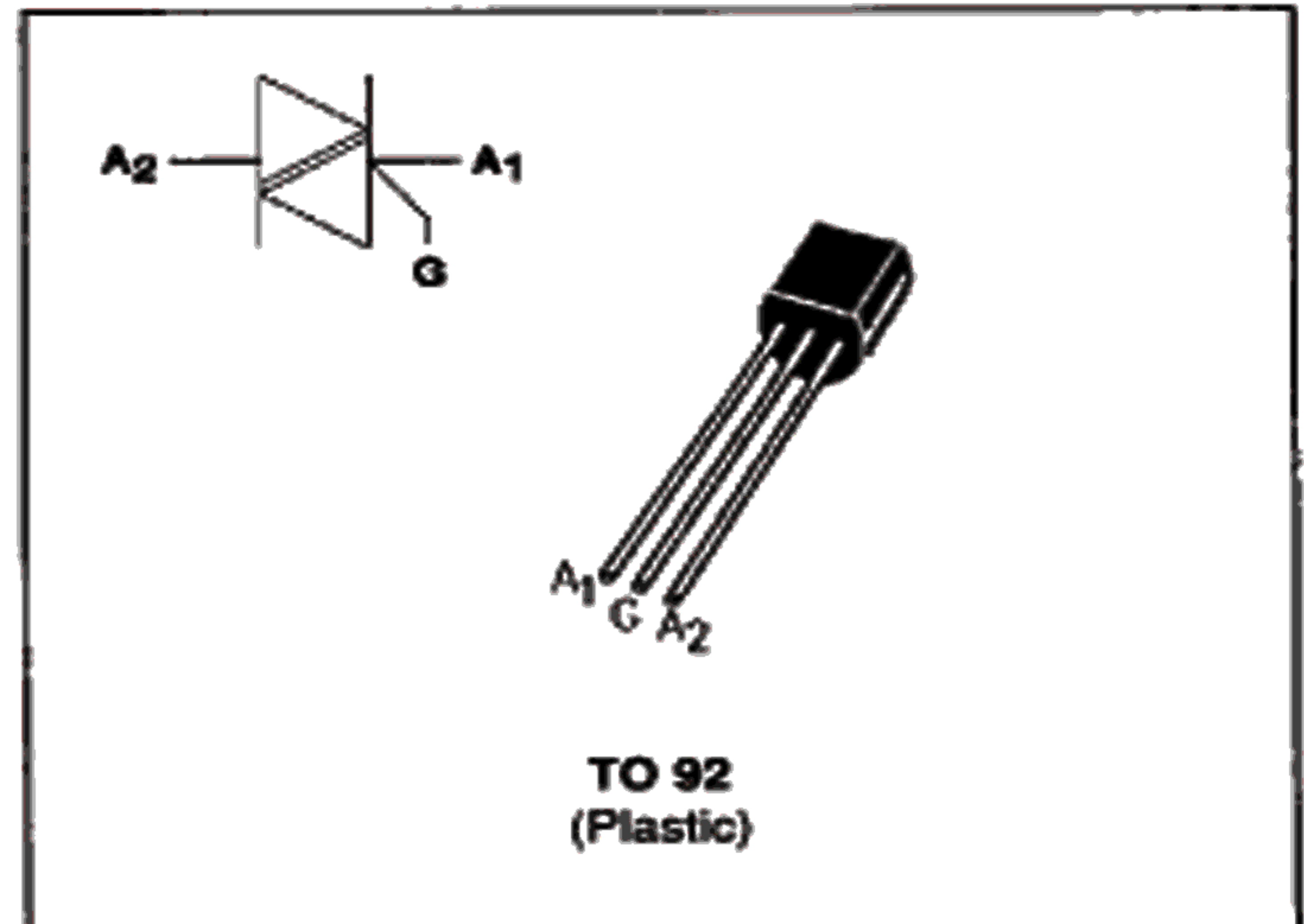


SENSITIVE GATE TRIACS
FEATURES

- $I_{T(RMS)} = 0.8 \text{ A}$
- $V_{DRM} = 200 \text{ V to } 600 \text{ V}$
- $I_{GT} \leq 10 \text{ mA}$


ABSOLUTE RATINGS (limiting values)

| Symbol | Parameter | | Value | Unit |
|--------------------|---|--------------------------|-------------|------------------------|
| $I_{T(RMS)}$ | RMS on-state current (360° conduction angle) | $T_I = 55^\circ\text{C}$ | 0.8 | A |
| | RMS on-state current on printed circuit (360° Conduction angle) | $T_a = 30^\circ\text{C}$ | 0.5 | |
| I_{TSM} | Non repetitive surge peak on-state current (T_J initial = 25°C) | $t_p = 8.3 \text{ ms}$ | 8.5 | A |
| | | $t_p = 10 \text{ ms}$ | 8 | |
| i^2t | i^2t value | $t_p = 10 \text{ ms}$ | 0.32 | A^2s |
| di/dt | Critical rate of rise of on-state current $I_G = 100 \text{ mA}$ $di_G/dt = 1 \text{ A}/\mu\text{s}$ | Repetitive | 10 | $\text{A}/\mu\text{s}$ |
| T_{stg} T_J | Storage and operating junction temperature range | | - 40, + 150 | $^\circ\text{C}$ |
| | | | - 40, + 125 | $^\circ\text{C}$ |
| T_I | Maximum lead temperature for soldering during 10 s | | 260 | $^\circ\text{C}$ |

| Symbol | Parameter | T08- | | | Unit |
|------------------------|---|------|-----|-----|------|
| | | 2A | 4A | 6A | |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage $T_J = 125 \text{ }^\circ\text{C}$ | 200 | 400 | 600 | V |

T08 A**THERMAL RESISTANCES**

| Symbol | Parameter | Value | Unit |
|-------------|---|-------|------|
| Rth (j - a) | Junction to ambient on printed circuit | 150 | °C/W |
| Rth (j - l) | Junction to leads for 360° conduction angle (F = 50 Hz) | 60 | °C/W |

GATE CHARACTERISTICS (maximum values)

$P_{GM} = 2 \text{ W}$ ($t = 20 \mu\text{s}$) $P_G (AV) = 100 \text{ mW}$ $I_{GM} = 1 \text{ A}$ ($t = 20 \mu\text{s}$) $V_{GM} = 16 \text{ V}$ ($t = 20 \mu\text{s}$).

ELECTRICAL CHARACTERISTICS

| Symbol | Test Conditions | Quadrant | Value | Unit | | |
|--------------------------------------|---|-----------------------|-------------|------|------|------|
| I _{GT} | V _D =12V (DC) R _L =140Ω | T _J =25°C | I-II-III | MAX | 10 | mA |
| | | | IV | | 25 | |
| V _{GT} | V _D =12V (DC) R _L =140Ω | T _J =25°C | I-II-III-IV | MAX | 1.5 | V |
| V _{GD} | V _D =V _{DRM} R _L =3.3kΩ | T _J =125°C | I-II-III-IV | MIN | 0.2 | V |
| t _{gt} | V _D =V _{DRM} I _G = 40mA dI _G /dt = 0.5A/μs | T _J =25°C | I-II-III-IV | TYP | 2 | μs |
| I _L | I _G =1.2 I _{GT} | T _J =25°C | I-II-III-IV | MAX | 25 | mA |
| I _H * | I _T = 50mA gate open | T _J =25°C | | MAX | 25 | mA |
| V _{TM} * | I _{TM} = 1.2A t _p = 380μs | T _J =25°C | | MAX | 1.9 | V |
| I _{DRM} I _{RRM} | V _{DRM} Rated V _{RRM} Rated | T _J =25°C | | MAX | 0.01 | mA |
| | | T _J =125°C | | MAX | 0.75 | |
| dV/dt * | Linear slope up to V _D =67%V _{DRM} gate open | T _J =125°C | | MIN | 70 | V/μs |
| (dI/dt) _c * | (dV/dt) _c = 2V/μs | T _J =125°C | | MIN | 0.75 | A/ms |

* For either polarity of electrode A2 voltage with reference to electrode A1.

Fig.1 : Maximum RMS power dissipation versus RMS on-state current (F=50Hz).
(Curves are cut off by (di/dt)c limitation)

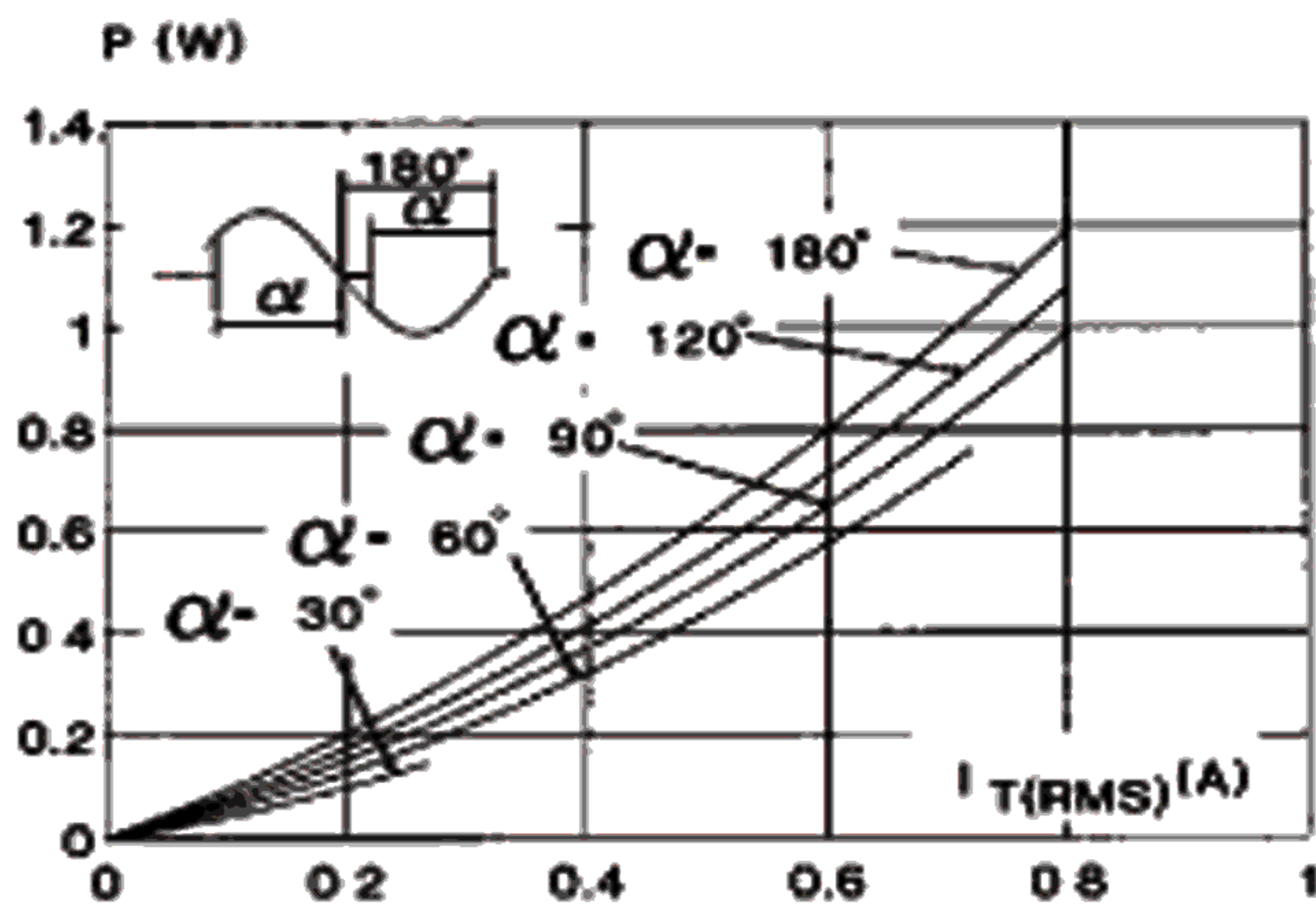


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (Tamb and Tlead).

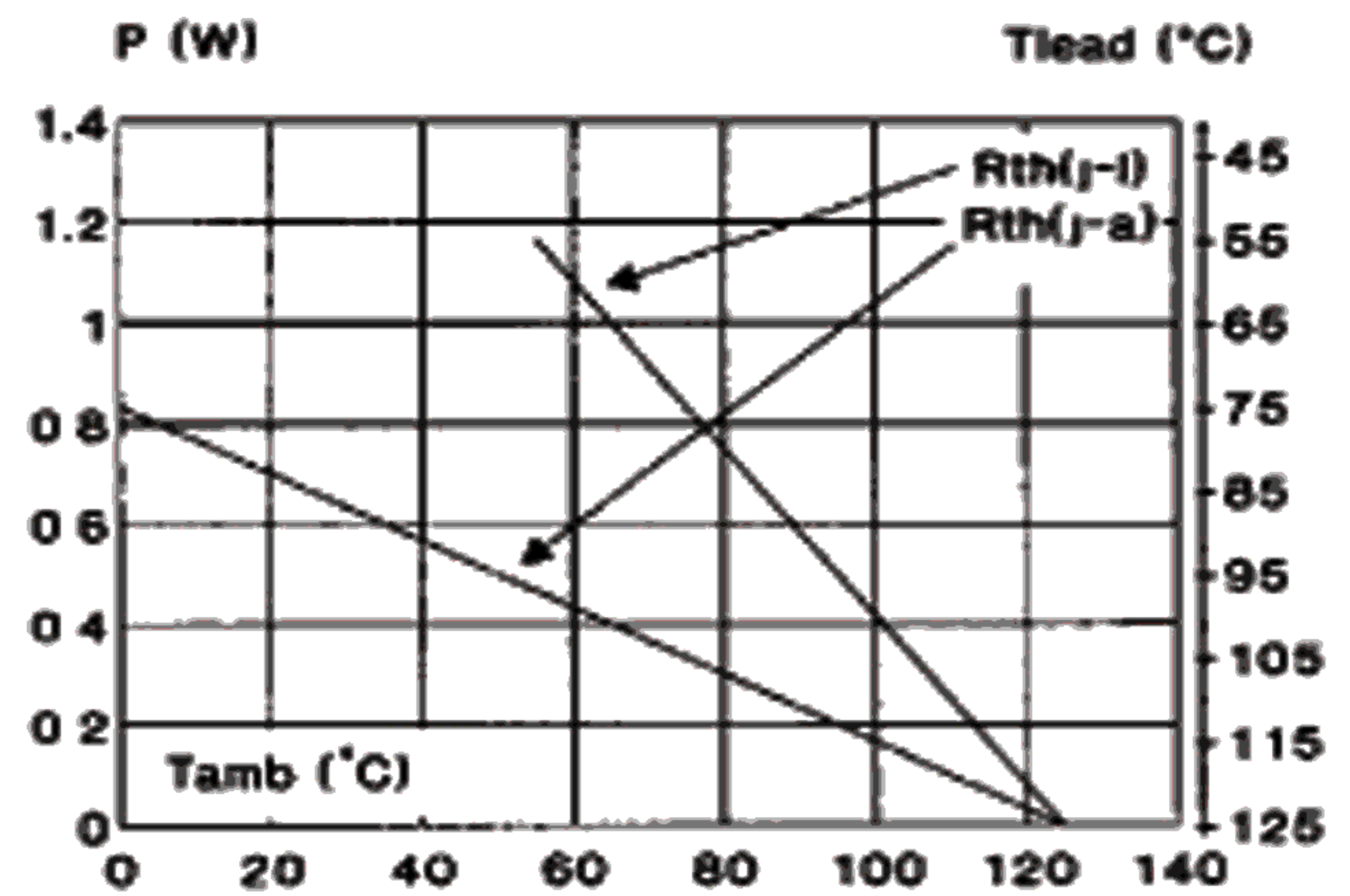


Fig.3 : RMS on-state current versus lead temperature.

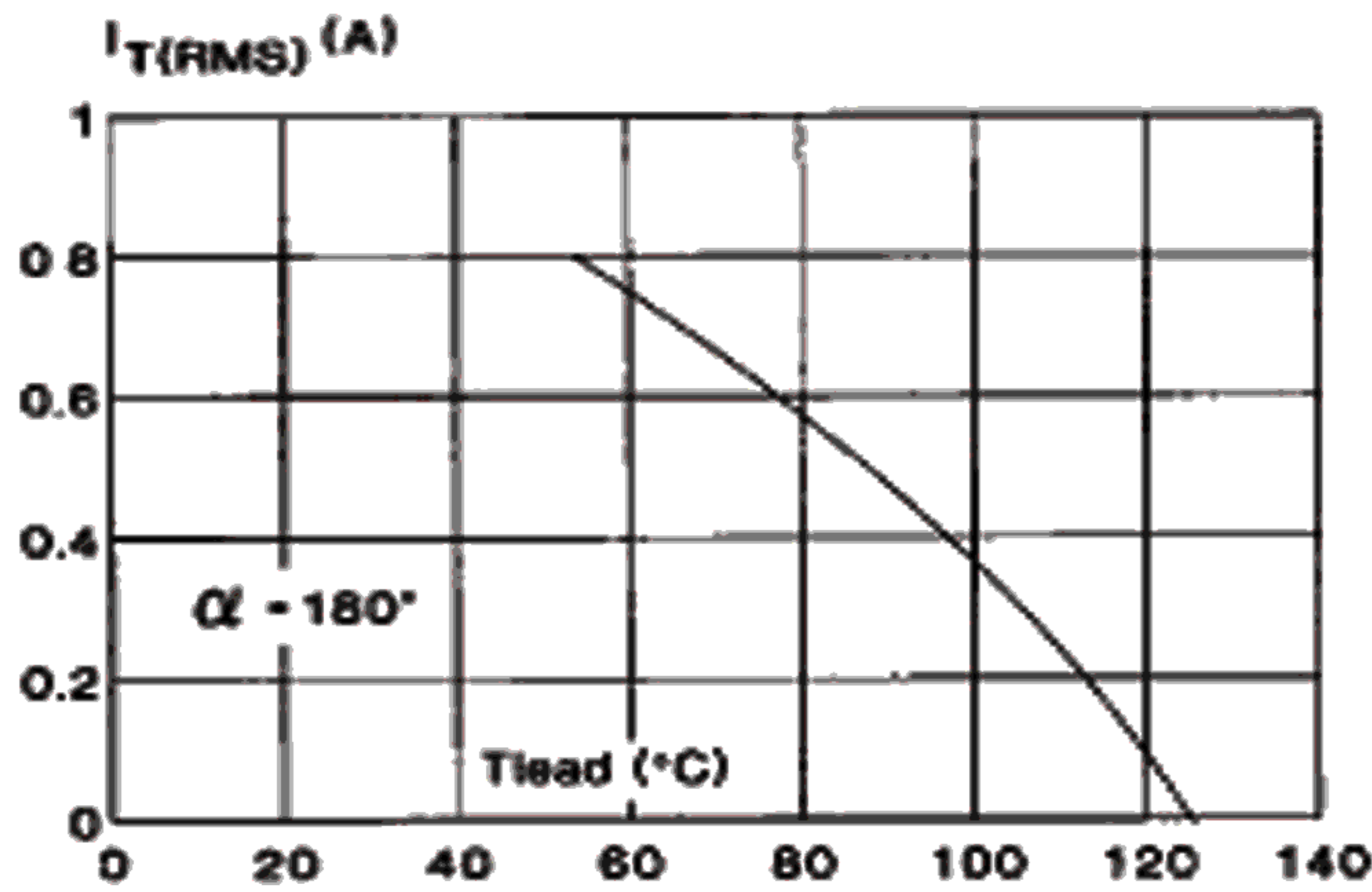


Fig.4 : Thermal transient impedance junction to ambient versus pulse duration.

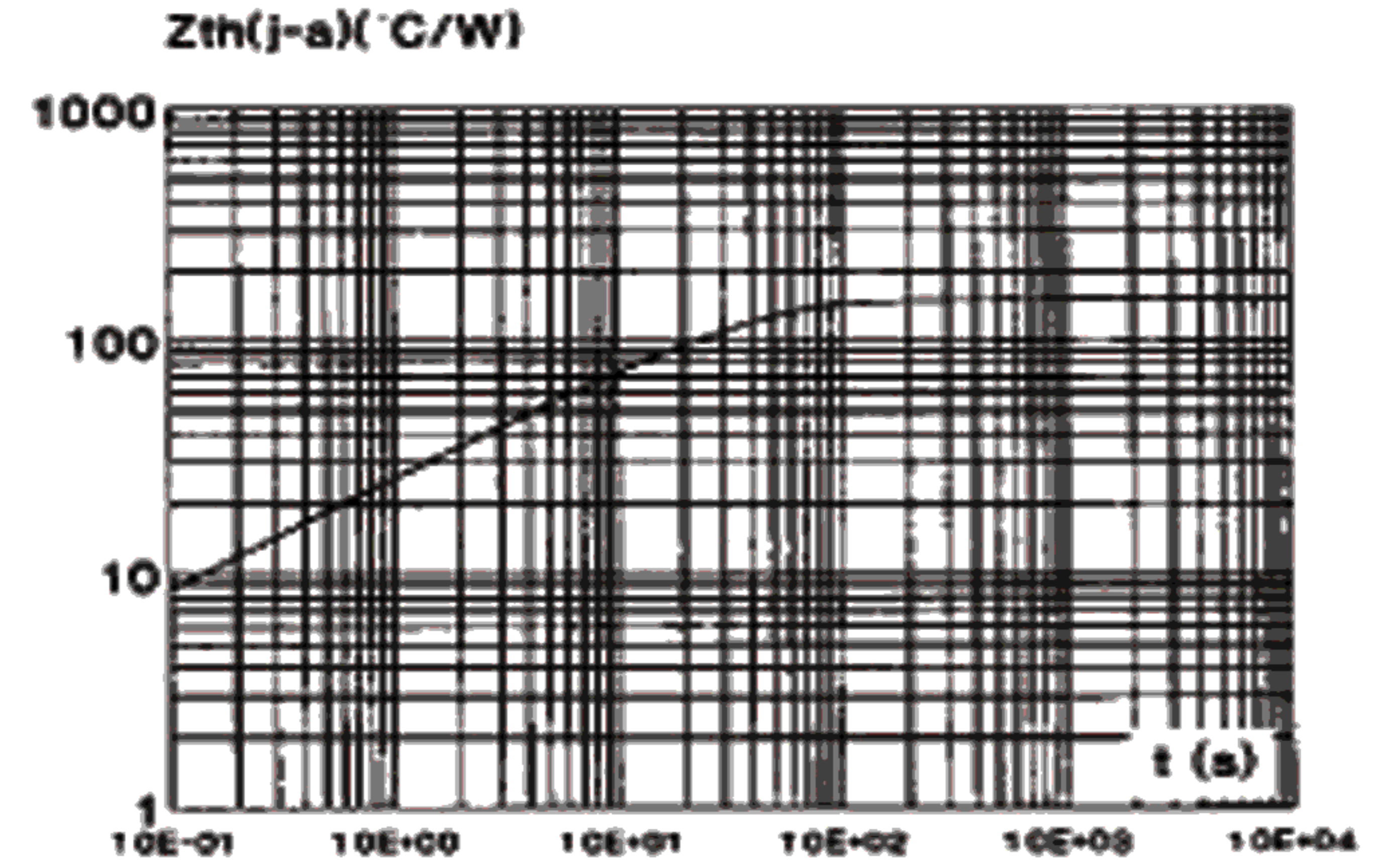


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

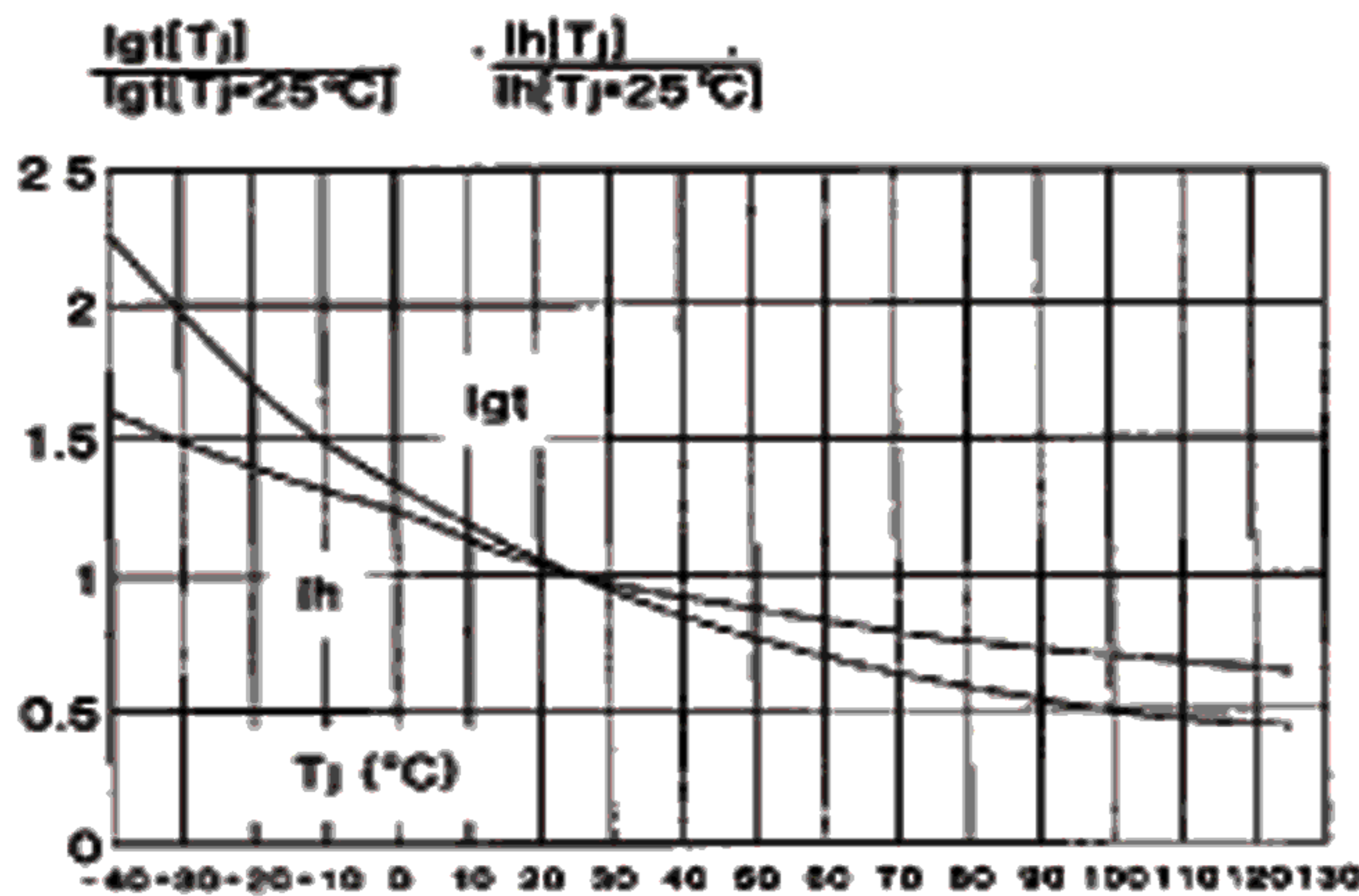


Fig.6 : Non Repetitive surge peak on-state current versus number of cycles.

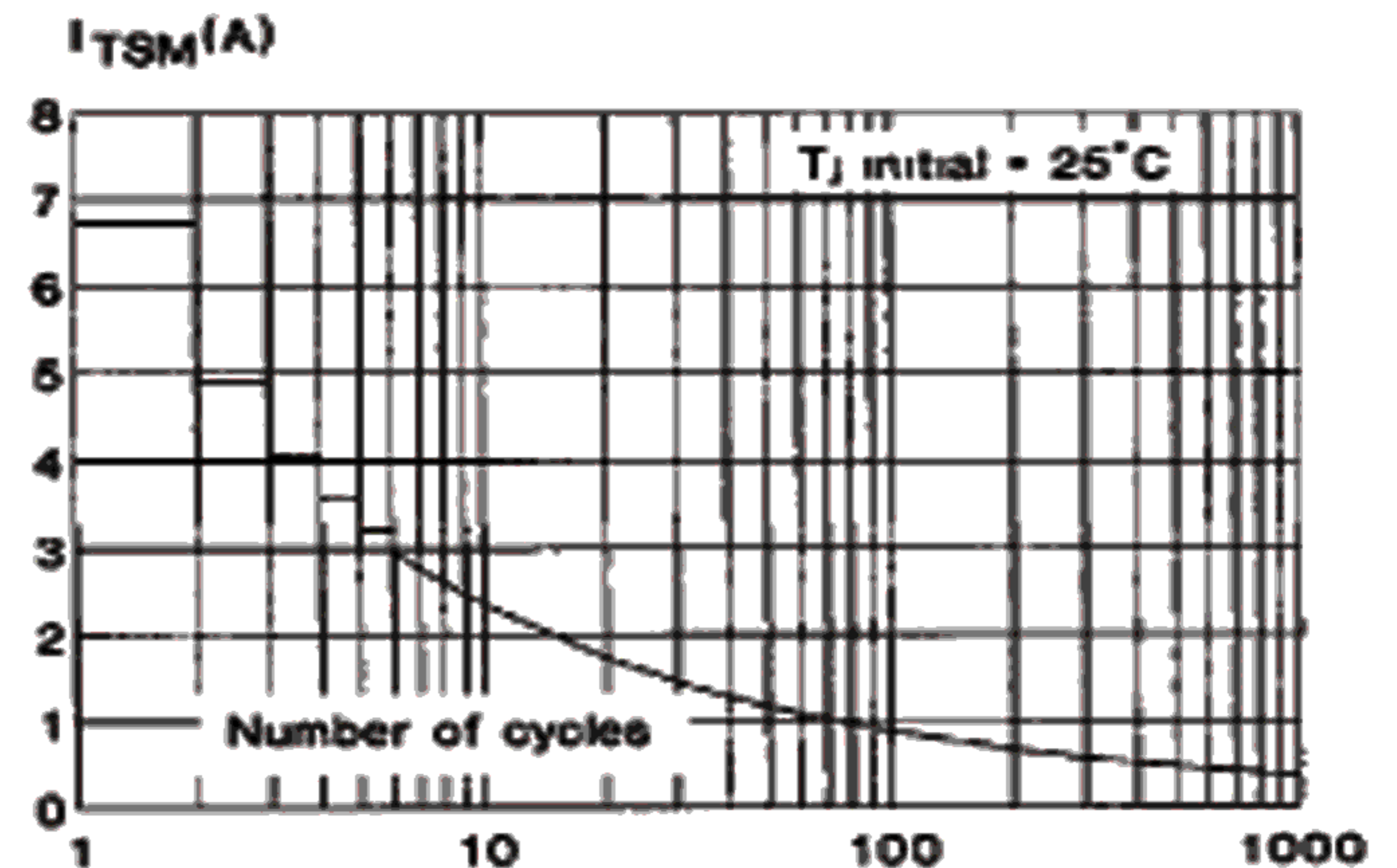


Fig.7 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10\text{ms}$, and corresponding value of I^2t .

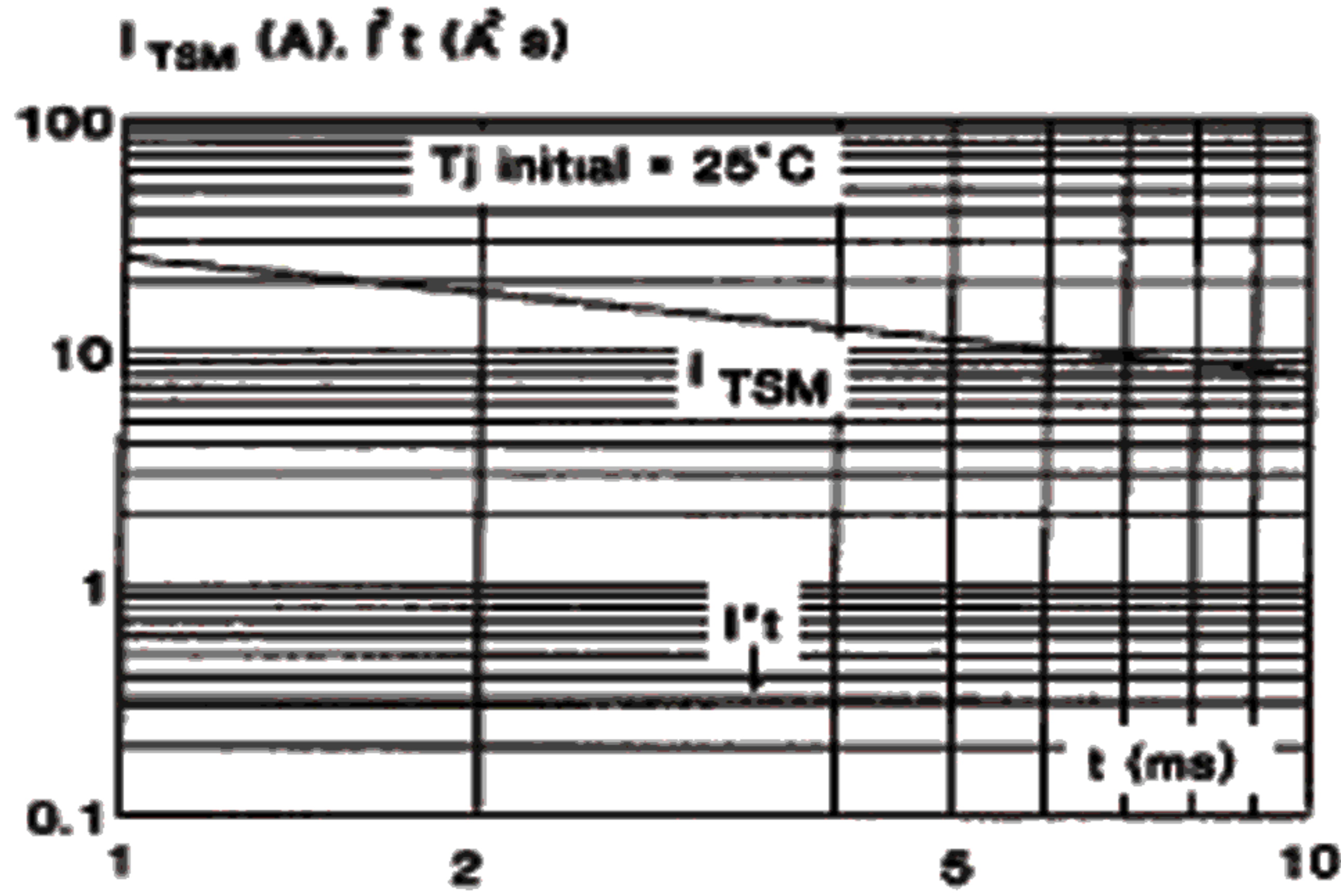
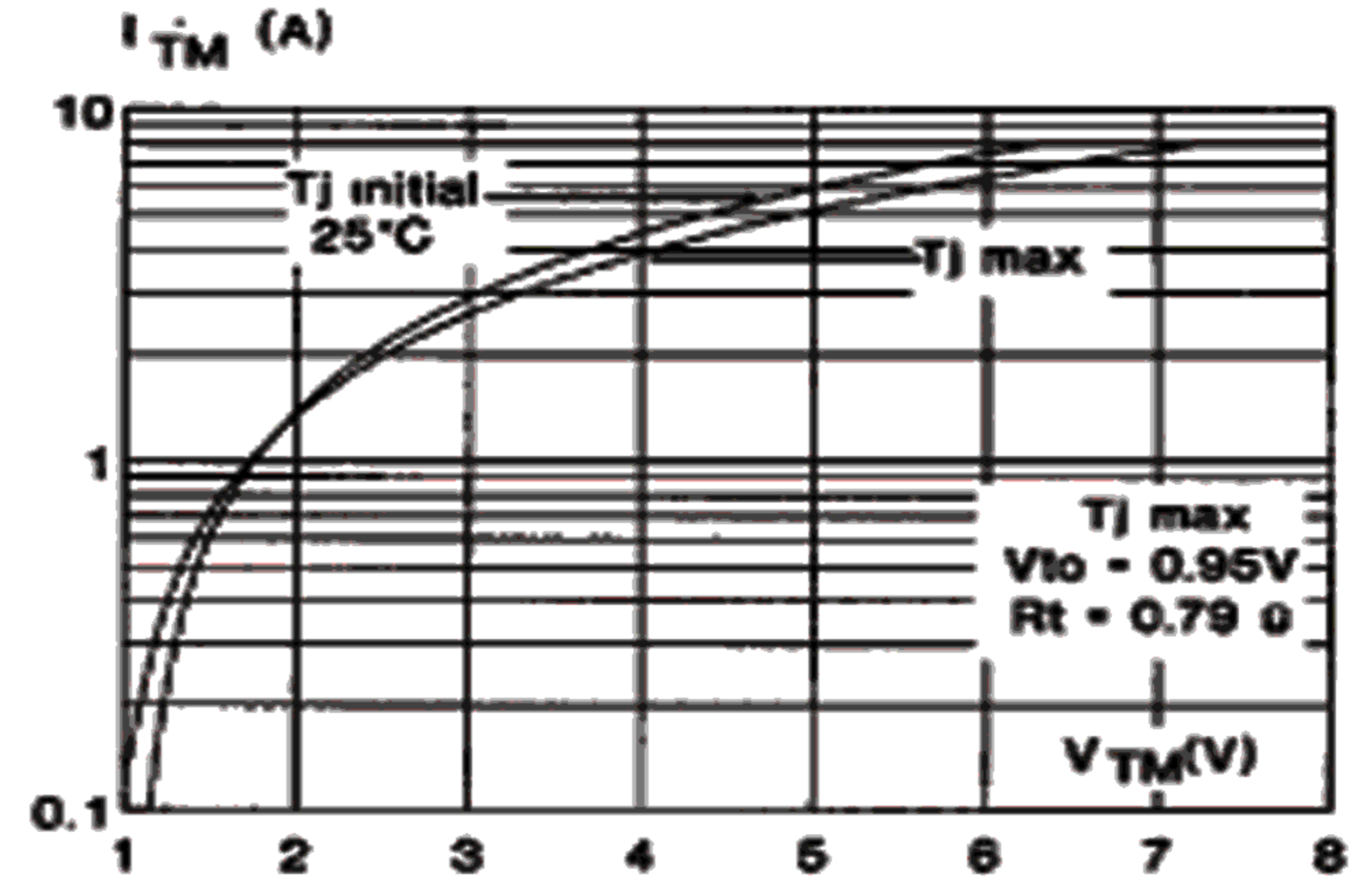
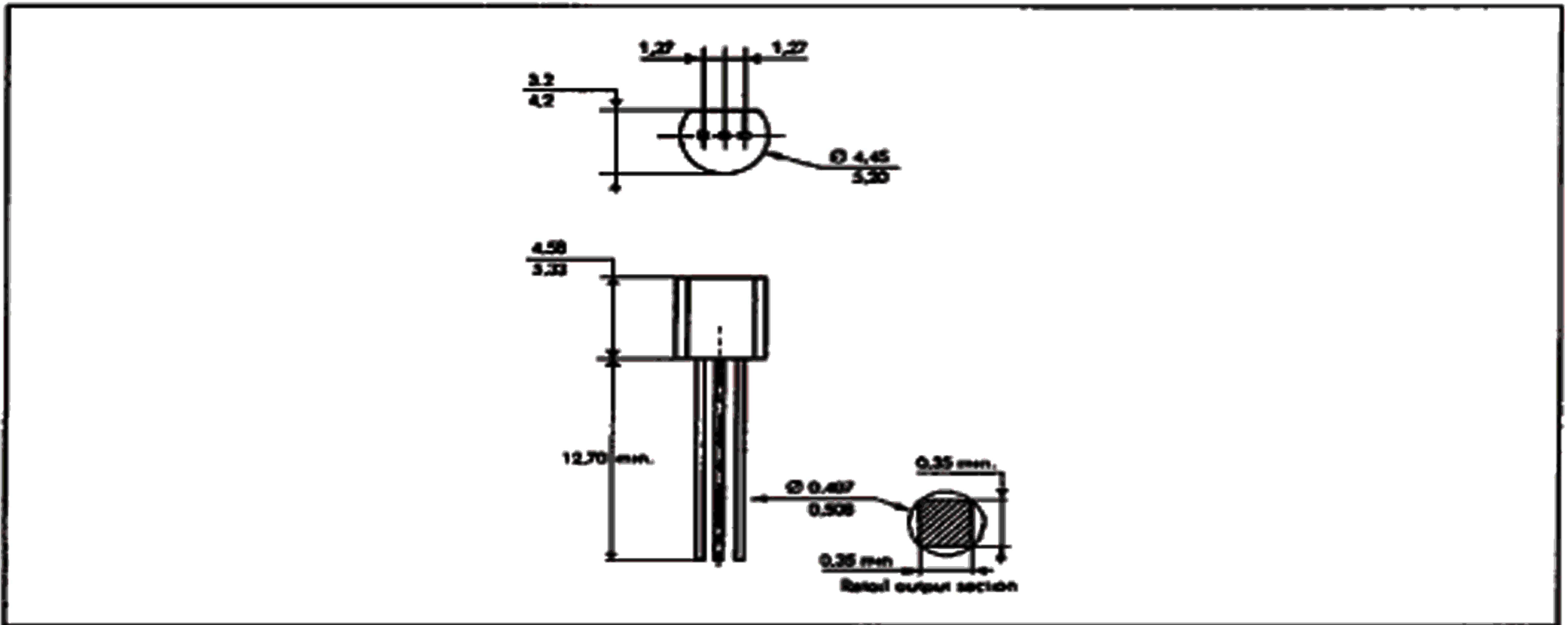


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA (in millimeters)
TO 92 Plastic



Cooling method : by conduction (method C)
 Marking : type number
 Weight : 0.2 g
 Polarity : N A
 Stud torque : N A