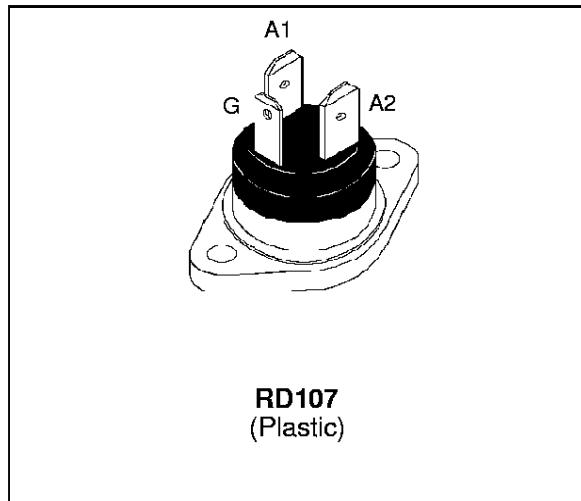


STANDARD TRIACS

FEATURES

- $I_T(\text{RMS}) = 25\text{A}$
- $V_{DRM} = 400\text{V to } 800\text{V}$
- INSULATING VOLTAGE $2500\text{V}_{(\text{RMS})}$
(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.

ABSOLUTE RATINGS (limiting values)

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

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

T25xxxKS

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction to case for D.C	1.7	°C/W
R _{th(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 (t_p = 20 μs) I_{GM} = 4 A (t_p = 20 μs)

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions	Quadrant		Sensitivity		Unit	
				12	13		
I _{GT}	V _D =12V (DC) R _L =33Ω	T _j = 25°C	I-II-III	MAX	50	50	mA
			IV	MAX	50	75	
V _{GT}	V _D =12V (DC) R _L =33Ω	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 = 500mA I _T = 35A dI _G /dt = 3A/μs	T _j = 25°C	I-II-III-IV	TYP	2		μs
I _H *	I _T = 250 mA Gate open	T _j = 25°C		MAX	50	75	mA
I _L	I _G = 1.2 I _{GT}	T _j = 25°C	I-III-IV	TYP	50	75	mA
			II	TYP	100	150	
V _{TM} *	I _{TM} = 35A t _p = 380μs	T _j = 25°C		MAX	1.5		V
I _{DRM} I _{RRM}	V _D = V _{DRM} V _R = V _{RRM}	T _j = 25°C		MAX	10		μA
		T _j = 125°C		MAX	3		mA
dV/dt *	V _D =67%V _{DRM} Gate open	T _j = 125°C		MIN	500		V/μs
(dV/dt)c *	(dI/dt)c = 11 A/ms	T _j = 125°C		MIN	5		V/μs

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

ORDERING INFORMATION

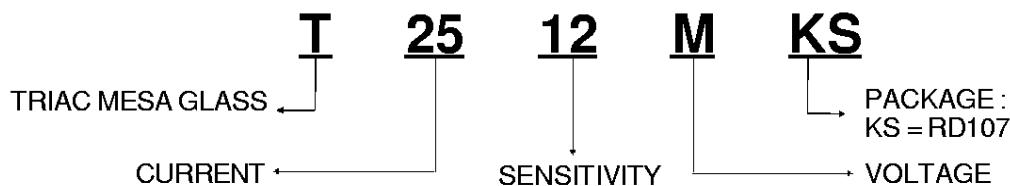


Fig.1 : Maximum RMS power dissipation versus RMS on-state current.

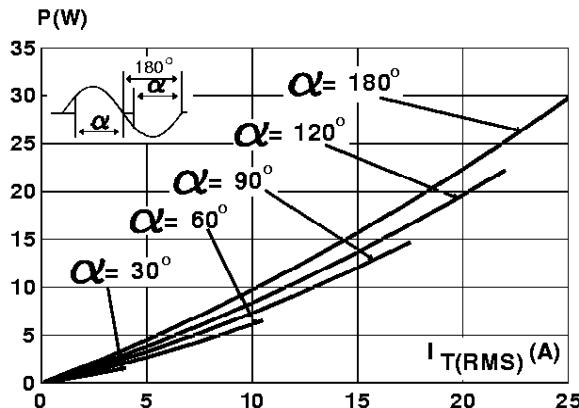


Fig.3 : RMS on-state current versus case temperature.

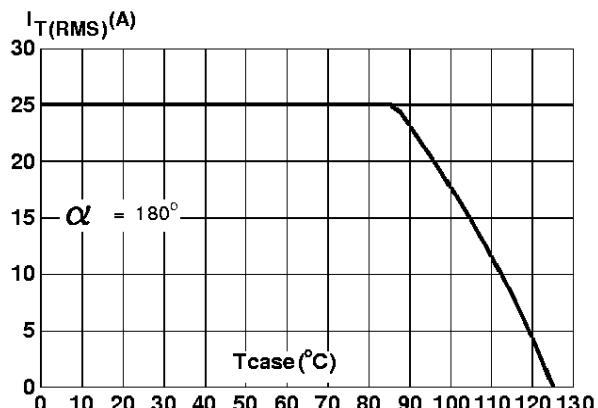


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

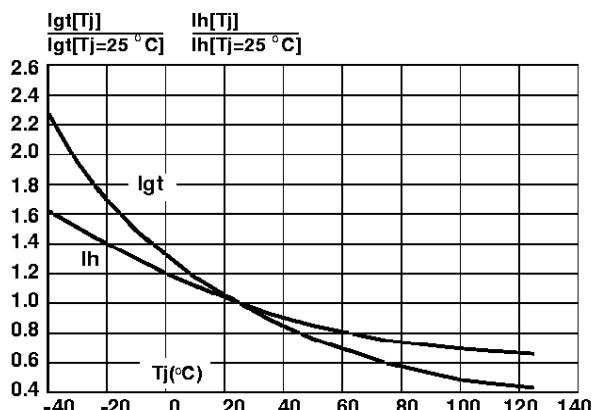


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperature (Tamb and Tcase) for different thermal resistances heatsink + contact.

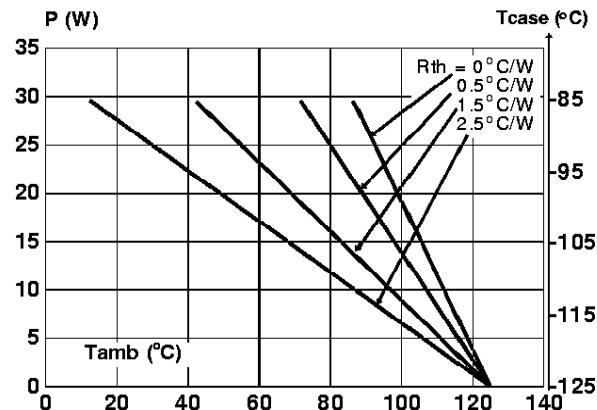


Fig.4 : Relative variation of thermal impedance junction to case versus pulse duration.

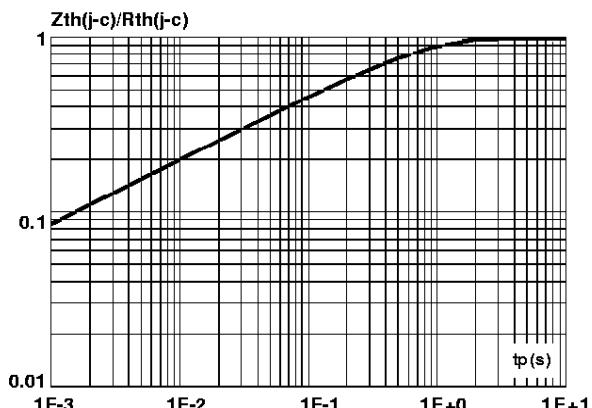
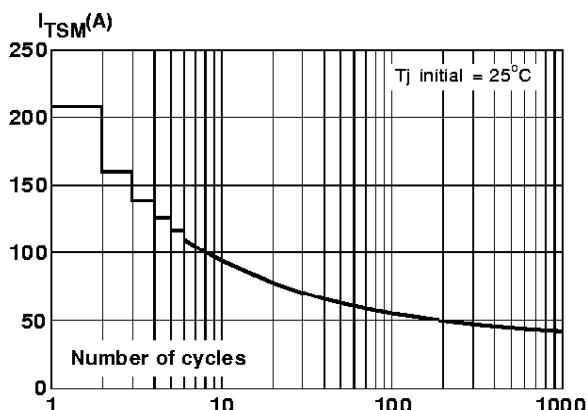


Fig.6 : Non repetitive surge peak on-state current versus number of cycles.



T25xxxKS

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 $I^2 t$.

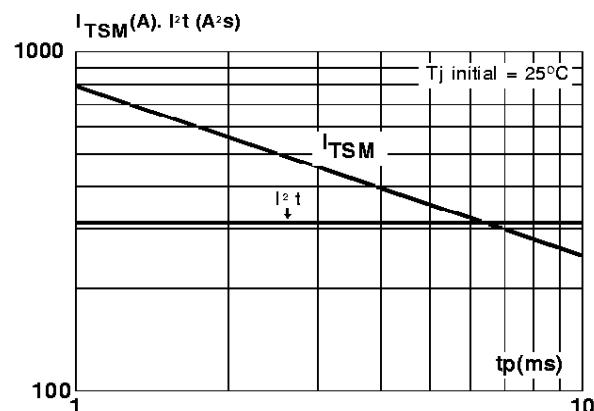
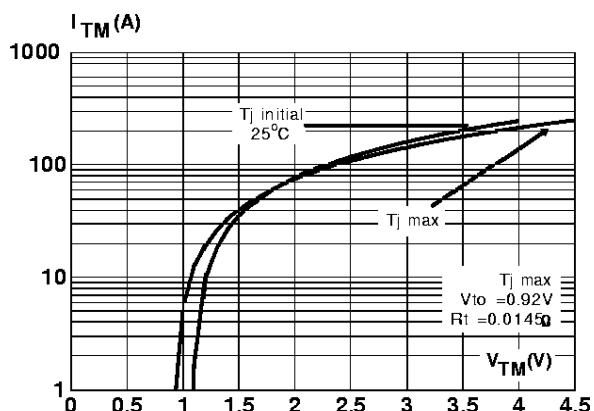
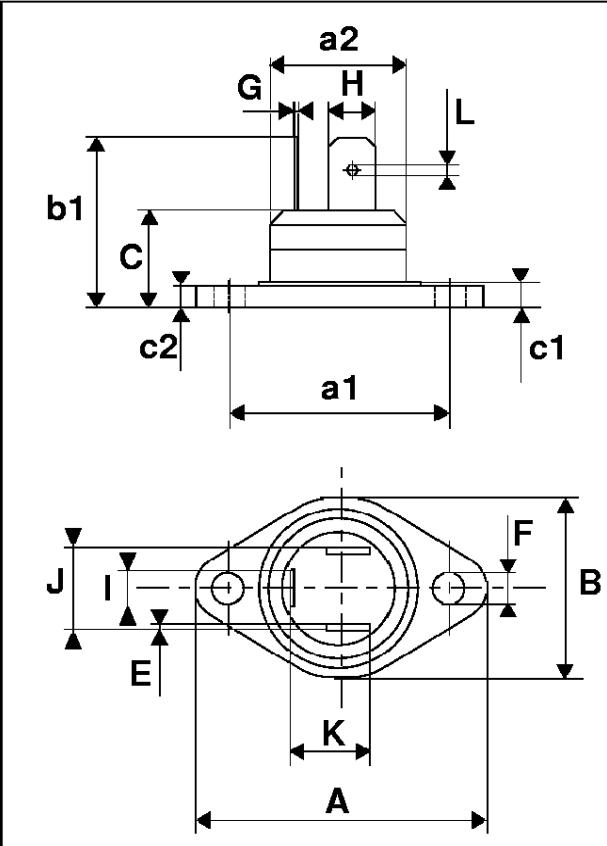


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA
RD107 (Plastic)



REF.	DIMENSIONS					
	Millimeters			Inches		
	Typ.	Min.	Max.	Typ.	Min.	Max.
A			40.0			1.575
a1		29.9	30.3		1.177	1.193
a2			22.0			0.867
B			27.0			1.063
b1			24.0			0.945
C			14.0			0.552
c1			3.5			0.138
c2	1.95	3.0		0.767	0.118	
E	0.75	0.85		0.029	0.033	
F	4.0	4.5		0.157	0.177	
G	0.45	0.55		0.018	0.022	
H	6.2	6.3		0.244	0.248	
I	4.7	4.8		0.185	0.189	
J	9.5	11.7		0.374	0.461	
K	11.35			0.446		
L		1.4	1.6		0.551	0.630

Marking : type number

Weight : 20 g

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