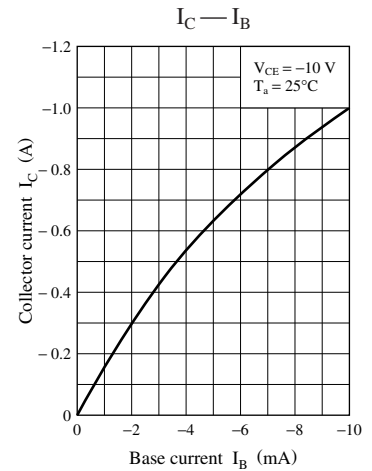
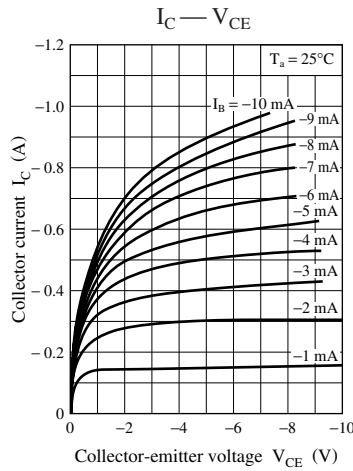
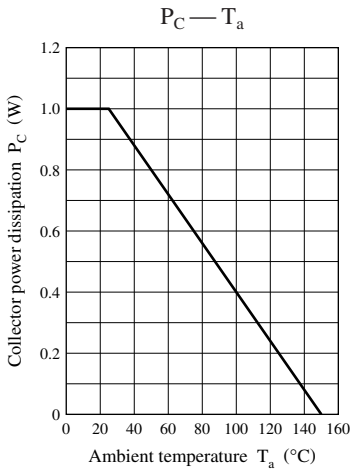
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

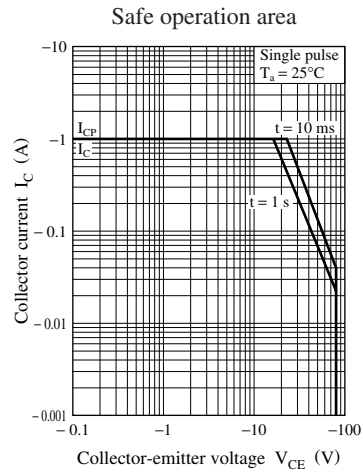
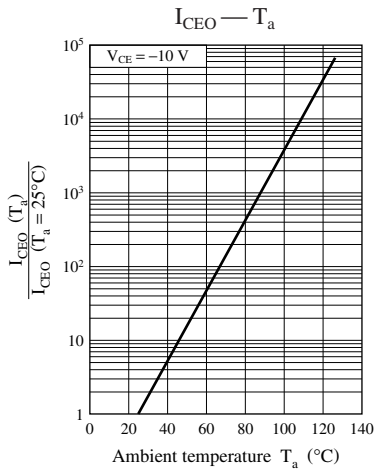
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}$, $I_E = 0$	-80			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -100 \mu\text{A}$, $I_B = 0$	-80			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}$, $I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -20 \text{V}$, $I_E = 0$			-0.1	μA
Forward current transfer ratio	h_{FE1} *	$V_{CE} = -10 \text{V}$, $I_C = -150 \text{mA}$	90		220	—
	h_{FE2}	$V_{CE} = -5 \text{V}$, $I_C = -500 \text{mA}$	50	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300 \text{mA}$, $I_B = -30 \text{mA}$		-0.2	-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300 \text{mA}$, $I_B = -30 \text{mA}$		-0.85	-1.2	V
Transition frequency	f_T	$V_{CB} = -10 \text{V}$, $I_E = 50 \text{mA}$, $f = 200 \text{MHz}$		120		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{V}$, $I_E = 0$, $f = 1 \text{MHz}$		11	20	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_{FE1}	90 to 155	130 to 220





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