

# DSC2F01

## Silicon NPN epitaxial planar type

For high-frequency amplification

### ■ Features

- High transition frequency  $f_T$
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

### ■ Packaging

Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	15	V
Collector-emitter voltage (Base open)	$V_{CEO}$	10	V
Emitter-base voltage (Collector open)	$V_{EBO}$	3	V
Collector current	$I_C$	50	mA
Collector power dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

### ■ Package

- Code  
Mini3-G3-B
- Pin Name
  1. Base
  2. Emitter
  3. Collector

### ■ Marking Symbol: C7

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

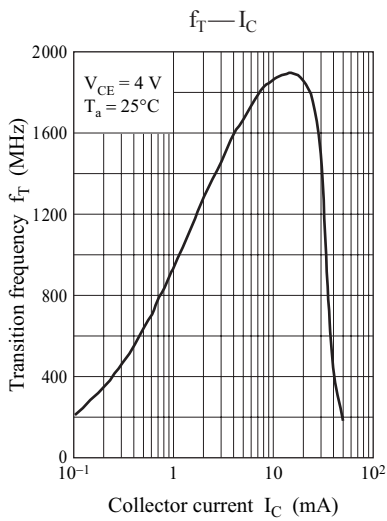
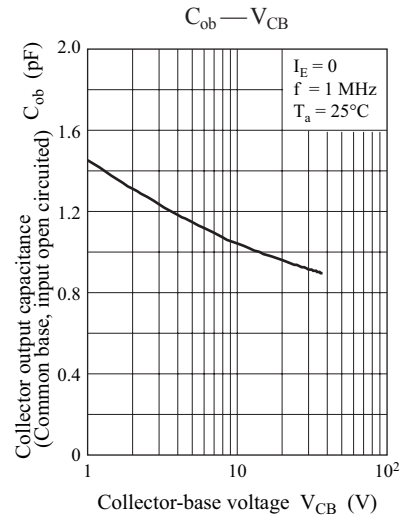
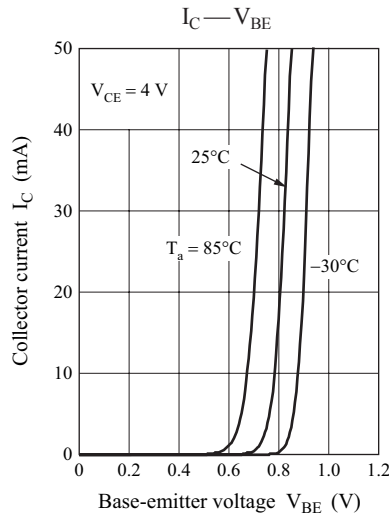
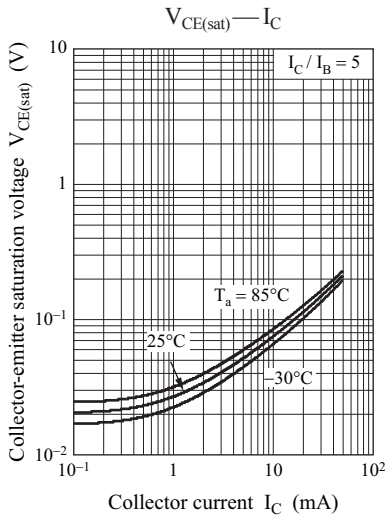
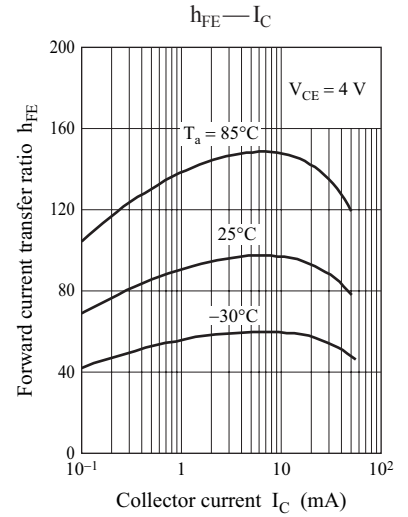
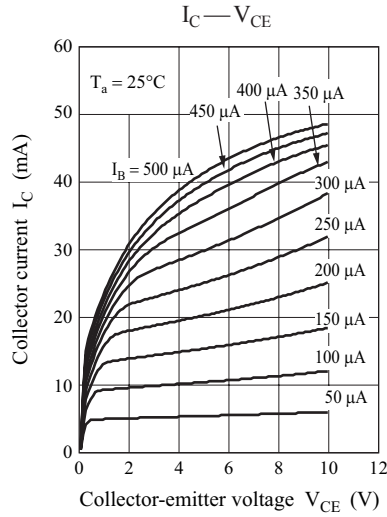
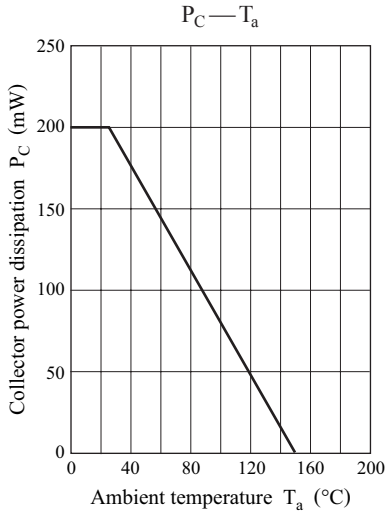
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = 2 \text{ mA}, I_B = 0$	10			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	3			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 10 \text{ V}, I_E = 0$			1	$\mu\text{A}$
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = 4 \text{ V}, I_C = 5 \text{ mA}$	75		220	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}, I_B = 4 \text{ mA}$			0.5	V
Transition frequency	$f_T$	$V_{CE} = 4 \text{ V}, I_C = 5 \text{ mA}$		1.9		GHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = 4 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		1.2		pF
Collector-base parameter	$r_{bb}' \cdot C_C$	$V_{CE} = 4 \text{ V}, I_C = 5 \text{ mA}, f = 31.9 \text{ MHz}$		12		ps
Reverse transfer capacitance (Common base)	$C_{rb}$	$V_{CE} = 4 \text{ V}, I_C = 0, f = 1 \text{ MHz}$		0.6		pF

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

2. \*: Rank classification

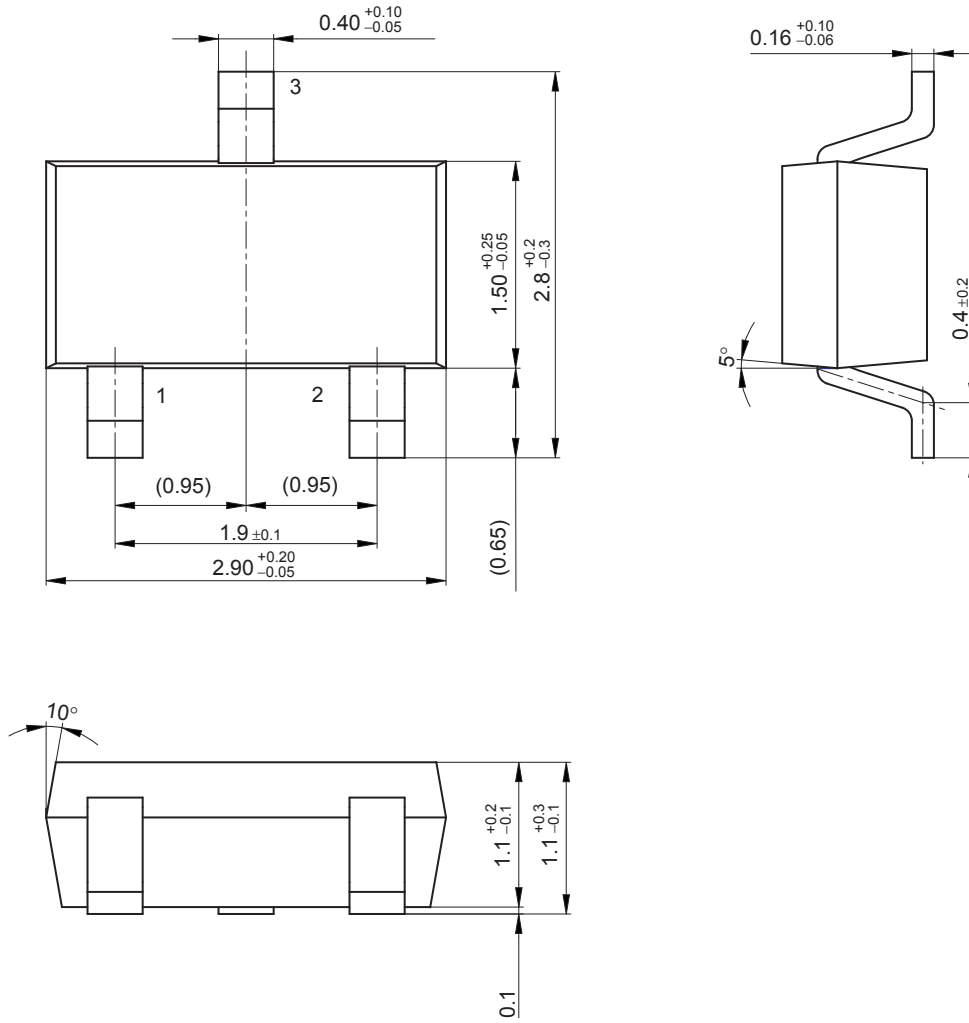
Code	P	Q	0
Rank	P	Q	No-rank
$h_{FE}$	75 to 130	110 to 220	75 to 220
Marking Symbol	C7P	C7Q	C7

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



Mini3-G3-B

Unit: mm



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