

T25xxxKS

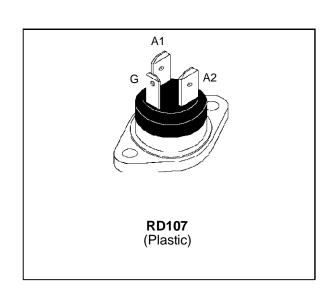
STANDARD TRIACS

FEATURES

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



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(RMS)}	RMS on-state current (360° conduction angle)	Tc= 85 °C	25	А
Non repetitive surge peak on-state cui		tp = 8.3 ms	260	Α
	(T _j initial = 25°C)		250	
I ² t	I ² t Value for fusing	tp = 10 ms	312	A ² s
dl/dt	Critical rate of rise of on-state current Reper Ig = 500 mA dig/dt = 1 A/µs .		10	A/μs
	F		50	
T _{stg} T _j	Storage and operating junction temperature	- 40, + 150 - 40, + 125	°C	
TI	Maximum lead temperature for soldering dur	260	°C	

Symbol	Parameter		Unit			
		D	М	S	Ν	
VDRM VRRM	Repetitive peak off-state voltage $T_j = 125^{\circ}C$	400	600	700	800	٧

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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)

 $P_{G~(AV)}\!\!=1~W~~P_{GM}=10~W~(tp=20~\mu s)~~I_{GM}=4~A~(tp=20~\mu s)$

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Sensitivity		Unit
Symbol	rest Conditions	5	Quadrani		12	13	
I _{GT}	$V_D=12V$ (DC) $R_L=33\Omega$	Tj= 25°C	1-11-111	MAX	50	50	mA
			IV	MAX	50	75	
V_{GT}	$V_D=12V$ (DC) $R_L=33\Omega$	Tj= 25°C	I-II-III-IV	MAX	1.5		V
V_{GD}	$V_D=V_{DRM}$ $R_L=3.3k\Omega$	Tj= 125°C	I-II-III-IV	MIN	0.2		V
tgt	$\begin{array}{ll} V_D {=} V_{DRM} & I_G = 500 mA \\ I_T = 35A \\ dI_G {/} dt = 3A {/} \mu s \end{array}$	Tj= 25°C	I-II-III-IV	TYP	2		μs
I _H *	I _T = 250 mA Gate open	Tj= 25°C		MAX	50	75	mA
ΙL	I _G = 1.2 I _{GT}	Tj= 25°C	I-III-IV	TYP	50	75	mA
			Ш	TYP	100	150	
V _{TM} *	I _{TM} = 35A tp= 380μs	Tj= 25°C		MAX	1.5		V
I _{DRM}				MAX	10		μΑ
I _{RRM}	V _R = V _{RRM}	Tj= 125°C		MAX	3		mA
dV/dt*	VD=67%V _{DRM} Gate open	Tj= 125°C		MIN	500		V/μs
(dV/dt)c*	(dl/dt)c = 11 A/ms	Tj= 125°C		MIN	5		V/µs

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

ORDERING INFORMATION

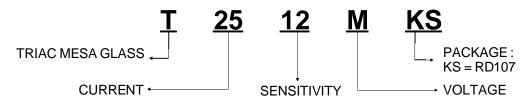


Fig.1: Maximum RMS power dissipation versus RMS on-state current.

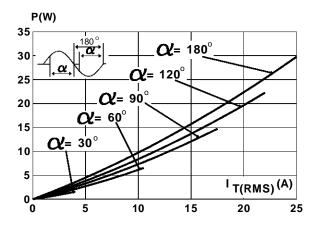


Fig.3: RMS on-state current versus case temperature.

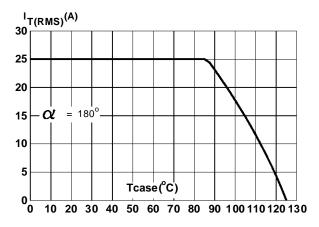


Fig.5: Relative variation of gate trigger current and holding current versus junction temperature.

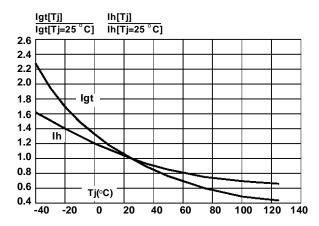


Fig.2: Correlation between maximum RMS power dissipation and maximum allowable temperature (Tamb and Tcase) for different thermal resistances heatsink + contact.

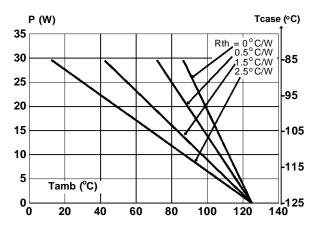


Fig.4: Relative variation of thermal impedance junction to case versus pulse duration.

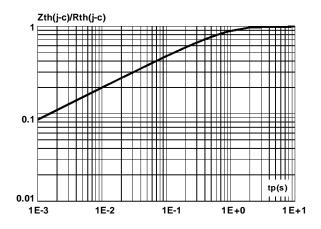
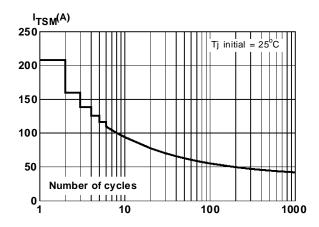


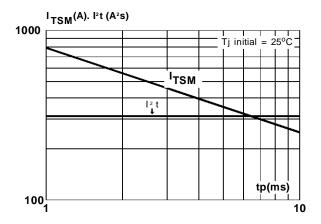
Fig.6: Non repetitive surge peak on-state current versus number of cycles.

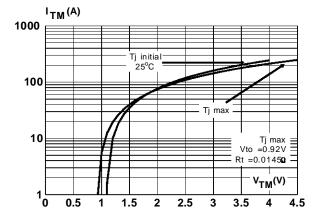


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Fig.7: Non repetitive surge peak on-state current for a sinusoidal pulse with width : $tp \le 10ms$, and corresponding value of I^2t .

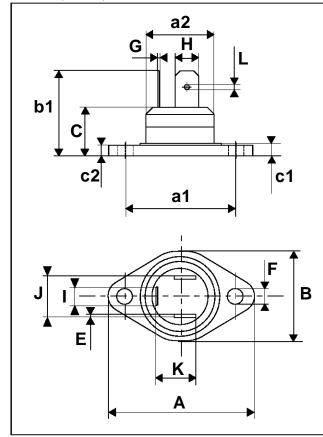
Fig.8: On-state characteristics (maximum values).





PACKAGE MECHANICAL DATA

RD107 (Plastic)



	DIMENSIONS						
REF.	Millimeters			Inches			
	Тур.	Min.	Max.	Тур.	Min.	Max.	
Α			40.0			1.575	
a1		29.9	30.3		1.177	1.193	
a2			22.0			0.867	
В			27.0			1.063	
b1			24.0			0.945	
С			14.0			0.552	
c1			3.5			0.138	
c2		1.95	3.0		0.767	0.118	
Е		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	
Н		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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