

# DSC9G02

## Silicon NPN epitaxial planar type

For high-frequency amplification  
DSC5G02 in SSMini3 type package

### ■ Features

- High transition frequency  $f_T$
- Halogen-free / RoHS compliant  
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

### ■ Marking Symbol: C5

### ■ Packaging

DSC9G02×0L Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

### ■ 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	$I_C$	15	mA
Collector power dissipation	$P_C$	125	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

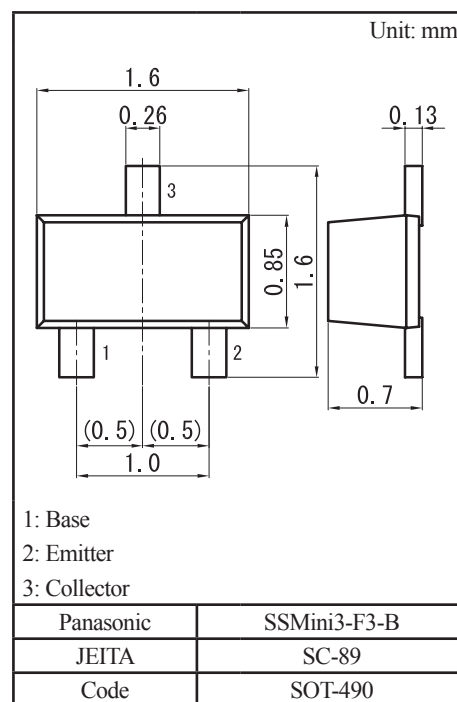
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = 10 \mu\text{A}, I_E = 0$	30			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	3			V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$		0.72		V
Forward current transfer ratio *1	$h_{FE}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	65		260	—
Transition frequency	$f_T$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$	450	650		MHz
Reverse transfer capacitance (Common emitter)	$C_{re}$	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}, f = 10.7 \text{ MHz}$		0.6		pF
Power gain	PG	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}, f = 100 \text{ MHz}$		24		dB
Noise figure	NF	$V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}, f = 100 \text{ MHz}$		3.3		dB

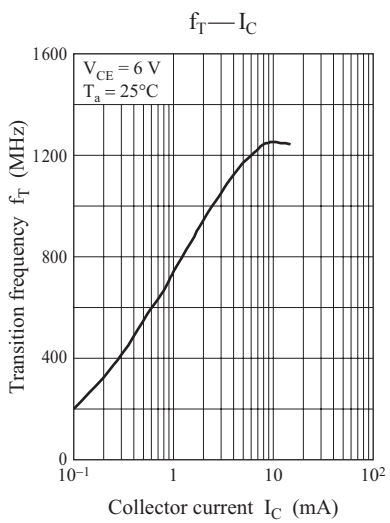
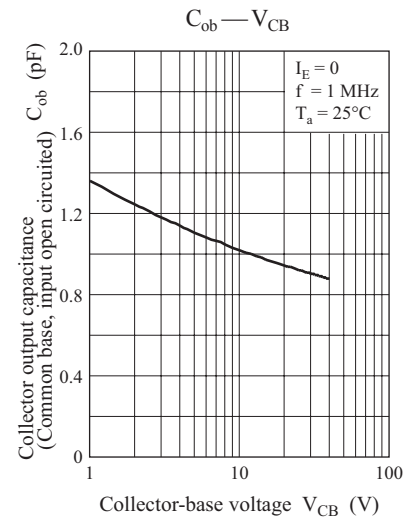
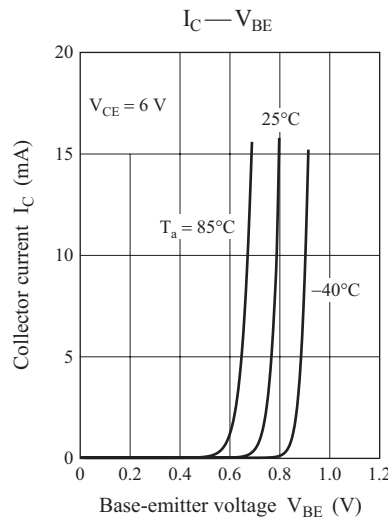
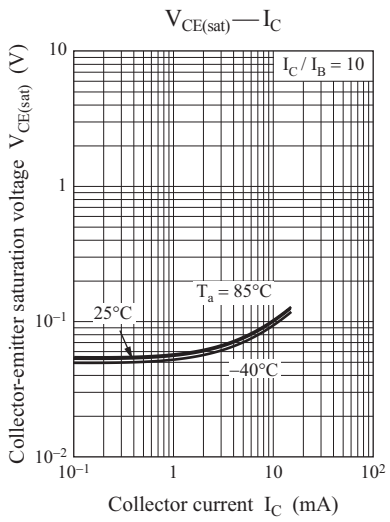
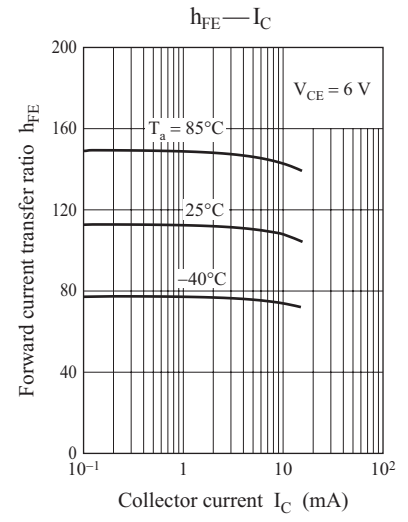
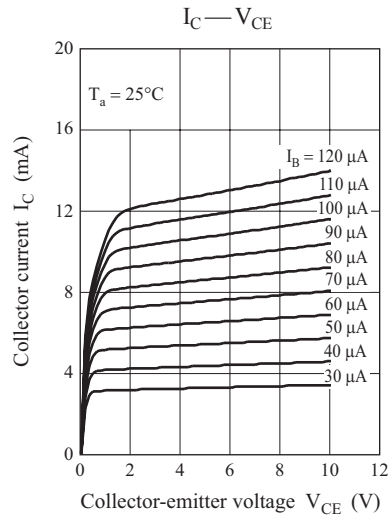
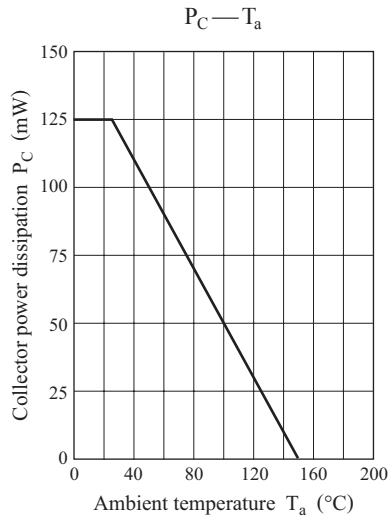
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*1: Rank classification

Code	C	D	0
Rank	C	D	No-rank
$h_{FE}$	65 to 160	100 to 260	65 to 260
Marking Symbol	C5C	C5D	C5

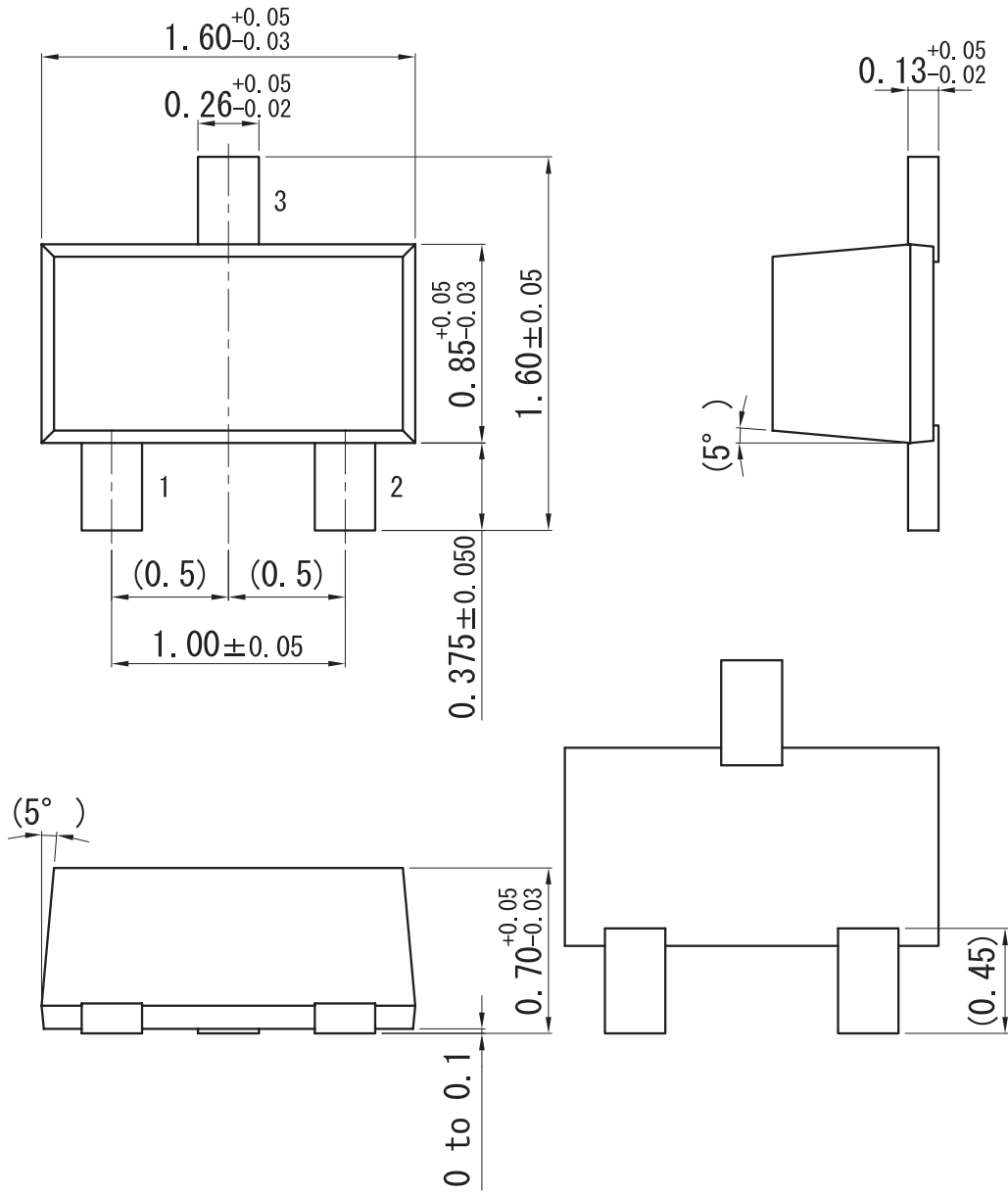
Product of no-rank is not classified and have no marking symbol for rank.



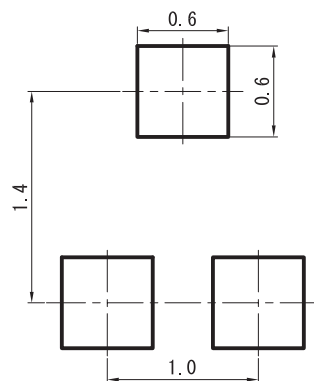


SSMini3-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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