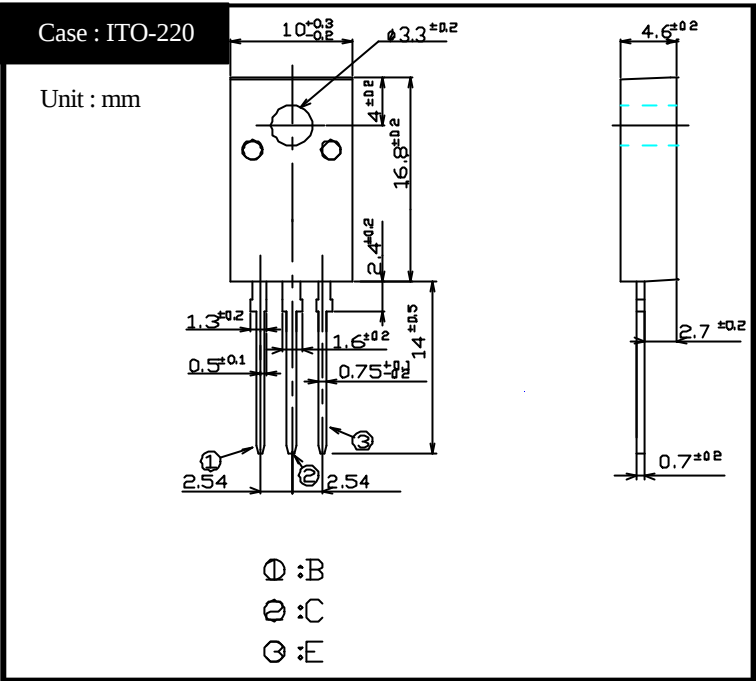


2SA1601

(TP15T4)

-15A PNP

OUTLINE DIMENSIONS



RATINGS

• Absolute Maximum Ratings

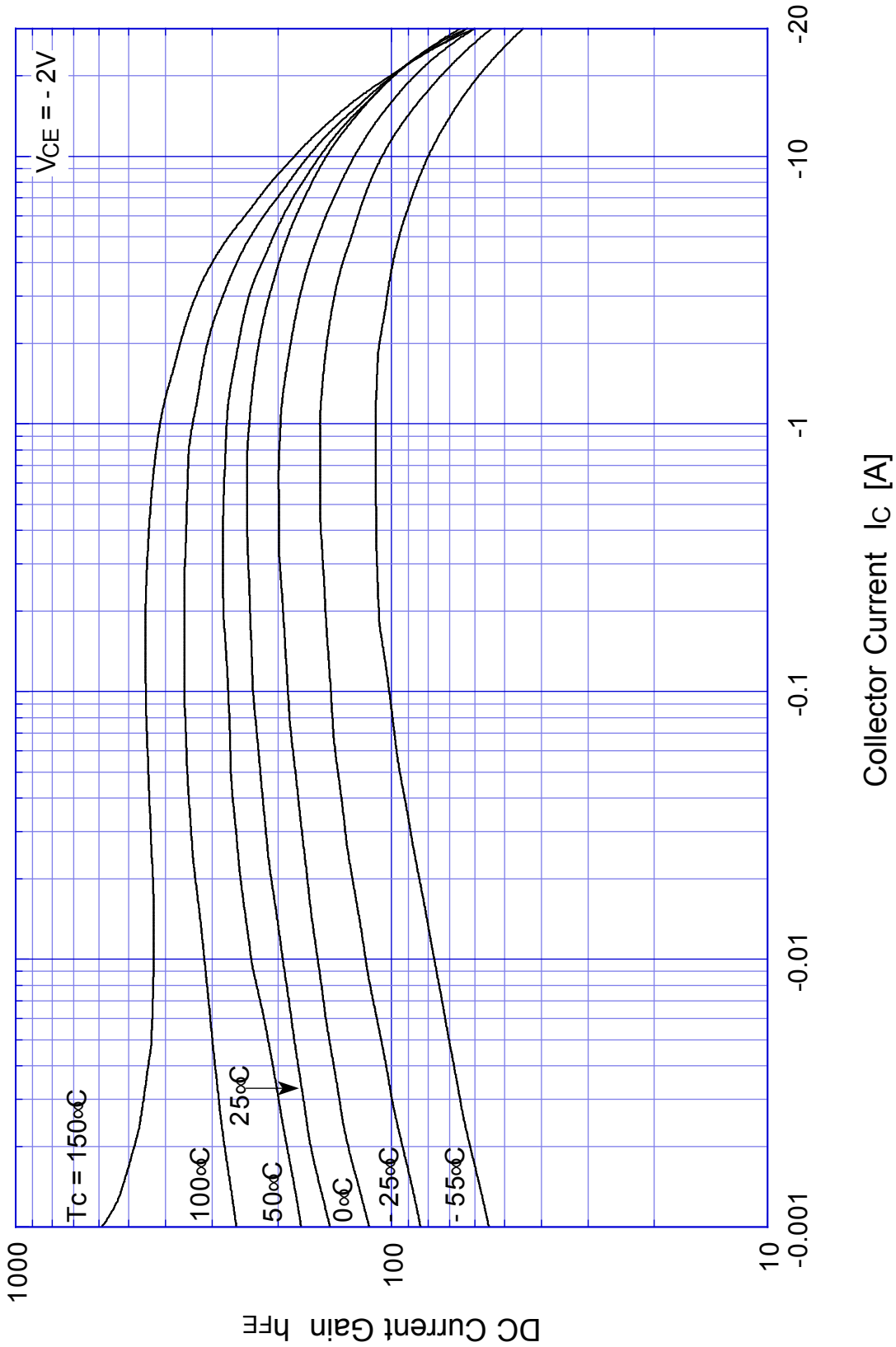
| Item                         | Symbol           | Conditions                    | Ratings   | Unit |
|------------------------------|------------------|-------------------------------|-----------|------|
| Storage Temperature          | Tstg             |                               | -55 ~ 150 |      |
| Junction Temperature         | Tj               |                               | 150       |      |
| 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>   |                               | -15       | A    |
| Collector Current Peak       | I <sub>CP</sub>  |                               | -30       | A    |
| Base Current DC              | I <sub>B</sub>   |                               | -2        | A    |
| Base Current Peak            | I <sub>BP</sub>  |                               | -3        | A    |
| Total Transistor Dissipation | P <sub>T</sub>   | Tc = 25                       | 45        | W    |
| Dielectric Strength          | Vdis             | Terminal to case, AC 1 minute | 2         | kV   |
| Mounting Torque              | TOR              | (Recommended torque : 0.3N·m) | 0.5       | N·m  |

• Electrical Characteristics (Tc=25 )

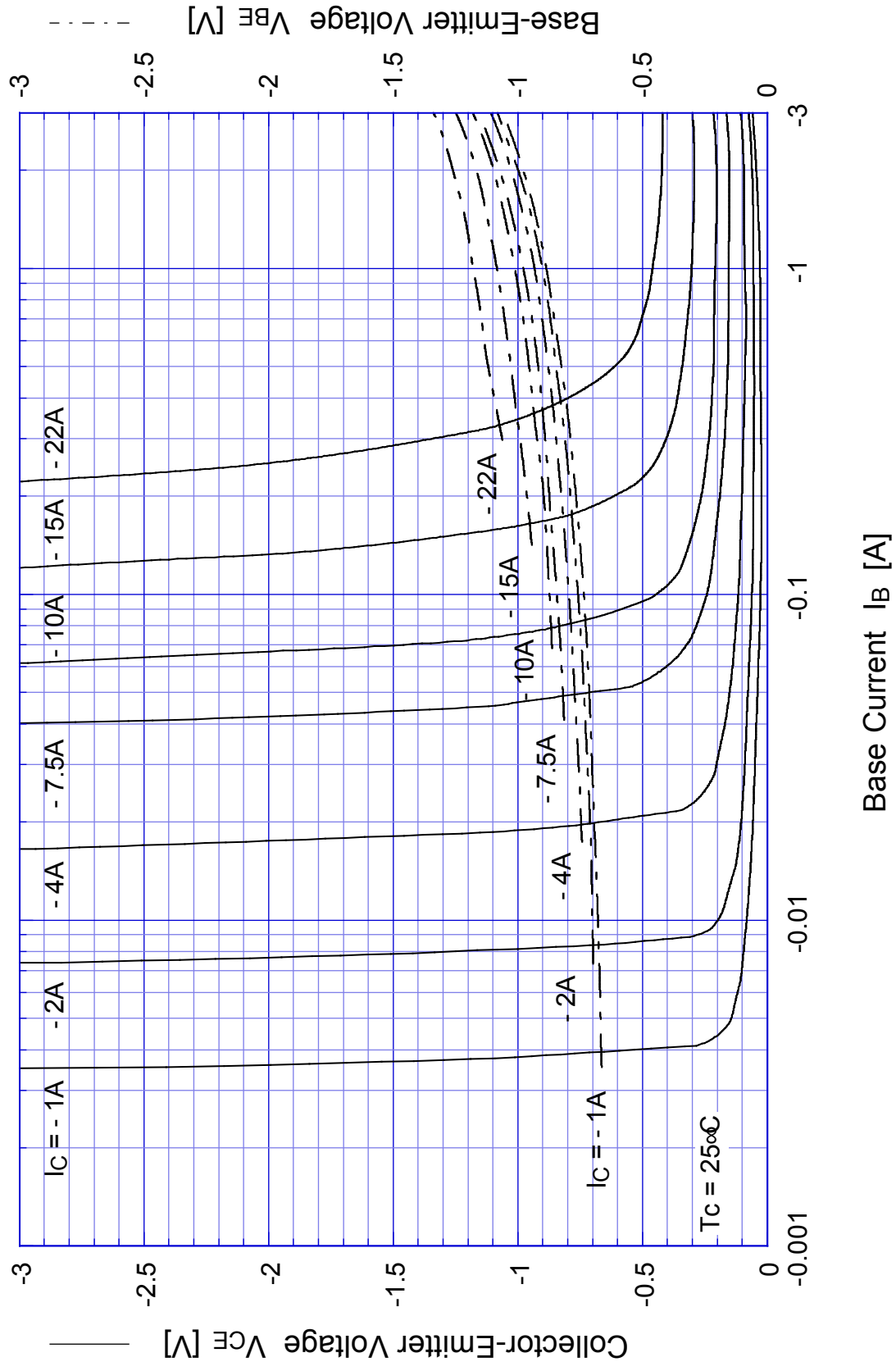
| Item                                    | Symbol                 | Conditions                                                                                                                  | Ratings  | Unit |
|-----------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------|------|
| Collector to Emitter Sustaining Voltage | V <sub>CEO</sub> (sus) | I <sub>C</sub> = -0.1A                                                                                                      | Min -40  | V    |
| Collector Cutoff Current                | I <sub>CBO</sub>       | At rated Voltage                                                                                                            | Max -0.1 | mA   |
|                                         |                        |                                                                                                                             | 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> = -7.5A                                                                               | Min 70   |      |
| Collector to Emitter Saturation Voltage | V <sub>CE</sub> (sat)  | I <sub>C</sub> = -7.5A                                                                                                      | Max -0.3 | V    |
| Base to Emitter Saturation Voltage      | V <sub>BE</sub> (sat)  | I <sub>B</sub> = -0.4A                                                                                                      | Max -1.2 | V    |
| Thermal Resistance                      | θ jc                   | Junction to case                                                                                                            | Max 2.77 | /W   |
| Transition Frequency                    | f <sub>T</sub>         | V <sub>CE</sub> = -10V, I <sub>C</sub> = -1.5A                                                                              | TYP 50   | MHz  |
| Turn on Time                            | ton                    | I <sub>C</sub> = -7.5A<br>I <sub>B1</sub> = -0.75A, I <sub>B2</sub> = -0.75A<br>R <sub>L</sub> = 4Ω, V <sub>BB2</sub> = -4V | Max 0.3  | μ s  |
| Storage Time                            | ts                     |                                                                                                                             | Max 1.5  |      |
| Fall Time                               | tf                     |                                                                                                                             | Max 0.5  |      |

2SA1601

$h_{FE} - I_C$

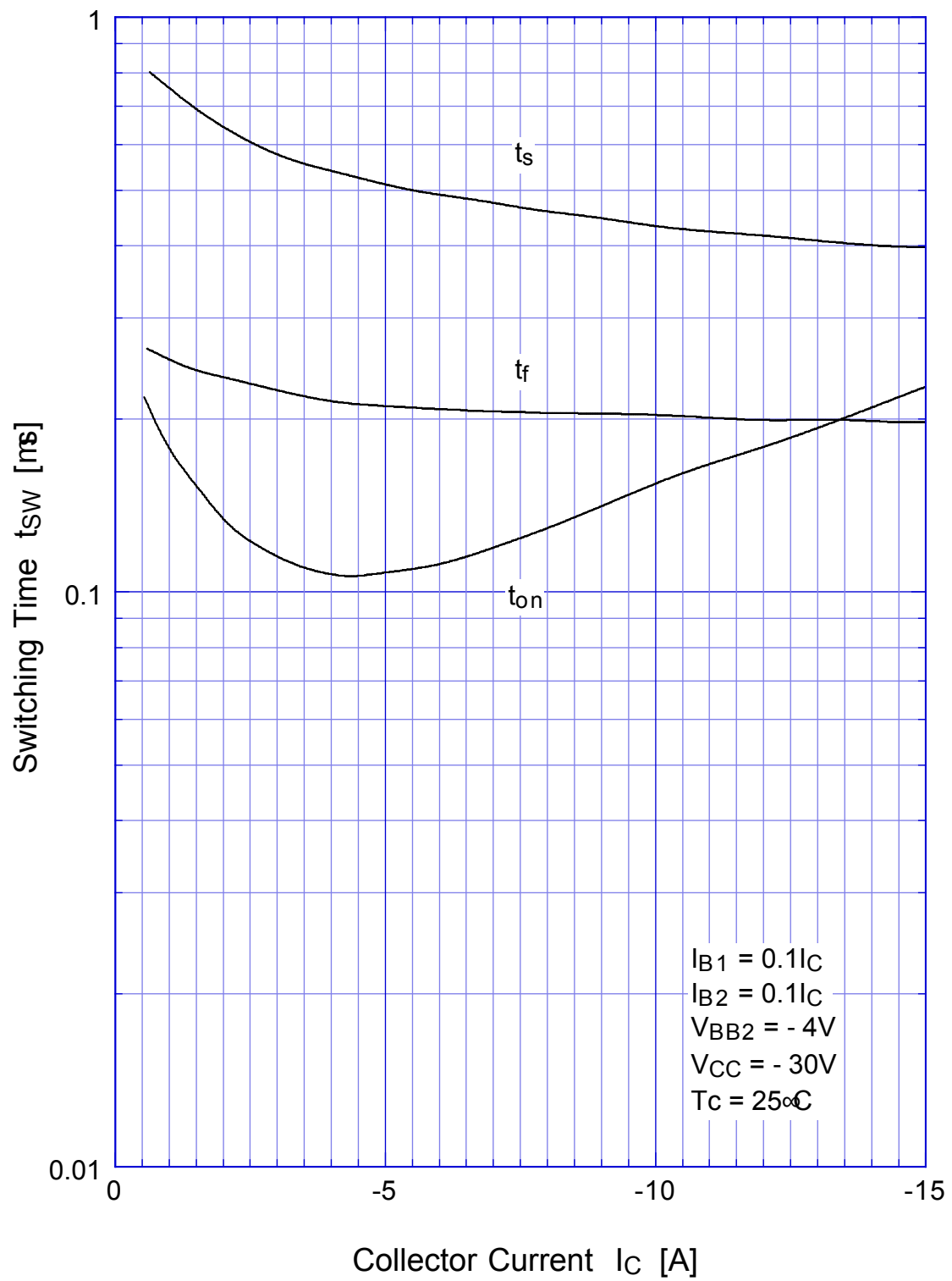


2SA1601 Saturation Voltage



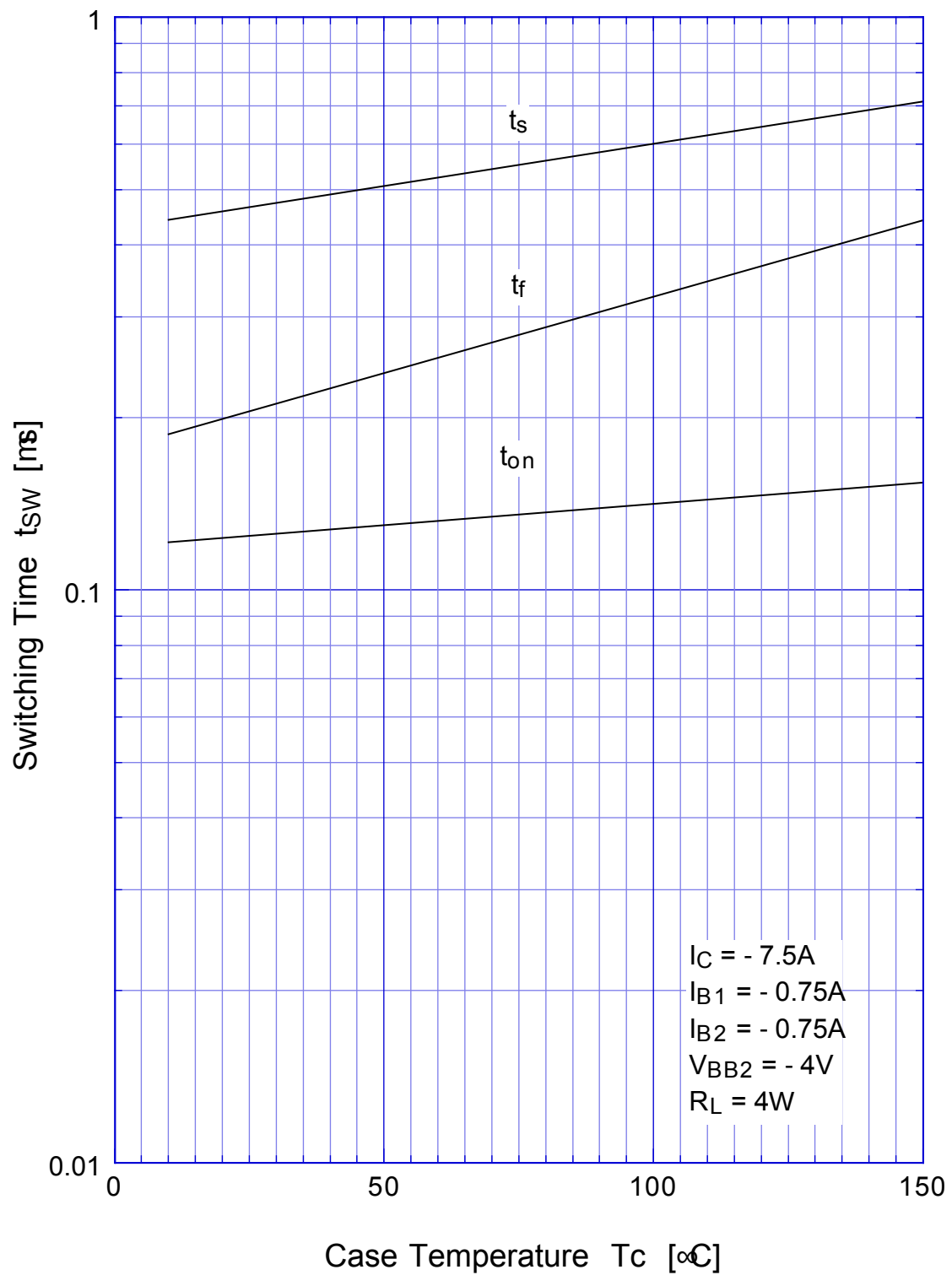
## 2SA1601

## Switching Time - $I_C$



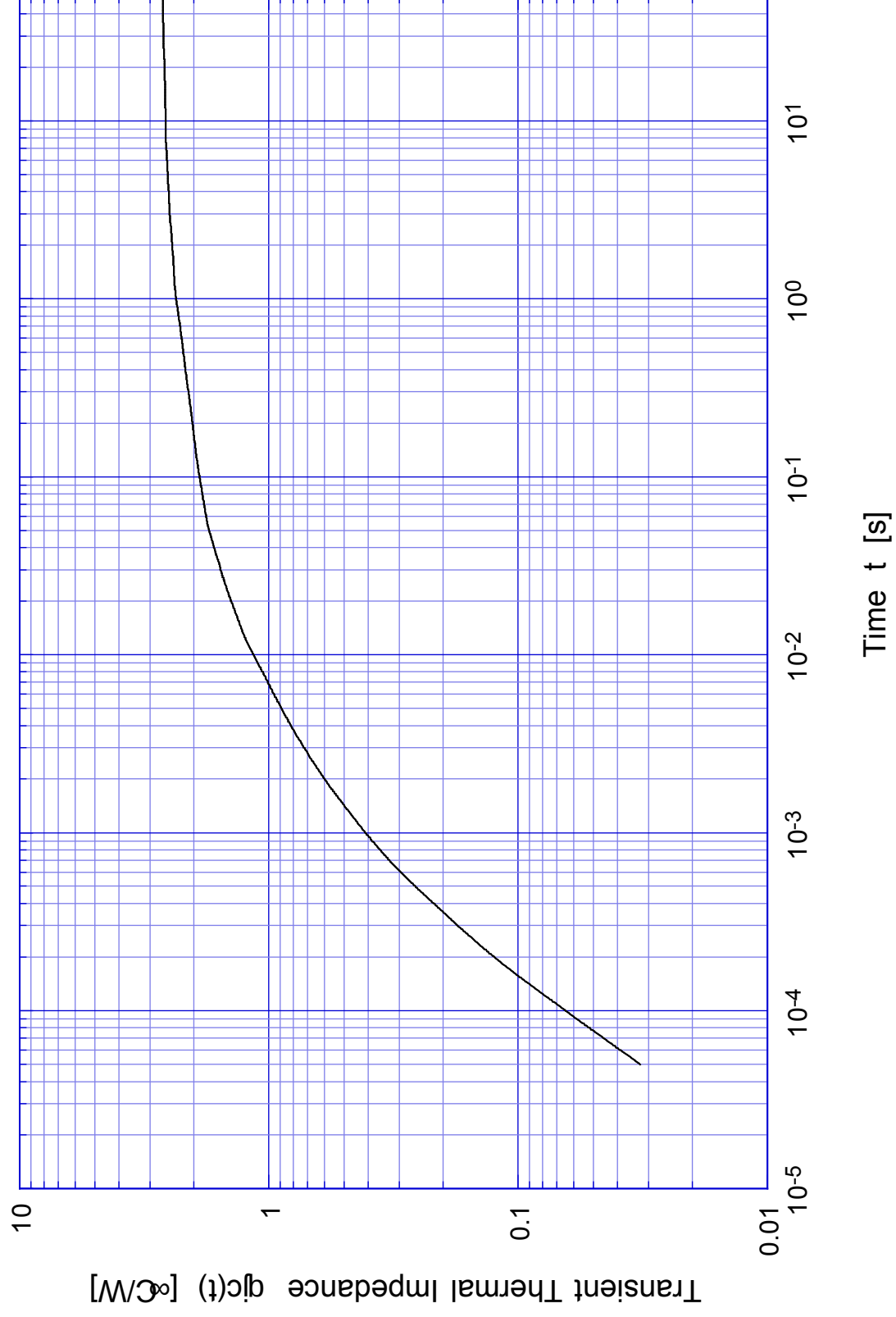
## 2SA1601

## Switching Time - $T_c$

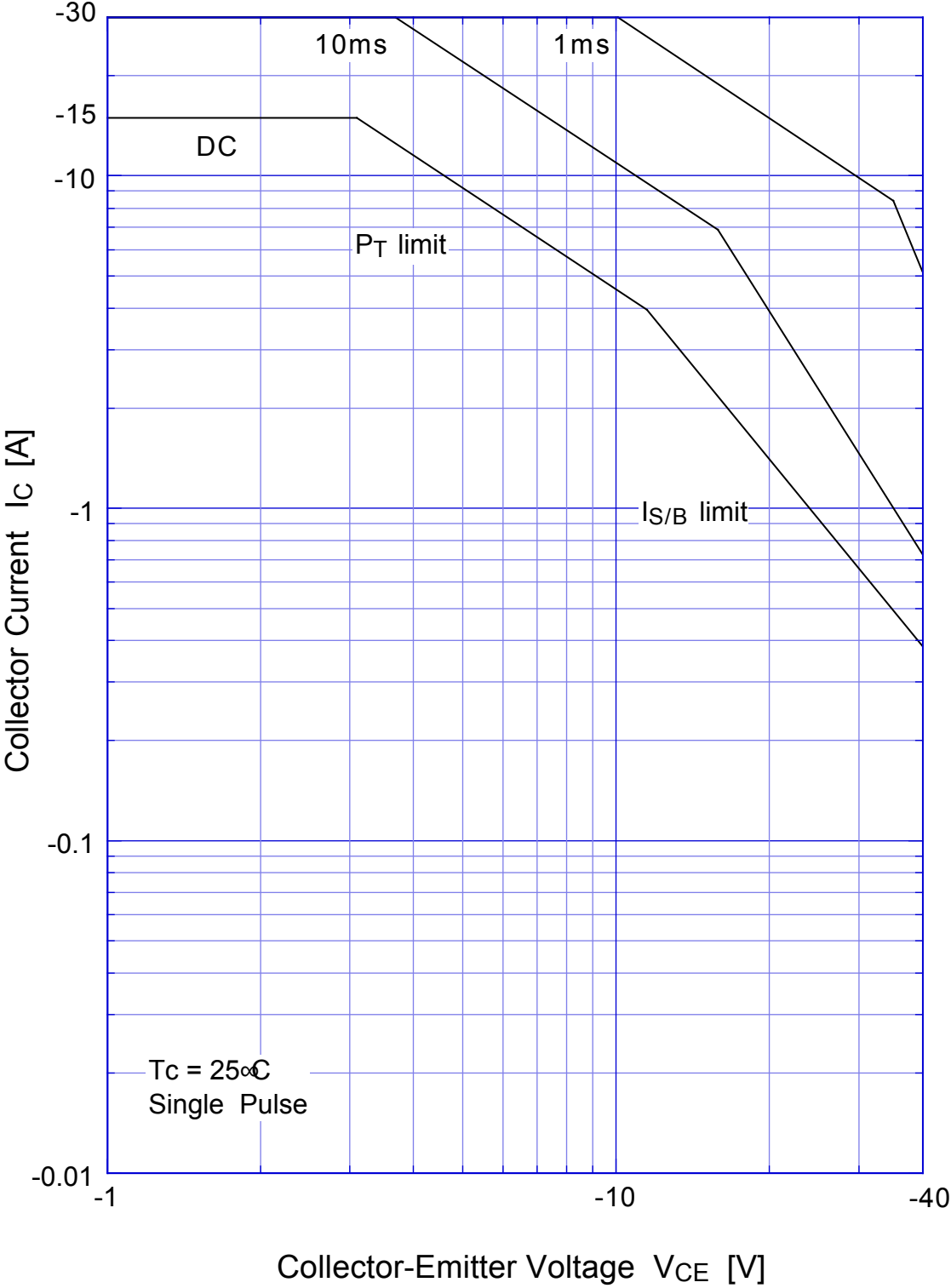


2SA1601      Transient Thermal Impedance

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2SA1601 Forward Bias SOA



## 2SA1601 Collector Current Derating

