

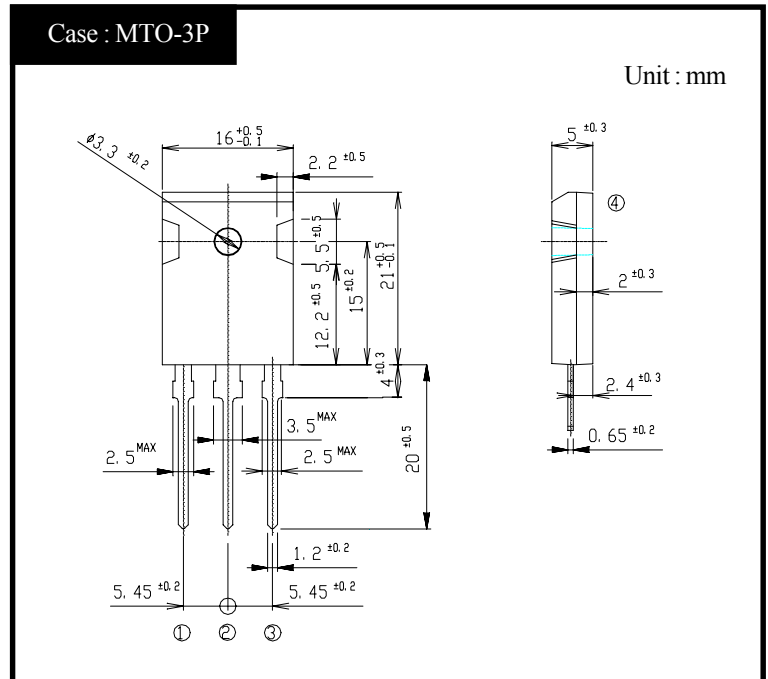
# SHINDENGEN

## Darlington Transistor

**2SB1285**  
(T15J10)

**-15A PNP**

### OUTLINE DIMENSIONS



### RATINGS

#### ● Absolute Maximum Ratings

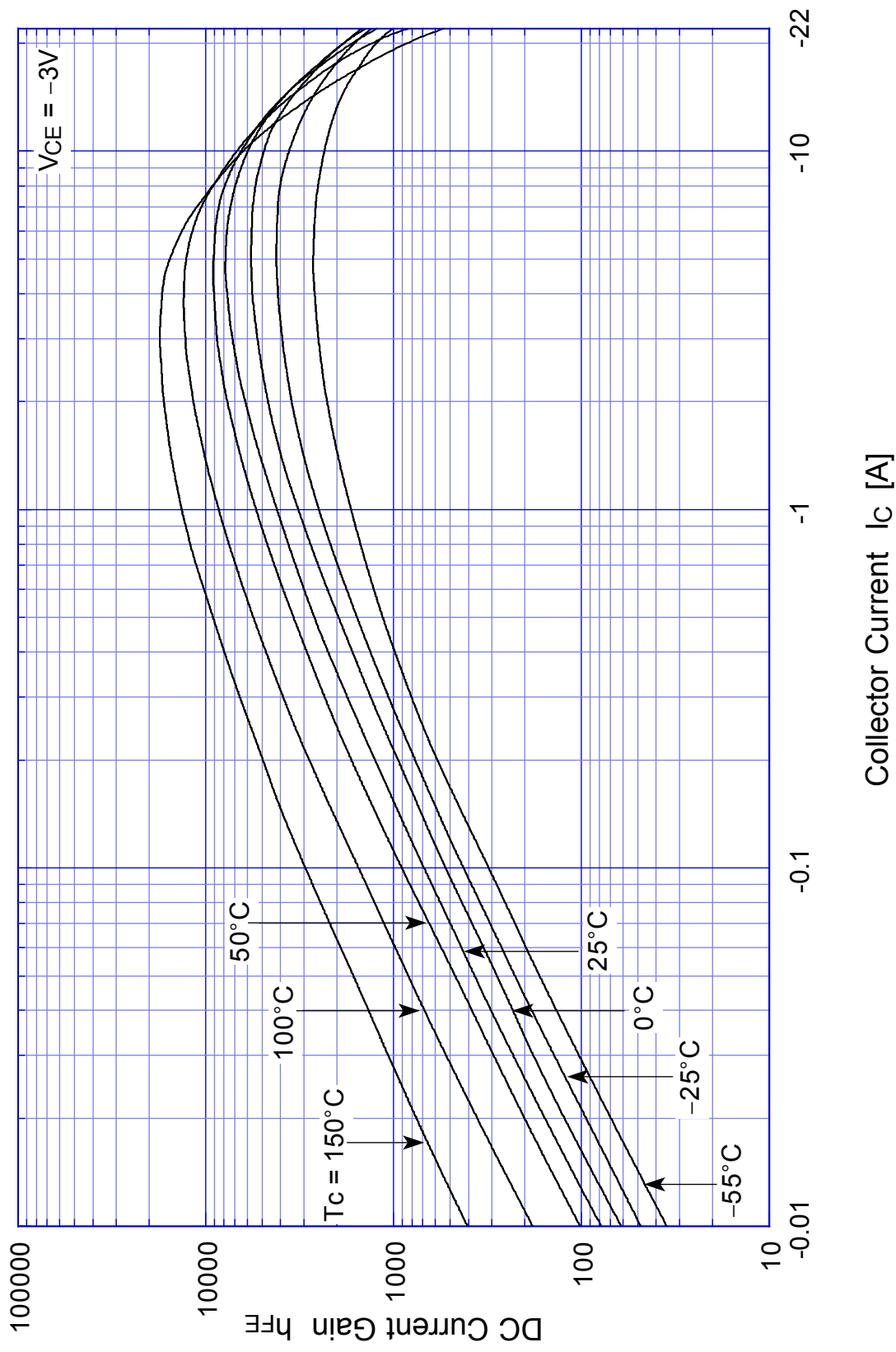
| Item                         | Symbol           | Conditions                    | Ratings  | Unit |
|------------------------------|------------------|-------------------------------|----------|------|
| Storage Temperature          | T <sub>stg</sub> |                               | -55~+150 | °C   |
| Junction Temperature         | T <sub>j</sub>   |                               | +150     | °C   |
| Collector to Base Voltage    | V <sub>CB0</sub> |                               | -100     | V    |
| Collector to Emitter Voltage | V <sub>CEO</sub> |                               | -100     | 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>  |                               | -22      | A    |
| Base Current DC              | I <sub>B</sub>   |                               | -1       | A    |
| Base Current Peak            | I <sub>BP</sub>  |                               | -2       | A    |
| Total Transistor Dissipation | P <sub>T</sub>   | T <sub>c</sub> = 25°C         | 100      | W    |
| Mounting Torque              | TOR              | (Recommended torque : 0.5N·m) | 0.8      | N·m  |

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

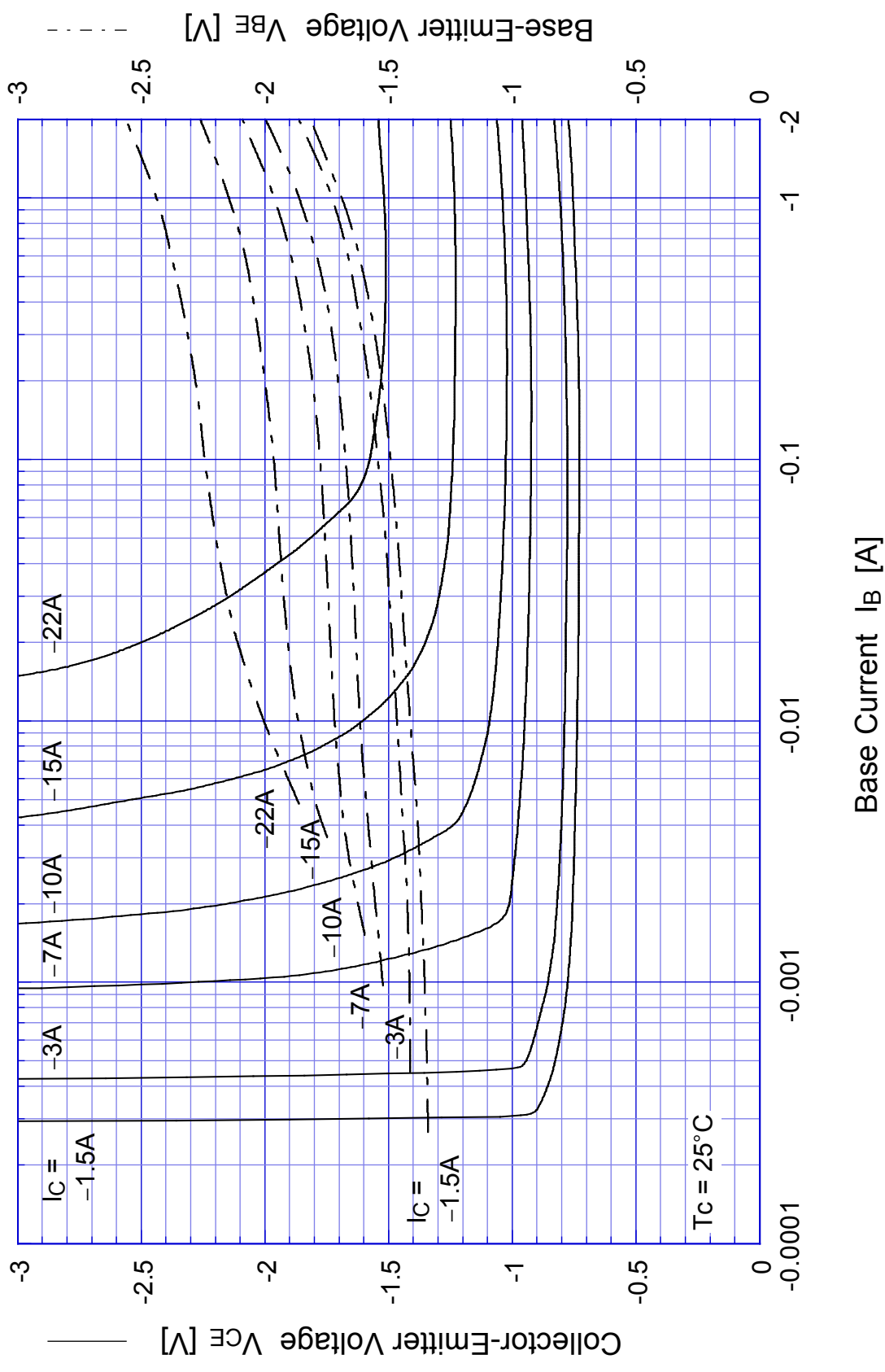
| Item                                    | Symbol               | Conditions  | Ratings    | Unit |
|---|----------------------|---|------------|------|
| Collector Cutoff Current                | I <sub>CB0</sub>     | V <sub>CB</sub> = -100V   | Max -0.1   | mA   |
|   | I <sub>CEO</sub>     | V <sub>CE</sub> = -100V   | Max -0.1   |      |
| Emitter Cutoff Current                  | I <sub>EBO</sub>     | V <sub>EB</sub> = -7V   | Max -5     | mA   |
| DC Current Gain                         | h <sub>FE</sub>      | V <sub>CE</sub> = -3V, I <sub>C</sub> = -10A  | Min 1,500  |      |
|   |                      |   | Max 15,000 |      |
| Collector to Emitter Saturation Voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = -10A   | Max -1.5   | V    |
| Base to Emitter Saturation Voltage      | V <sub>BE(sat)</sub> | I <sub>B</sub> = -20mA  | Max -2.0   | V    |
| Thermal Resistance                      | θ <sub>jc</sub>      | Junction to case  | Max 1.25   | °C/W |
| Transition Frequency                    | f <sub>T</sub>       | V <sub>CE</sub> = 10V, I <sub>C</sub> = -1.5A   | TYP 20     | MHz  |
| Turn on Time                            | ton                  |   | Max 1      | μs   |
| Storage Time                            | ts                   | I <sub>C</sub> = -15A<br>I <sub>B1</sub> = I <sub>B2</sub> = -20mA<br>R <sub>L</sub> = 2Ω | Max 4      |      |
| Fall Time                               | tf                   | V <sub>BB2</sub> = -4V  | Max 2      |      |

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$h_{FE} - I_C$

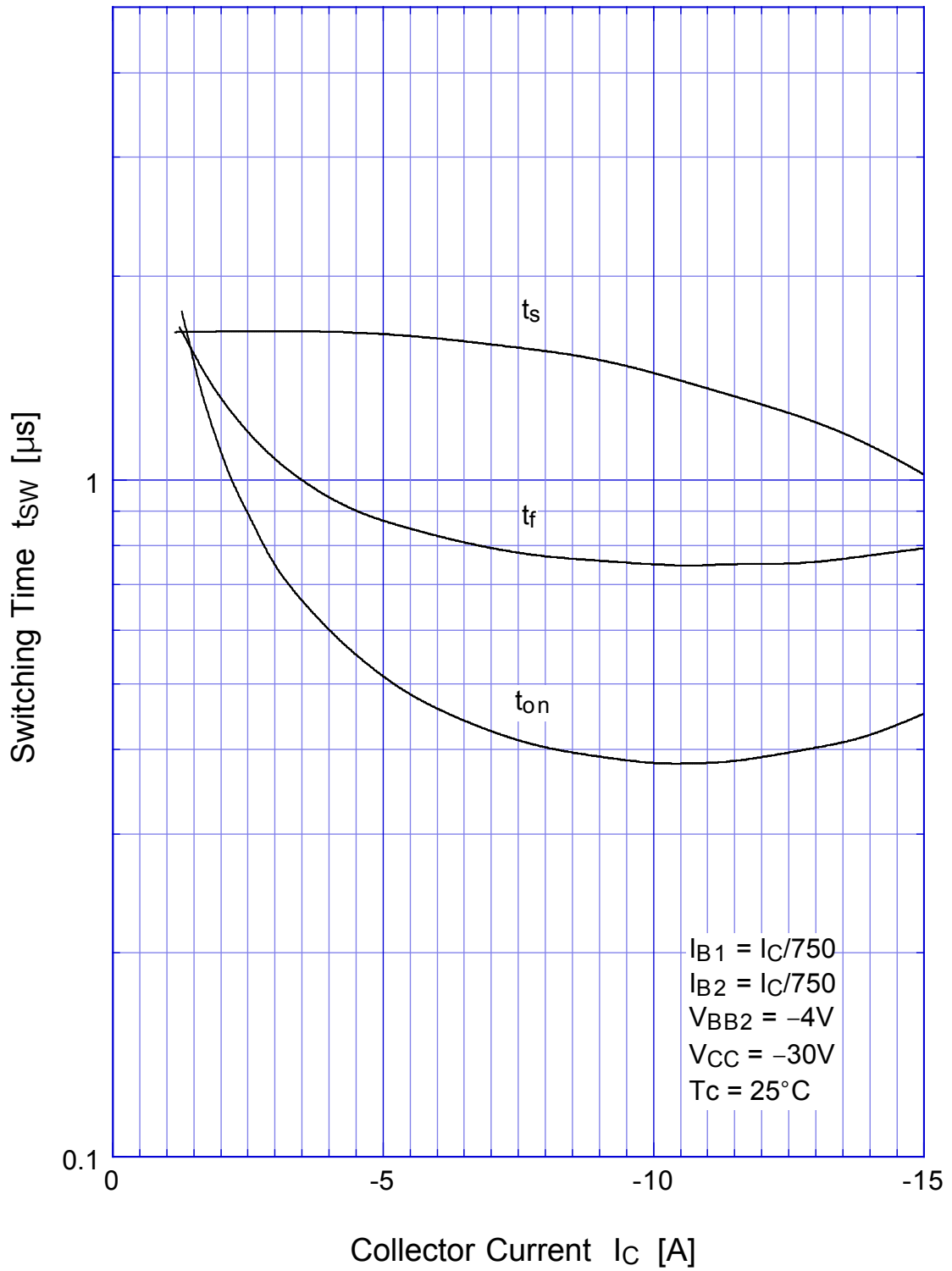


# 2SB1285 Saturation Voltage



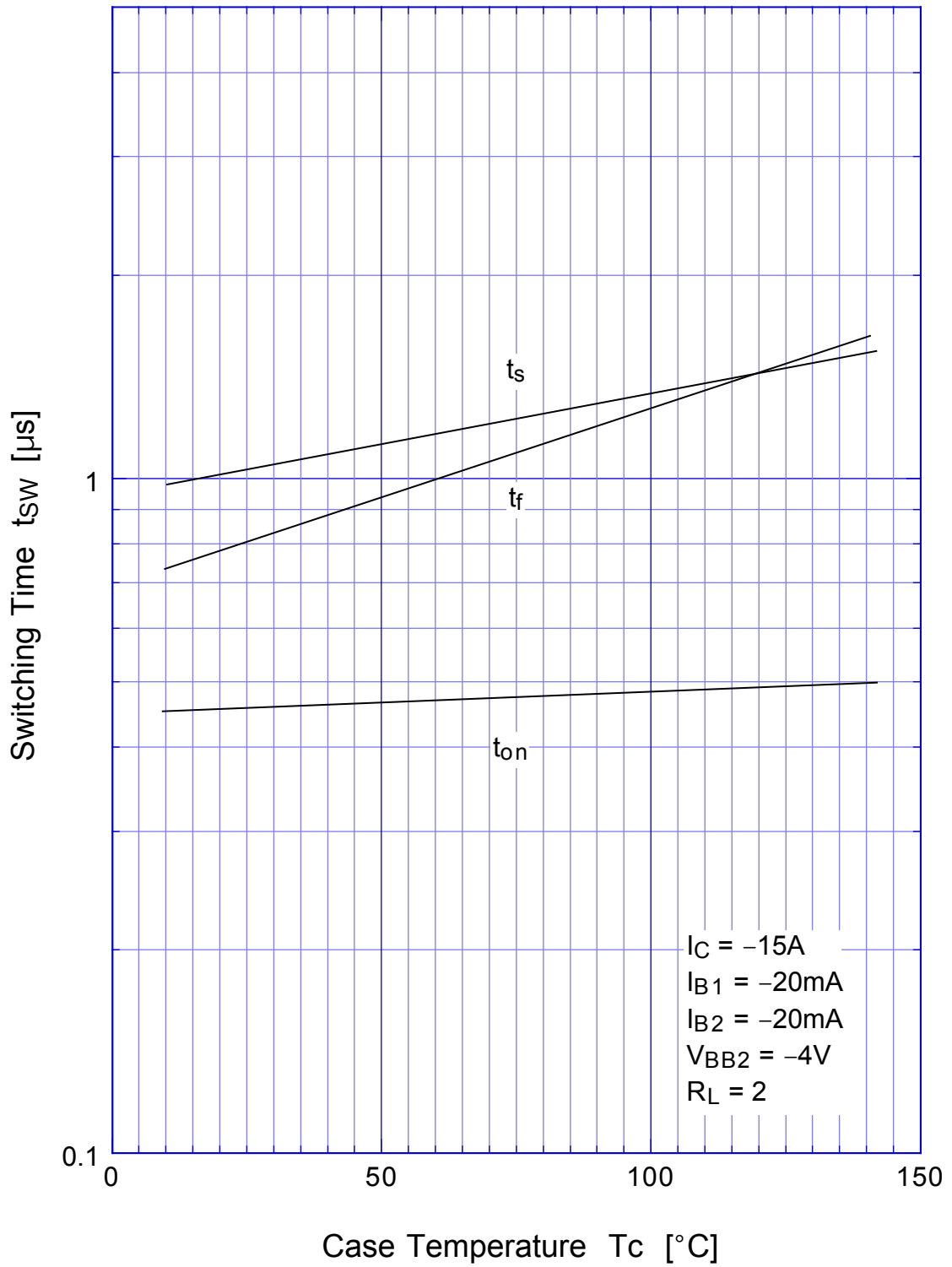
# 2SB1285

## Switching Time - $I_C$

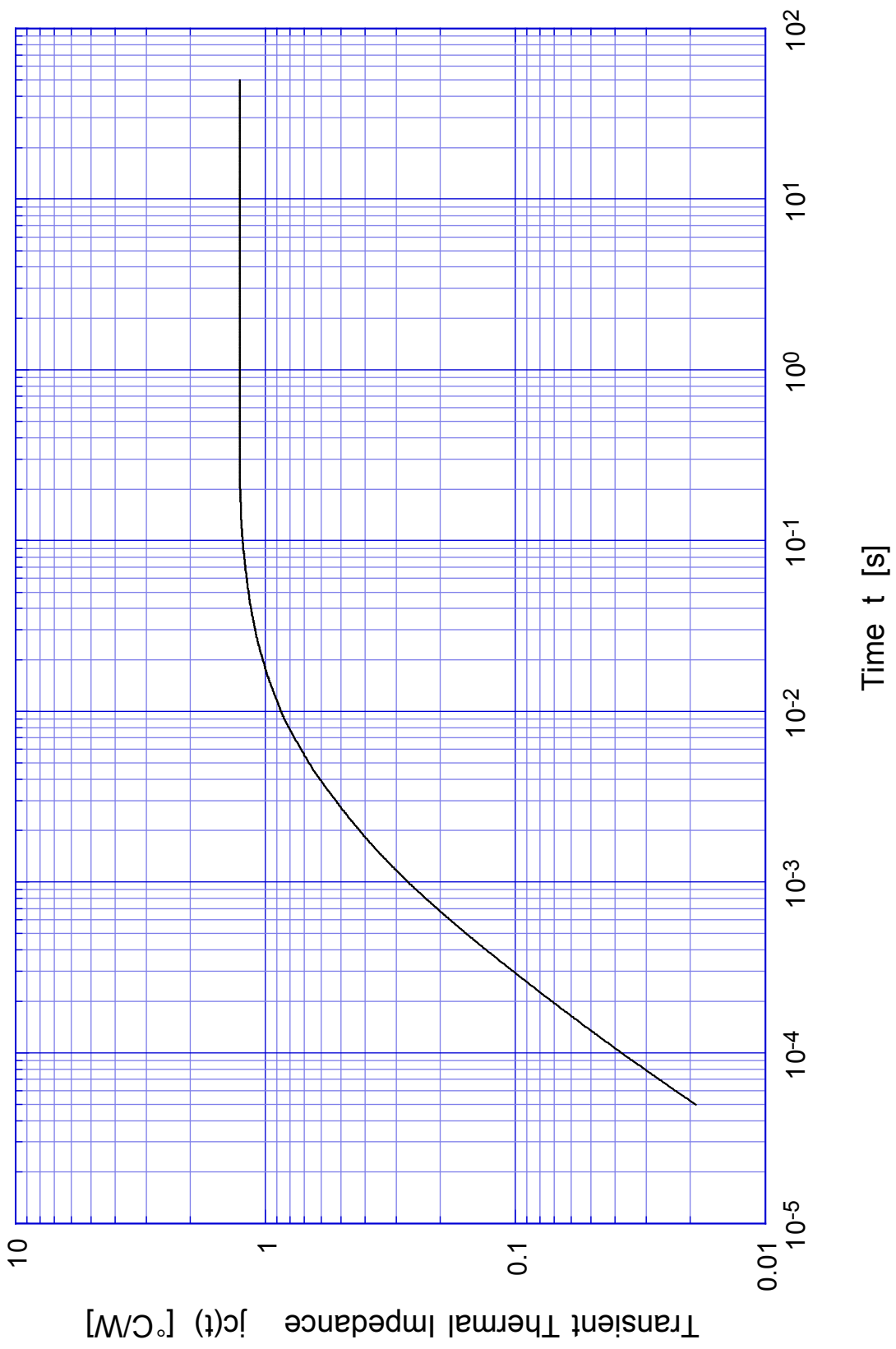


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## Switching Time - Tc

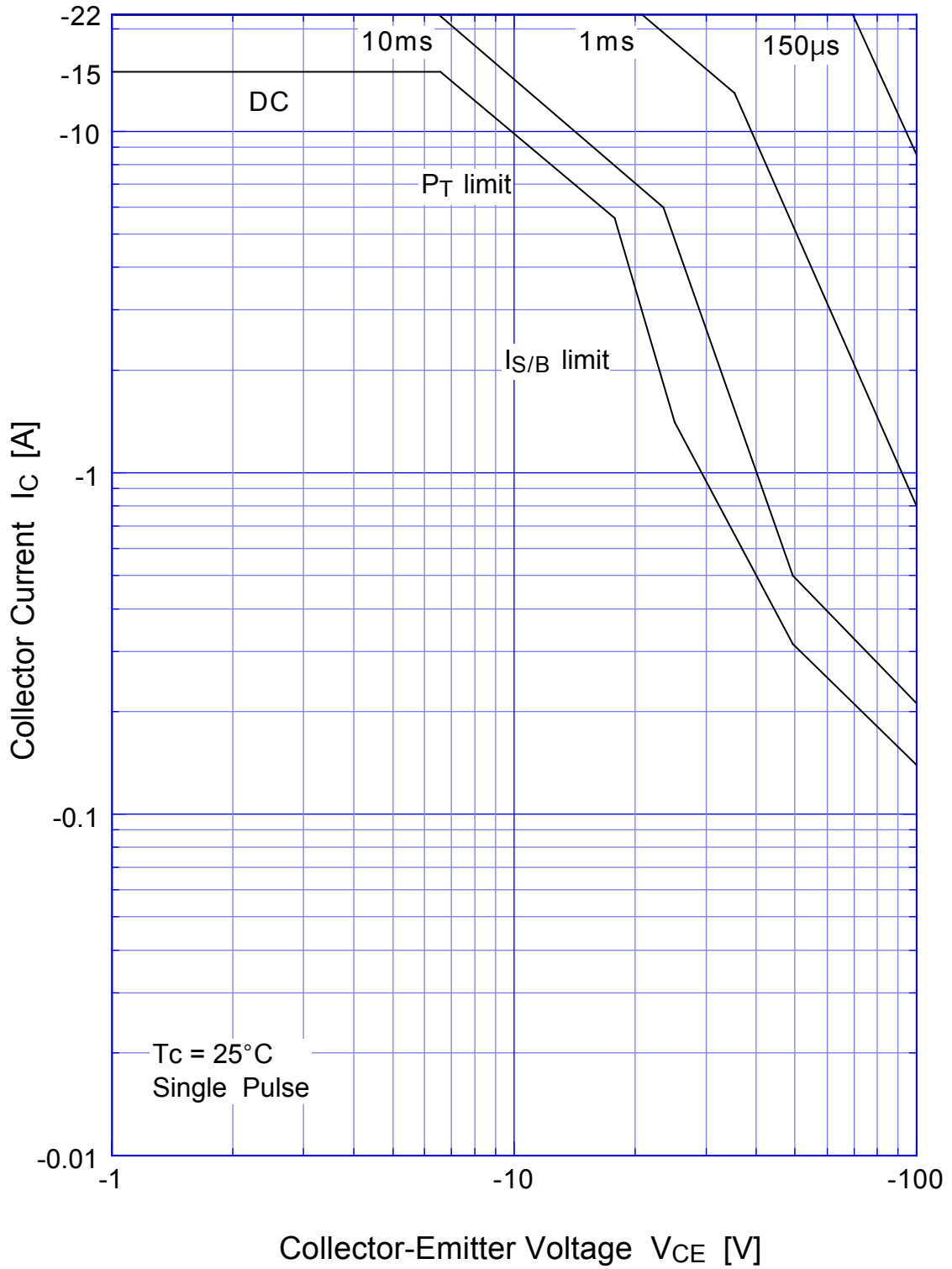


# 2SB1285 Transient Thermal Impedance

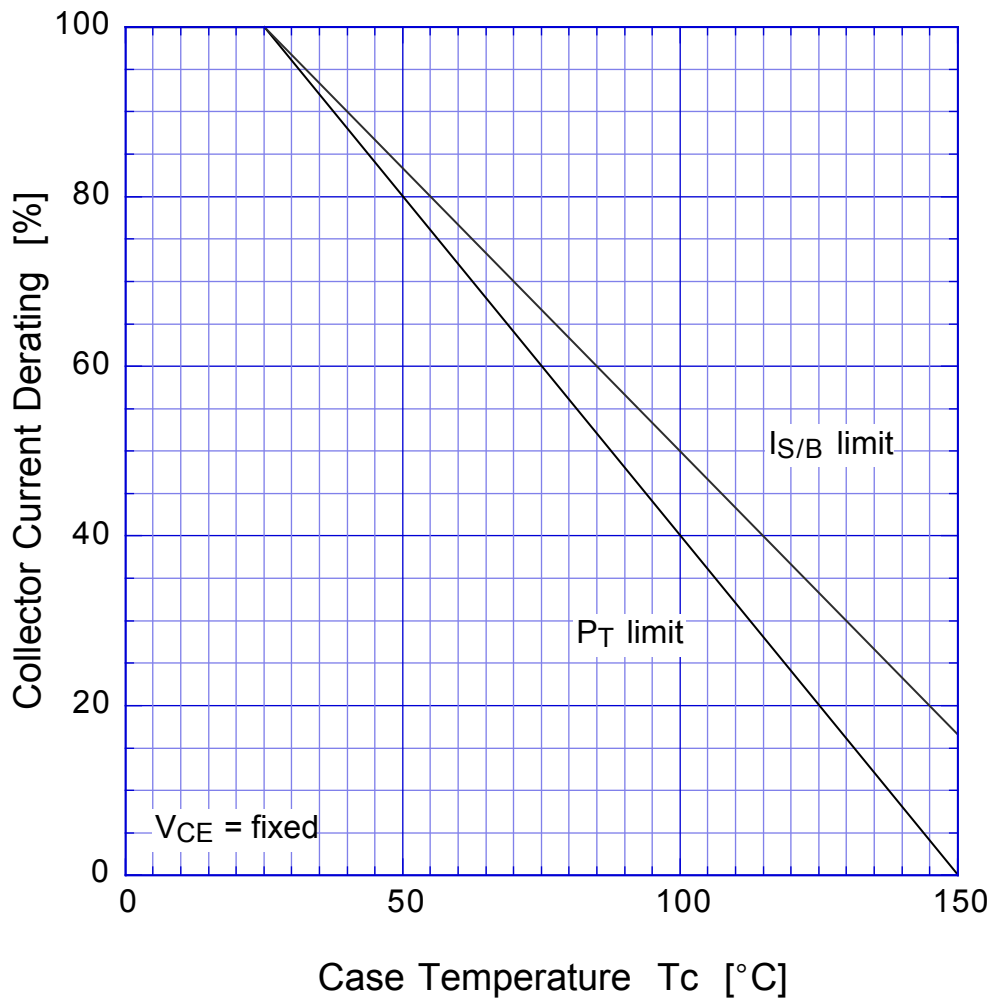


# 2SB1285

# Forward Bias SOA



## 2SB1285 Collector Current Derating





# 2SB1285

# Reverse Bias SOA

