

# 2SC0829 (2SC829)

## Silicon NPN epitaxial planar type

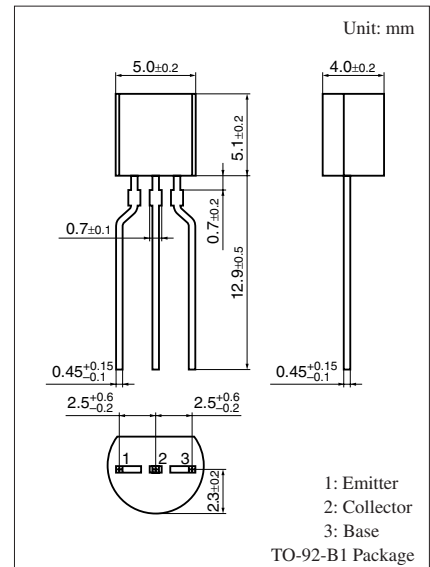
For high-frequency amplification

### ■ 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)	$V_{\text{CBO}}$	30	V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	20	V
Emitter-base voltage (Collector open)	$V_{\text{EBO}}$	5	V
Collector current	$I_{\text{C}}$	30	mA
Collector power dissipation	$P_{\text{C}}$	400	mW
Junction temperature	$T_{\text{j}}$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$



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

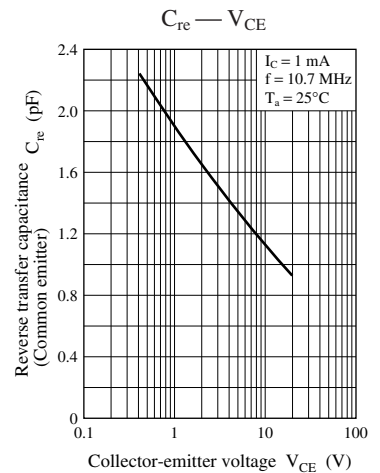
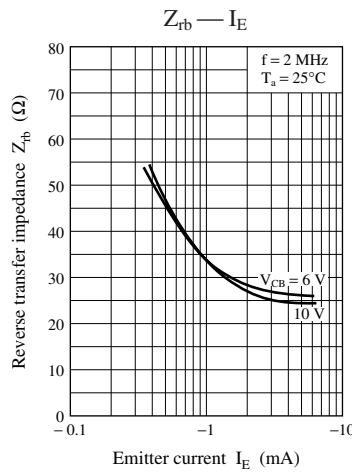
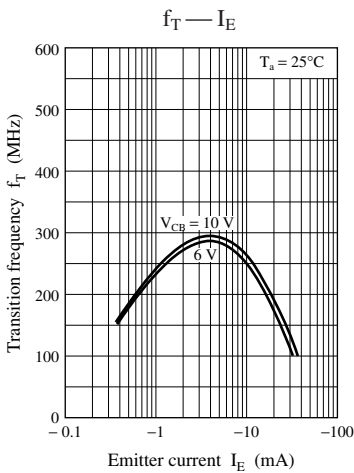
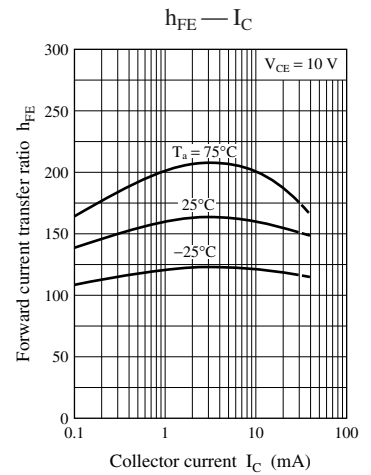
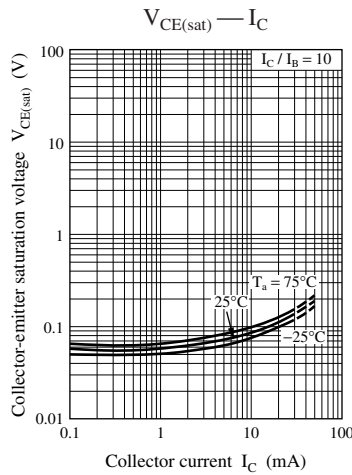
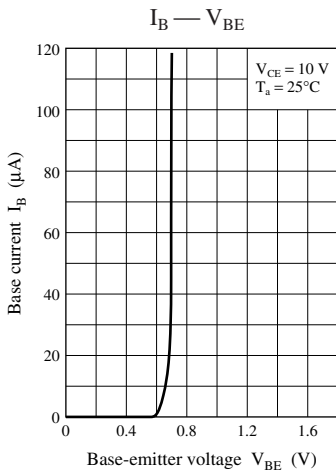
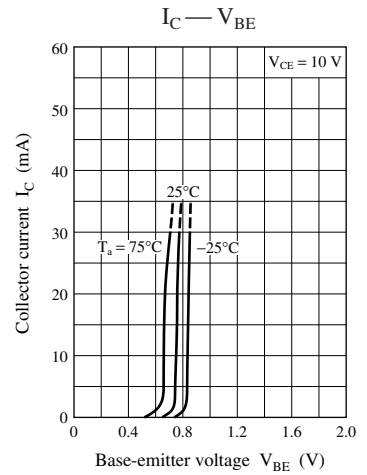
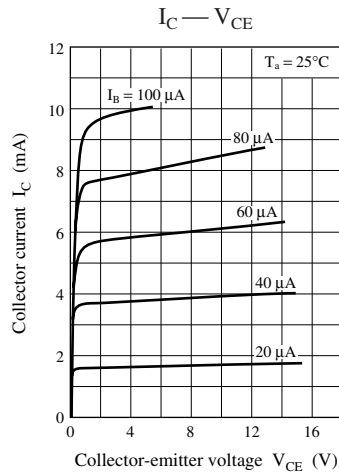
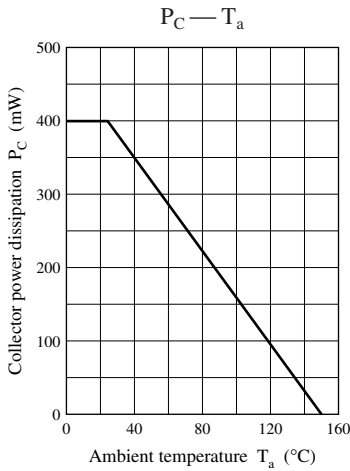
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{\text{CBO}}$	$I_{\text{C}} = 10 \mu\text{A}$ , $I_{\text{E}} = 0$	30			V
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	$I_{\text{C}} = 2 \text{ mA}$ , $I_{\text{B}} = 0$	20			V
Emitter-base voltage (Collector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

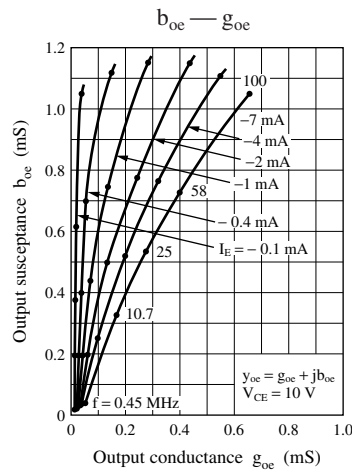
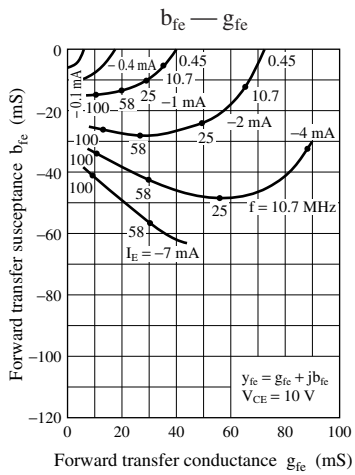
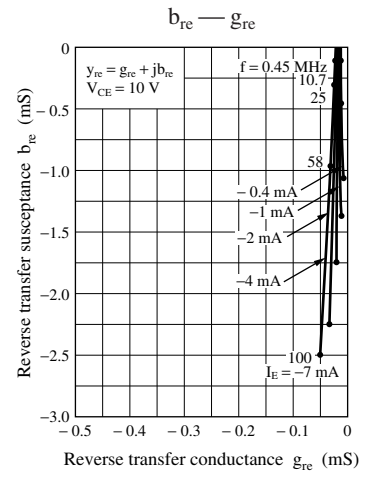
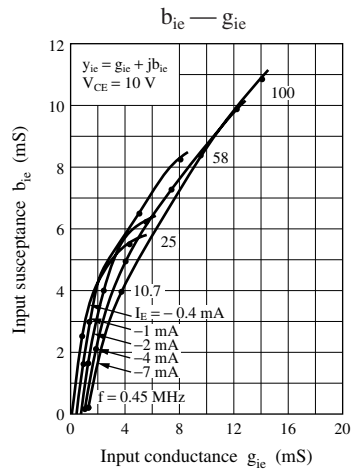
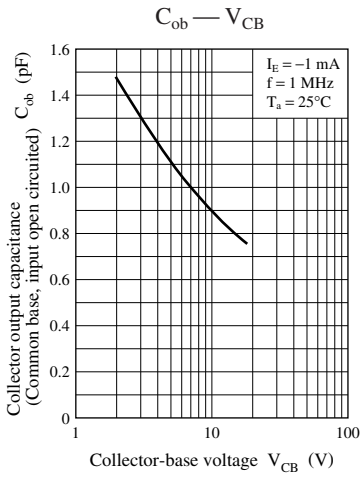
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

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

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





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