

2SC5609G

Silicon NPN epitaxial planar type

For general amplification

Complementary to 2SA2021G

■ Features

- High forward current transfer ratio h_{FE}

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	200	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

■ Package

- Code
SSSMini3-F2
- Pin Name

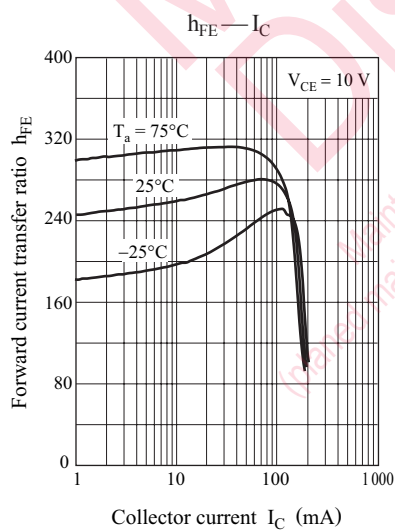
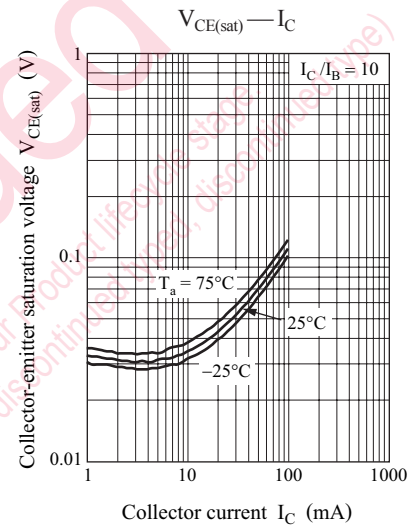
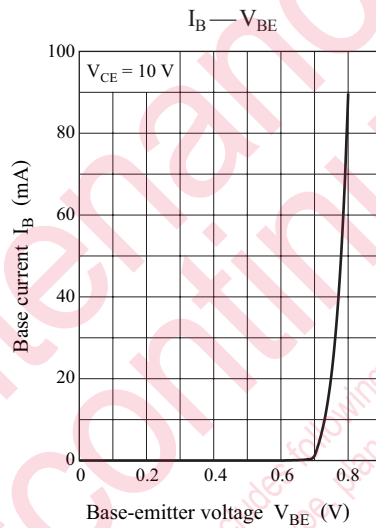
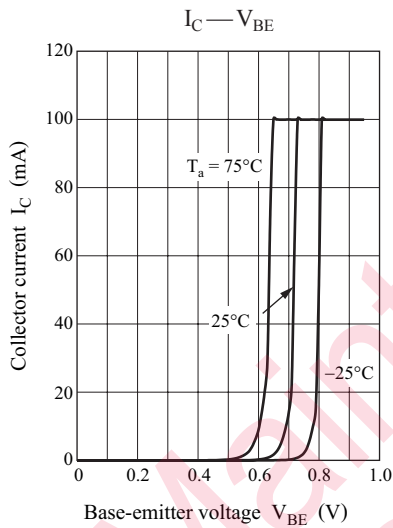
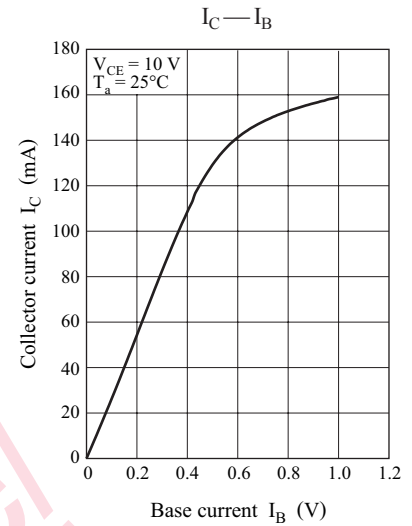
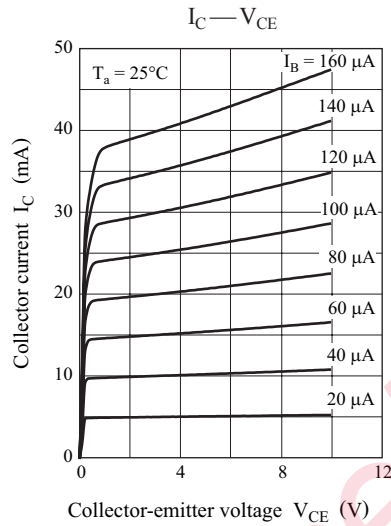
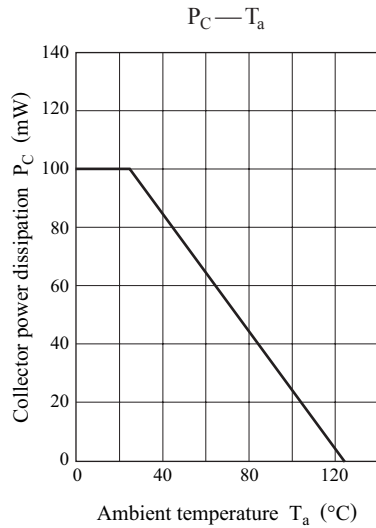
1. Base
2. Emitter
3. Collector

■ Marking Symbol: 3F**■ 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}	$I_C = 10\ \mu\text{A}$, $I_E = 0$	60			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2\ \text{mA}$, $I_B = 0$	50			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 20\ \text{V}$, $I_E = 0$			0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10\ \text{V}$, $I_B = 0$			100	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 10\ \text{V}$, $I_C = 2\ \text{mA}$	180		390	—
	h_{FE2}^*	$V_{CE} = 2\ \text{V}$, $I_C = 100\ \text{mA}$	90			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\ \text{mA}$, $I_B = 10\ \text{mA}$		0.1	0.3	V
Transition frequency	f_T	$V_{CB} = 10\ \text{V}$, $I_E = -2\ \text{mA}$, $f = 200\ \text{MHz}$		80		MHz
Collector output capacitance (Common base, input open circuited)	C_{re}	$V_{CB} = 10\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$		3.5		pF

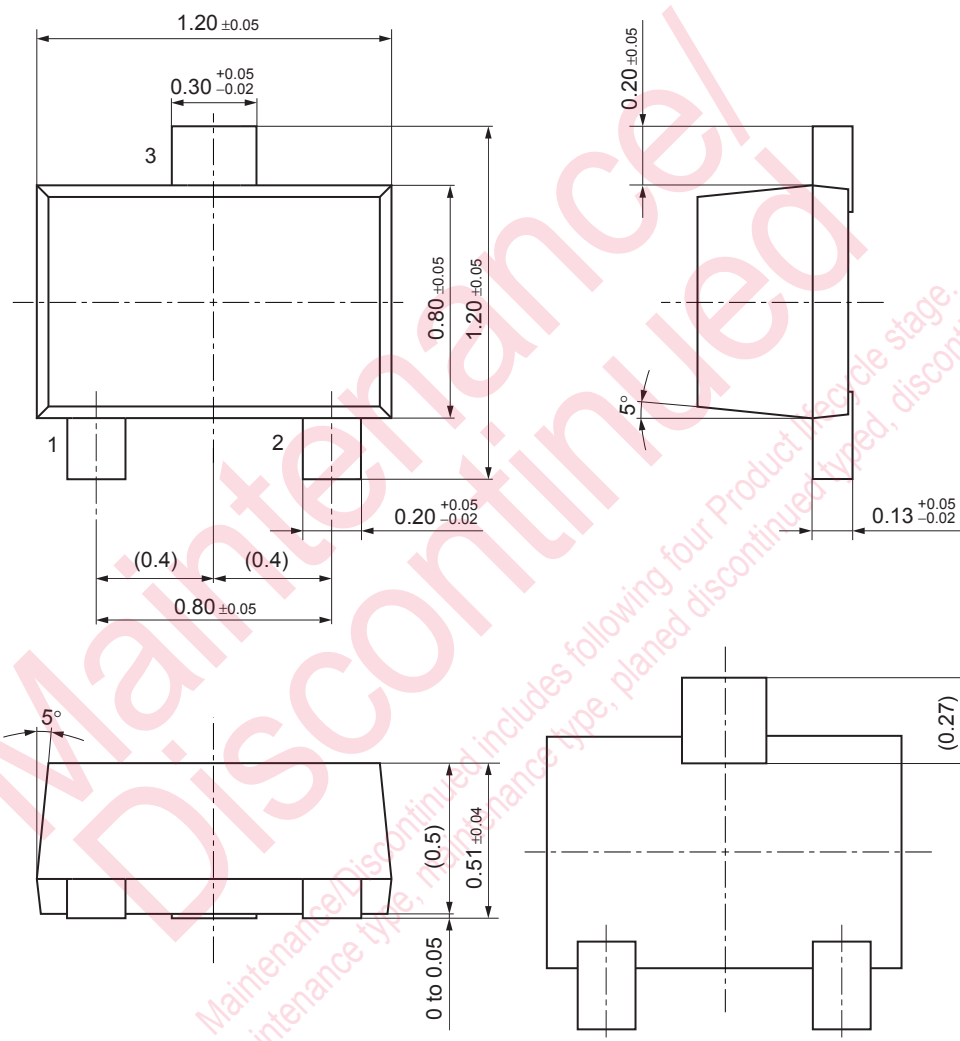
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement



SSSMini3-F2

Unit: mm



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