# 2SC3931G

## Silicon NPN epitaxial planar type

### For high-frequency amplification

#### ■ Features

- Optimum for RF amplification of FM/AM radios
- High transition frequency f<sub>T</sub>
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

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

Parameter	Symbol	Symbol Rating	
Collector-base voltage (Emitter open)	$V_{CBO}$	30	V
Collector-emitter voltage (Base open)	$V_{CEO}$	20	V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	3	V
Collector current	$I_{C}$	15	mA
Collector power dissipation	$P_{C}$	150	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

#### Package

- Code SMini3-F2
- Marking Symbol: U
- Pin Name
  - 1. Base
  - 2. Emitter
  - 3. Collector

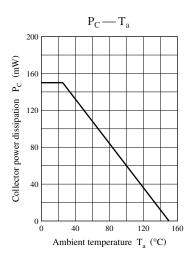
### ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

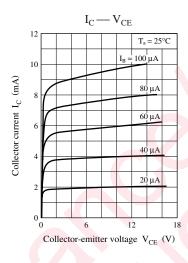
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_C = 10 \mu\text{A}, I_E = 0$	30	250		V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10  \mu A, I_C = 0$	3			V
Base-emitter voltage	$V_{BE}$	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}$	1.9	720		mV
Forward current transfer ratio *	$h_{FE}$	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}$	65		260	_
Transition frequency	$f_T$	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 200 \text{ MHz}$	450	650		MHz
Common-emitter reverse transfer capacitance	C <sub>re</sub>	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 10.7 \text{ MHz}$		0.8	1.0	pF
Power gain	G <sub>P</sub>	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		24		dB
Noise figure	NF	$V_{CB} = 6 \text{ V}, I_E = -1 \text{ mA}, f = 100 \text{ MHz}$		3.3		dB

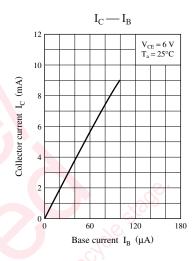
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

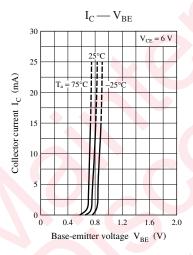
#### 2. \*: Rank classification

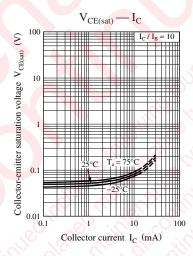
Rank	С	D
$h_{FE}$	65 to 160	100 to 260

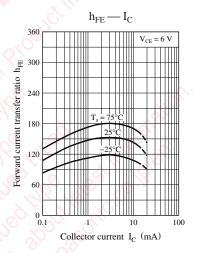


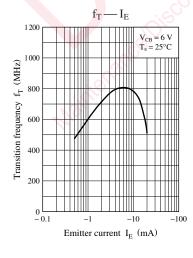


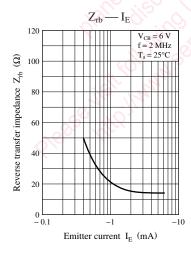


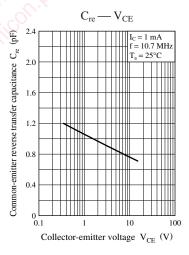




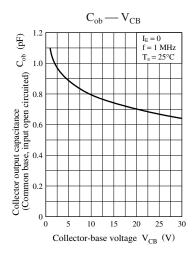


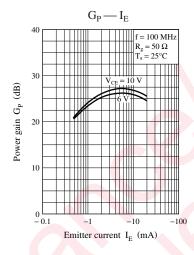


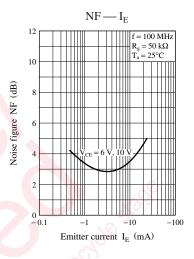


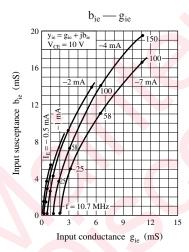


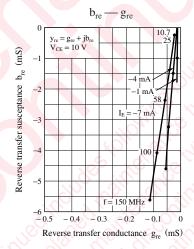
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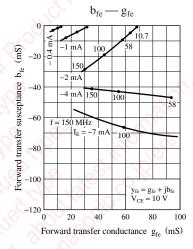


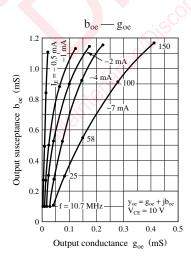




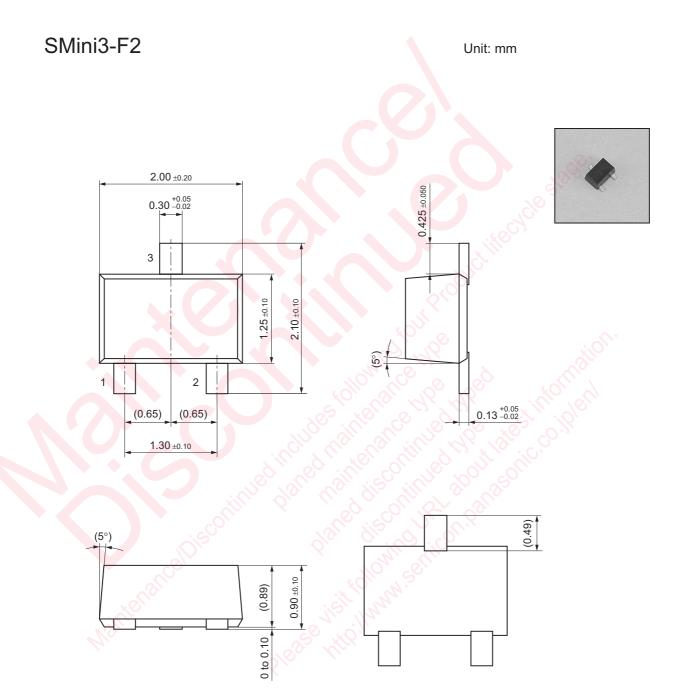








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