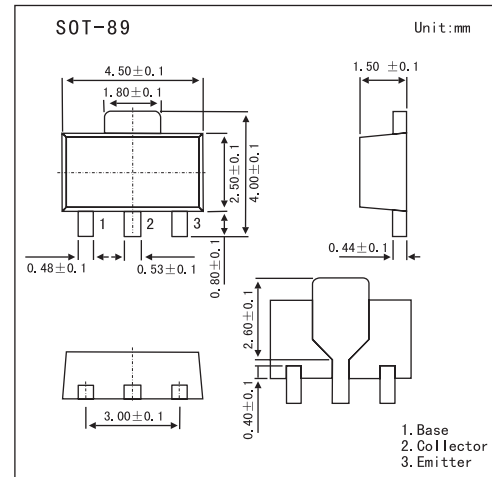


## Silicon PNP Epitaxial Type

## 2SC2873

## ■ Features

- Low saturation voltage:  $V_{CE(sat)} = 0.5\text{ V (max)}$  ( $I_C = 1\text{ A}$ ).
- High speed switching time:  $t_{stg} = 1.0\ \mu\text{ s (typ.)}$ .
- Small flat package.
- $P_C = 1.0\text{ to }2.0\text{ W}$

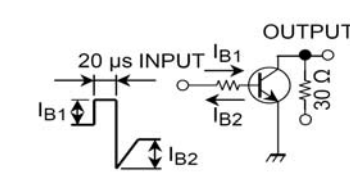
■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                   | Symbol     | Rating      | Unit             |
|-----------------------------|------------|-------------|------------------|
| Collector-base voltage      | $V_{CBO}$  | 50          | V                |
| Collector-emitter voltage   | $V_{CEO}$  | 50          | V                |
| Emitter-base voltage        | $V_{EBO}$  | 5           | V                |
| Collector current           | $I_C$      | 2           | A                |
| Base current                | $I_B$      | 0.4         | A                |
| Collector power dissipation | $P_C$      | 500         | mW               |
|                             | $P_C^{*1}$ | 1000        | mW               |
| Junction temperature        | $T_j$      | 150         | $^\circ\text{C}$ |
| Storage temperature range   | $T_{stg}$  | -55 to +150 | $^\circ\text{C}$ |

\*1 Mounted on ceramic substrate ( $250\text{ mm}^2 \times 0.8\text{ t}$ )

## 2SC2873

## ■ Electrical Characteristics Ta = 25°C

| Parameter                            | Symbol               | Testconditons  | Min   | Typ | Max | Unit |    |
|--------------------------------------|----------------------|--|---|-----|-----|------|----|
| Collector-emitter breakdown voltage  | V <sub>CEO</sub>     | I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0   | 50  |     |     | V    |    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> = 50 V, I <sub>E</sub> = 0   |   |     | 0.1 | μA   |    |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0  |   |     | 0.1 | μA   |    |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> = 2 V, I <sub>C</sub> = 0.5 A                                      | 70  |     | 240 |      |    |
|                                      |                      | V <sub>CE</sub> = 2 V, I <sub>C</sub> = 2.0 A                                      | 20  |     |     |      |    |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 1 A, I <sub>B</sub> = 0.05 A                                      |   |     | 0.5 | V    |    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 1 A, I <sub>B</sub> = 0.05 A                                      |   |     | 1.2 | V    |    |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz                              |   | 30  |     | pF   |    |
| Turn-on time                         | t <sub>on</sub>      |  |   | 0.1 |     | μs   |    |
| Storage time                         | t <sub>stg</sub>     |  |   |     | 1.0 |      | μs |
| Fall time                            | t <sub>f</sub>       |  | I <sub>B1</sub> = -I <sub>B2</sub> = 0.05 A,<br>DUTY CYCLE ≤ 1% |     | 0.1 |      | μs |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> = 2 V, I <sub>C</sub> = 0.5 A                                      |   | 120 |     | MHz  |    |

## ■ hFE Classification

|         |        |         |
|---------|--------|---------|
| Marking | MO     | MY      |
| Rank    | O      | Y       |
| hFE     | 70~140 | 120~240 |