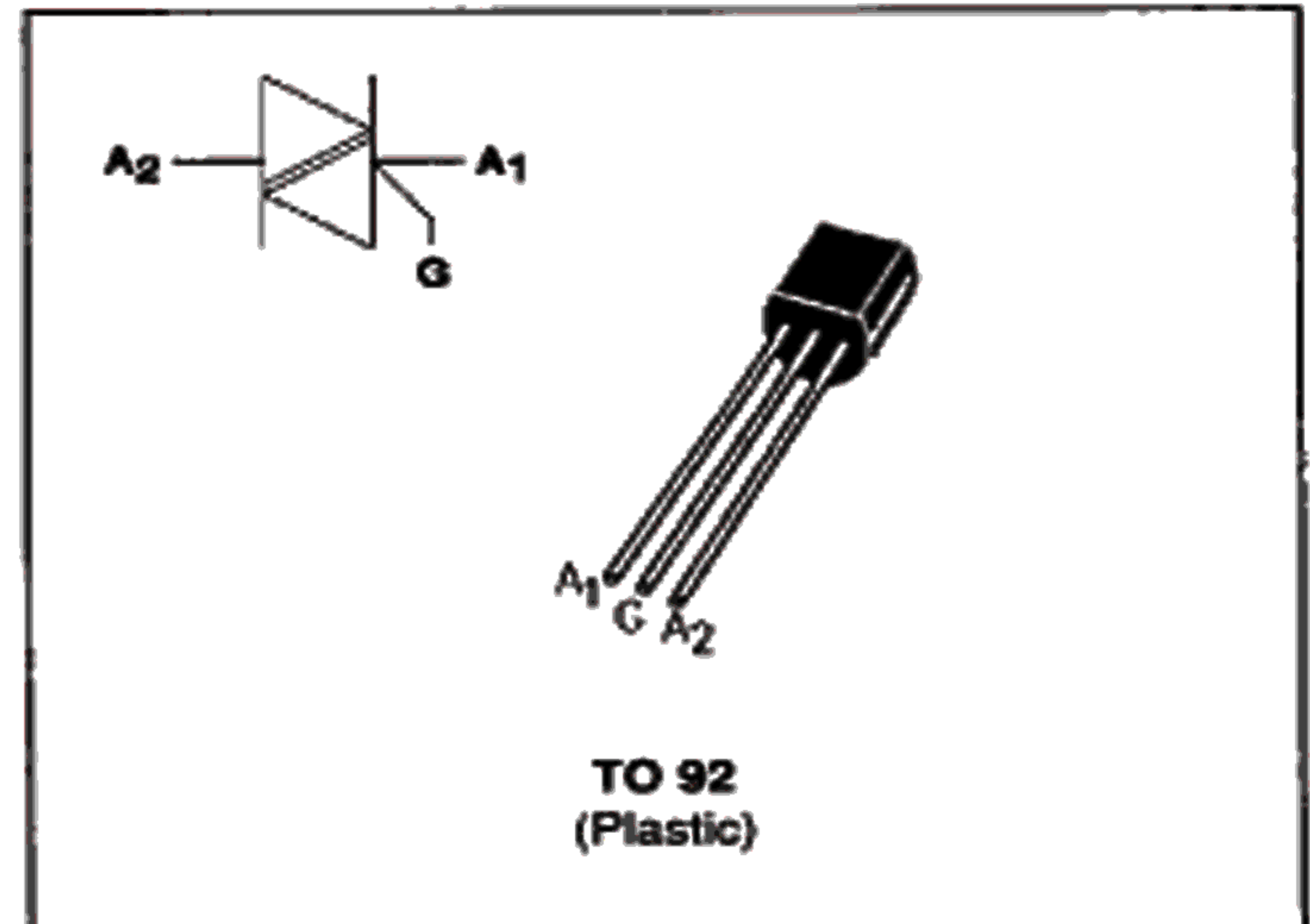


**SENSITIVE GATE TRIACS**
**FEATURES**

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


**ABSOLUTE RATINGS (limiting values)**

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current ( $360^\circ$ conduction angle )	$T_I = 55^\circ\text{C}$	0.8	A
	RMS on-state current on printed circuit ( $360^\circ$ Conduction angle )	$T_a = 30^\circ\text{C}$	0.5	
$I_{TSM}$	Non repetitive surge peak on-state current ( $T_J$ initial = $25^\circ\text{C}$ )	$t_p = 8.3 \text{ ms}$	8.5	A
		$t_p = 10 \text{ ms}$	8	
$i^2t$	$i^2t$ value	$t_p = 10 \text{ ms}$	0.32	$\text{A}^2\text{s}$
$di/dt$	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 $T_J = 125^\circ\text{C}$	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)**

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

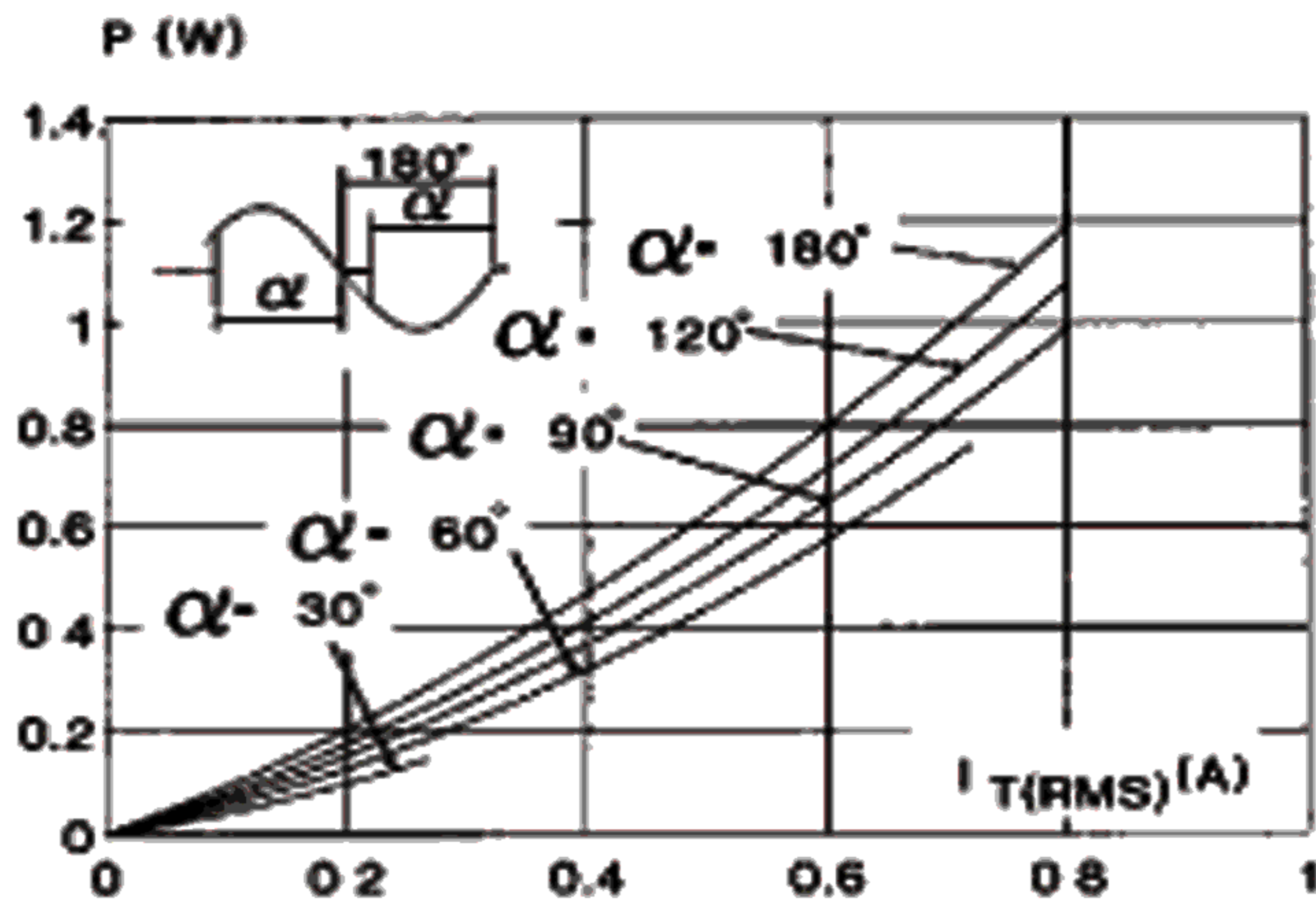
**ELECTRICAL CHARACTERISTICS**

Symbol	Test Conditions	Quadrant	Value	Unit		
I <sub>GT</sub>	V <sub>D</sub> =12V (DC) R <sub>L</sub> =140Ω	T <sub>J</sub> =25°C	I-II-III	MAX	10	mA
			IV		25	
V <sub>GT</sub>	V <sub>D</sub> =12V (DC) R <sub>L</sub> =140Ω	T <sub>J</sub> =25°C	I-II-III-IV	MAX	1.5	V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> R <sub>L</sub> =3.3kΩ	T <sub>J</sub> =125°C	I-II-III-IV	MIN	0.2	V
t <sub>gt</sub>	V <sub>D</sub> =V <sub>DRM</sub> I <sub>G</sub> = 40mA dI <sub>G</sub> /dt = 0.5A/μs	T <sub>J</sub> =25°C	I-II-III-IV	TYP	2	μs
I <sub>L</sub>	I <sub>G</sub> =1.2 I <sub>GT</sub>	T <sub>J</sub> =25°C	I-II-III-IV	MAX	25	mA
I <sub>H</sub> *	I <sub>T</sub> = 50mA gate open	T <sub>J</sub> =25°C		MAX	25	mA
V <sub>TM</sub> *	I <sub>TM</sub> = 1.2A t <sub>p</sub> = 380μs	T <sub>J</sub> =25°C		MAX	1.9	V
I <sub>DRM</sub> I <sub>RRM</sub>	V <sub>DRM</sub> Rated V <sub>RRM</sub> Rated	T <sub>J</sub> =25°C		MAX	0.01	mA
		T <sub>J</sub> =125°C		MAX	0.75	
dV/dt *	Linear slope up to V <sub>D</sub> =67%V <sub>DRM</sub> gate open	T <sub>J</sub> =125°C		MIN	70	V/μs
(dI/dt) <sub>c</sub> *	(dV/dt) <sub>c</sub> = 2V/μs	T <sub>J</sub> =125°C		MIN	0.75	A/ms

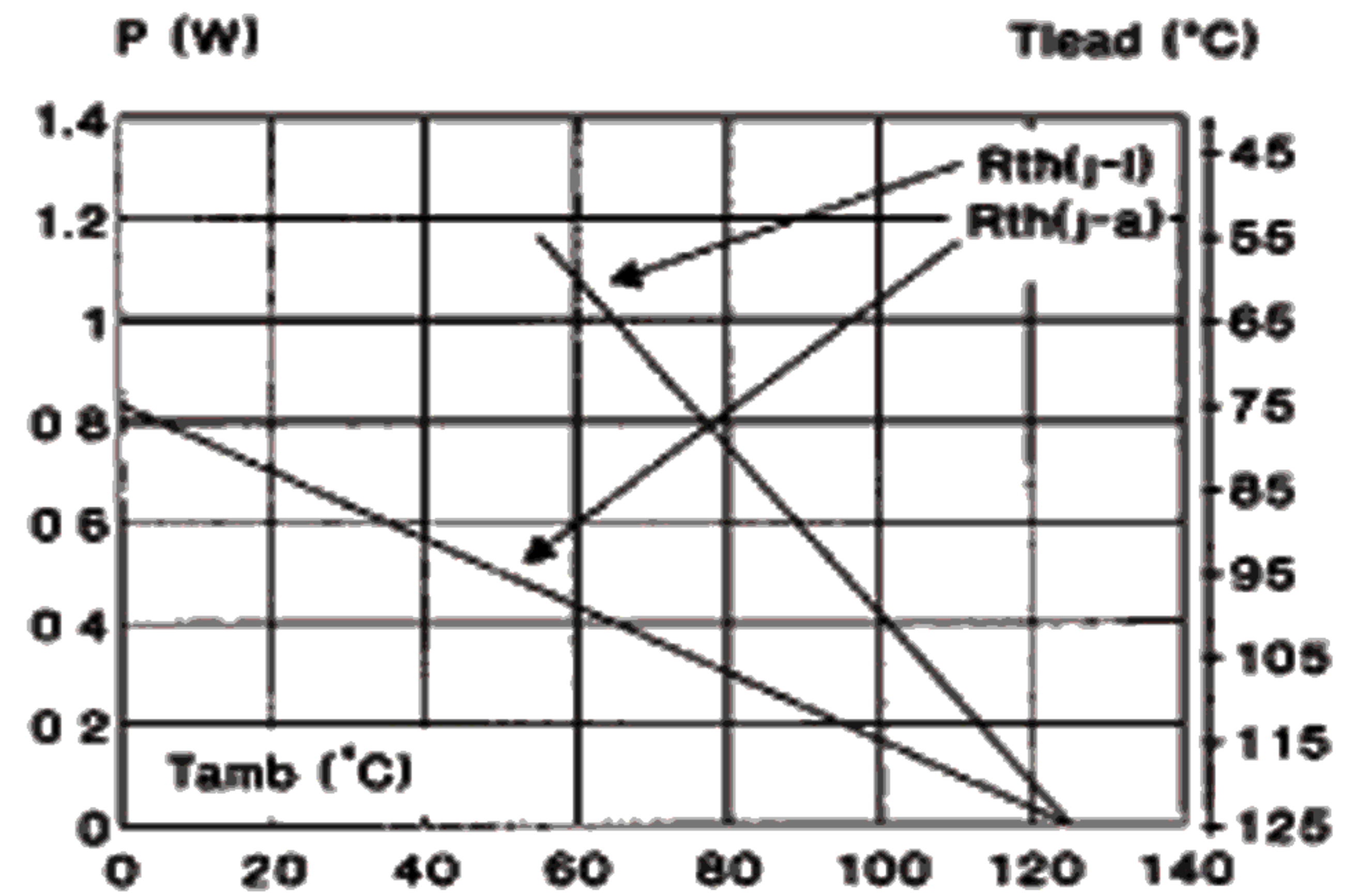
\* For either polarity of electrode A2 voltage with reference to electrode A1.



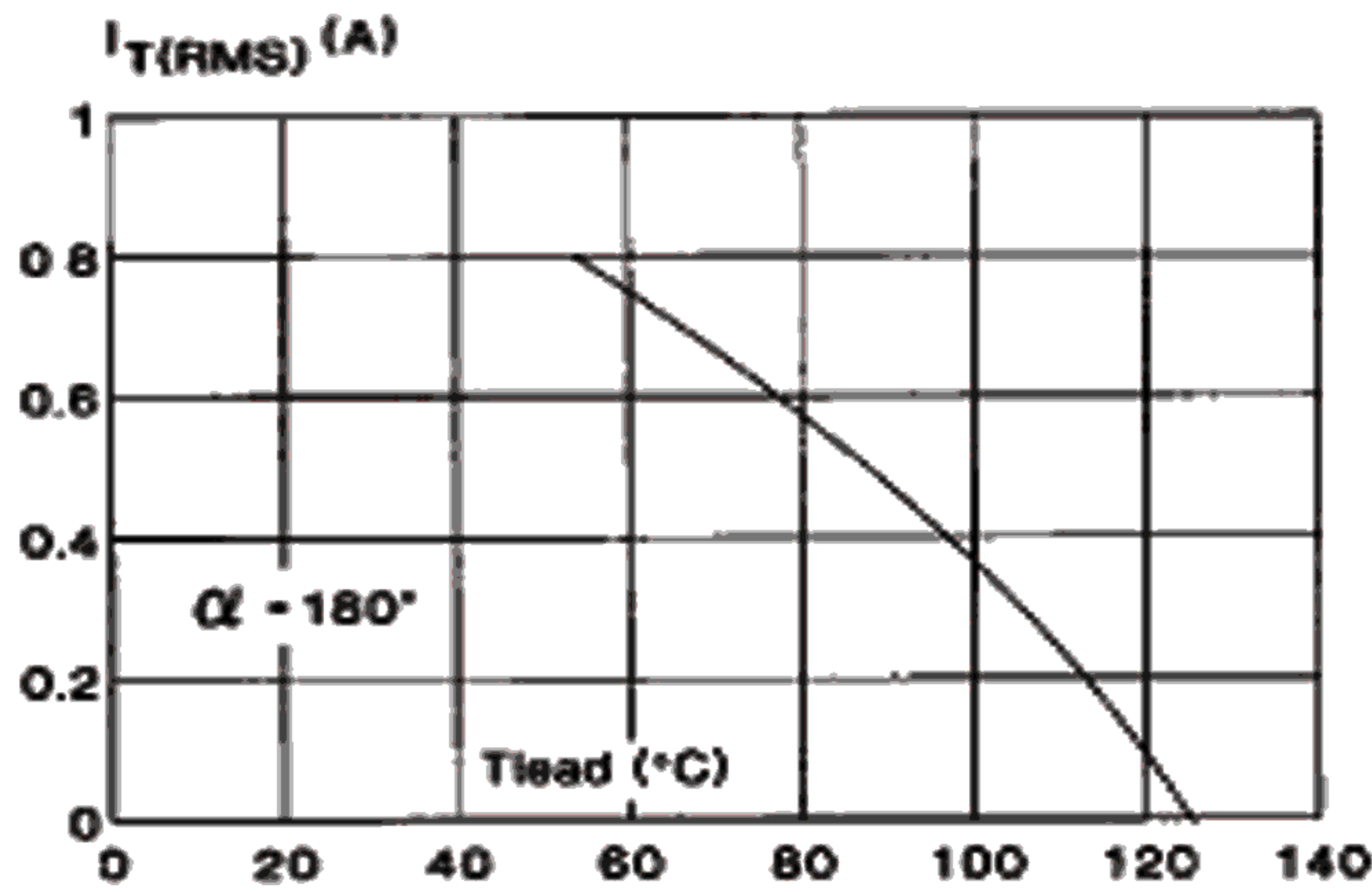
**Fig.1** : Maximum RMS power dissipation versus RMS on-state current (F=50Hz).  
(Curves are cut off by (di/dt)c limitation)



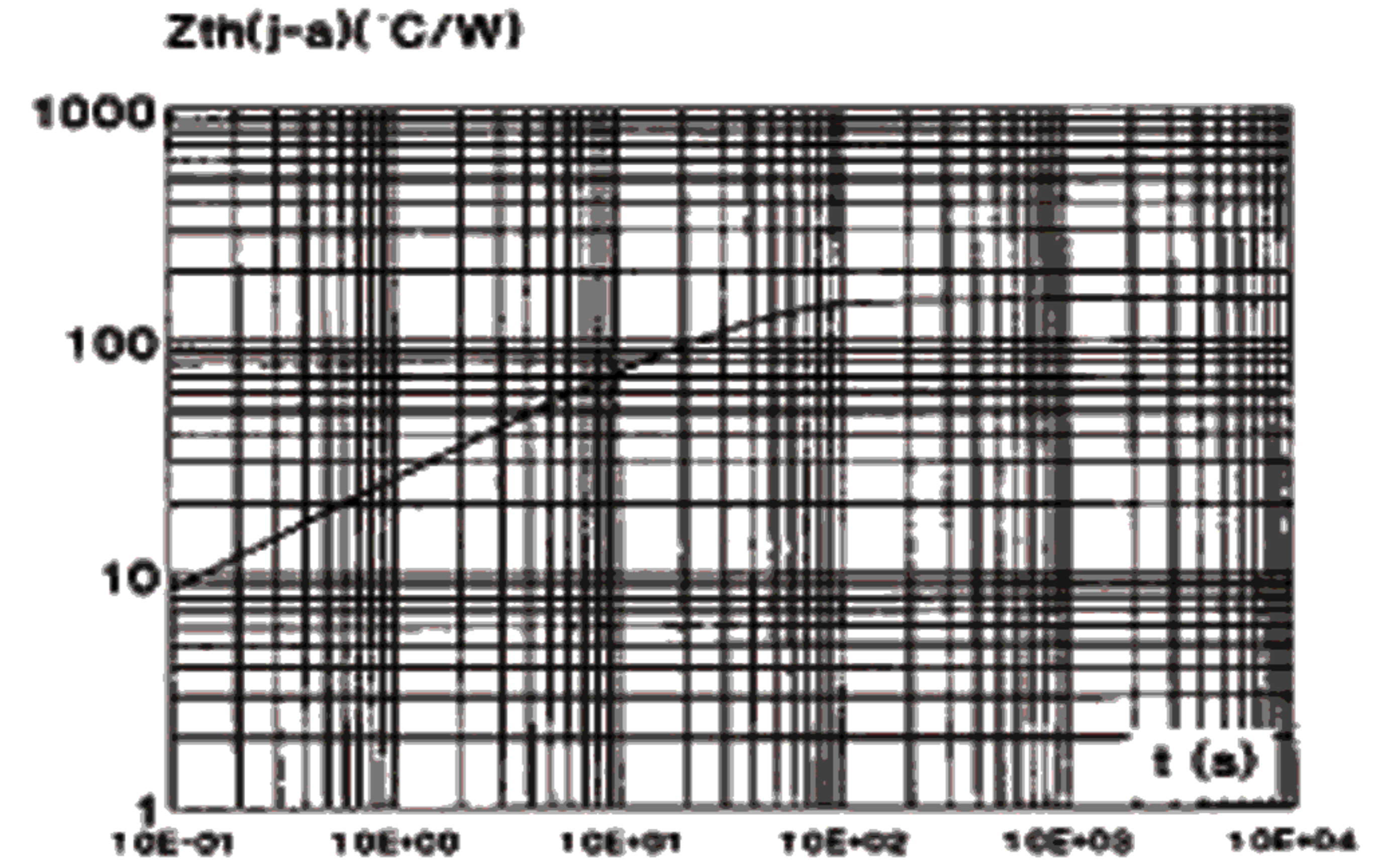
**Fig.2** : Correlation between maximum RMS power dissipation and maximum allowable temperatures (Tamb and Tlead).



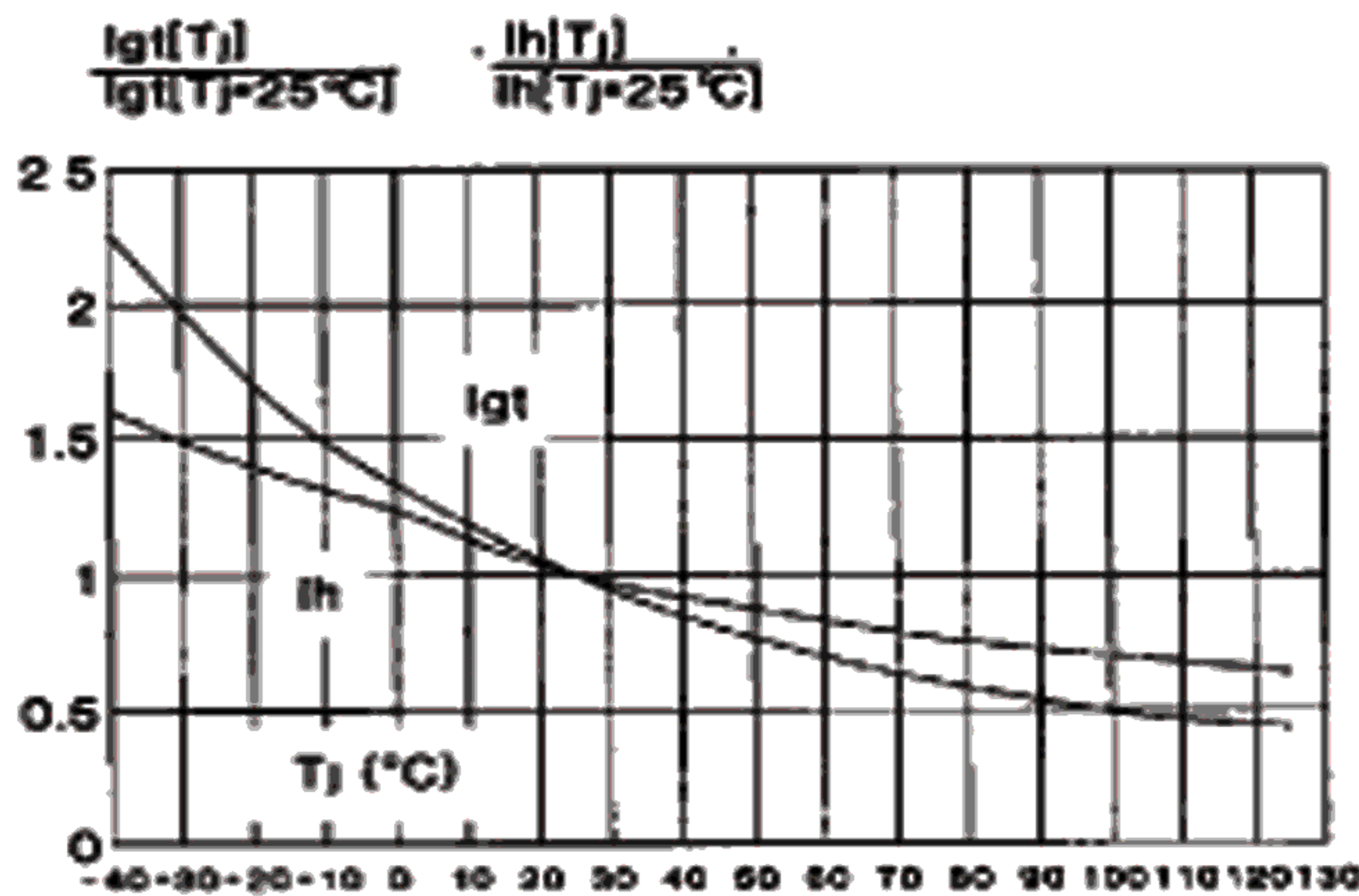
**Fig.3** : RMS on-state current versus lead temperature.



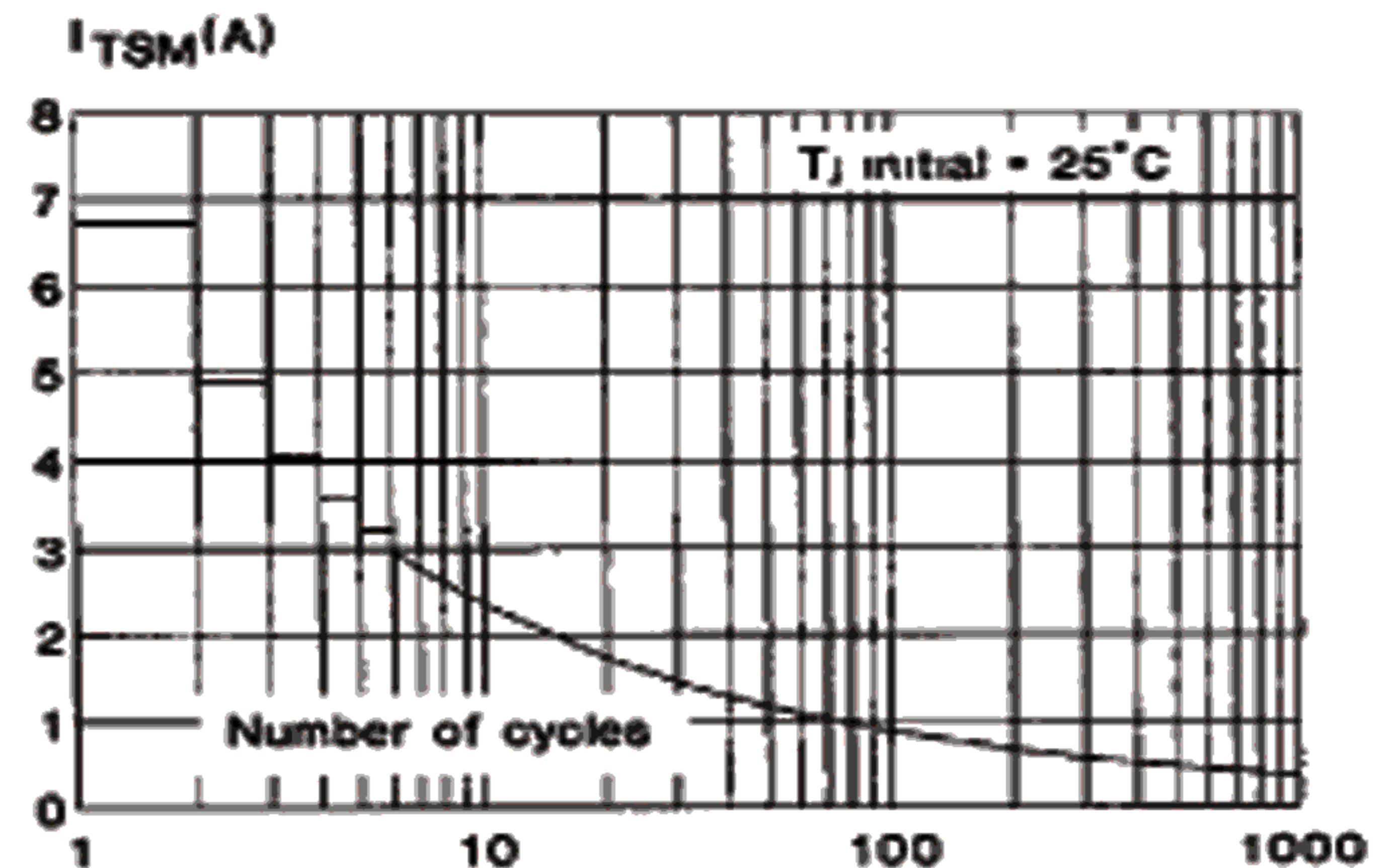
**Fig.4** : Thermal transient impedance junction to ambient versus pulse duration.



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

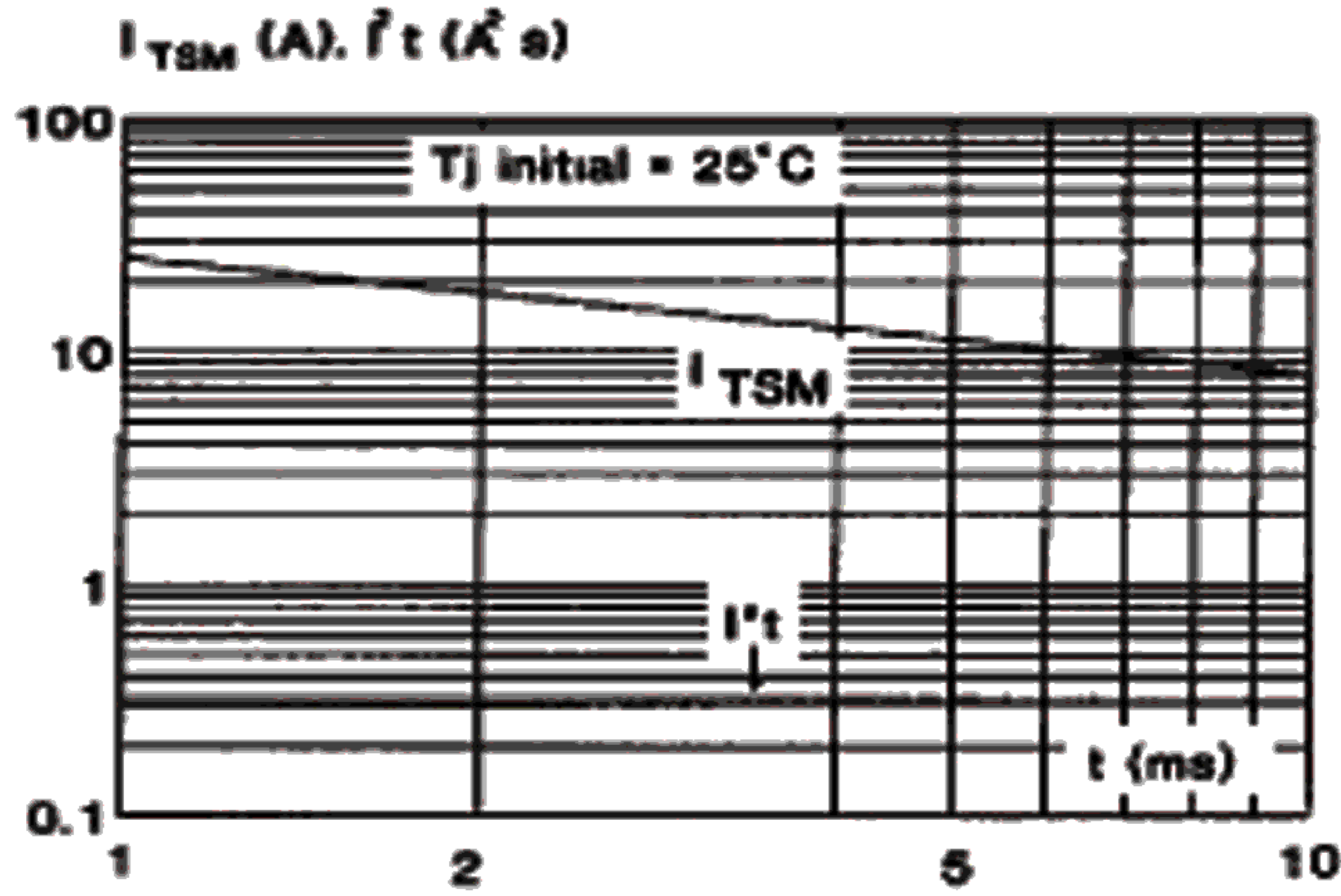


**Fig.6** : Non Repetitive surge peak on-state current versus number of cycles.

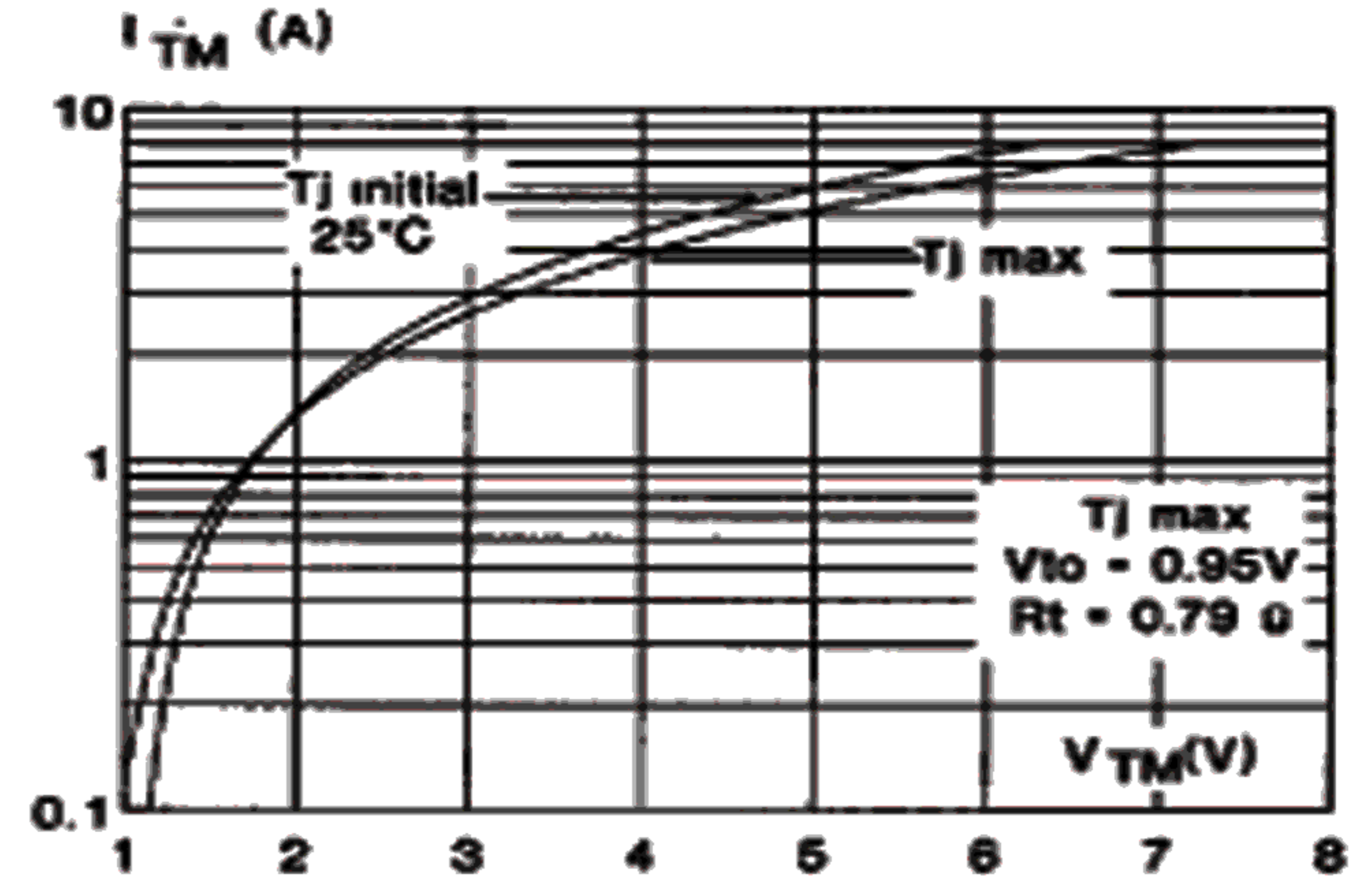




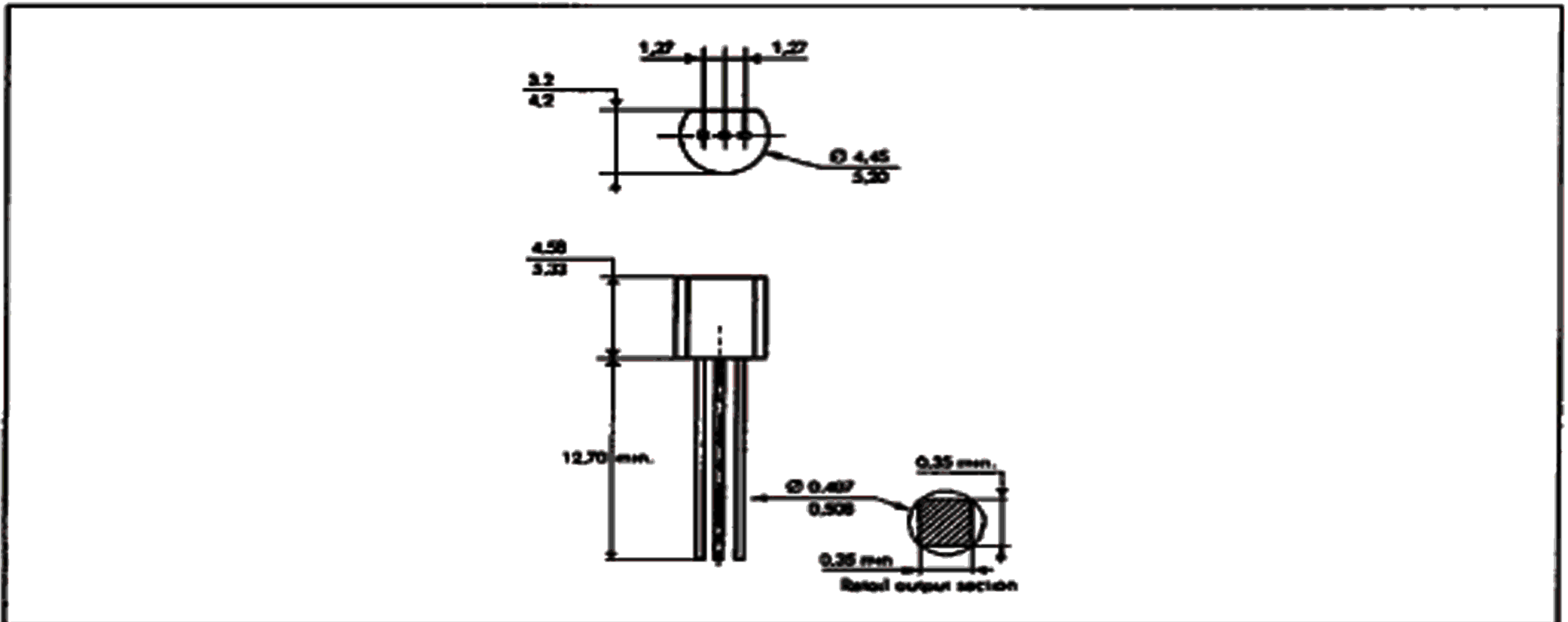
**Fig.7 :** Non repetitive surge peak on-state current for a sinusoidal pulse with width :  $t \leq 10\text{ms}$ , and corresponding value of  $I^2t$ .



**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