

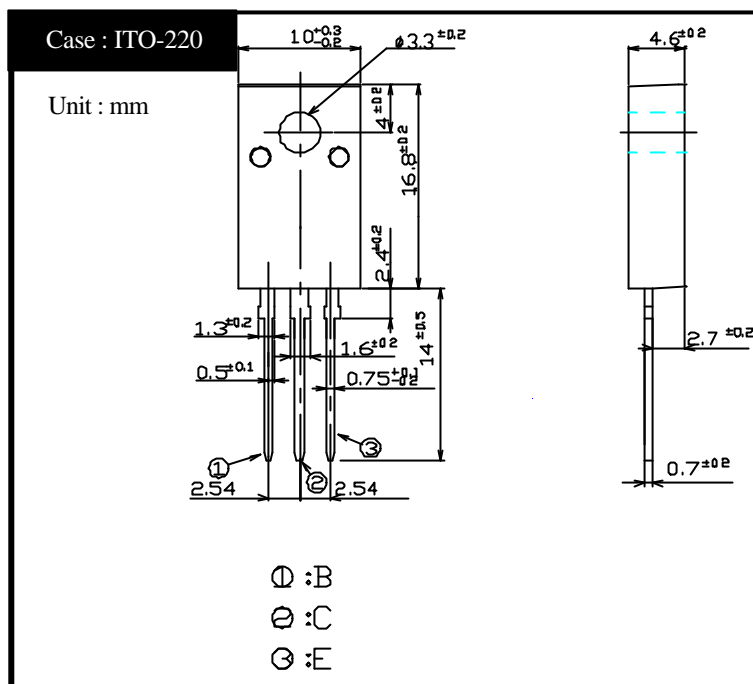
Darlington Transistor

2SB1284

(TP10J10)

- 10 A PNP

OUTLINE DIMENSIONS



RATINGS

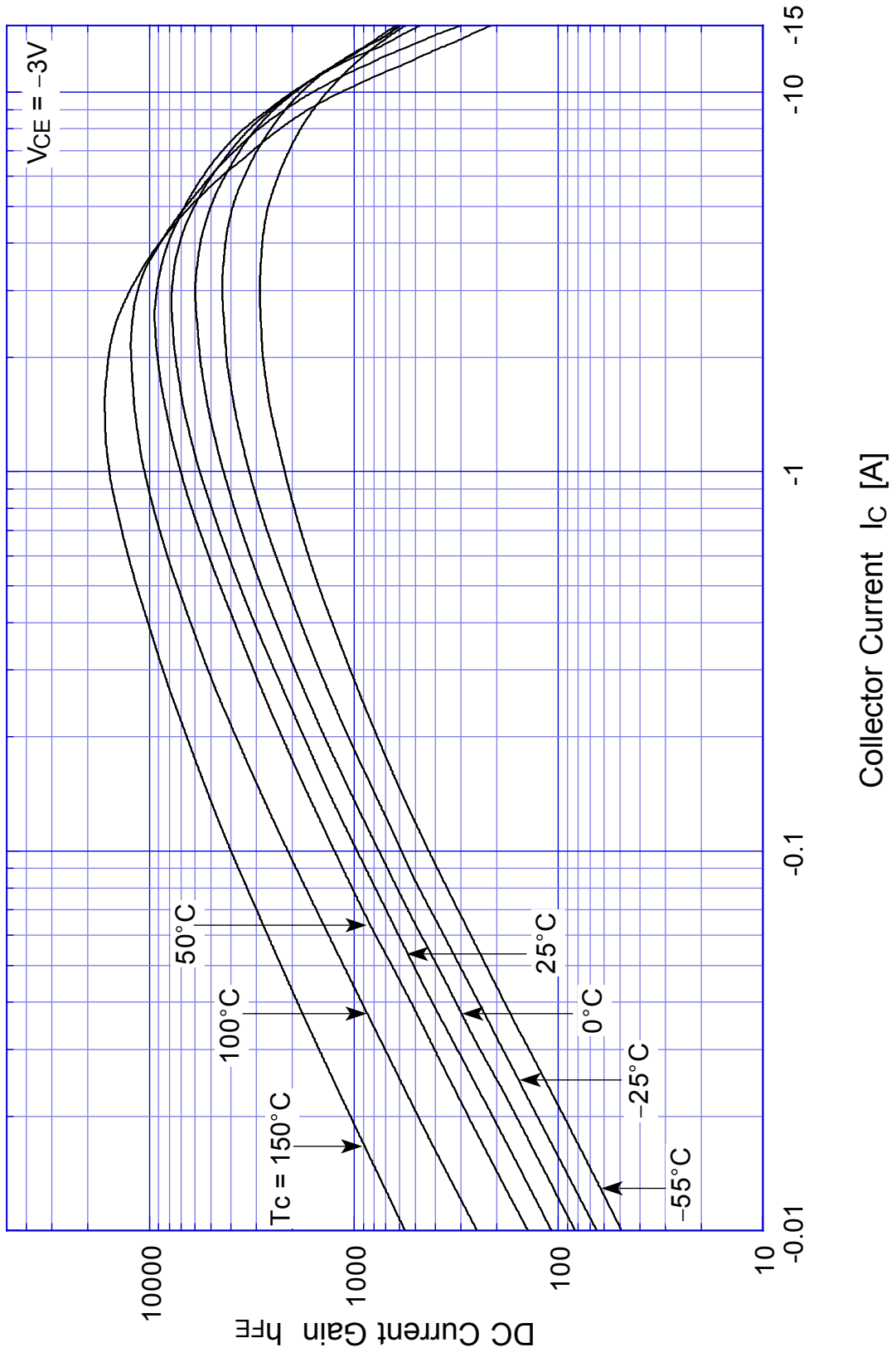
Absolute Maximum Ratings

| Item | Symbol | Conditions | Ratings | Unit |
|------------------------------|------------------|--------------------------------|------------|------|
| Storage Temperature | T _{stg} | | -55 ~ +150 | |
| Junction Temperature | T _j | | +150 | |
| Collector to Base Voltage | V _{CB0} | | -100 | V |
| Collector to Emitter Voltage | V _{CEO} | | -100 | V |
| Emitter to Base Voltage | V _{EBO} | | -7 | V |
| Collector Current DC | I _C | | -10 | A |
| Collector Current Peak | I _{CP} | | -15 | A |
| Base Current DC | I _B | | -0.8 | A |
| Base Current Peak | I _{BP} | | -1.5 | A |
| Total Transistor Dissipation | P _T | T _C = 25 | 35 | 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 |

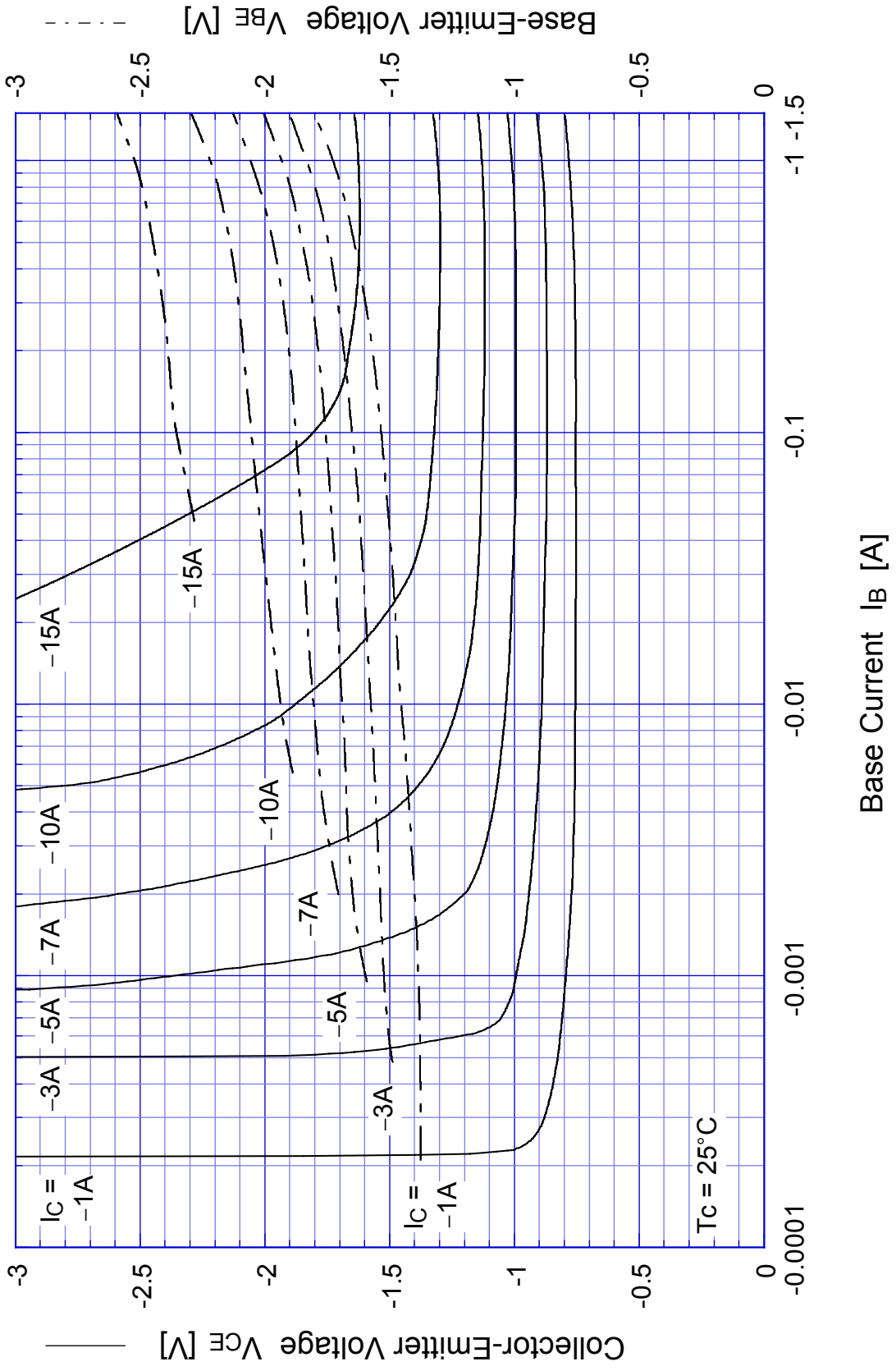
Electrical Characteristics (T_c=25)

| Item | Symbol | Conditions | Ratings | Unit |
|---|----------------------|---|------------|------|
| Collector Cutoff Current | I _{CBO} | V _{CB} = -100V | Max -0.1 | mA |
| | I _{CEO} | V _{CE} = -100V | Max -0.1 | |
| Emitter Cutoff Current | I _{EBO} | V _{EB} = -7V | Max -5 | mA |
| DC Current Gain | h _{FE} | V _{CE} = -3V, I _C = -5A | Min 1,500 | |
| | | | Max 15,000 | |
| Collector to Emitter Saturation Voltage | V _{CE(sat)} | I _C = -5A | Max -1.5 | V |
| Base to Emitter Saturation Voltage | V _{BE(sat)} | I _B = -10mA | Max -2.0 | V |
| Thermal Resistance | θ _{jc} | Junction to case | Max 3.57 | /W |
| Transition Frequency | f _T | V _{CE} = 10V, I _C = -1A | TYP 20 | MHz |
| Turn on Time | t _{on} | I _C = -5A I _{B1} = I _{B2} = -10mA R _L = 6 V _{BB2} = -4V | Max 1 | μs |
| Storage Time | t _s | | Max 4 | |
| Fall Time | t _f | | Max 2 | |

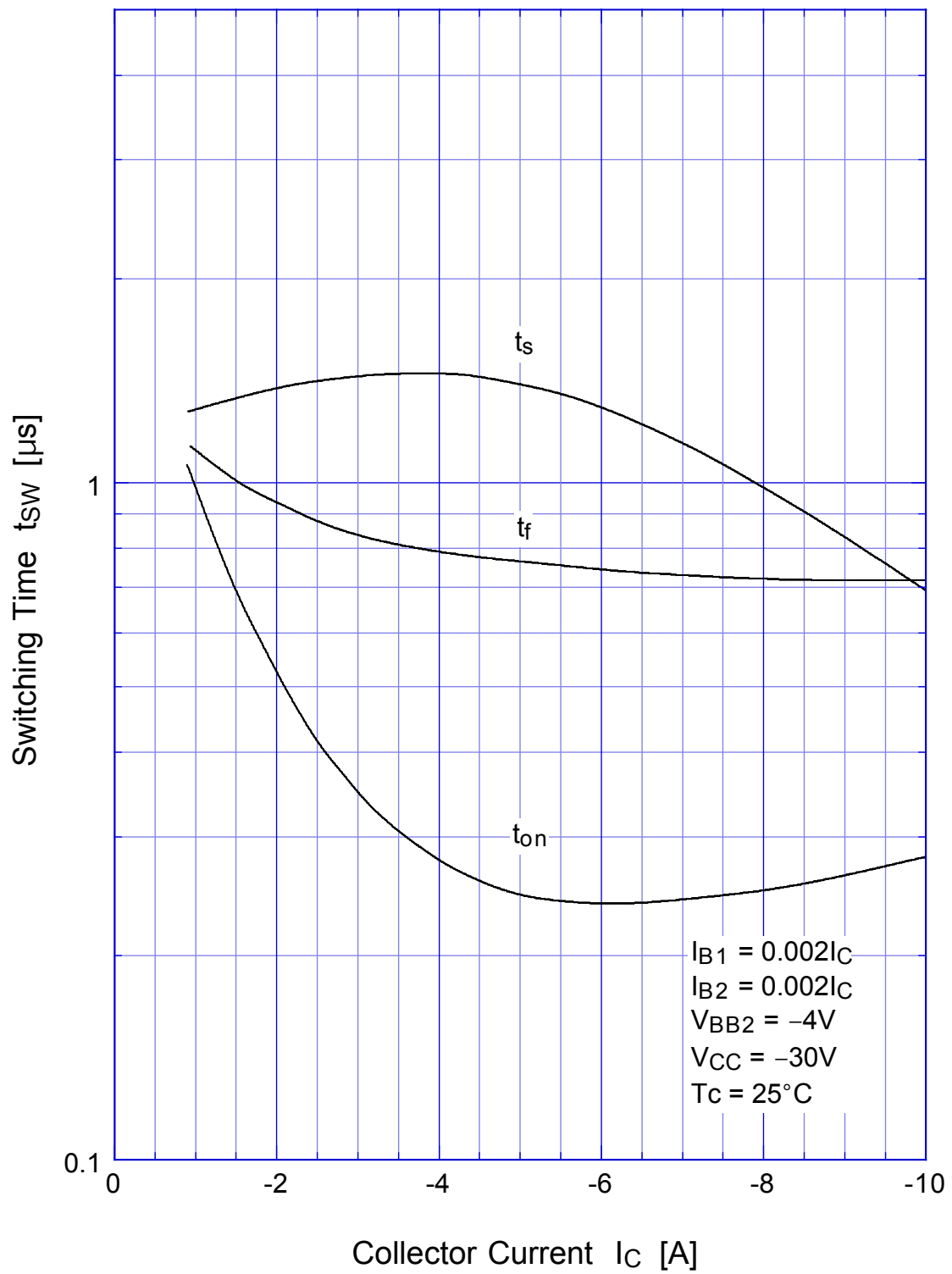
2SB1284 $h_{FE} - I_c$



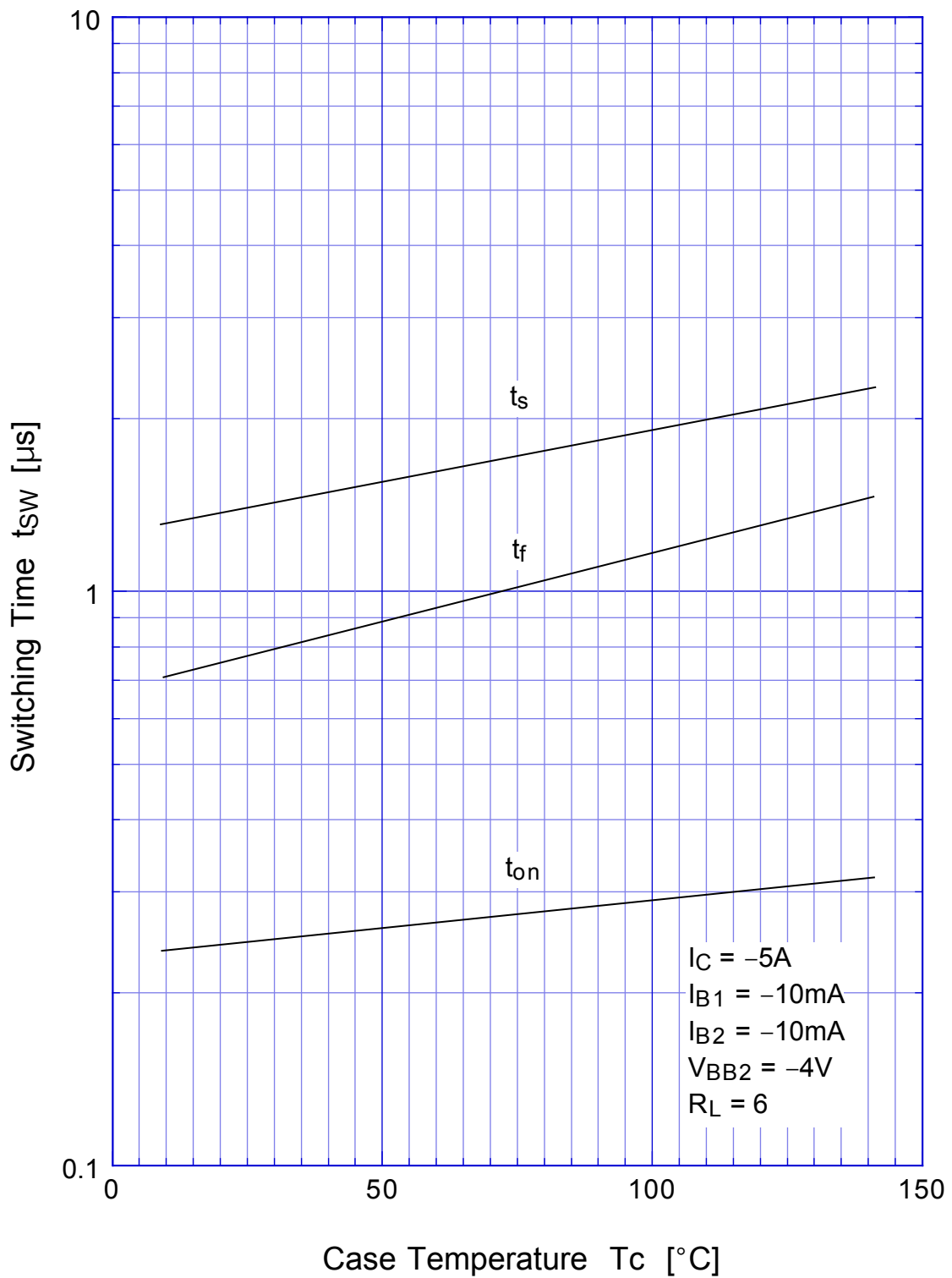
2SB1284 Saturation Voltage



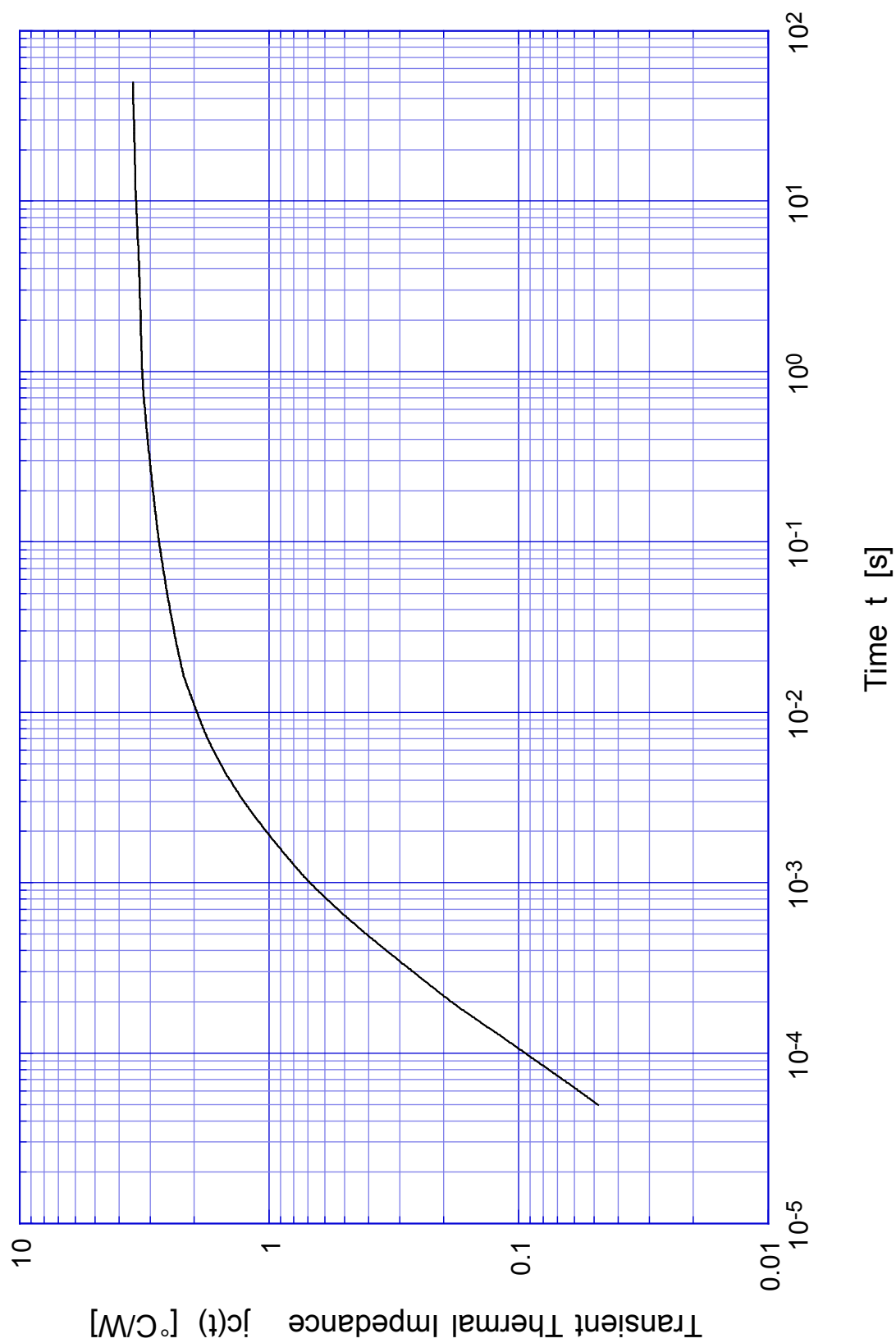
2SB1284 Switching Time - I_C



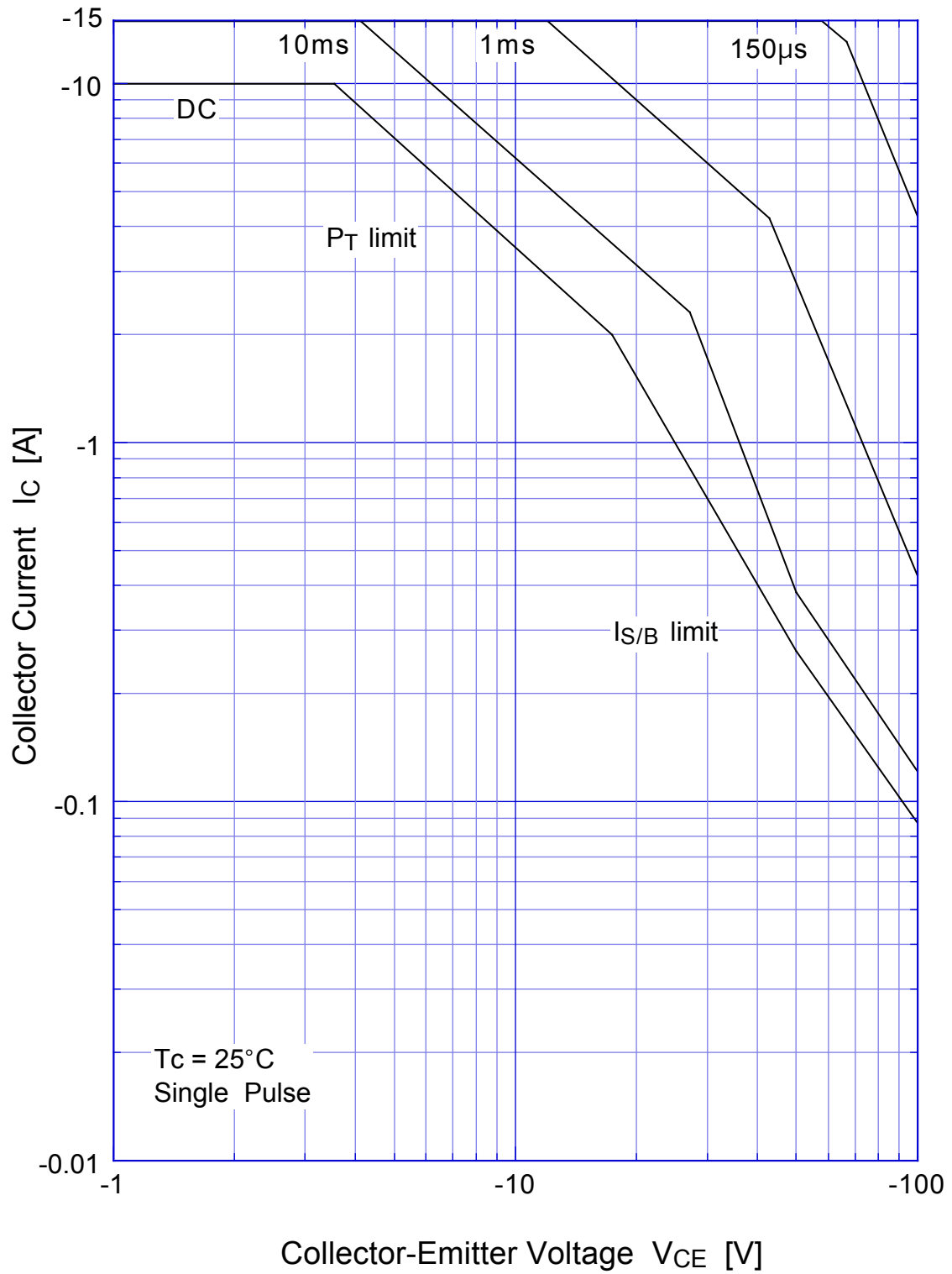
2SB1284 Switching Time - Tc



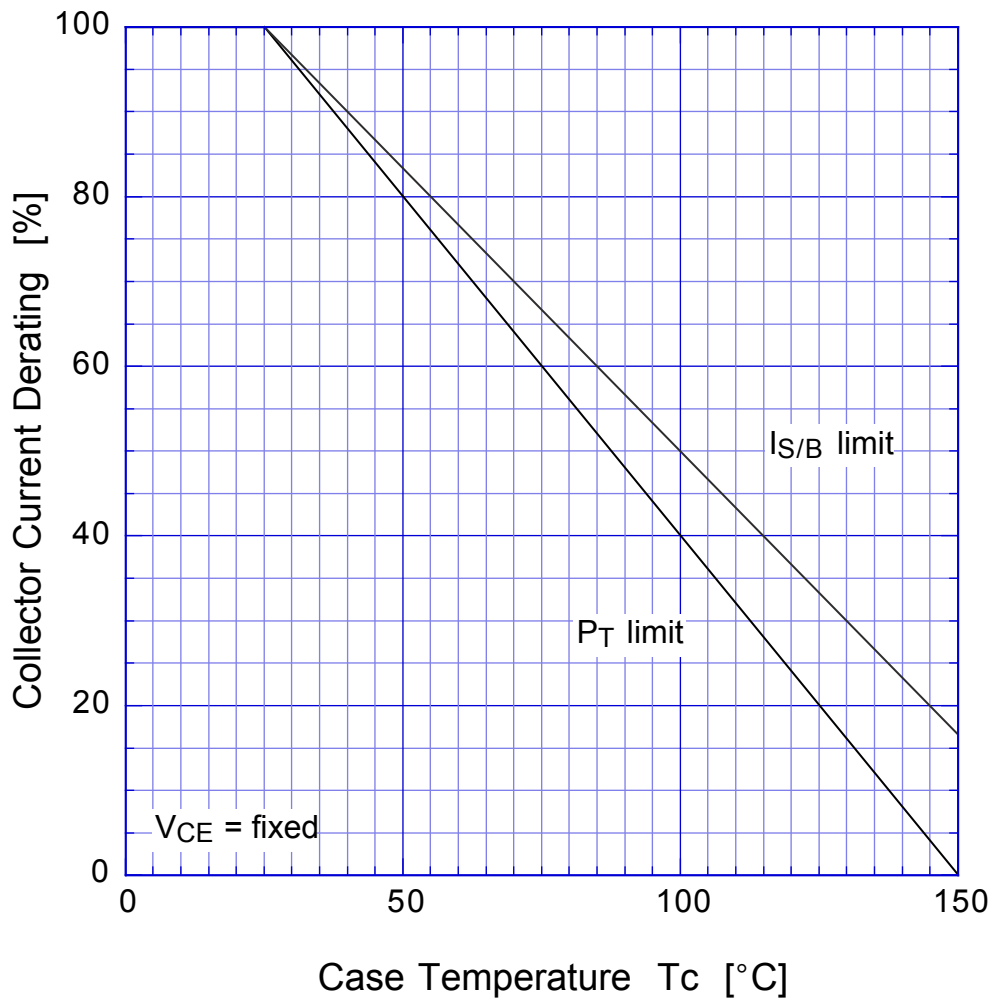
2SB1284 Transient Thermal Impedance



2SB1284 Forward Bias SOA



2SB1284 Collector Current Derating



2SB1284 Reverse Bias SOA

