

2SC2636

Silicon NPN epitaxial planer type

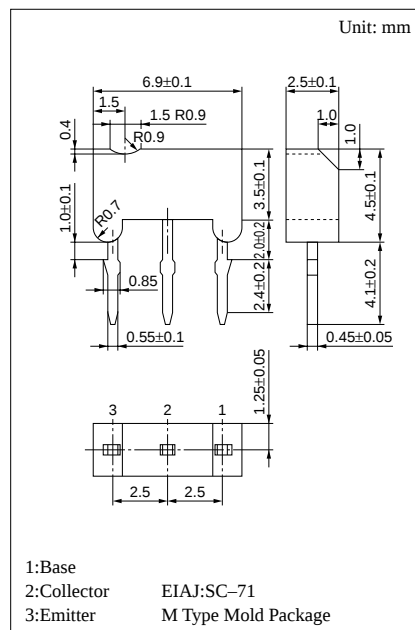
For high-frequency amplification/oscillation

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	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	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}	$-55 \sim +150$	$^\circ\text{C}$

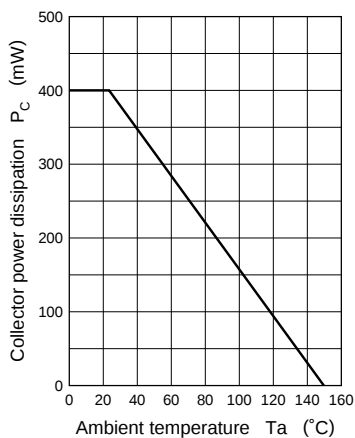
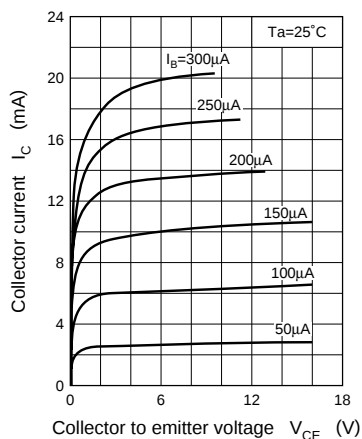
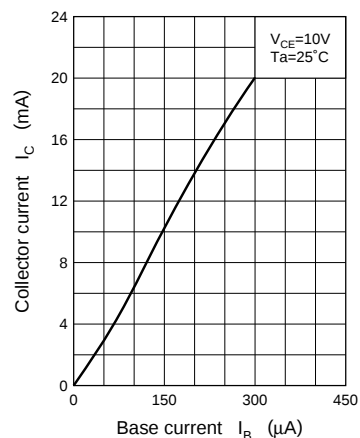
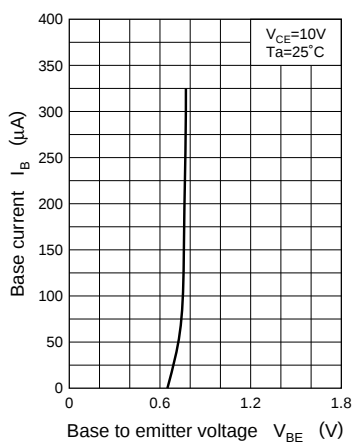
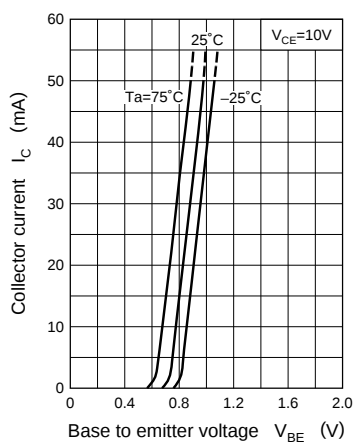
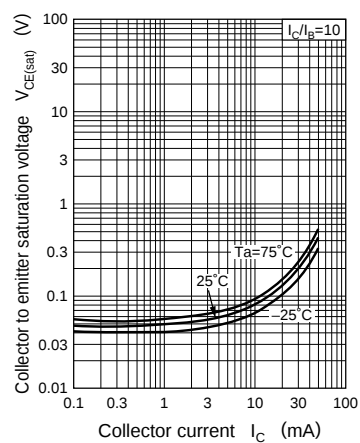
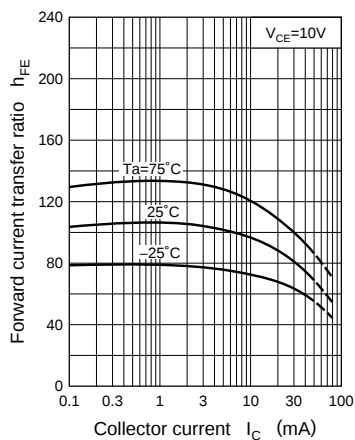
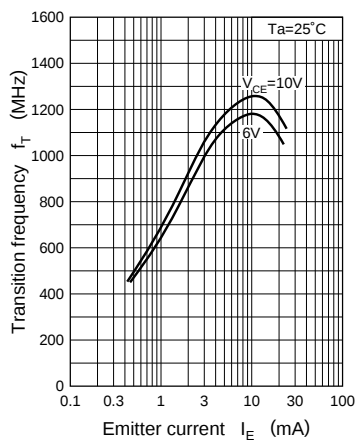
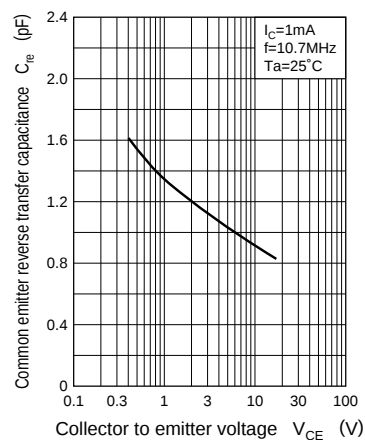


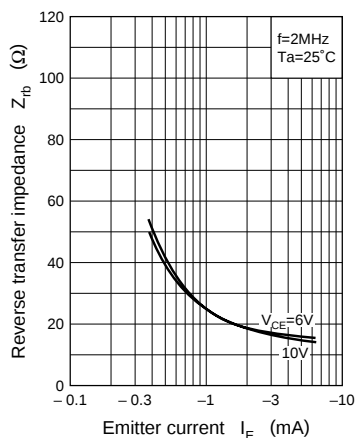
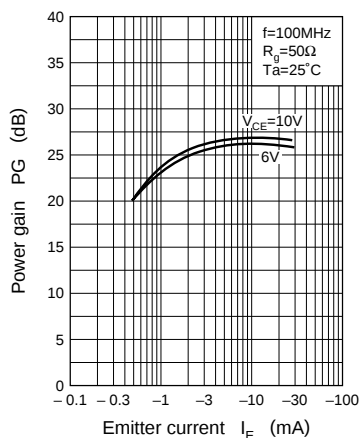
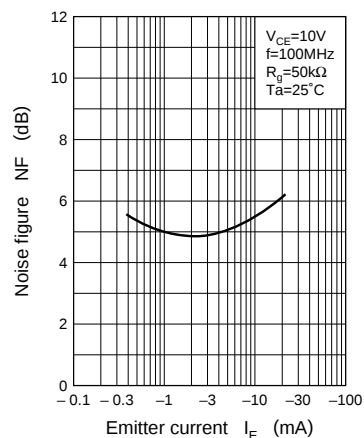
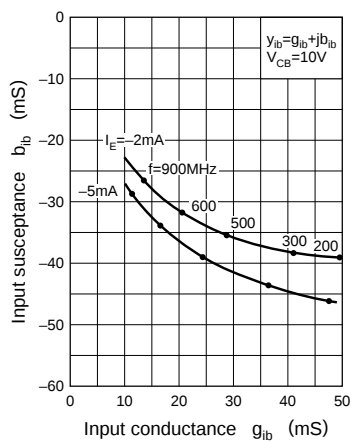
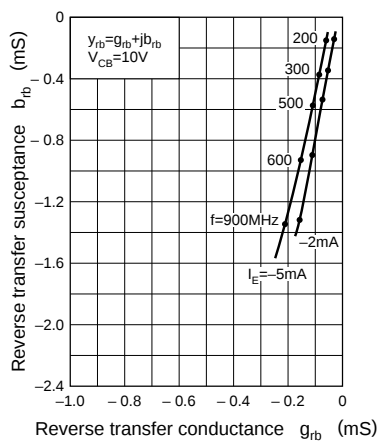
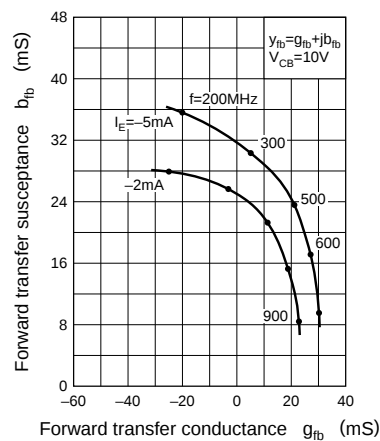
Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	30			V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu\text{A}$, $I_C = 0$	3			V
Forward current transfer ratio	h_{FE}	$V_{CB} = 10\text{V}$, $I_E = -2\text{mA}$	25			
Base to emitter voltage	V_{BE}	$V_{CB} = 10\text{V}$, $I_E = -2\text{mA}$		720		mV
Transition frequency	f_T^*	$V_{CB} = 10\text{V}$, $I_E = -15\text{mA}$, $f = 200\text{MHz}$	600	1200	1600	MHz
Power gain	PG	$V_{CB} = 10\text{V}$, $I_E = -1\text{mA}$, $f = 100\text{MHz}$		20		dB
Common base reverse transfer capacitance	C_{rb}	$V_{CB} = 6\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		0.8		pF
Common emitter reverse transfer capacitance	C_{re}	$V_{CE} = 10\text{V}$, $I_C = 1\text{mA}$, $f = 10.7\text{MHz}$			1.5	pF
Base time constant	$\tau_{bb'} \cdot C_C$	$V_{CB} = 10\text{V}$, $I_E = -10\text{mA}$, $f = 31.9\text{MHz}$			25	ps

* f_T Rank classification

Rank	T	S
f_T	600 ~ 1300	900 ~ 1600

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

$Z_{rb} - I_E$  $PG - I_E$  $NF - I_E$  $b_{ib} - g_{ib}$  $b_{rb} - g_{rb}$  $b_{fb} - g_{fb}$  $b_{ob} - g_{ob}$ 