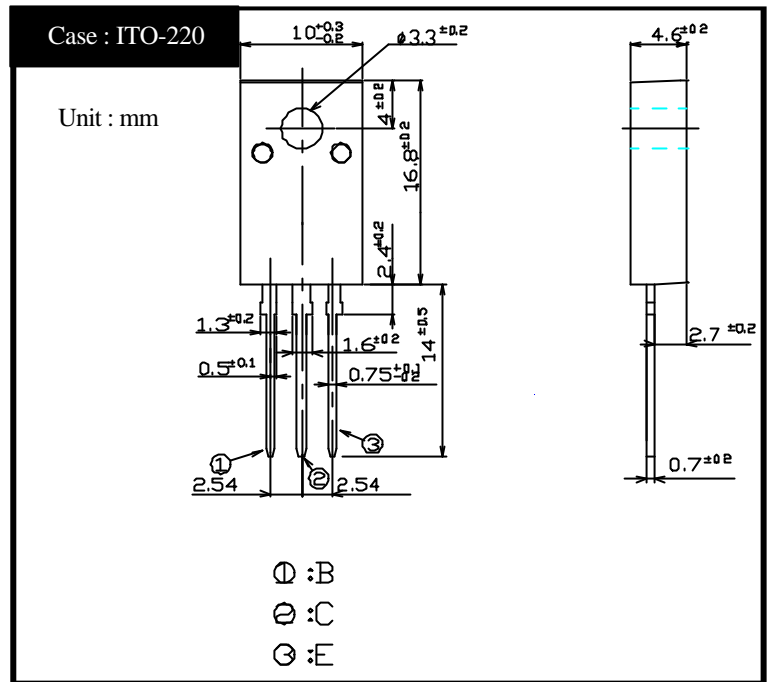


2SA1600
(TP12T4)

-12A PNP

OUTLINE DIMENSIONS



RATINGS

Absolute Maximum Ratings

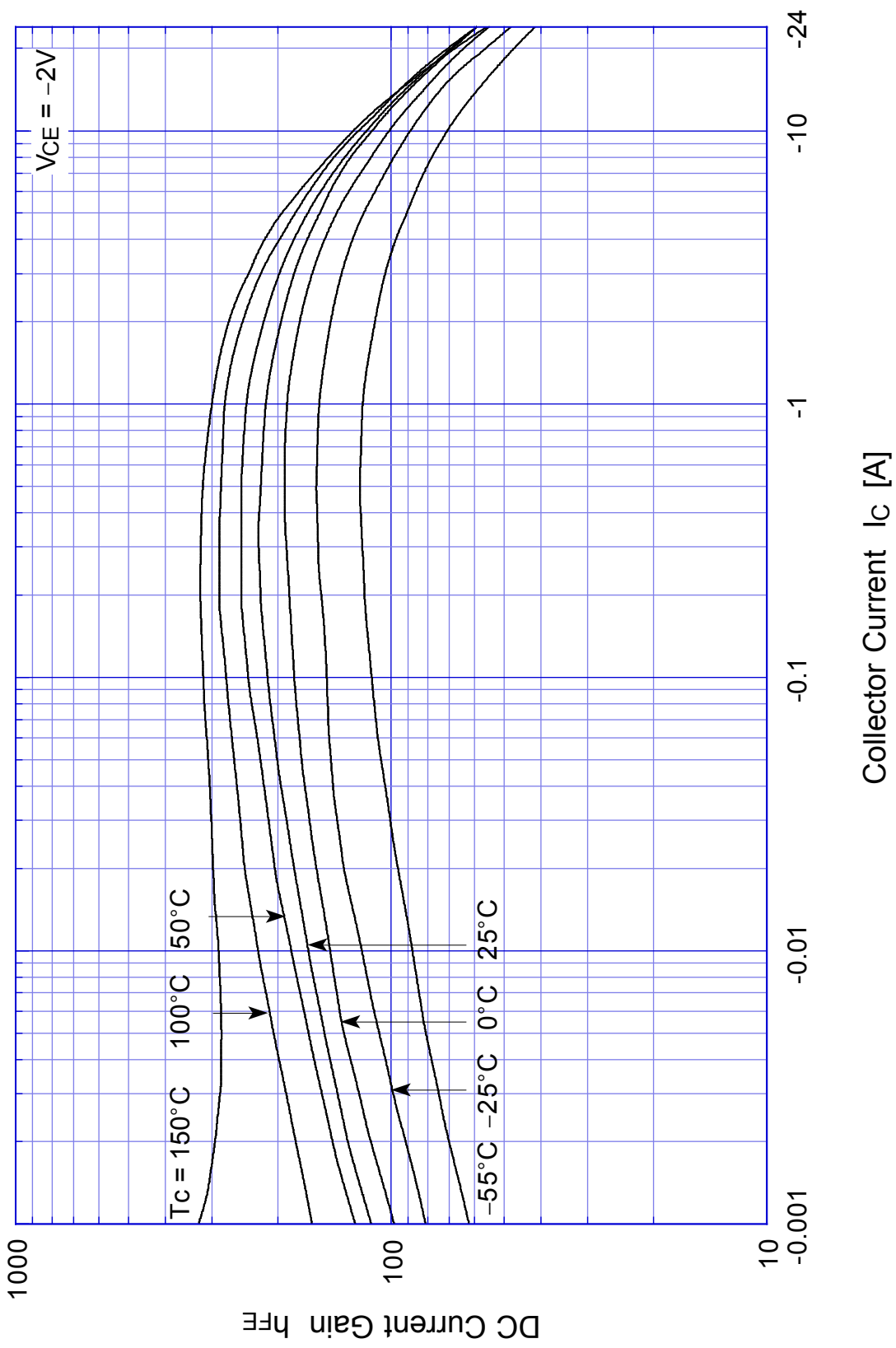
| Item | Symbol | Conditions | Ratings | Unit |
|------------------------------|------------------|-------------------------------|-----------|------|
| Storage Temperature | T _{stg} | | -55 ~ 150 | |
| Junction Temperature | T _j | | 150 | |
| Collector to Base Voltage | V _{CB0} | | -60 | V |
| Collector to Emitter Voltage | V _{CE0} | | -40 | V |
| Emitter to Base Voltage | V _{EBO} | | -7 | V |
| Collector Current DC | I _C | | -12 | A |
| Collector Current Peak | I _{CP} | | -24 | A |
| Base Current DC | I _B | | -2 | A |
| Base Current Peak | I _{BP} | | -3 | A |
| Total Transistor Dissipation | P _T | T _C = 25 | 30 | W |
| Dielectric Strength | V _{dis} | Terminal to case, AC 1 minute | 2 | kV |
| Mounting Torque | TOR | (Recommended torque : 0.3N·m) | 0.5 | N·m |

Electrical Characteristics (T_c=25)

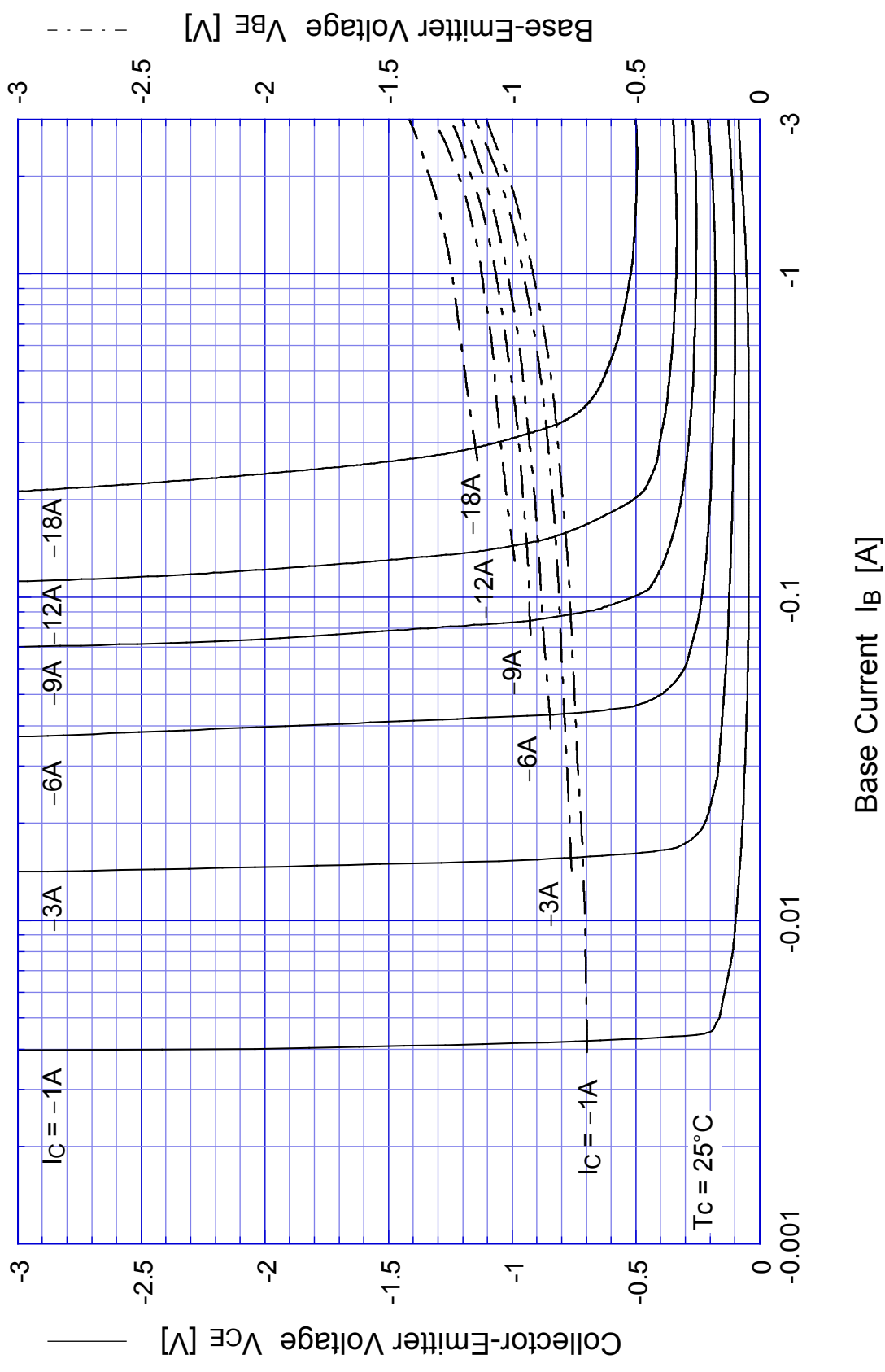
| Item | Symbol | Conditions | Ratings | Unit |
|-----------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------|----------|------|
| Collector to Emitter Sustaining Voltage | V _{CE0(sus)} | I _C = -0.1A | Min -40 | V |
| Collector Cutoff Current | I _{CBO} | At rated Voltage | Max -0.1 | mA |
| | | | Max -0.1 | |
| Emitter Cutoff Current | I _{EBO} | At rated Voltage | Max -0.1 | mA |
| DC Current Gain | h _{FE} | V _{CE} = -2V, I _C = -6A | Min 70 | |
| Collector to Emitter Saturation Voltage | V _{CE(sat)} | I _C = -6A | Max -0.3 | V |
| Base to Emitter Saturation Voltage | V _{BE(sat)} | I _B = -0.3A | Max -1.2 | V |
| Thermal Resistance | θ _{JC} | Junction to case | Max 4.16 | /W |
| Transition Frequency | f _T | V _{CE} = -10V, I _C = -1.2A | TYP 50 | MHz |
| Turn on Time | t _{on} | I _C = -6A I _{B1} = -0.6A, I _{B2} = -0.6A R _L = 5 Ω, V _{BB2} = -4V | Max 0.3 | μs |
| Storage Time | t _s | | Max 1.5 | |
| Fall Time | t _f | | Max 0.5 | |

2SA1600

$h_{FE} - I_C$

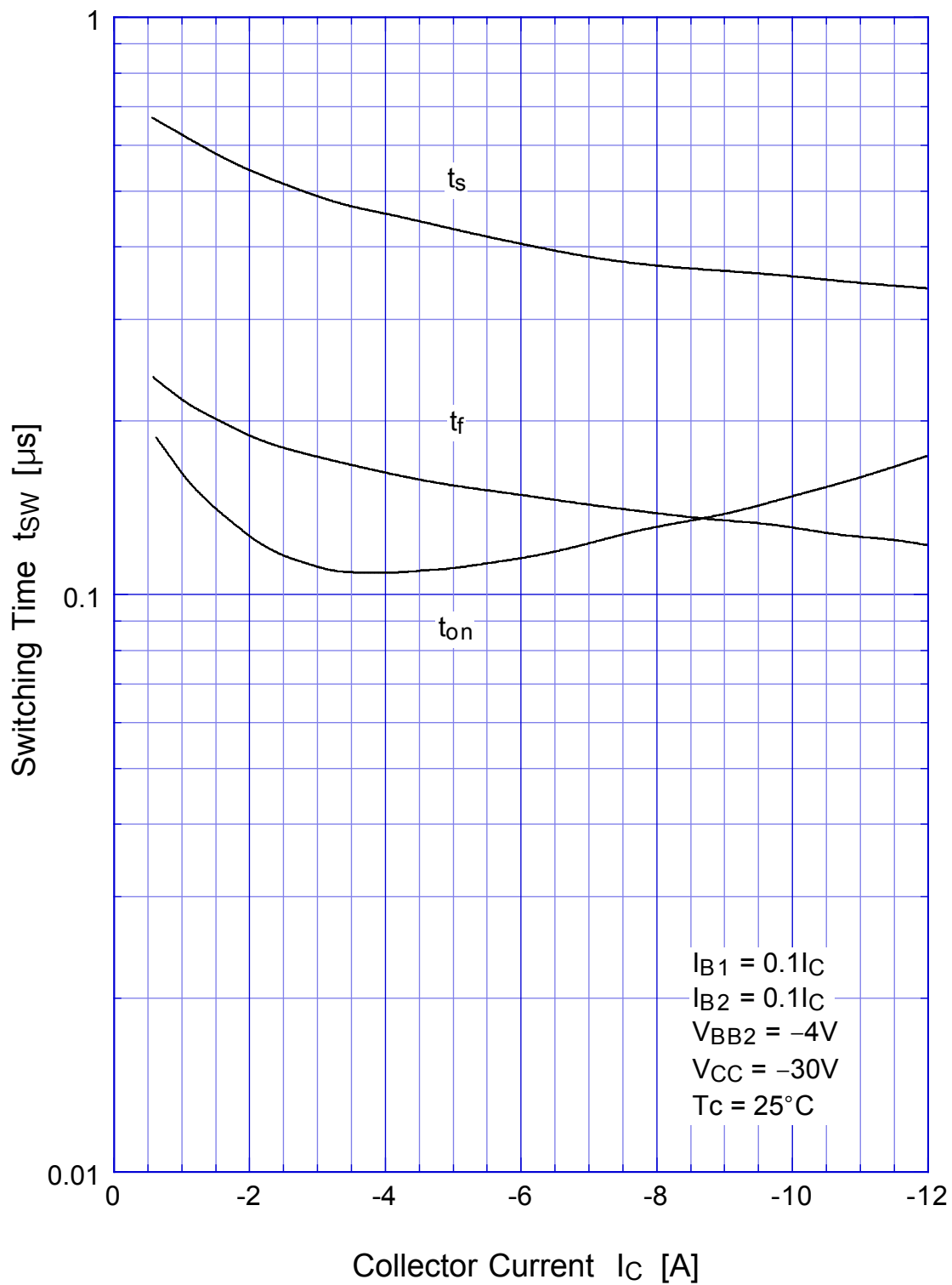


2SA1600 Saturation Voltage



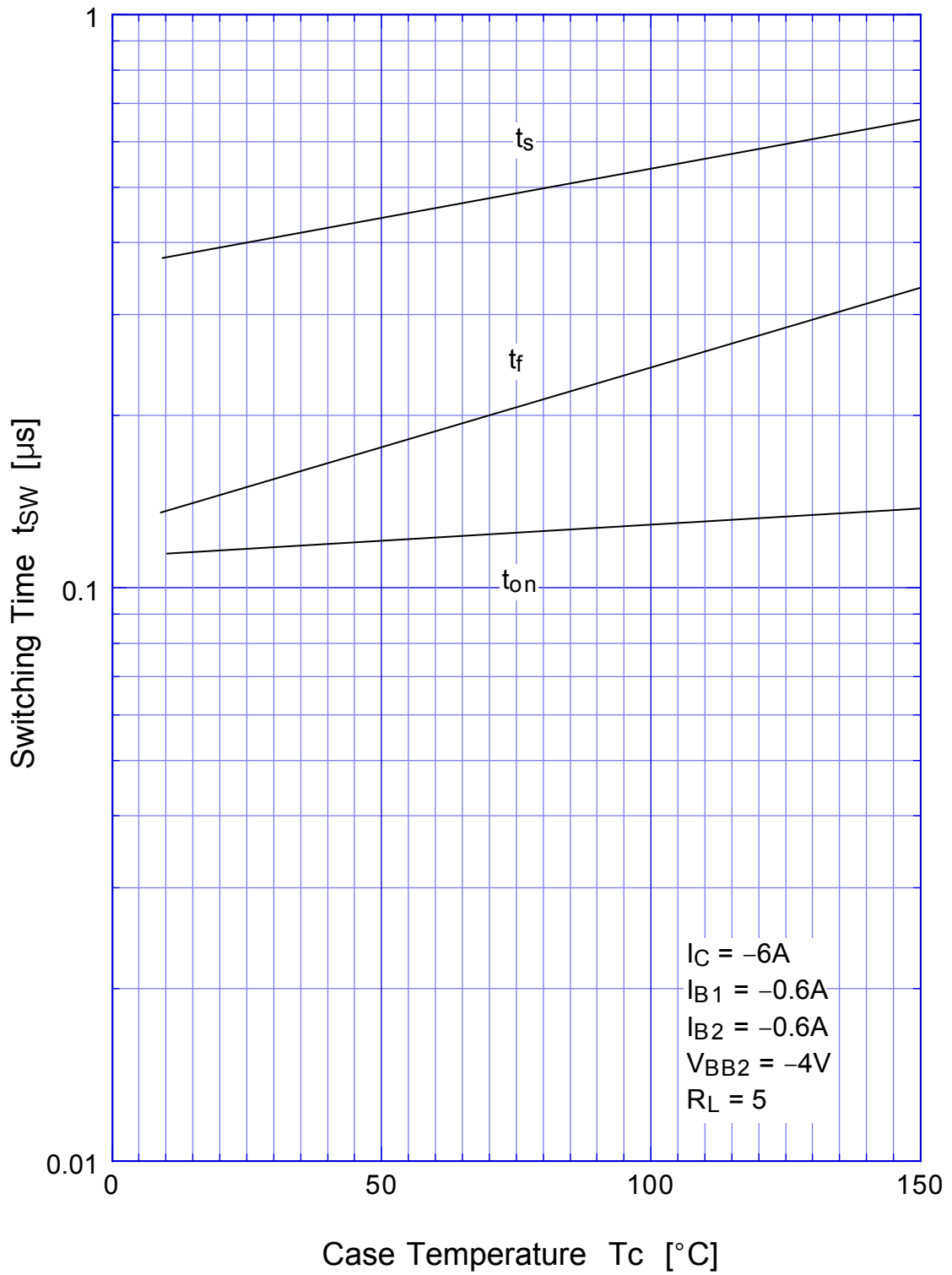
2SA1600

Switching Time - I_C

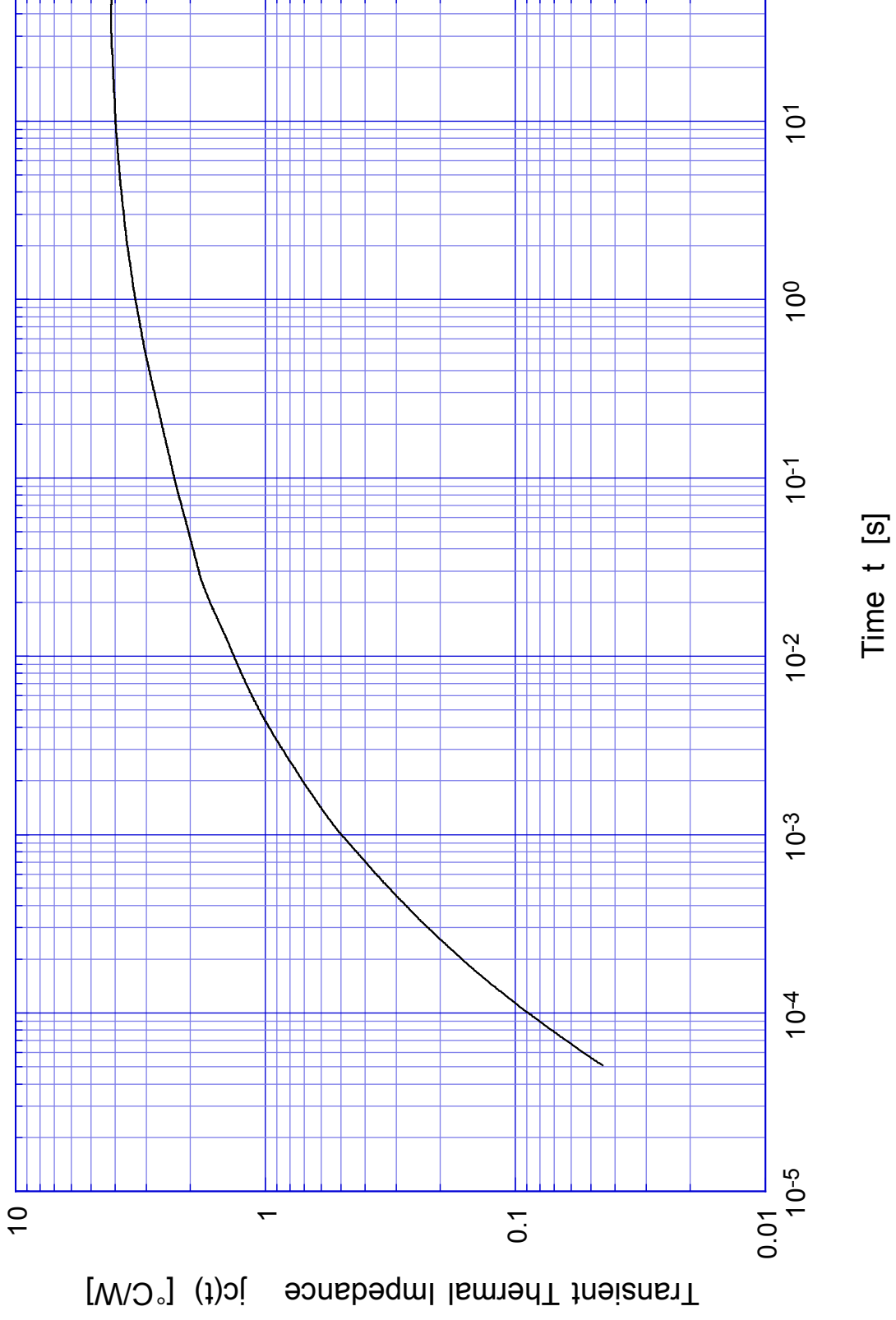


2SA1600

Switching Time - Tc

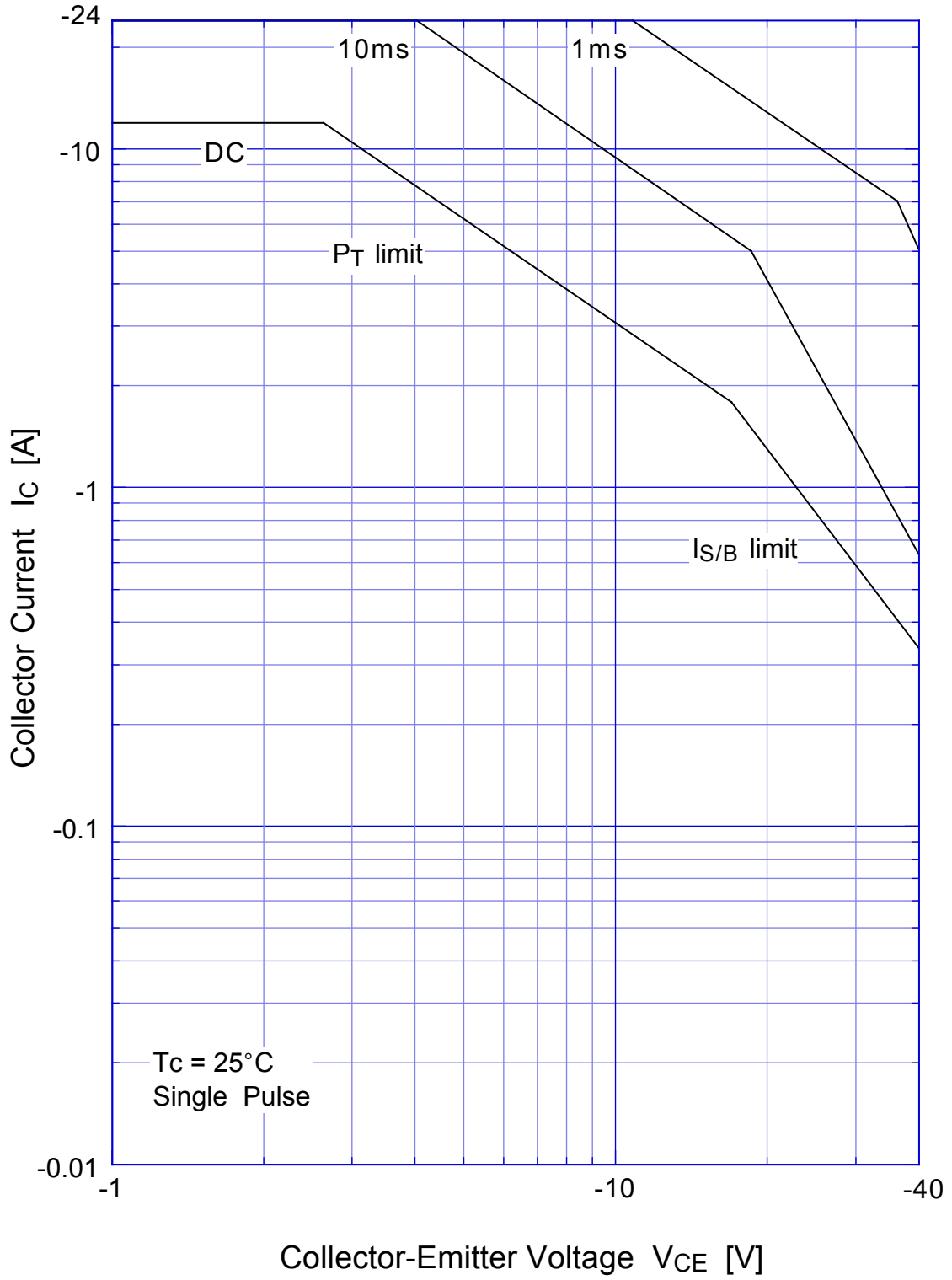


2SA1600 Transient Thermal Impedance



2SA1600

Forward Bias SOA



2SA1600 Collector Current Derating

