

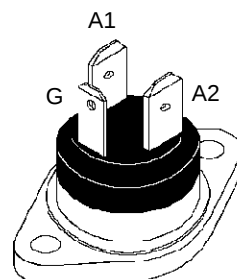
STANDARD TRIACS

FEATURES

- $I_{T(RMS)} = 25A$
- $V_{DRM} = 400V$ to $800V$
- INSULATING VOLTAGE $2500V_{(RMS)}$
(UL RECOGNIZED : E81734)

DESCRIPTION

The T25xxxKS series triacs uses a high performance MESA GLASS technology. These parts are intended for general purpose switching and phase control applications.



RD107
(Plastic)

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (360° conduction angle)	$T_c = 85^\circ C$	25	A
I_{TSM}	Non repetitive surge peak on-state current (T_j initial = $25^\circ C$)	$t_p = 8.3$ ms	260	A
		$t_p = 10$ ms	250	
I^2_t	I^2_t Value for fusing	$t_p = 10$ ms	312	A^2s
di/dt	Critical rate of rise of on-state current $I_G = 500$ mA $di_G/dt = 1$ A/ μs .	Repetitive $F = 50$ Hz	10	A/ μs
		Non Repetitive	50	
T_{stg} T_j	Storage and operating junction temperature range		- 40, + 150 - 40, + 125	$^\circ C$
TI	Maximum lead temperature for soldering during 10s		260	$^\circ C$

Symbol	Parameter	Voltage				Unit
		D	M	S	N	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage $T_j = 125^\circ C$	400	600	700	800	V

T25xxxKS**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
Rth(j-c)	Junction to case for D.C	1.7	°C/W
Rth(j-c)	Junction to case for A.C 360° conduction angle (F=50Hz)	1.3	°C/W

GATE CHARACTERISTICS (maximum values)

P_G (AV) = 1 W P_{GM} = 10 W (tp = 20 μ s) I_{GM} = 4 A (tp = 20 μ s)

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Sensitivity		Unit
					12	13	
I_{GT}	$V_D=12V$ (DC) $R_L=33\Omega$	$T_j=25^\circ C$	I-II-III	MAX	50	50	mA
			IV	MAX	50	75	
V_{GT}	$V_D=12V$ (DC) $R_L=33\Omega$	$T_j=25^\circ C$	I-II-III-IV	MAX	1.5		V
V_{GD}	$V_D=V_{DRM}$ $R_L=3.3k\Omega$	$T_j=125^\circ C$	I-II-III-IV	MIN	0.2		V
tgt	$V_D=V_{DRM}$ $I_G=500mA$ $I_T=35A$ $dI_G/dt=3A/\mu s$	$T_j=25^\circ C$	I-II-III-IV	TYP	2		μs
I_H^*	$I_T=250mA$ Gate open	$T_j=25^\circ C$		MAX	50	75	mA
I_L	$I_G=1.2 I_{GT}$	$T_j=25^\circ C$	I-III-IV	TYP	50	75	
			II	TYP	100	150	
V_{TM}^*	$I_{TM}=35A$ tp= 380 μs	$T_j=25^\circ C$		MAX	1.5		V
I_{DRM} I_{RRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ C$		MAX	10		μA
		$T_j=125^\circ C$		MAX	3		mA
dV/dt *	$V_D=67\%V_{DRM}$ Gate open	$T_j=125^\circ C$		MIN	500		V/ μs
(dV/dt)c *	(dI/dt)c = 11 A/ms	$T_j=125^\circ C$		MIN	5		V/ μs

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

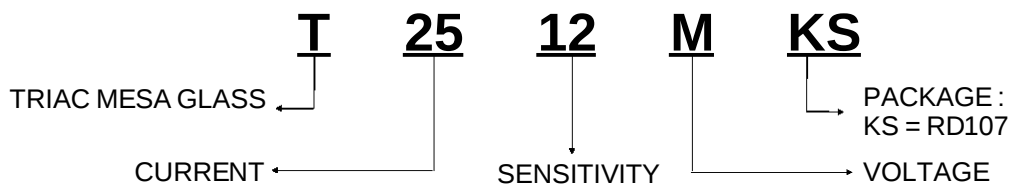
ORDERING INFORMATION

Fig.1 : Maximum RMS power dissipation versus RMS on-state current.

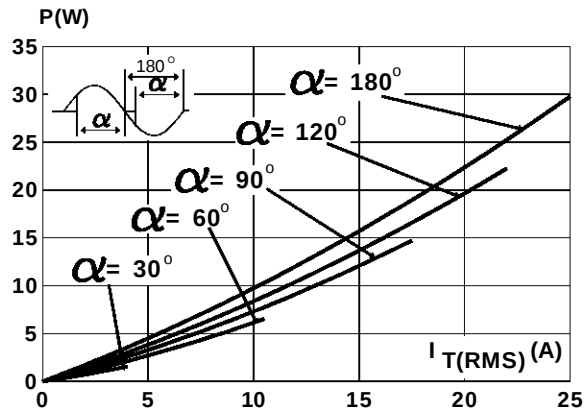


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperature (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

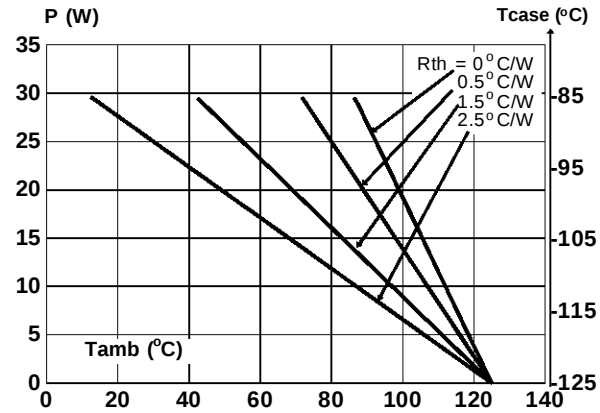


Fig.3 : RMS on-state current versus case temperature.

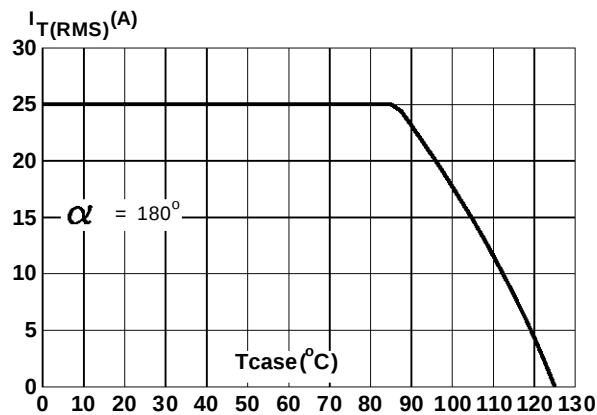


Fig.4 : Relative variation of thermal impedance junction to case versus pulse duration.

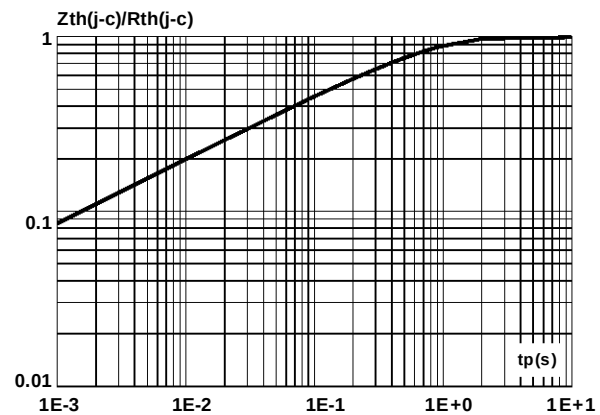


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

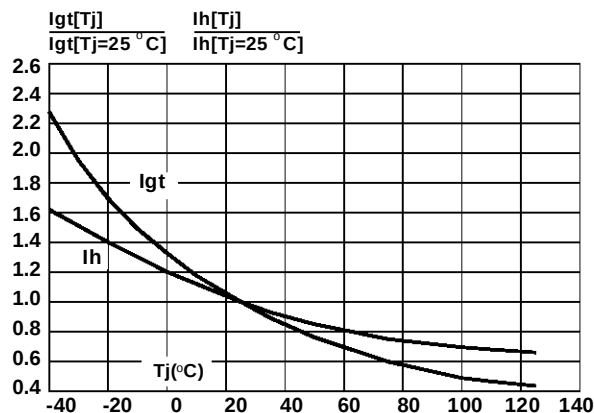


Fig.6 : Non repetitive surge peak on-state current versus number of cycles.

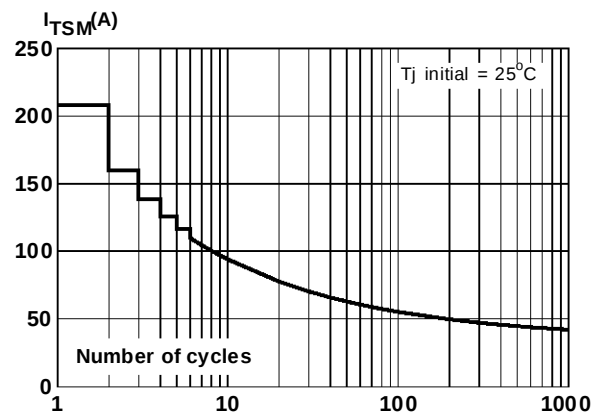


Fig.7 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t_p \leq 10\text{ms}$, and corresponding value of I^2t .

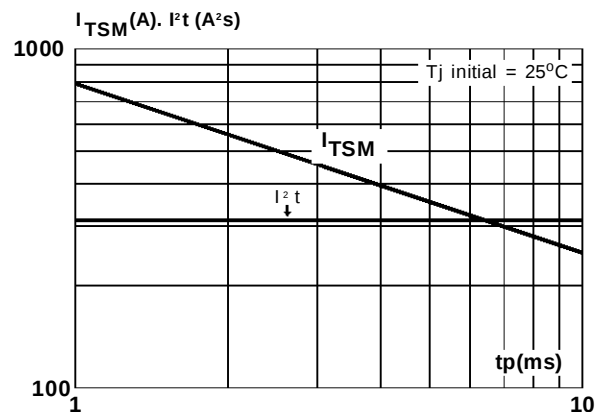
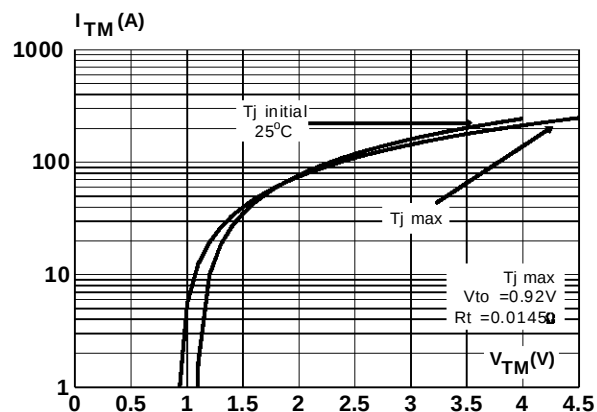
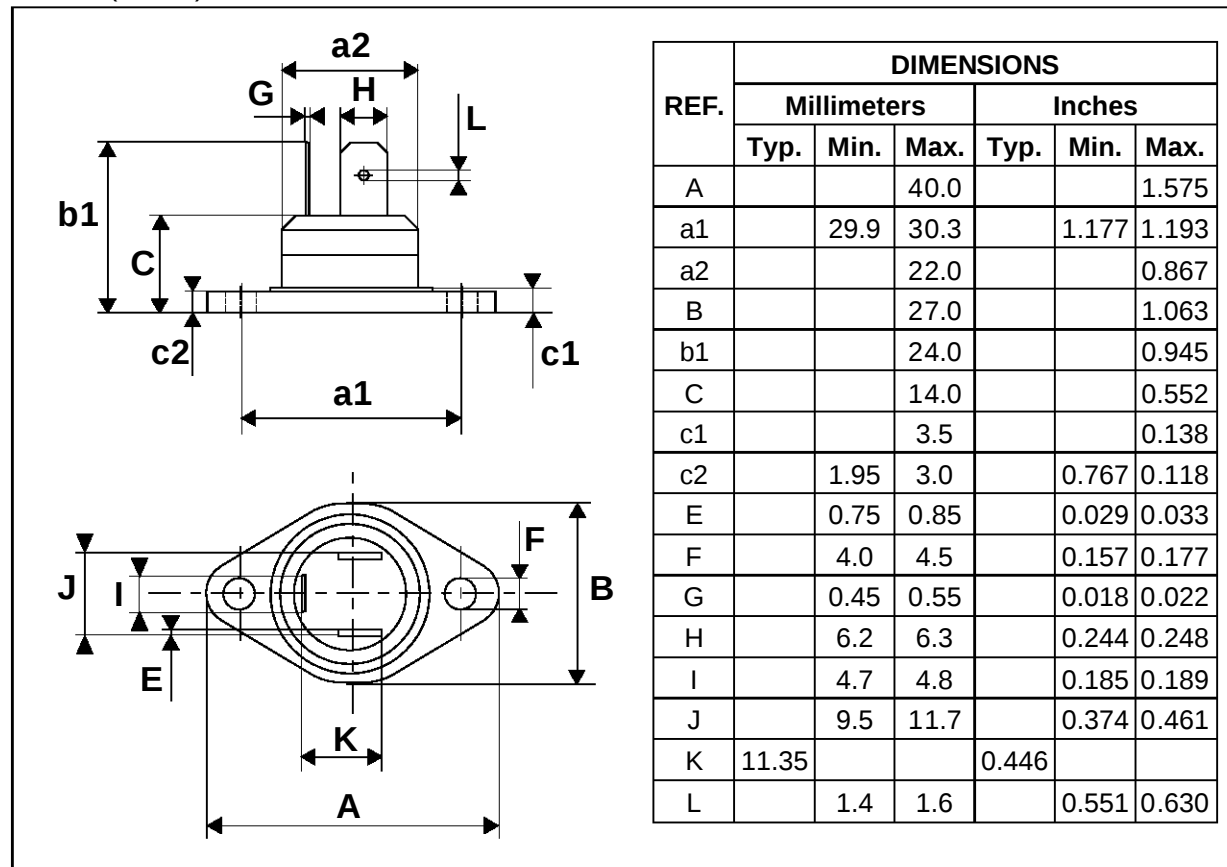


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA
 RD107 (Plastic)


Marking : type number
 Weight : 20 g

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