

2SC5592

Silicon NPN epitaxial planer type

For DC-DC converter

For various driver circuits

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$, large current capacitance
- High-speed switching
- Mini type 3-pin package, allowing downsizing and thinning of the equipment.
- Complementary pair with 2SA2010

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

| Parameter | Symbol | Rating | Unit |
|-------------------------------|-----------|-------------|------------------|
| Collector to base voltage | V_{CBO} | 15 | V |
| Collector to emitter voltage | V_{CEO} | 15 | V |
| Emitter to base voltage | V_{EBO} | 5 | V |
| Peak collector current | I_{CP} | 10 | A |
| Collector current | I_C | 2.5 | A |
| Collector power dissipation * | P_C | 600 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

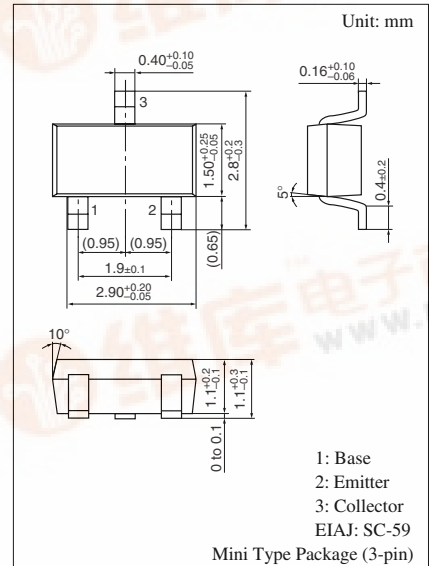
Note) *: Measure on the ceramic substrate at $15 \times 15 \times 0.6 \text{ mm}^3$.

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

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|---------------|--|-----|-----|-------|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 10 \text{ V}, I_E = 0$ | | | 0.1 | μA |
| Collector to base voltage | V_{CBO} | $I_C = 10 \mu\text{A}, I_E = 0$ | 15 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = 1 \text{ mA}, I_B = 0$ | 15 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 5 | | | V |
| Forward current transfer ratio *1 | h_{FE1} | $V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$ | 400 | | 1 000 | |
| | h_{FE2} | $V_{CE} = 2 \text{ V}, I_C = 2.5 \text{ A}$ | 280 | | | |
| Collector to emitter saturation voltage *1 | $V_{CE(sat)}$ | $I_C = 1 \text{ A}, I_B = 10 \text{ mA}$ | | 110 | | mV |
| | | $I_C = 2.5 \text{ A}, I_B = 50 \text{ mA}$ | | 220 | 320 | mV |
| Collector output capacitance | C_{ob} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | 30 | | pF |
| Transition frequency | f_T | $V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}$ $f = 200 \text{ MHz}$ | | 180 | | MHz |
| Turn-on time *2 | t_{on} | | | 30 | | ns |
| Storage time *2 | t_{stg} | | | 100 | | ns |
| | t_f | | | 10 | | ns |

Note) *1: Rank classification ($\leq 1 \text{ ms}$)

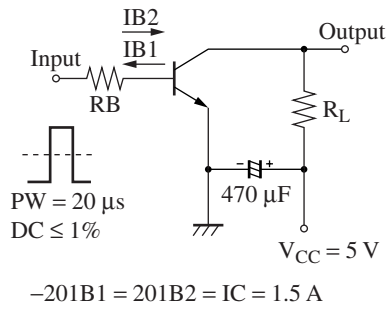
*2: Refere to the measurement circuit.



Marking Symbol: 2T



■ Measurement Circuit



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