

# DSA5G01

Silicon PNP epitaxial planar type

For high-frequency amplification  
DSA2G01 in SMini3 type package

## ■ Features

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

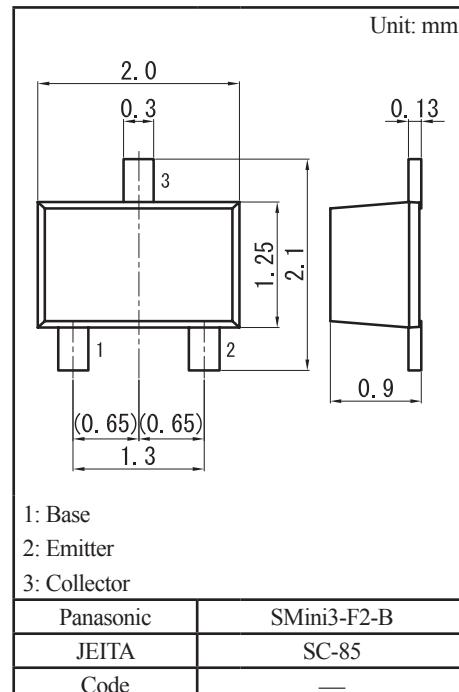
## ■ Marking Symbol: A4

## ■ Packaging

DSA5G01×0L 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) | $V_{EBO}$ | -5          | V    |
| Collector current                     | $I_C$     | -30         | mA   |
| Collector power dissipation           | $P_C$     | 150         | mW   |
| Junction temperature                  | $T_j$     | 150         | °C   |
| Operating ambient temperature         | $T_{opr}$ | -40 to +85  | °C   |
| Storage temperature                   | $T_{stg}$ | -55 to +150 | °C   |



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

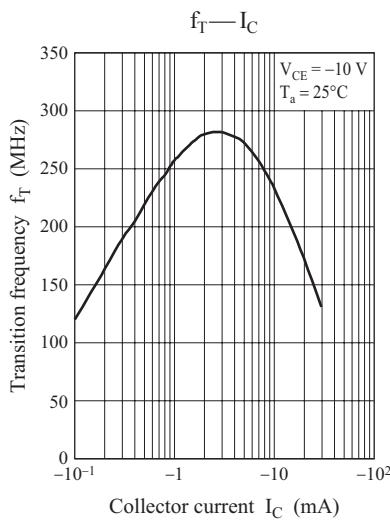
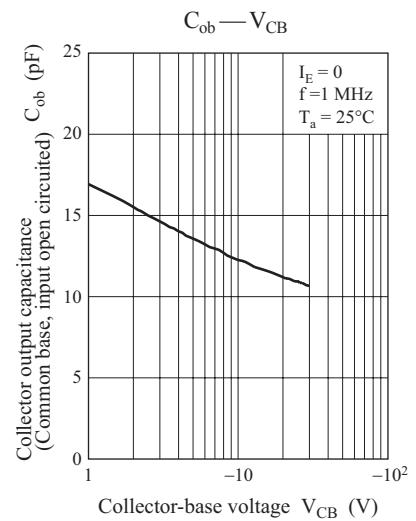
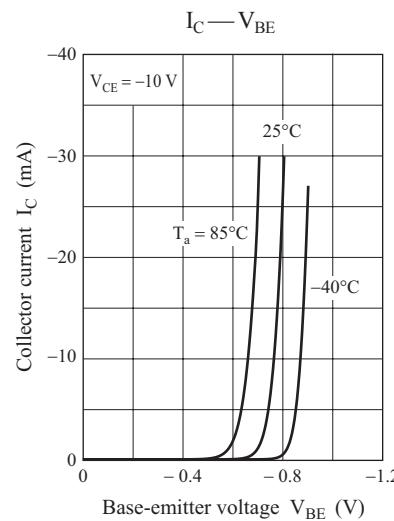
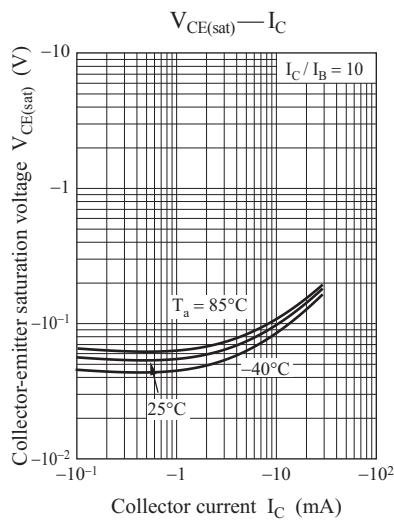
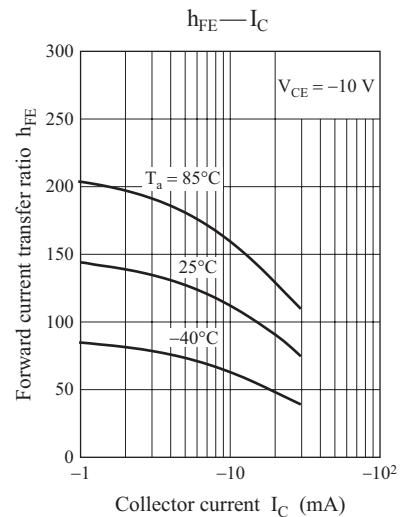
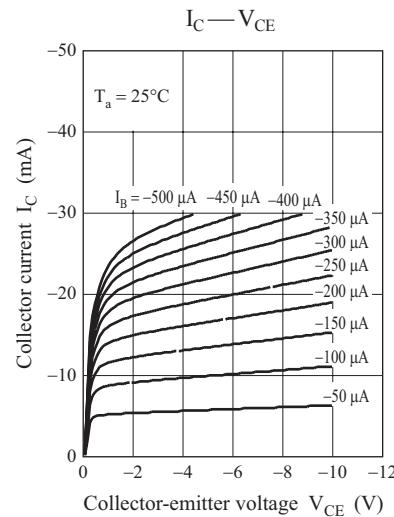
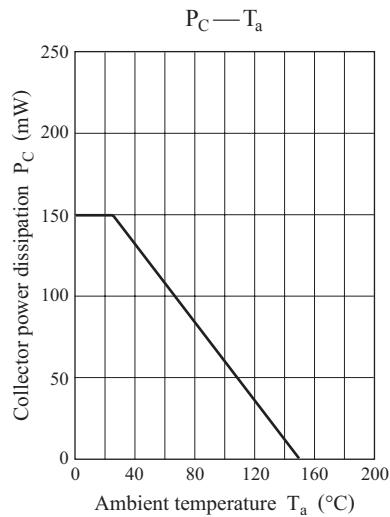
| Parameter  | Symbol        | Conditions   | Min | Typ  | Max | Unit |
|--|---------------|--|-----|------|-----|------|
| Base-emitter voltage                             | $V_{BE}$      | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$                         |     | -0.7 |     | V    |
| Collector-base cutoff current (Emitter open)     | $I_{CBO}$     | $V_{CB} = -10\text{ V}$ , $I_E = 0$                                    |     | -0.1 |     | μA   |
| Collector-emitter cutoff current (Base open)     | $I_{CEO}$     | $V_{CE} = -20\text{ V}$ , $I_B = 0$                                    |     | -100 |     | μA   |
| Emitter-base cutoff current (Collector open)     | $I_{EBO}$     | $V_{EB} = -5\text{ V}$ , $I_C = 0$                                     |     | -10  |     | μA   |
| Forward current transfer ratio *1                | $h_{FE}$      | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$                         | 70  | 220  |     | —    |
| Collector-emitter saturation voltage             | $V_{CE(sat)}$ | $I_C = -10\text{ mA}$ , $I_B = -1\text{ mA}$                           |     | -0.1 |     | V    |
| Transition frequency                             | $f_T$         | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$                         | 150 | 300  |     | MHz  |
| Reverse transfer capacitance<br>(Common emitter) | $C_{re}$      | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$ , $f = 10.7\text{ MHz}$ |     | 1.0  |     | pF   |
| Noise figure                                     | NF            | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$ , $f = 5\text{ MHz}$    |     | 2.8  |     | dB   |
| Reverse transfer impedance                       | $Z_{rb}$      | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$ , $f = 2\text{ MHz}$    |     | 22   |     | Ω    |

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

2. \*1: Rank classification

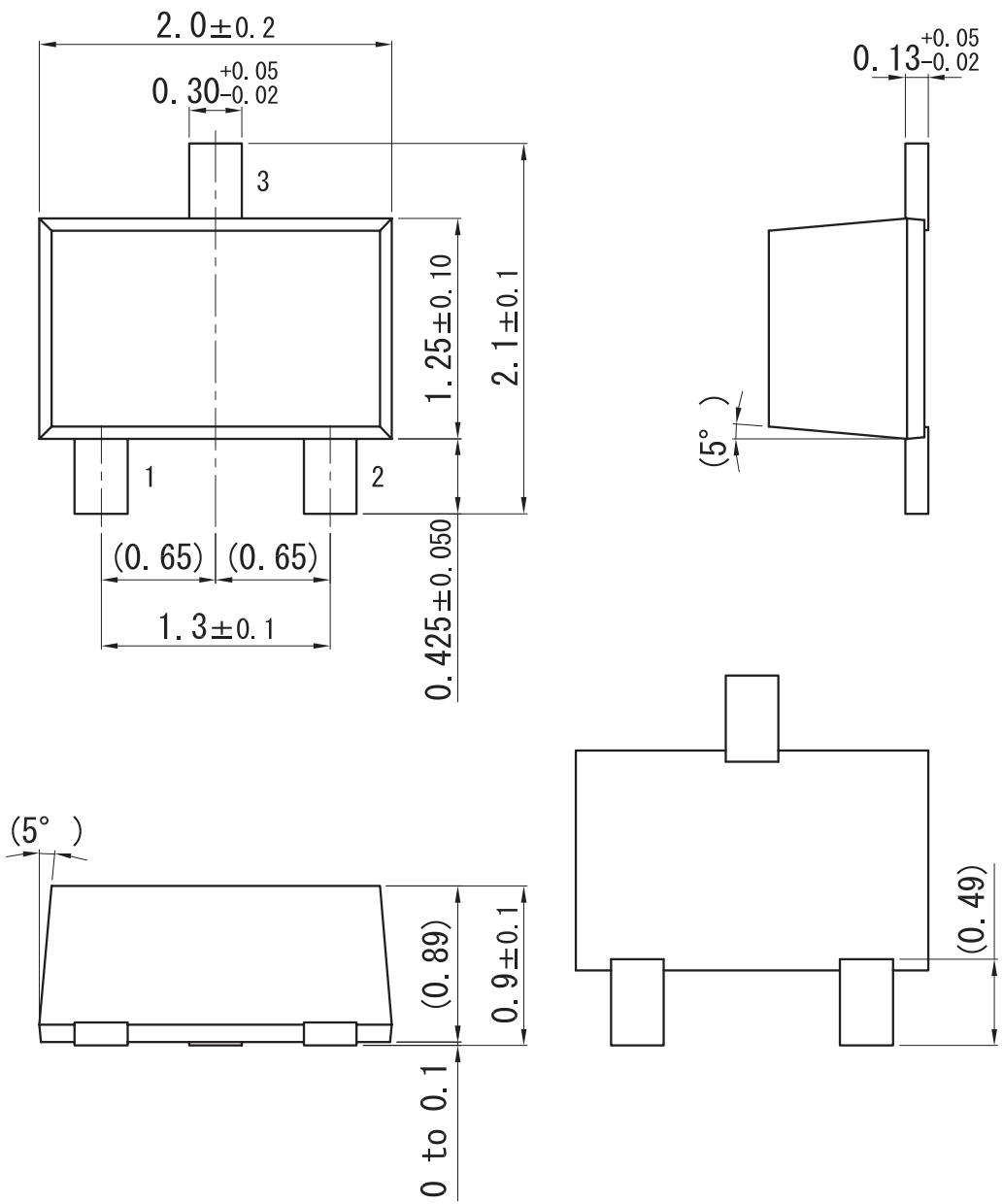
| Code           | B         | C          | 0         |
|----------------|-----------|------------|-----------|
| Rank           | B         | C          | No-rank   |
| $h_{FE}$       | 70 to 140 | 110 to 220 | 70 to 220 |
| Marking Symbol | A4B       | A4C        | A4        |

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

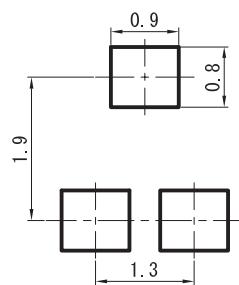


## SMini3-F2-B

Unit: mm



## ■ Land Pattern (Reference) (Unit: mm)



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