

2SC5725

Silicon NPN epitaxial planar type

For DC-DC converter

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 20 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 15 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 5 | V |
| Collector current | I_C | 2 | A |
| Peak collector current | I_{CP} | 6 | A |
| Collector power dissipation * | P_C | 600 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

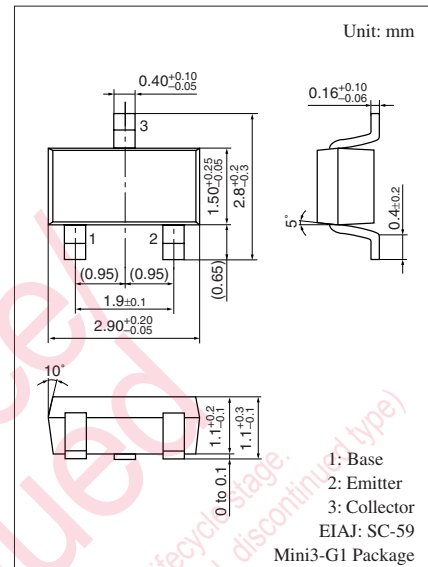
Note) *: Measure on the ceramic substrate at 15 mm × 15 mm × 0.6 mm

■ 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} | $I_C = 10 \mu\text{A}, I_E = 0$ | 20 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 1 \text{ mA}, I_B = 0$ | 15 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 10 \text{ V}, I_E = 0$ | | | 0.1 | μA |
| Forward current transfer ratio * | h_{FE1} | $V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$ | 200 | | 800 | — |
| | h_{FE2} | $V_{CE} = 2 \text{ V}, I_C = 1.5 \text{ A}$ | 120 | | | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = 0.5 \text{ A}, I_B = 25 \text{ mA}$ | | 40 | 100 | mV |
| | | $I_C = 1.5 \text{ A}, I_B = 30 \text{ mA}$ | | 130 | 280 | |
| Transition frequency | f_T | $V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$ | | 280 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | 15 | 25 | pF |

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

2. *: Pulse measurement



Marking Symbol: 3C

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