

2SC0829 (2SC829)

Silicon NPN epitaxial planar type

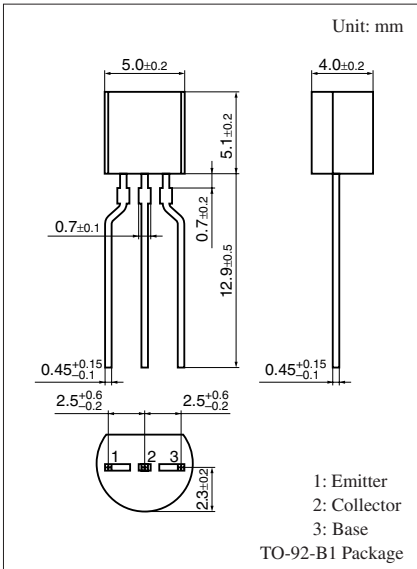
For high-frequency amplification

■ Features

- Optimum for RF amplification, oscillation, mixing, and IF stage of FM/AM radios

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	30	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	400	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



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

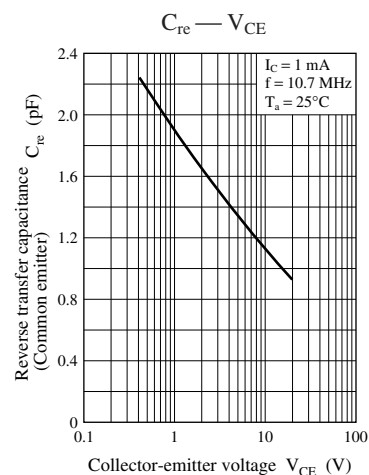
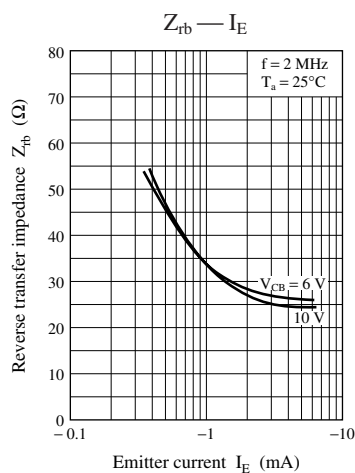
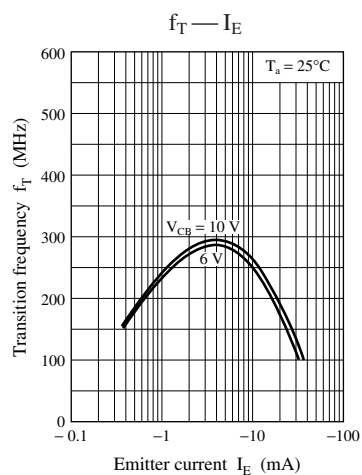
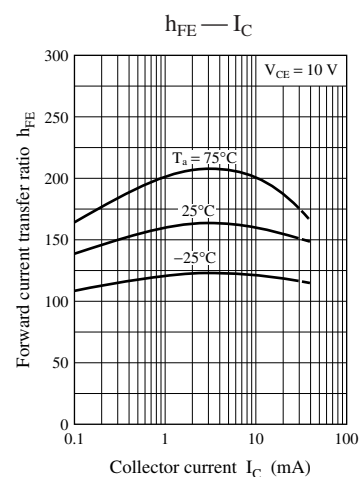
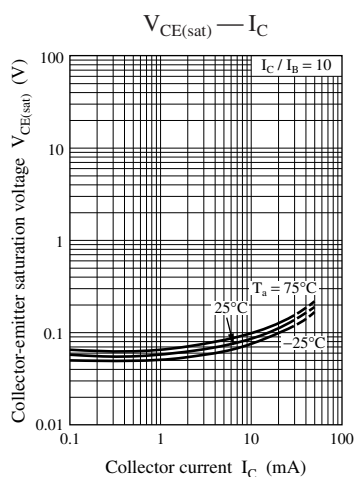
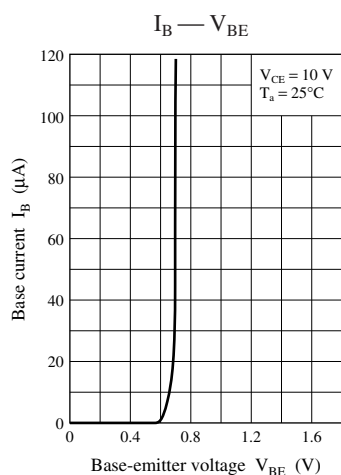
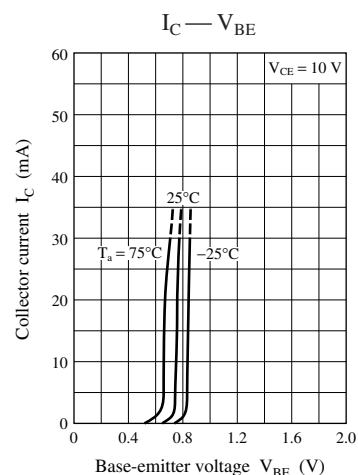
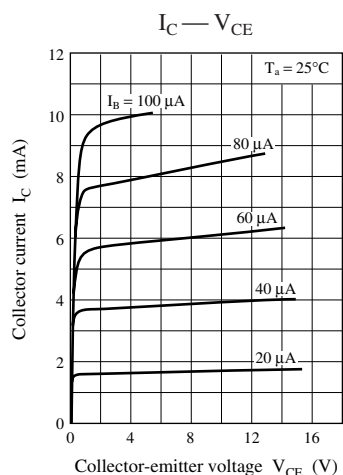
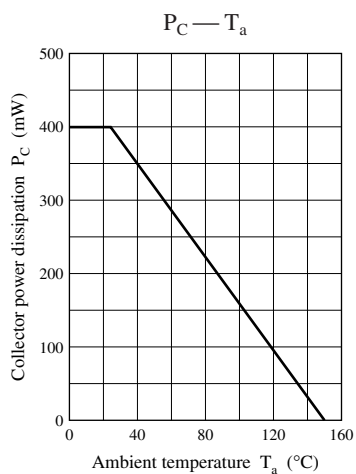
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10 \mu\text{A}$, $I_E = 0$	30			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{ mA}$, $I_B = 0$	20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}$, $I_C = 0$	5			V
Forward current transfer ratio *	h_{FE}	$V_{CE} = 10 \text{ V}$, $I_C = 1 \text{ mA}$	70		250	—
Transition frequency	f_T	$V_{CB} = 10 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 200 \text{ MHz}$	150	230		MHz
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CB} = 10 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 10.7 \text{ MHz}$		1.3	1.6	pF
Reverse transfer impedance	Z_{rb}	$V_{CB} = 10 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 2 \text{ MHz}$			60	Ω

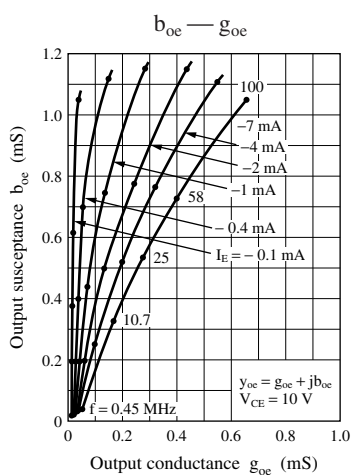
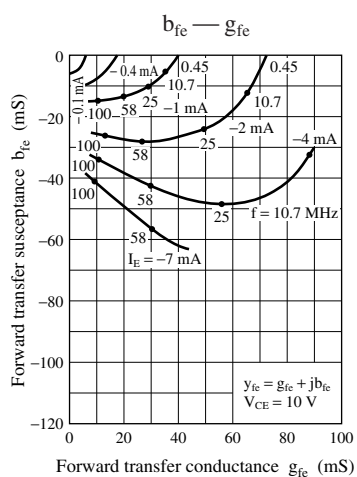
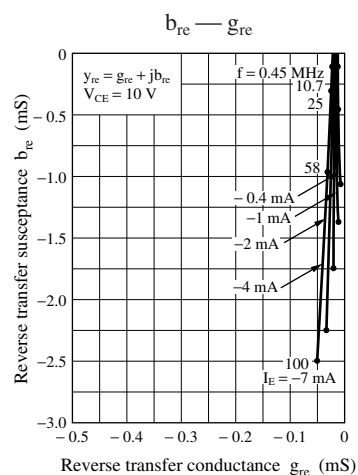
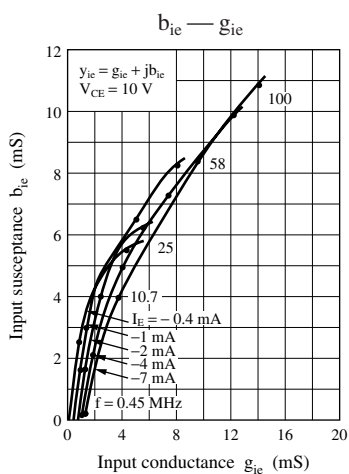
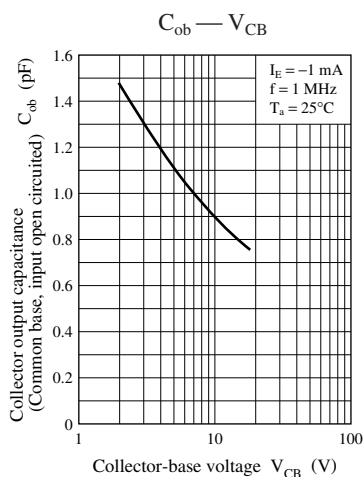
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	B	C
h_{FE}	70 to 160	110 to 250

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





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