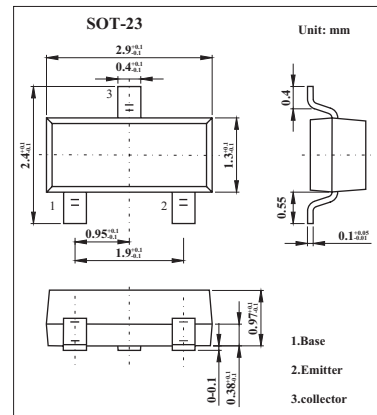


**2SC4519**

■ Features

- Adoption of FBET process.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Small-sized package.

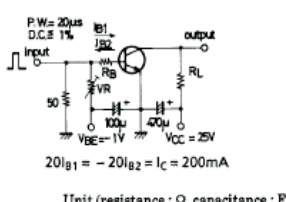


■ Absolute Maximum Ratings Ta = 25°C

| Parameter                 | Symbol           | Rating      | Unit |
|---------------------------|------------------|-------------|------|
| Collector-base voltage    | V <sub>CB0</sub> | 60          | V    |
| Collector-emitter voltage | V <sub>CEO</sub> | 45          | V    |
| Emitter-base voltage      | V <sub>EB0</sub> | 5           | V    |
| Collector current         | I <sub>c</sub>   | 500         | mA   |
| Collector current (pulse) | I <sub>cp</sub>  | 1           | A    |
| Collector dissipation     | P <sub>c</sub>   | 200         | mW   |
| Junction temperature      | T <sub>j</sub>   | 150         | °C   |
| Storage temperature       | T <sub>stg</sub> | -55 to +150 | °C   |

## 2SC4519

■ Electrical Characteristics Ta = 25°C

| Parameter                            | Symbol               | Testconditons  | Min | Typ  | Max  | Unit |    |
|--------------------------------------|----------------------|--|-----|------|------|------|----|
| Collector cutoff current             | ICBO                 | V <sub>CB</sub> = 45V, I <sub>E</sub> =0   |     |      | 0.5  | μA   |    |
| Emitter cutoff current               | IEBO                 | V <sub>EB</sub> = 3V, I <sub>C</sub> =0  |     |      | 0.5  | μA   |    |
| DC current gain                      | hFE                  | V <sub>CE</sub> = 2V, I <sub>C</sub> = 50mA  | 100 |      | 400  |      |    |
| Gain bandwidth product               | f <sub>T</sub>       | V <sub>CE</sub> = 2V, I <sub>C</sub> = 50mA  |     | 360  |      | MHz  |    |
| Output capacitance                   | C <sub>ob</sub>      | V <sub>CB</sub> = 10V, f = 1.0MHz  |     | 4    |      | pF   |    |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 200mA, I <sub>B</sub> = 10mA                                      |     | 0.15 | 0.45 | V    |    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 200mV, I <sub>B</sub> = 10mA                                      |     | 0.8  | 1.2  | V    |    |
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> = 10μA, I <sub>E</sub> = 0  | 60  |      |      | V    |    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> = 1mA, R <sub>BE</sub> = ∞  | 45  |      |      | V    |    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> = 10μA, I <sub>C</sub> = 0  | 5   |      |      | V    |    |
| Turn-on time                         | t <sub>on</sub>      |  |     | 60   | 120  | ns   |    |
| Storage time                         | t <sub>stg</sub>     |  |     |      | 150  | 270  | ns |
| Fall time                            | t <sub>f</sub>       |  |     |      | 200  | 350  | ns |

■ hFE Classification

| Marking | TT      |         |         |
|---------|---------|---------|---------|
|         | 4       | 5       | 6       |
| hFE     | 100~200 | 140~280 | 200~400 |