

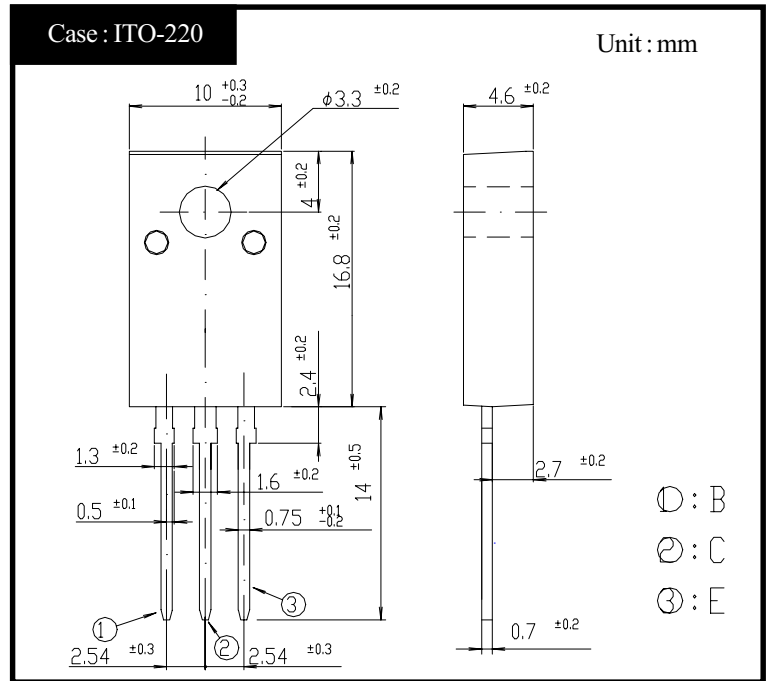
SHINDENGEN

Darlington Transistor

2SD1795
(TP10K40)

10A NPN

OUTLINE DIMENSIONS



RATINGS

● Absolute Maximum Ratings

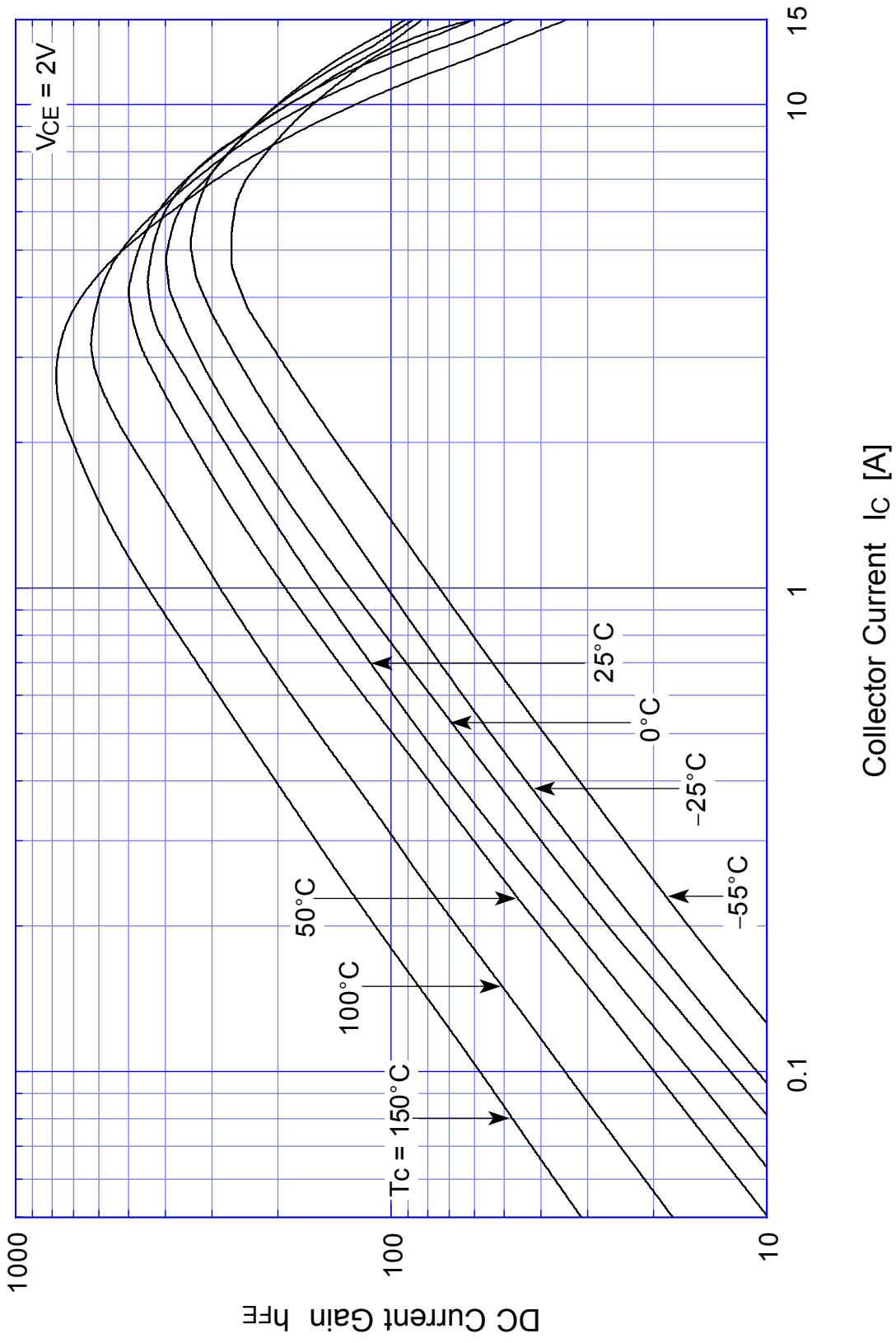
| Item | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|-------------------------------|----------|------|
| Storage Temperature | T_{stg} | | -55~+150 | °C |
| Junction Temperature | T_j | | +150 | °C |
| Collector to Base Voltage | V_{CBO} | | 500 | V |
| Collector to Emitter Voltage | V_{CEO} | | 400 | V |
| Emitter to Base Voltage | V_{EBO} | | 12 | V |
| Collector Current DC | I_C | | 10 | A |
| Collector Current Peak | I_{CP} | | 15 | A |
| Base Current DC | I_B | | 0.5 | A |
| Base Current Peak | I_{BP} | | 1.0 | A |
| Total Transistor Dissipation | P_T | $T_c = 25^\circ\text{C}$ | 50 | W |
| Dielectric Strength | V_{dis} | Terminals to case AC 1 minute | 2 | kV |
| Mounting Torque | TOR | (Recommended torque : 0.3N·m) | 0.5 | N·m |

● Electrical Characteristics ($T_c=25^\circ\text{C}$)

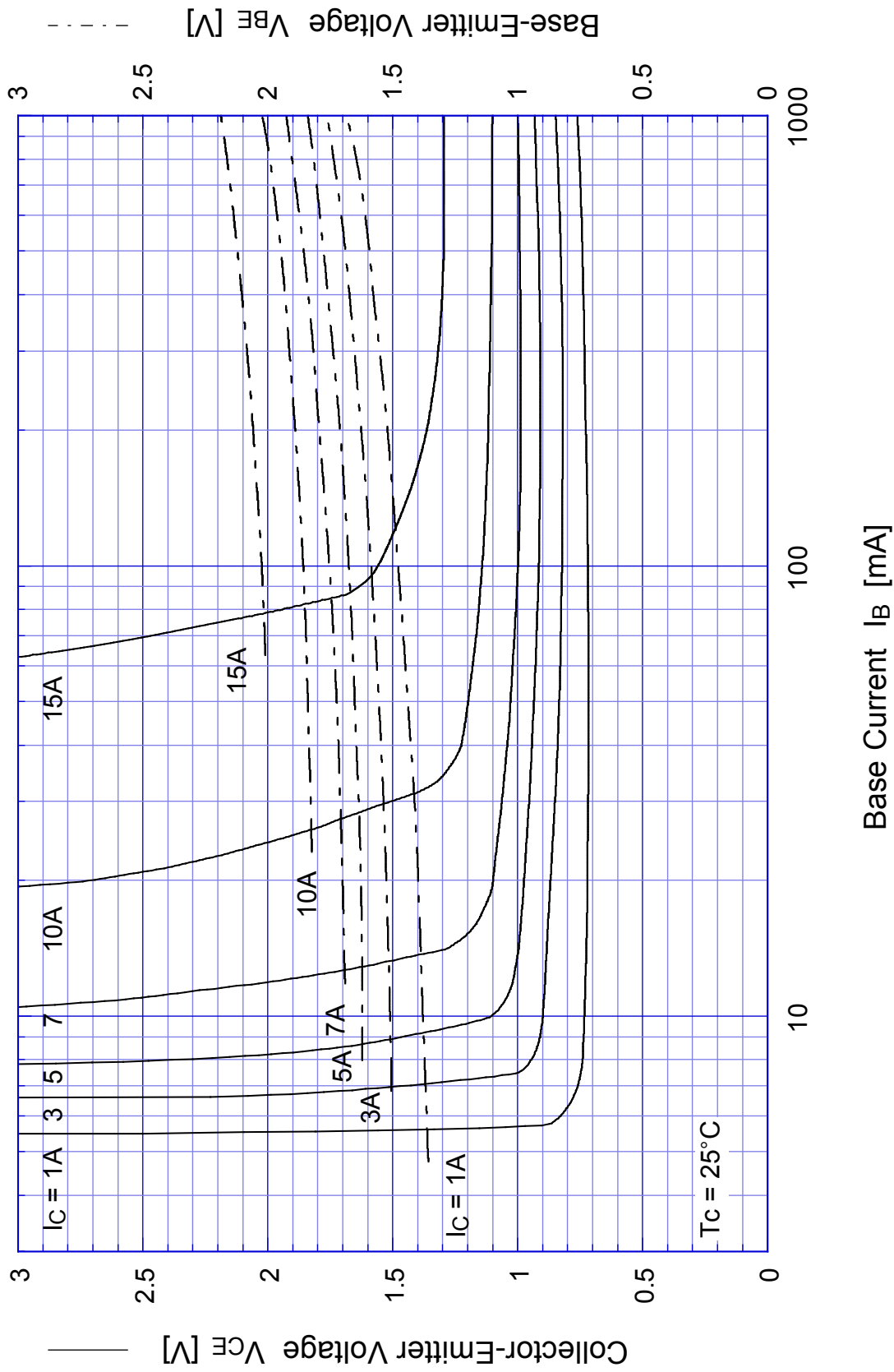
| Item | Symbol | Conditions | Ratings | Unit |
|---|---------------|---|---------|---------------|
| Collector to Emitter Sustaining Voltage | V_{CEO} | V_{CE} (Clamp) | Min 400 | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 500\text{V}$ | Max 0.1 | mA |
| | I_{CEO} | $V_{CE} = 400\text{V}$ | Max 0.1 | |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 12\text{V}$ | Max 100 | mA |
| DC Current Gain | h_{FE} | $V_{CE} = 2\text{V}, I_C = 7\text{A}$ | Min 150 | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 7\text{A}$ | Max 1.5 | V |
| Base to Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_B = 70\text{mA}$ | Max 2.0 | V |
| Thermal Resistance | θ_{jc} | Junction to case | Max 2.5 | °C/W |
| Transition Frequency | f_T | $V_{CE} = 10\text{V}, I_C = 1\text{A}$ | TYP 10 | MHz |
| Turn on Time | t_{on} | $I_C = 7\text{A}$ $I_{B1} = I_{B2} = 70\text{mA}$ $R_L = 10\Omega$ $V_{BB2} = 4\text{V}$ | Max 2 | μs |
| Storage Time | t_s | | Max 15 | |
| Fall Time | t_f | | Max 15 | |

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$h_{FE} - I_C$

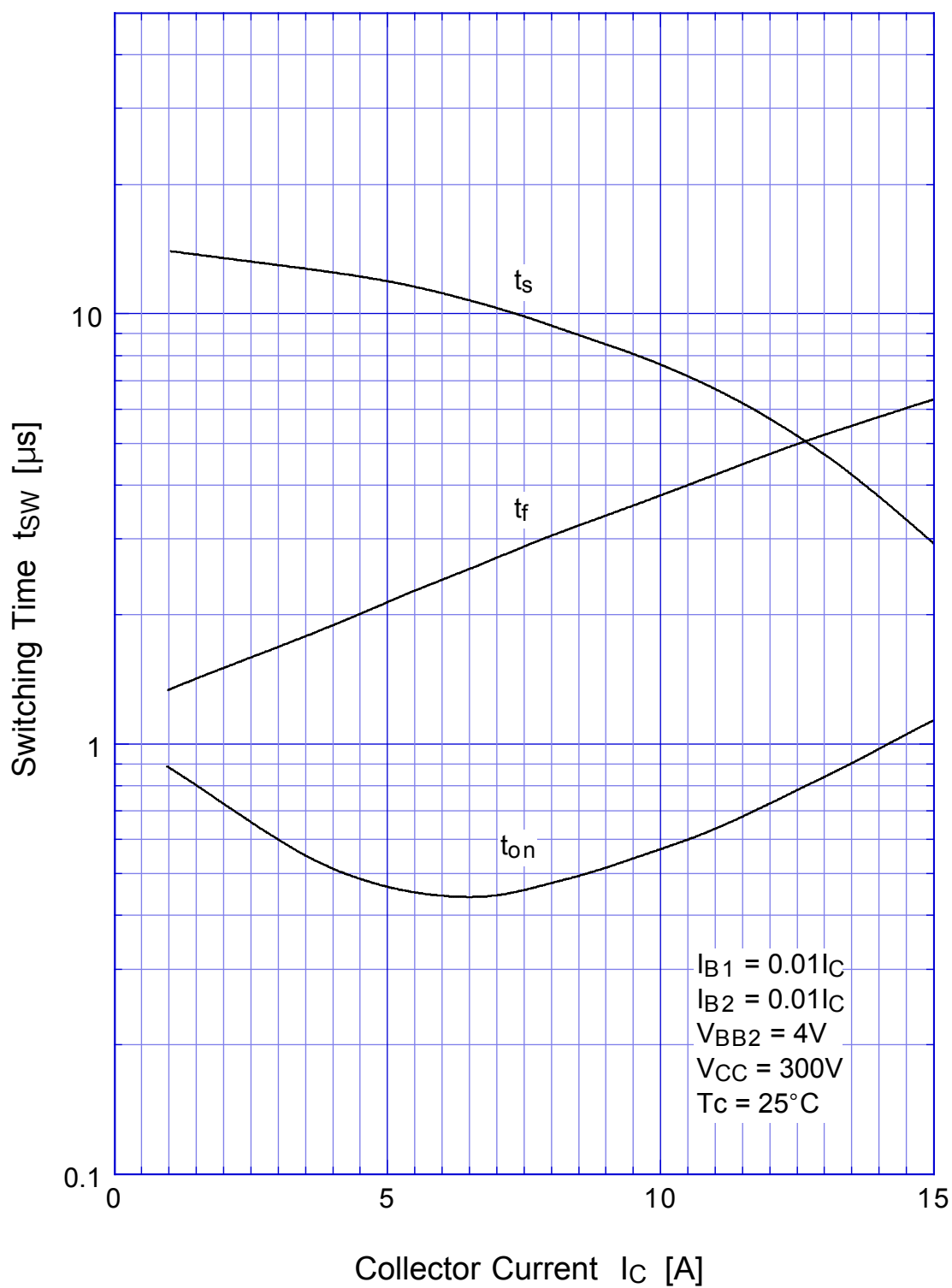


2SD1795 Saturation Voltage



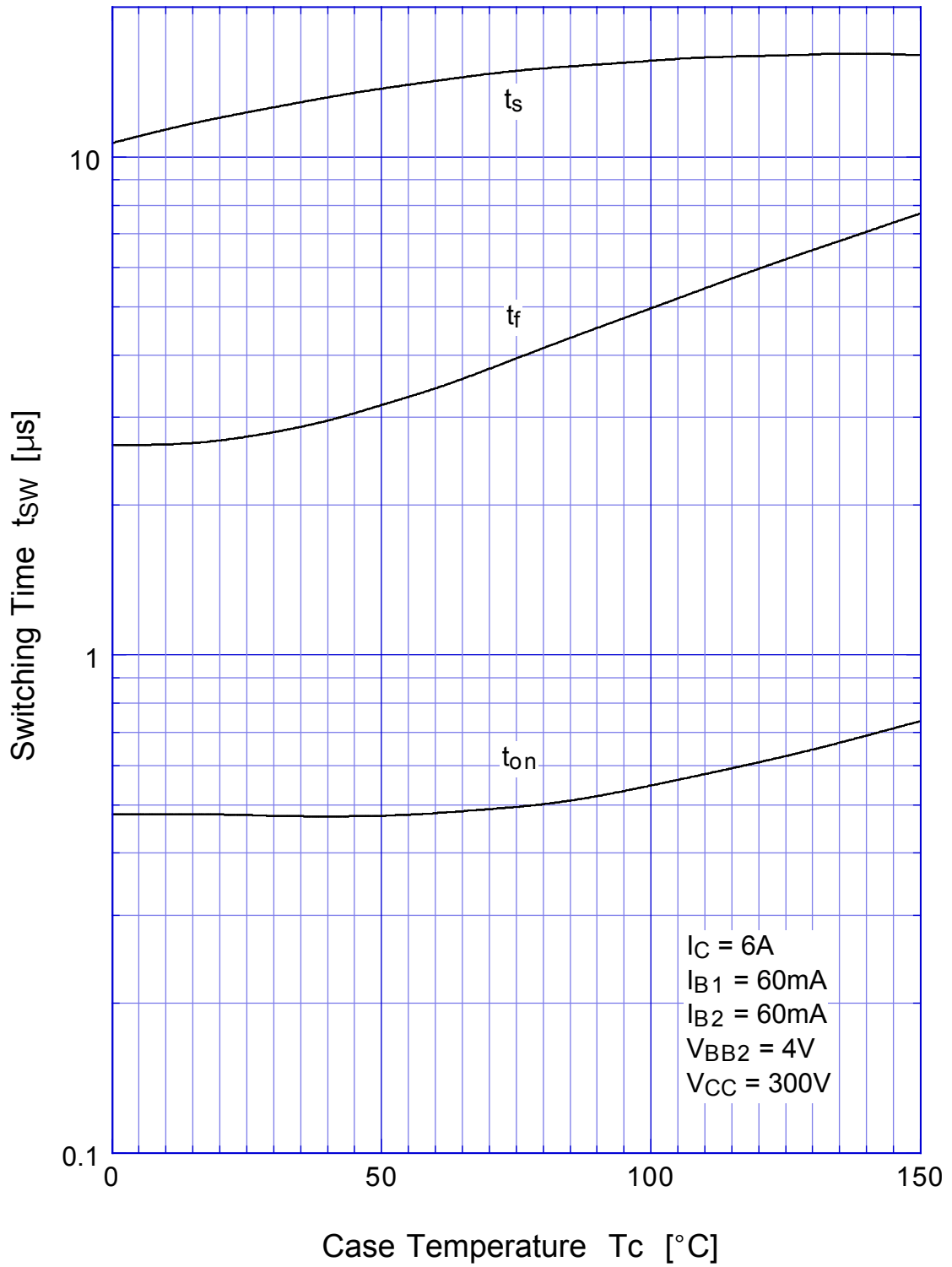
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Switching Time - I_C

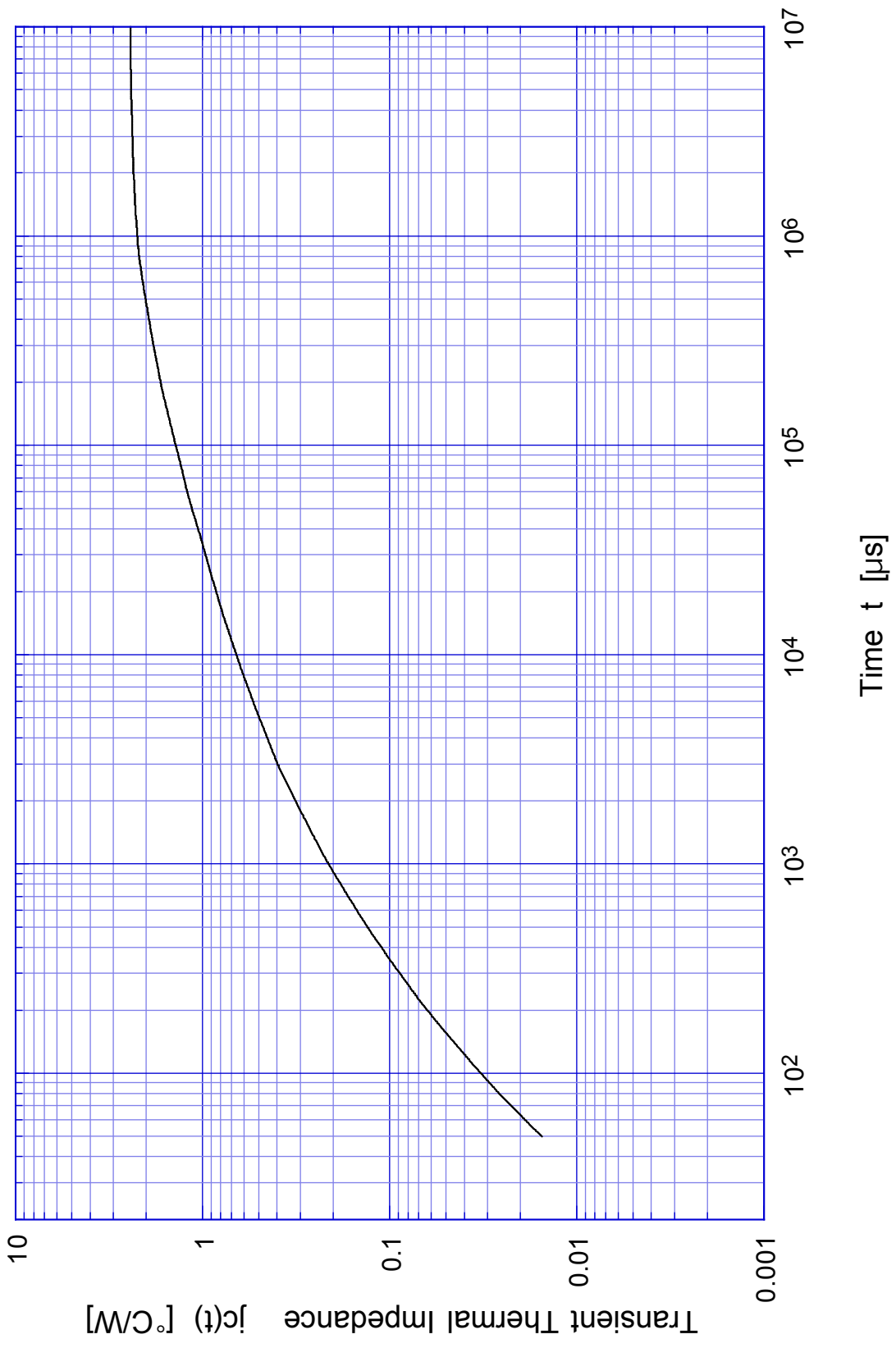


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Switching Time - Tc

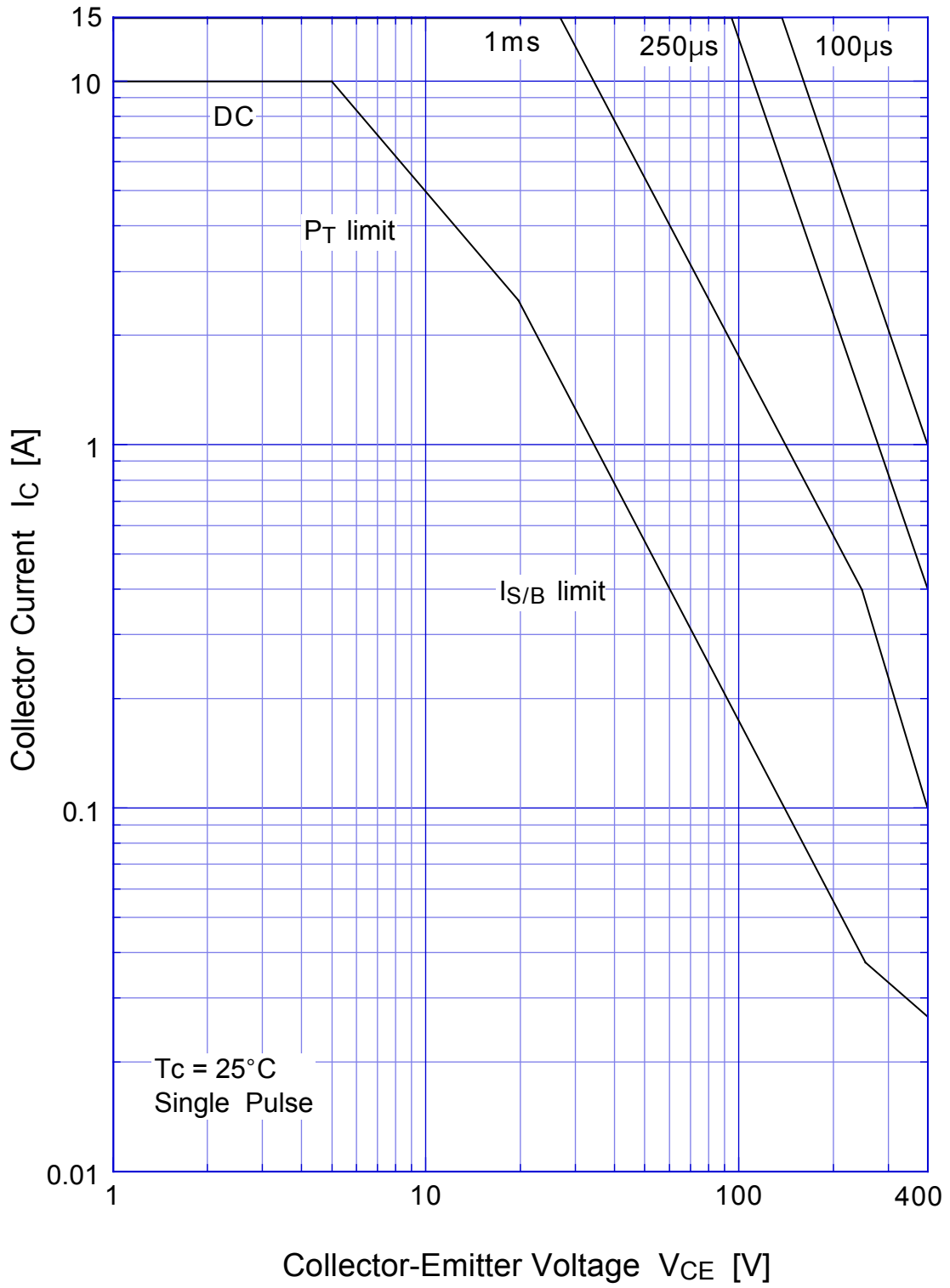


2SD1795 Transient Thermal Impedance



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Forward Bias SOA

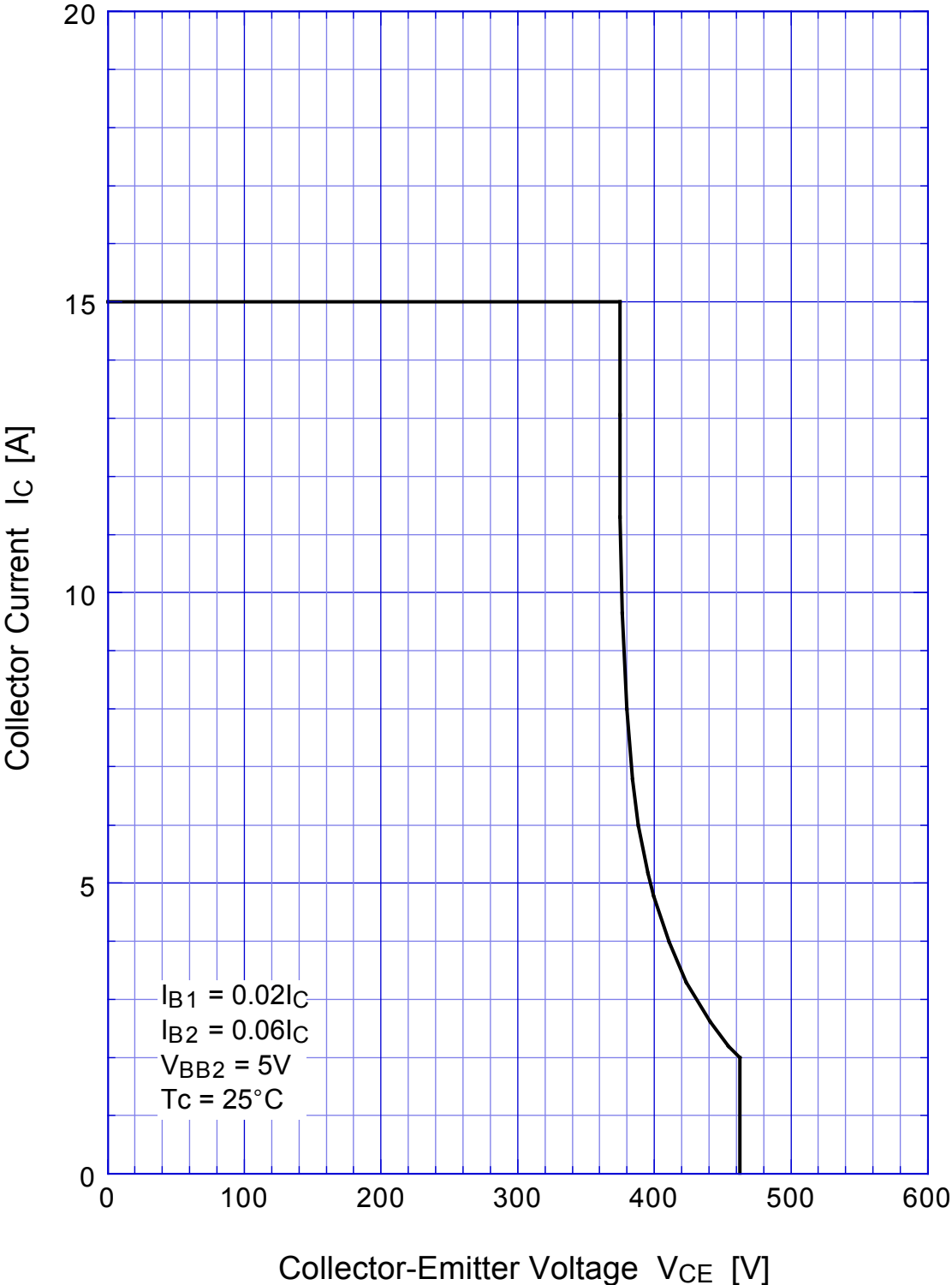


2SD1795 Collector Current Derating



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Reverse Bias SOA



This datasheet has been download from:

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Datasheets for electronics components.