

2SC0829 (2SC829)

Silicon NPN epitaxial planar type

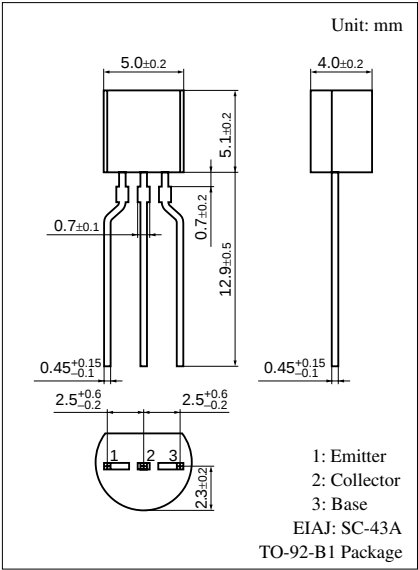
For high-frequency amplification

■ 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 to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	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	$^\circ\text{C}$



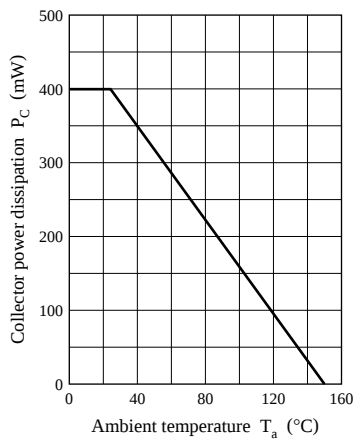
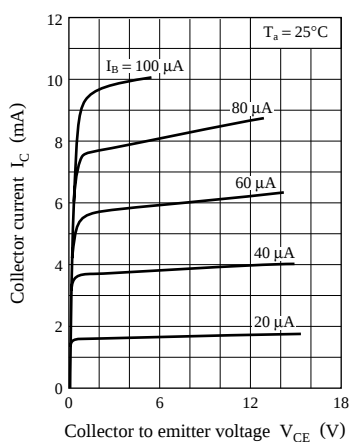
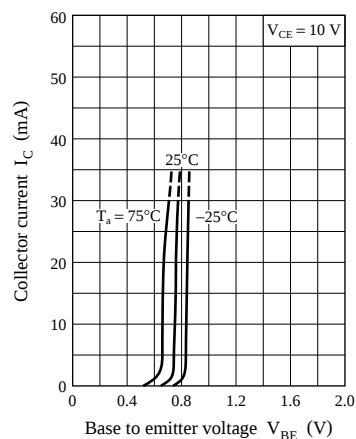
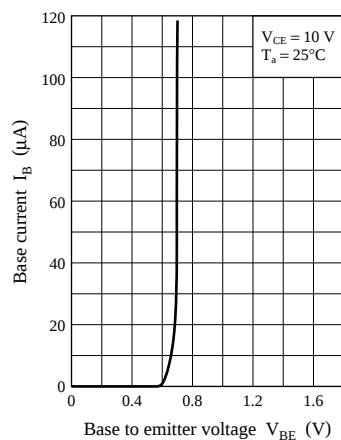
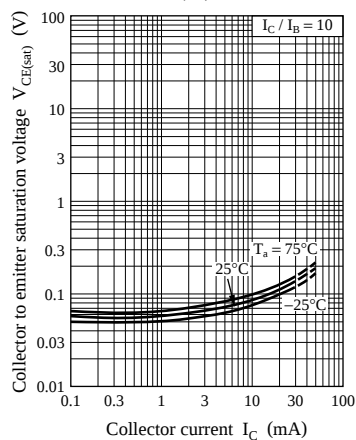
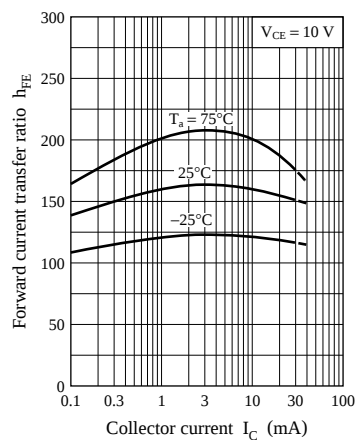
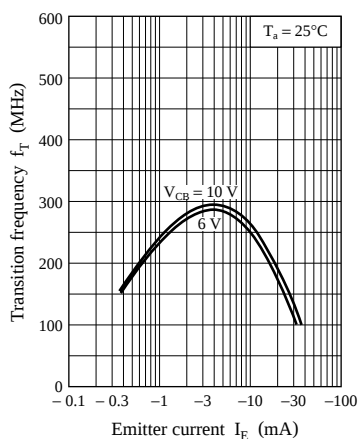
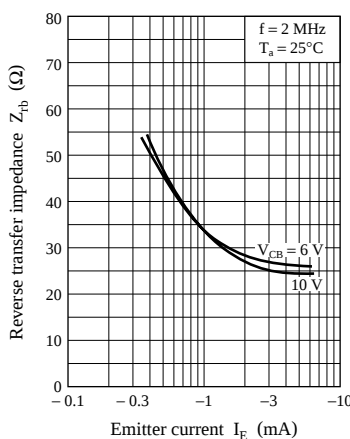
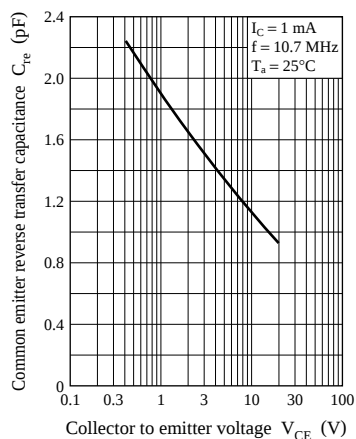
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

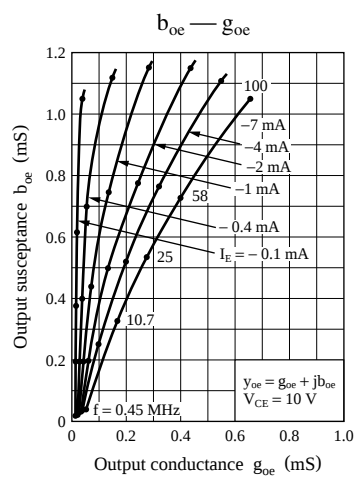
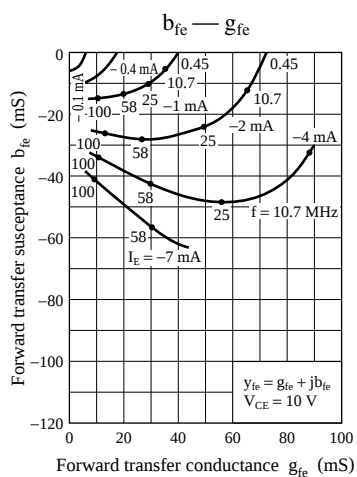
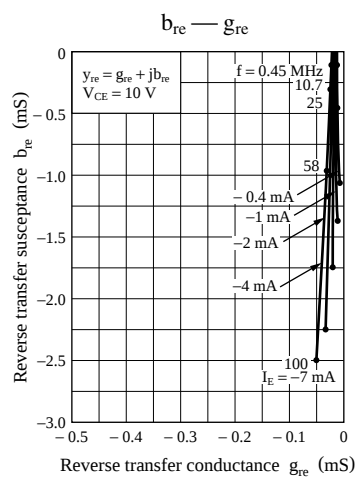
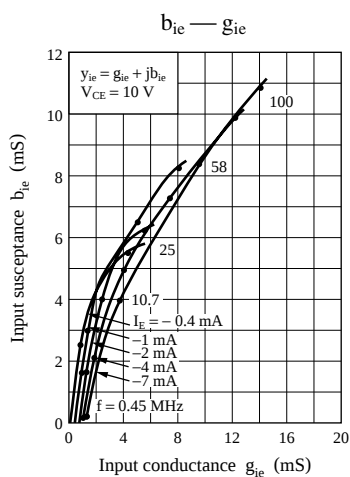
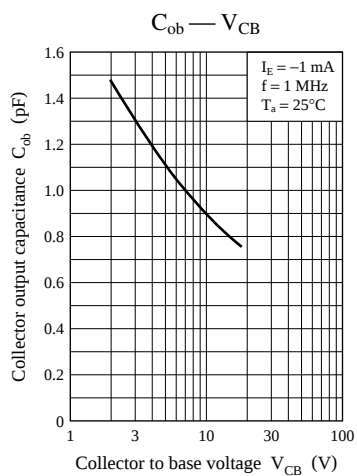
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V_{CBO}	$I_C = 10\ \mu\text{A}$, $I_E = 0$	30			V
Collector to emitter voltage	V_{CEO}	$I_C = 2\ \text{mA}$, $I_B = 0$	20			V
Emitter to base voltage	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	5			V
Forward current transfer ratio *	h_{FE}	$V_{CE} = 10\ \text{V}$, $I_C = 1\ \text{mA}$	70		250	
Transition frequency	f_T	$V_{CB} = 10\ \text{V}$, $I_C = 1\ \text{mA}$, $f = 200\ \text{MHz}$	150	230		MHz
Common emitter reverse transfer capacitance	C_{re}	$V_{CE} = 10\ \text{V}$, $I_C = 1\ \text{mA}$, $f = 10.7\ \text{MHz}$		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) *: h_{FE} Rank classification

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

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

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $I_B - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $Z_{rb} - I_E$  $C_{re} - V_{CE}$ 



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