

2SC2631

Silicon NPN epitaxial planar type

For low-frequency high breakdown voltage amplification
Complementary to 2SA1123

■ Features

- Satisfactory linearity of forward current transfer ratio h_{FE}
- High collector-emitter voltage (Base open) V_{CEO}
- Small collector output capacitance (Common base, input open circuited) C_{ob}

■ 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	750	mW
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

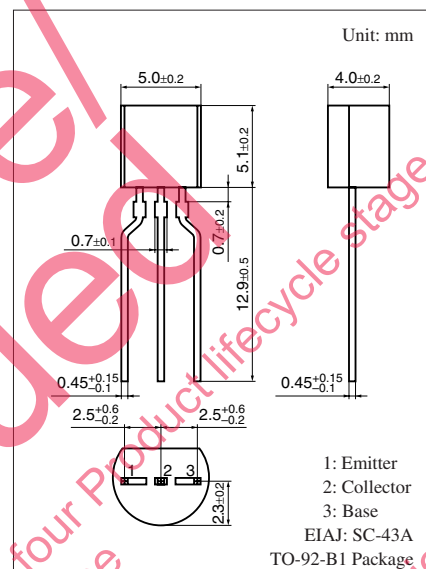
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

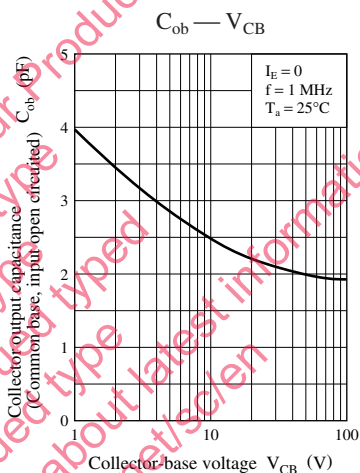
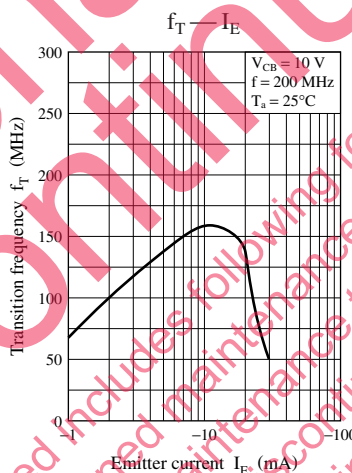
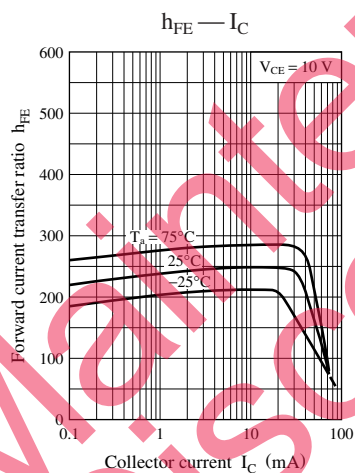
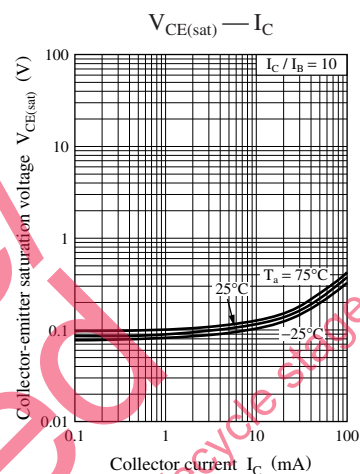
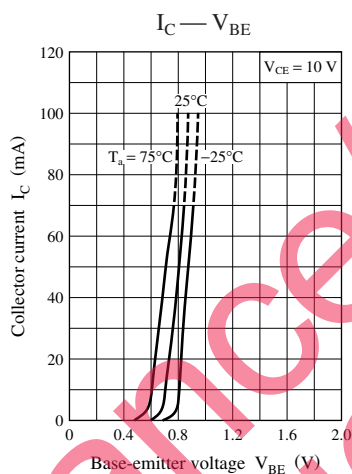
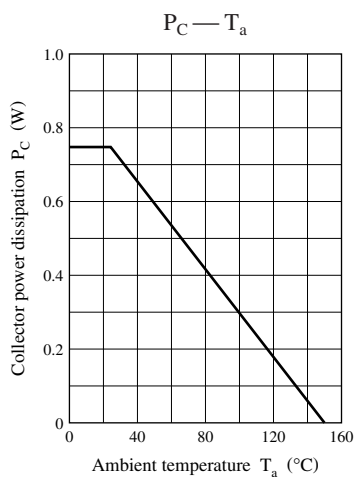
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 100\ \mu\text{A}$, $I_B = 0$	150			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 100\ \text{V}$, $I_E = 0$			1	μA
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	$V_{CB} = 10\ \text{V}$, $I_E = 10\ \text{mA}$, $f = 200\ \text{MHz}$		160		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
Noise voltage	NV	$V_{CE} = 10\ \text{V}$, $I_C = 1\ \text{mA}$, $G_v = 80\ \text{dB}$ $R_g = 100\ \text{k}\Omega$, Function = FLAT		150	300	mV

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

2. *: Rank classification

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





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