

T25xxxKS

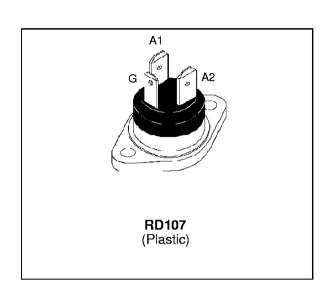
STANDARD TRIACS

FEATURES

- I_{T(RMS)} = 25A
- V_{DRM} = 400V to 800V
- 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	Α
ITSM	I_{TSM} Non repetitive surge peak on-state current (T _j initial = 25°C)		260	Α
			250	
I ² t	I ² t Value for fusing	tp = 10 ms	312	A ² s
dI/dt	Critical rate of rise of on-state current $I_G = 500 \text{ mA}$ $I_G = 1 \text{ A/}\mu\text{s}$.		10	A/μs
		Non Repetitive	50	
T _{stg} T _j	Storage and operating junction temperature	- 40, + 150 - 40, + 125	°C	
TI	Maximum lead temperature for soldering duri	260	°C	

Symbol	Parameter	Voltage				Unit
		D	М	S	Ν	
V _{DRM} V _{RRM}	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
Syllibol			Quadrant		12	13	
I _{GT}	$V_D=12V$ (DC) $R_L=33\Omega$	Tj= 25°C	1-11-111	MAX	50	50	m A
			IV	MAX	50	75	
V _{GT}	V _D =12V (DC) R _L =33Ω	Tj= 25°C	I-II-III-IV	MAX	1.5		٧
V _{GD}	V _D =V _{DRM} R _L =3.3kΩ	Tj= 125°C	I-II-III-IV	MIN	0.2		V
tgt	$V_D=V_{DRM}$ $I_G=500$ mA $I_T=35$ A $dI_G/dt=3$ A/ μ s	Tj= 25°C	I-II-III-IV	TYP	2		μѕ
IH *	l⊤= 250 mA Gate open	Tj= 25°C		MAX	50	75	mA
ال	I_{G} = 1.2 I_{GT}	Tj= 25℃	I-III-IV	TYP	50	75	mA
			II	TYP	100	150	
V _{TM} *	I _{TM} = 35A tp= 380µs	Tj= 25°C		MAX	1.5		V
IDRM	VD = VDRM	Tj= 25°C		MAX	10		μА
I _{RRM}	$V_R = V_{RRM}$	Tj= 125°C		MAX	Ç	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

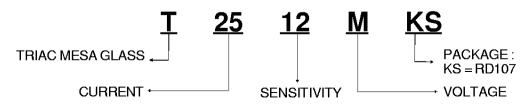


Fig.1: Maximum RMS power dissipation versus RMS on-state current.

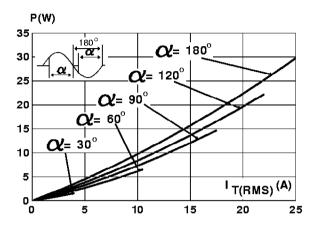


Fig.3: RMS on-state current versus case temperature.

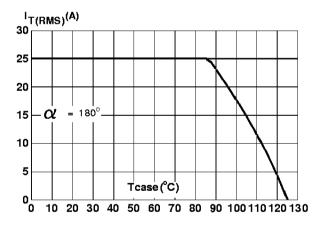


Fig.5: Relative variation of gate trigger current and holding current versus junction temperature.

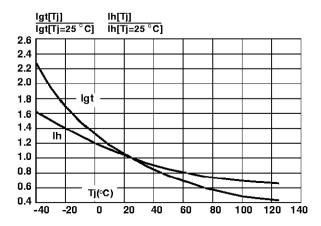


Fig.2: Correlation between maximum RMS power dissipation and maximum allowable temperature (Tamb and Tcase) for different thermal resistances heatsink + contact.

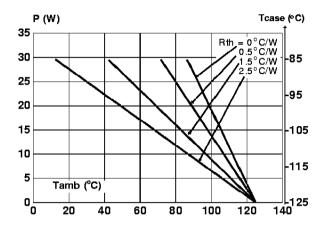


Fig.4: Relative variation of thermal impedance junction to case versus pulse duration.

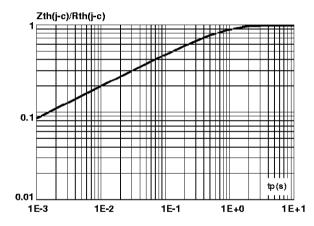


Fig.6: Non repetitive surge peak on-state current versus number of cycles.

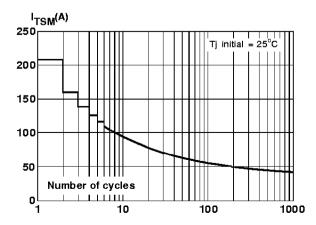
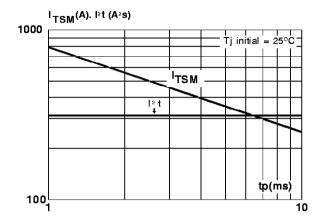
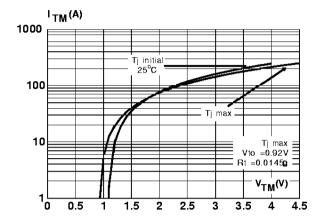


Fig.7: Non repetitive surge peak on-state current for a sinusoidal pulse with width : tp \leq 10ms, and corresponding value of I^2t .

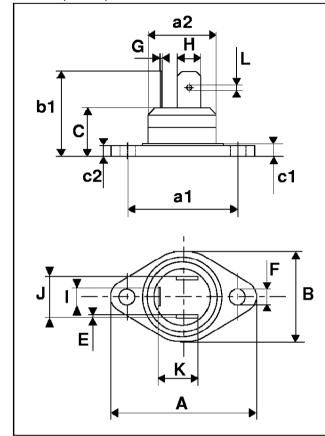
 $\textbf{Fig.8:} \ \textbf{On-state characteristics (maximum values)}.$





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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