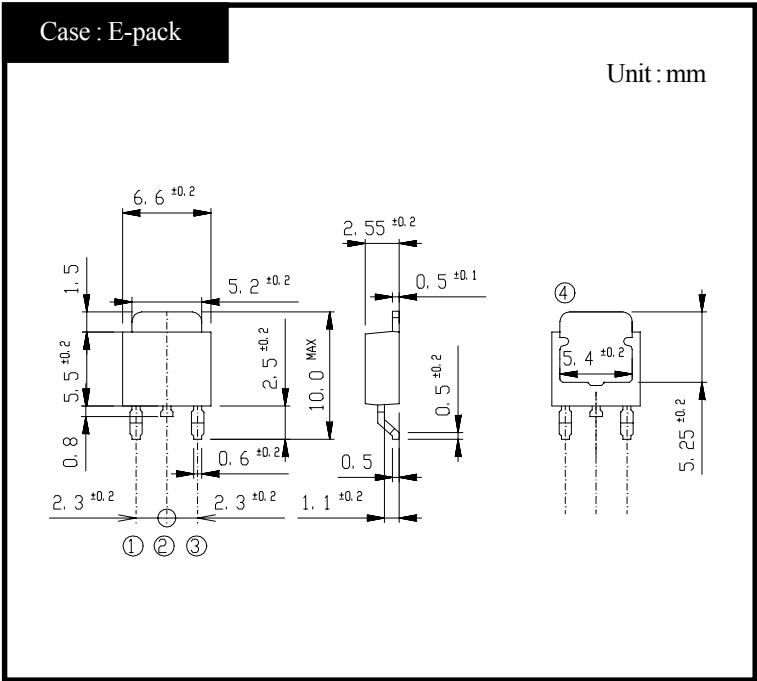


2SC4669  
(TE10S4)  
10A NPN

OUTLINE DIMENSIONS



RATINGS

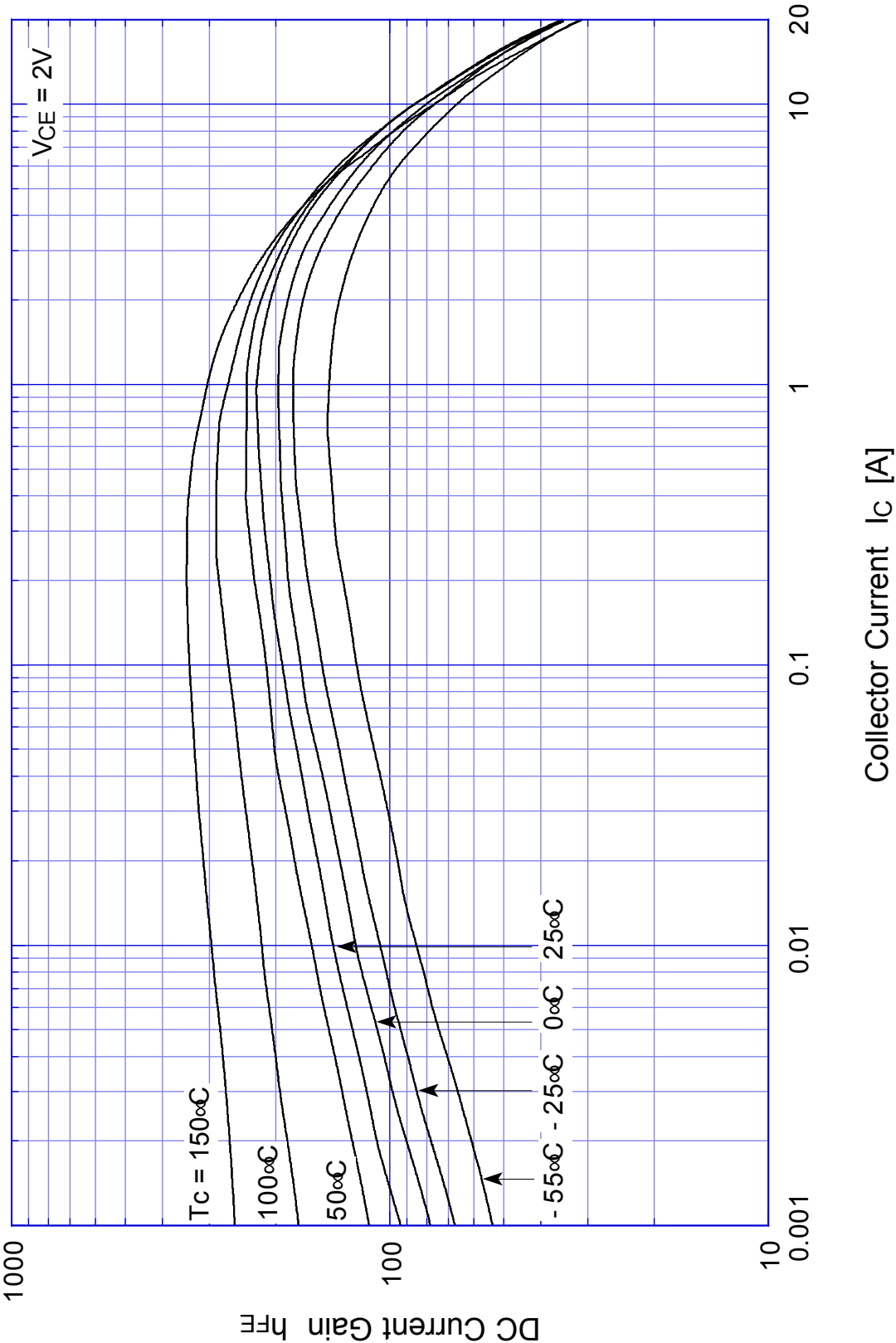
●Absolute Maximum Ratings

| Item                         | Symbol           | Conditions            | Ratings | Unit |
|------------------------------|------------------|-----------------------|---------|------|
| Storage Temperature          | T <sub>stg</sub> |                       | -55~150 | °C   |
| Junction Temperature         | T <sub>j</sub>   |                       | 150     | °C   |
| Collector to Base Voltage    | V <sub>CBO</sub> |                       | 60      | V    |
| Collector to Emitter Voltage | V <sub>CEO</sub> |                       | 40      | V    |
| Emitter to Base Voltage      | V <sub>EBO</sub> |                       | 7       | V    |
| Collector Current DC         | I <sub>C</sub>   |                       | 10      | A    |
| Collector Current Peak       | I <sub>CP</sub>  |                       | 20      | A    |
| Base Current DC              | I <sub>B</sub>   |                       | 1.5     | A    |
| Base Current Peak            | I <sub>BP</sub>  |                       | 2       | A    |
| Total Transistor Dissipation | P <sub>T</sub>   | T <sub>c</sub> = 25°C | 10      | W    |

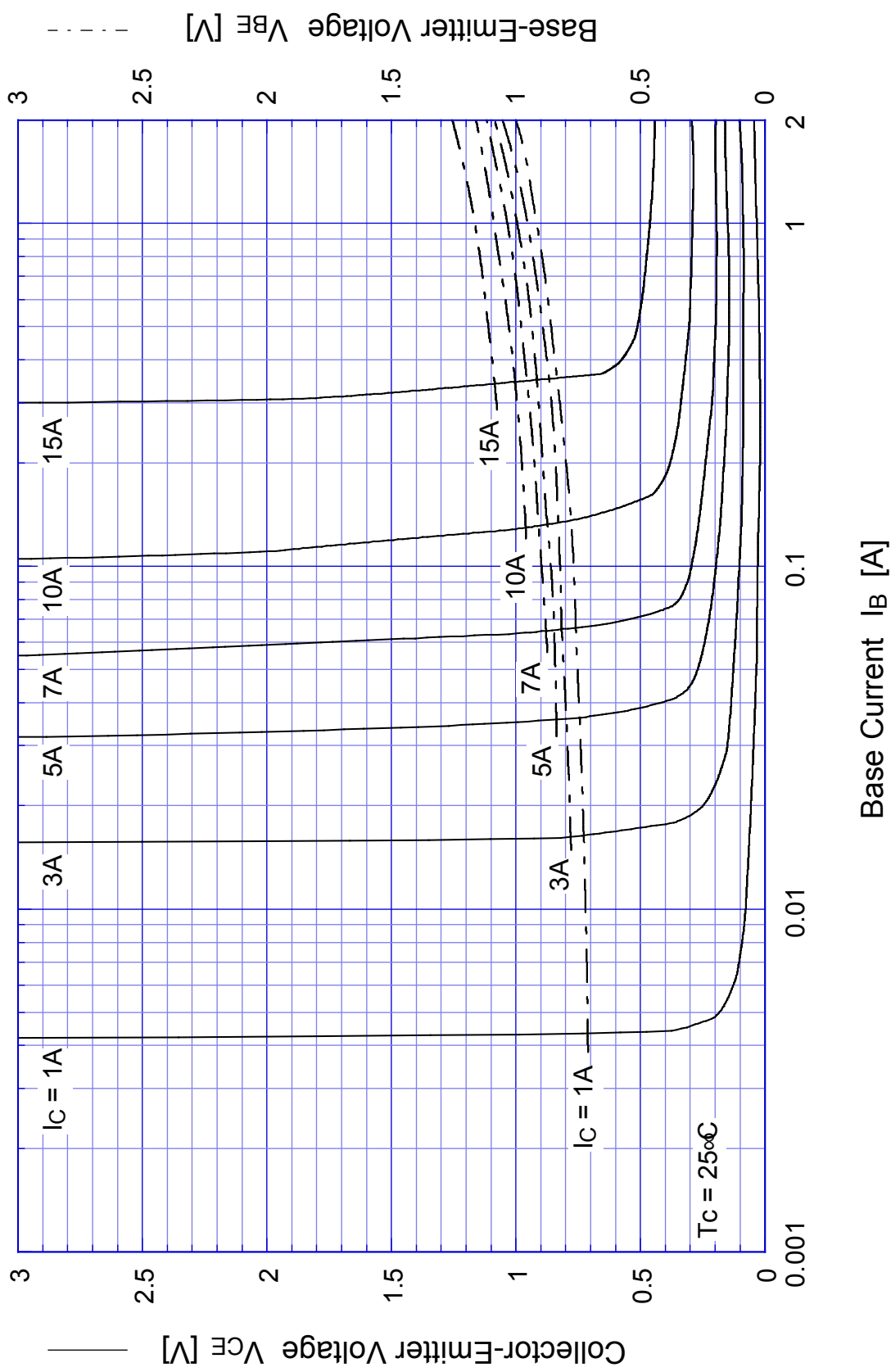
●Electrical Characteristics (T<sub>c</sub>=25°C)

| Item                                    | Symbol                | Conditions                                                                                                          | Ratings  | Unit |
|-----------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------|----------|------|
| Collector to Emitter Sustaining Voltage | V <sub>CEO(sus)</sub> | I <sub>C</sub> = 0.1A                                                                                               | Min 40   | V    |
| Collector Cutoff Current                | I <sub>CBO</sub>      | At rated Voltage                                                                                                    | Max 0.1  | mA   |
|                                         | I <sub>CEO</sub>      |                                                                                                                     | Max 0.1  |      |
| Emitter Cutoff Current                  | I <sub>EBO</sub>      | At rated Voltage                                                                                                    | Max 0.1  | mA   |
| DC Current Gain                         | h <sub>FE</sub>       | V <sub>CE</sub> = 2V, I <sub>C</sub> = 5A                                                                           | Min 70   |      |
| Collector to Emitter Saturation Voltage | V <sub>CE(sat)</sub>  | I <sub>C</sub> = 5A                                                                                                 | Max 0.3  | V    |
| Base to Emitter Saturation Voltage      | V <sub>BE(sat)</sub>  | I <sub>B</sub> = 0.5A                                                                                               | Max 1.2  | V    |
| Thermal Resistance                      | θ <sub>jc</sub>       | Junction to case                                                                                                    | Max 12.5 | °C/W |
| Transition Frequency                    | f <sub>T</sub>        | V <sub>CE</sub> = 10V, I <sub>C</sub> = 1A                                                                          | TYP 50   | MHz  |
| Turn on Time                            | ton                   | I <sub>C</sub> = 5A<br>I <sub>B1</sub> = 0.5A, I <sub>B2</sub> = 0.5A<br>R <sub>L</sub> = 5Ω, V <sub>BB2</sub> = 4V | Max 0.3  | μs   |
| Storage Time                            | ts                    |                                                                                                                     | Max 1.5  |      |
| Fall Time                               | tf                    |                                                                                                                     | Max 0.5  |      |

2SC4669  $h_{FE} - I_C$

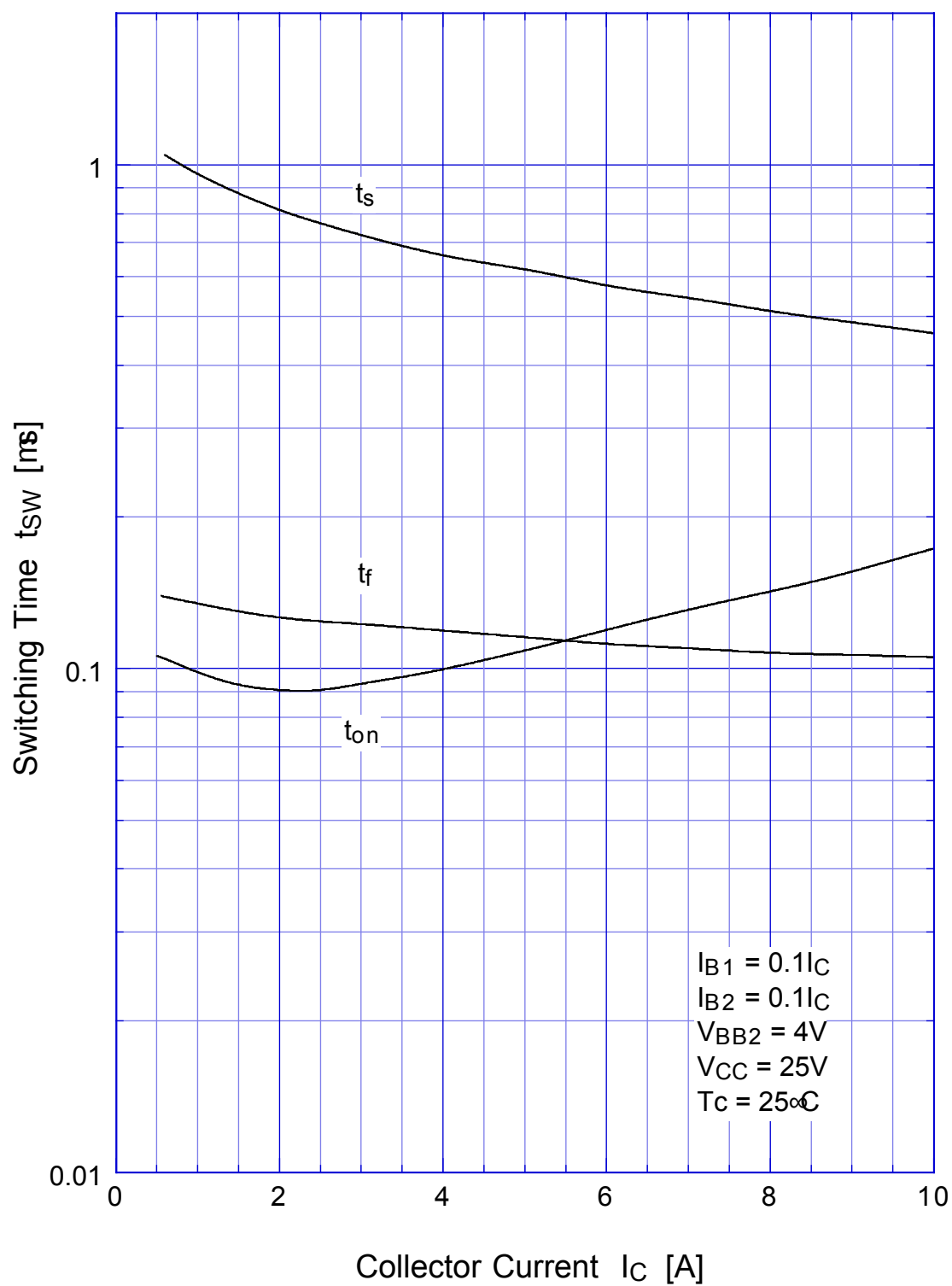


2SC4669 Saturation Voltage

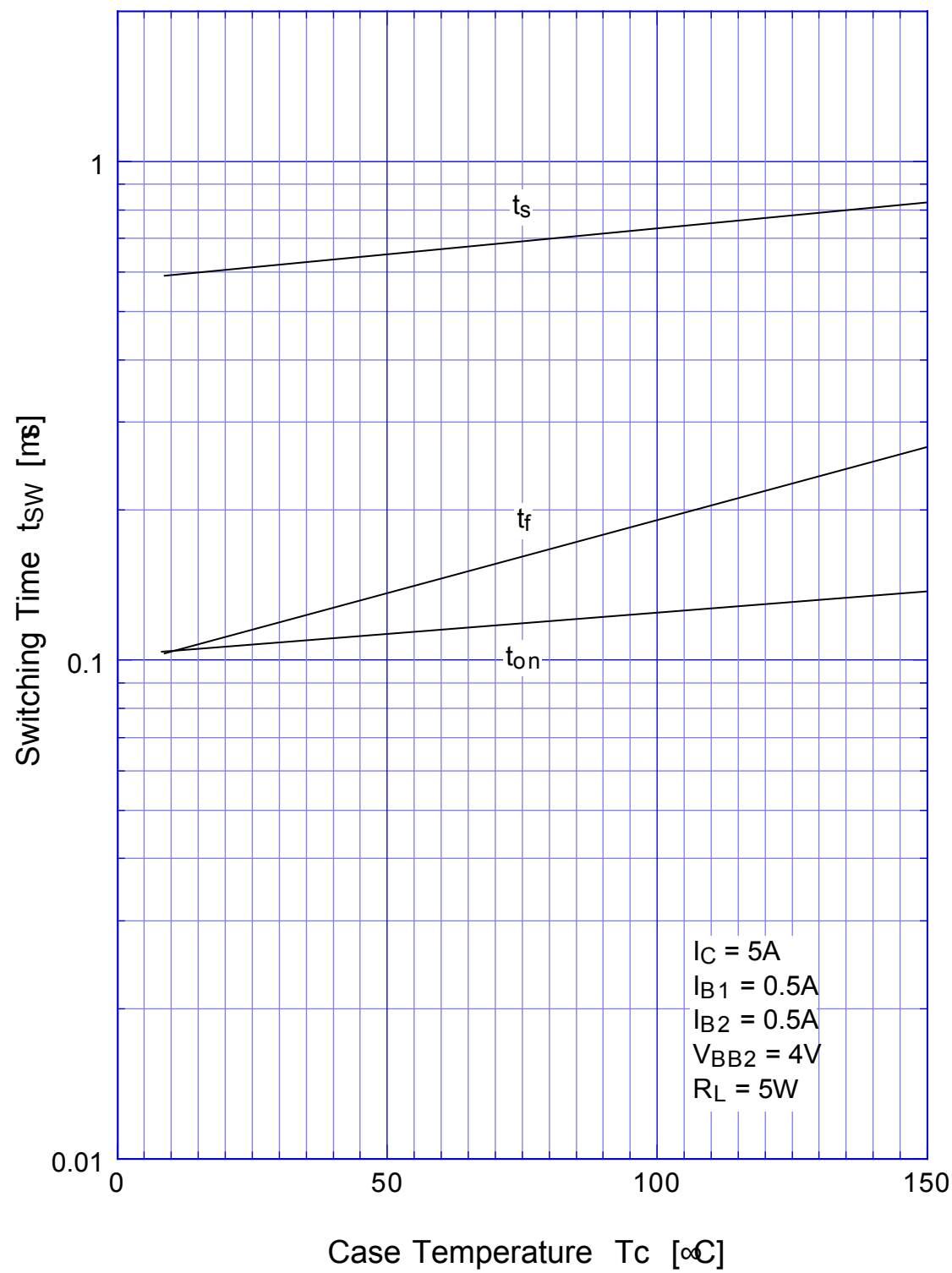


## 2SC4669

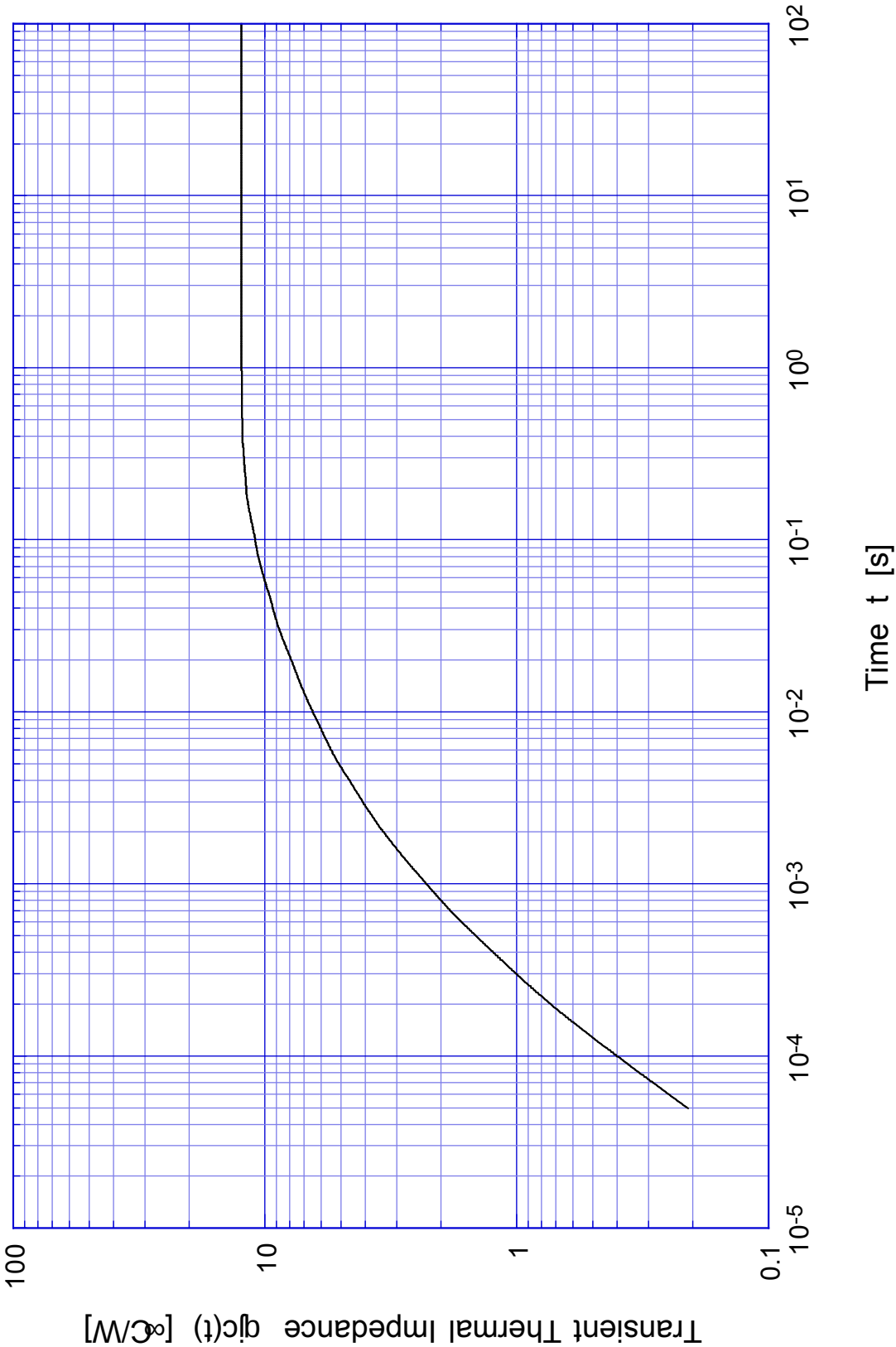
## Switching Time - $I_C$

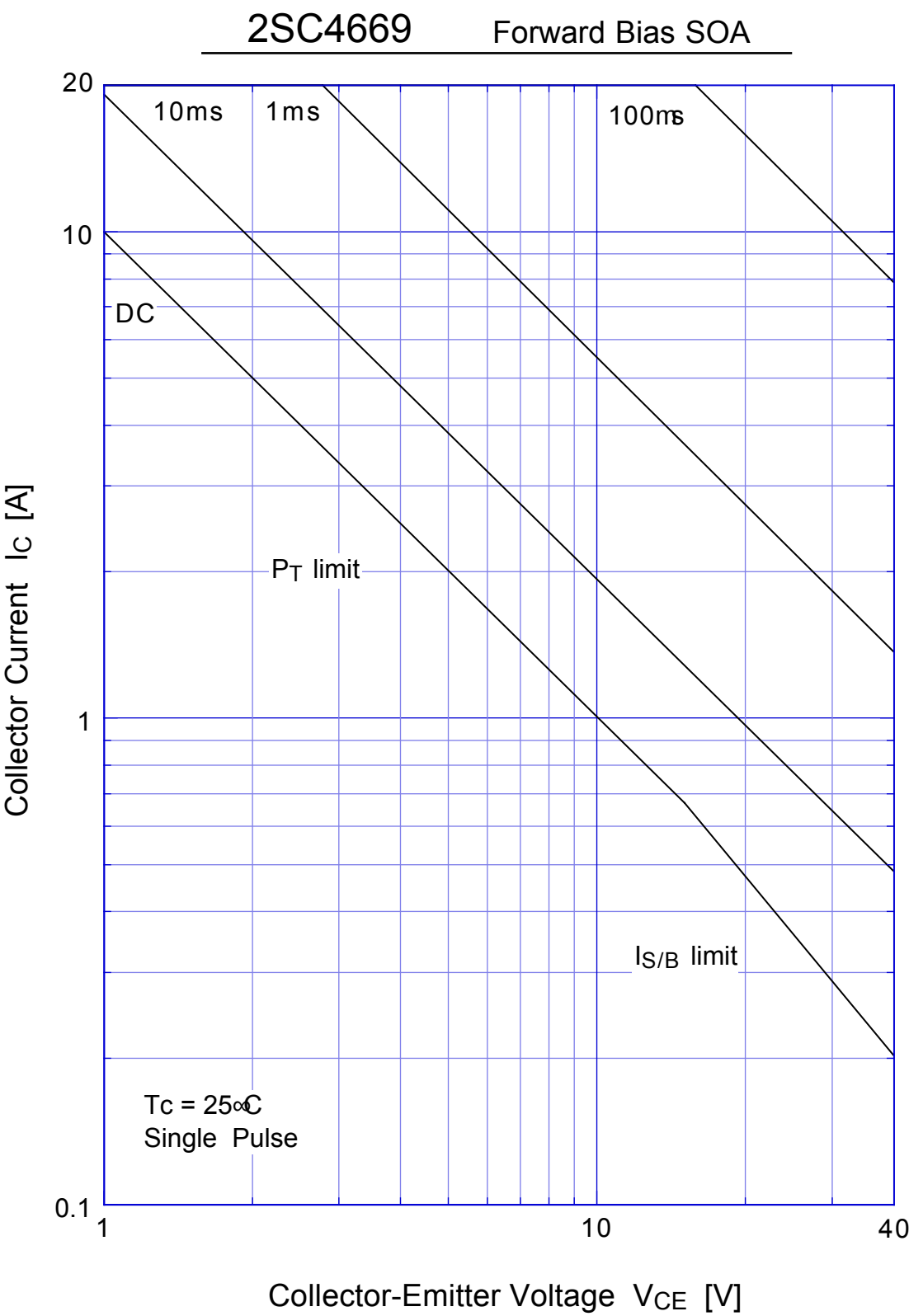


2SC4669      Switching Time - Tc

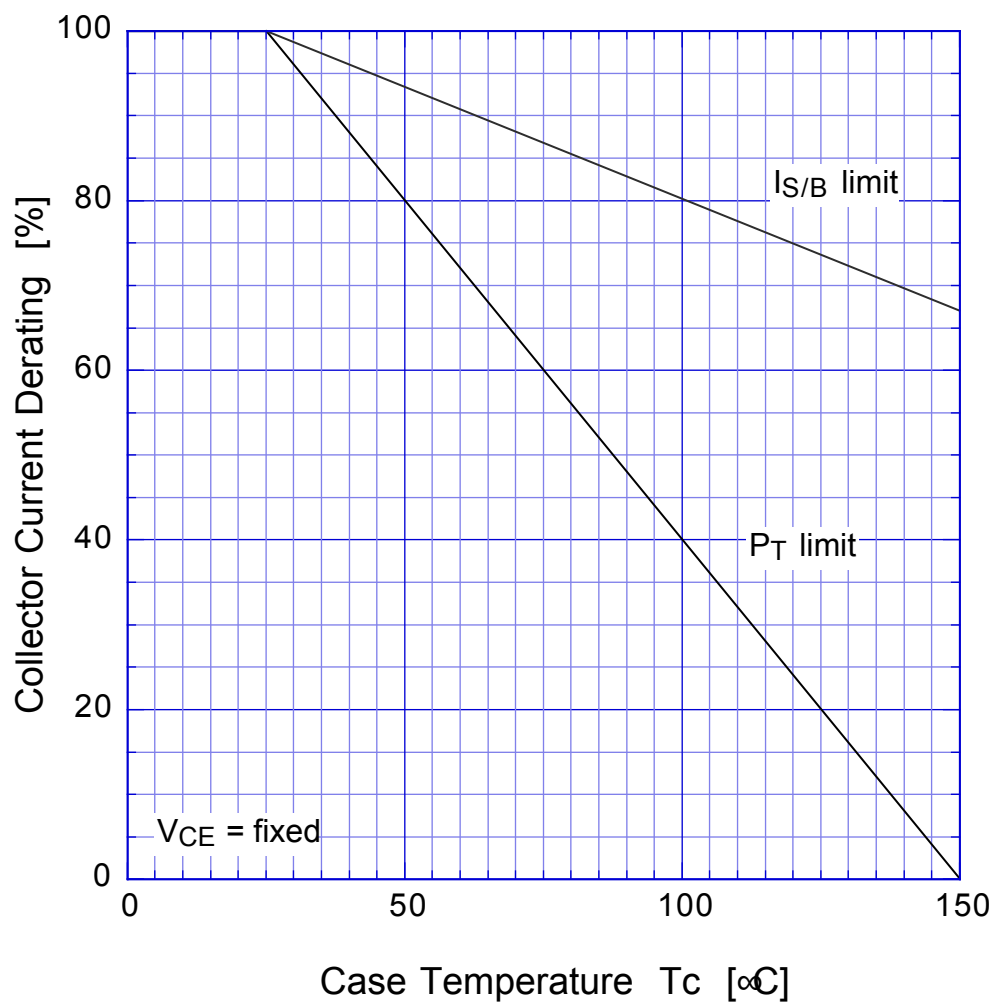


2SC4669      Transient Thermal Impedance





## 2SC4669 Collector Current Derating



2SC4669

Reverse Bias SOA

