

# 2SC2636

## Silicon NPN epitaxial planar type

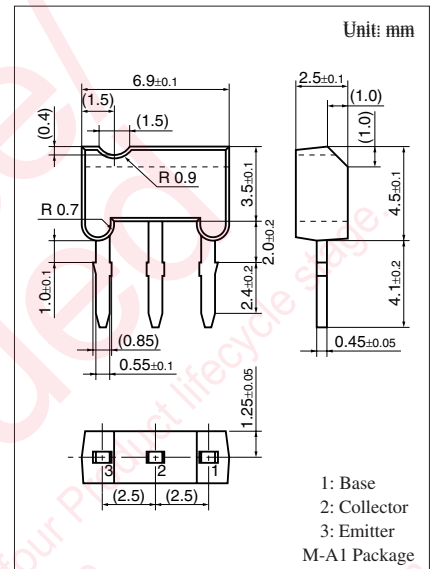
For high-frequency amplification/oscillation

### ■ Features

- High transition frequency  $f_T$
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board

### ■ 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)	$V_{EBO}$	3	V
Collector current	$I_C$	50	mA
Collector power dissipation	$P_C$	400	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



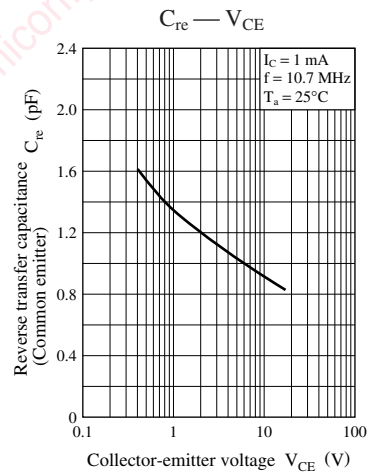
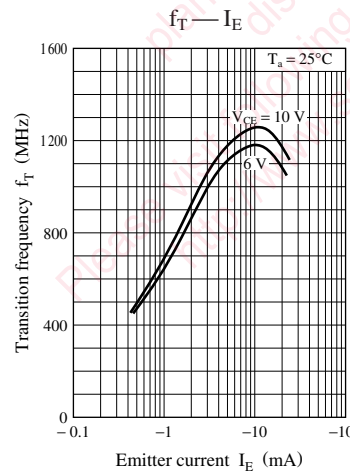
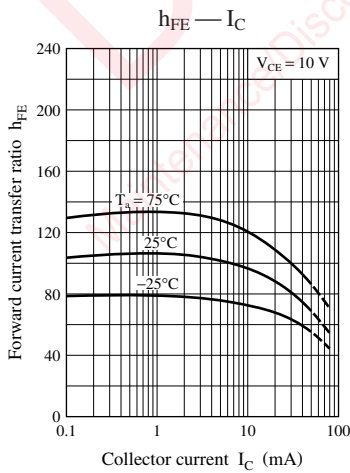
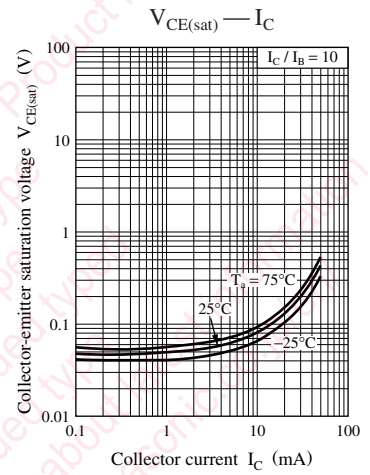
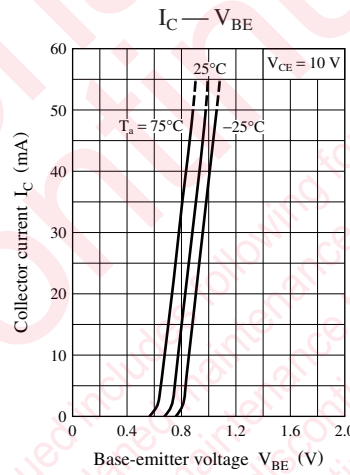
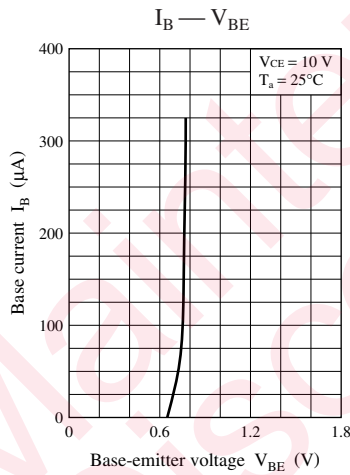
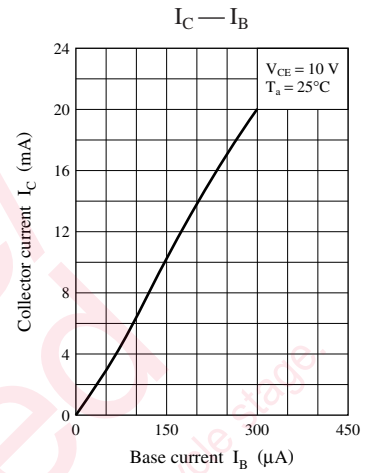
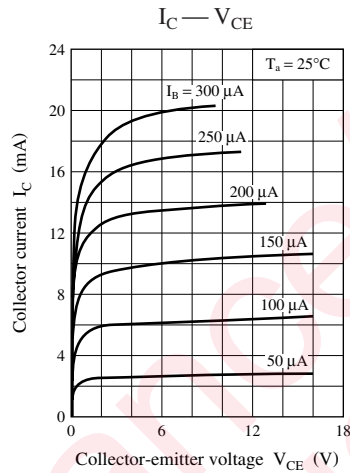
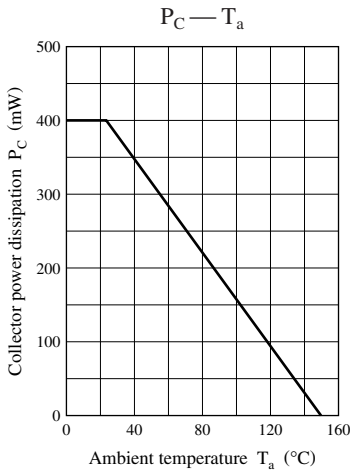
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

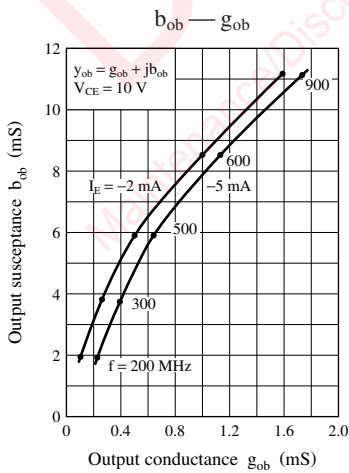
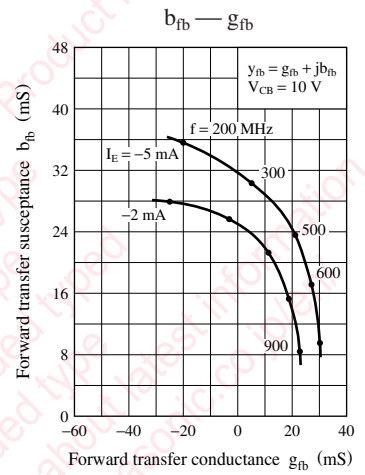
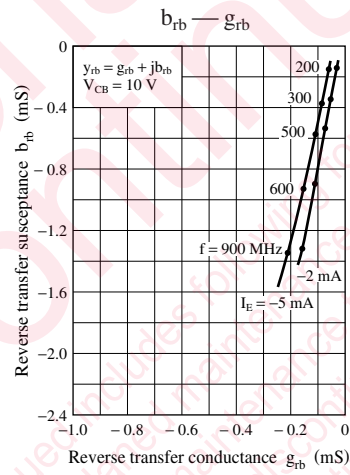
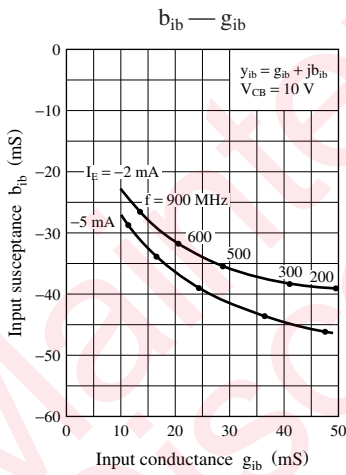
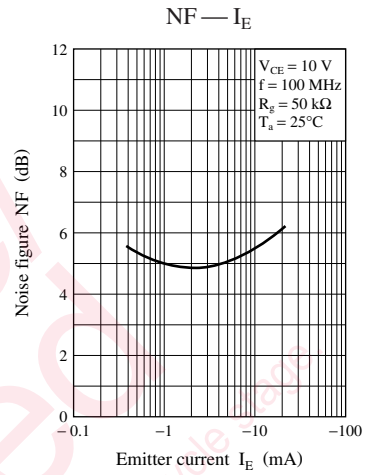
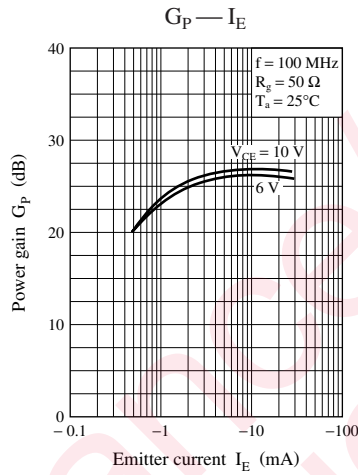
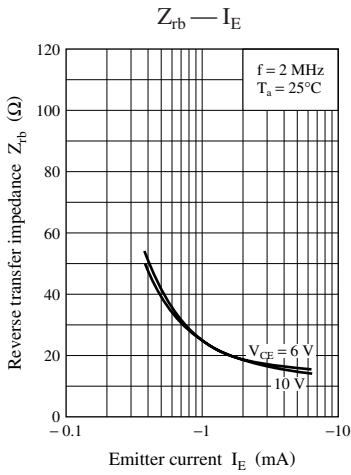
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 100 \mu\text{A}$ , $I_E = 0$	30			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}$ , $I_C = 0$	3			V
Base-emitter voltage	$V_{BE}$	$V_{CB} = 10 \text{ V}$ , $I_E = -2 \text{ mA}$		720		mV
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = 10 \text{ V}$ , $I_C = 2 \text{ mA}$	25			—
Transition frequency	$f_T$	$V_{CB} = 10 \text{ V}$ , $I_E = -15 \text{ mA}$ , $f = 200 \text{ MHz}$	600	1200	1600	MHz
Power gain	$G_P$	$V_{CB} = 10 \text{ V}$ , $I_E = -1 \text{ mA}$ , $f = 100 \text{ MHz}$		20		dB
Reverse transfer capacitance (Common base)	$C_{rb}$	$V_{CB} = 6 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		0.8		pF
Reverse transfer capacitance (Common emitter)	$C_{re}$	$V_{CE} = 10 \text{ V}$ , $I_C = 1 \text{ mA}$ , $f = 10.7 \text{ MHz}$			1.5	pF
Collector-base parameter	$r_{bb}' \cdot C_C$	$V_{CB} = 10 \text{ V}$ , $I_E = -10 \text{ mA}$ , $f = 31.9 \text{ MHz}$			25	ps

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

2. \*: Rank classification

Rank	T	S
$h_{FE}$	600 to 1300	900 to 1600





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