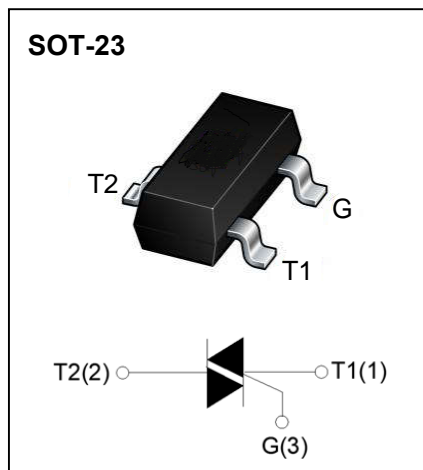


DESCRIPTION:

The 97A6 triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Package SOT-23 is RoHS compliant.

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM}/V_{RRM}	600	V
$I_{GT\ I/II/III/IV}$	5/5/5/10	mA



MARKING: 97A6

Absolute maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage	V_{DRM}	600	V
Repetitive peak reverse voltage	V_{RRM}	600	V
RMS on-state current	$I_{T(RMS)}$	0.8	A
Non repetitive surge peak on-state current (full cycle, $F=50\text{Hz}$)	I_{TSM}	8	A
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	0.32	A^2s
Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di/dt	I - II - III	50
		IV	10
Peak gate current	I_{GM}	1	A
Average gate power dissipation	$P_{G(AV)}$	0.5	W
Junction Temperature	T_J	$-40 \sim +125$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +150$	$^{\circ}\text{C}$

Electrical characteristics ($T_A=25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition		Value		Unit
Gate trigger current	I _{GT}	V _D =12V I _T = 0.1A T _j =25°C	I - II -III	MAX.	5	mA
			IV		10	
Gate trigger voltage	V _{GT}		I - II -III-IV	MAX.	1.2	V
Gate non-trigger voltage	V _{GD}	V _D =V _{DRM} T _j =125°C		MIN.	0.2	V
latching current	I _L	V _D =12V I _{GT} = 0.1A T _j =25°C	I -III-IV	MAX.	10	mA
			II		15	
Holding current	I _H		I - II -III-IV	MAX.	10	mA
Critical-rate of rise of commutation voltage	dV/dt	V _D =2/3V _{DRM} Gate Open T _j =125°C		MIN.	30	V/μs
STATIC CHARACTERISTICS						
Forward "on" voltage	V _{TM}	I _{TM} =0.8A tp=380μs		MAX.	1.7	V
Repetitive Peak Off-State Current	I _{DRM}	V _D =V _{DRM} V _R =V _{RRM}	T _j =25°C	MAX.	20	μA
Repetitive Peak Reverse Current	I _{RRM}		T _j =125°C	MAX.	100	μA
THERMAL RESISTANCES						
Thermal resistance	Rth(j-c)	Junction to case(AC)		TYP.	60	°C/W
	Rth(j-a)	Junction to ambient		TYP.	150	°C/W

Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

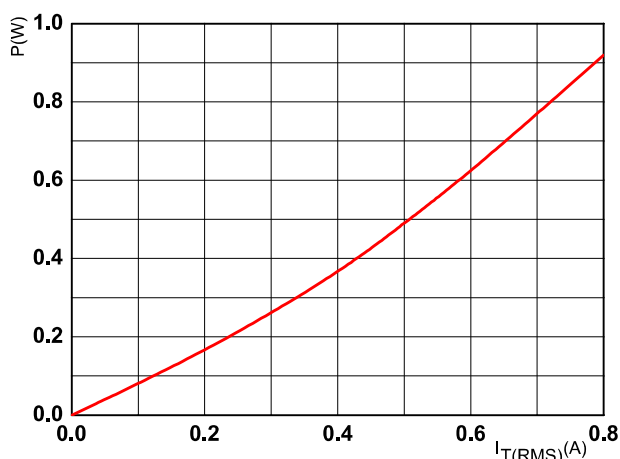


FIG.2: RMS on-state current versus case temperature (full cycle)

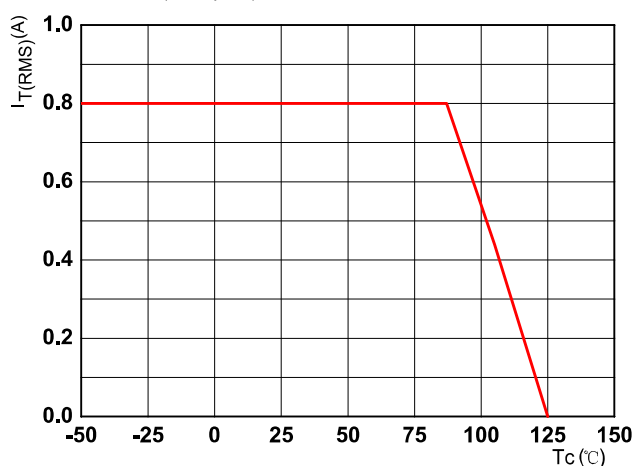


FIG.3: Surge peak on-state current versus number of cycles

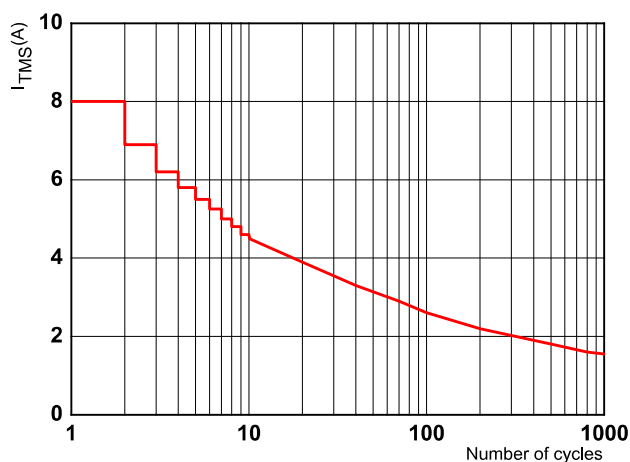


FIG.4: On-state characteristics (maximum values)

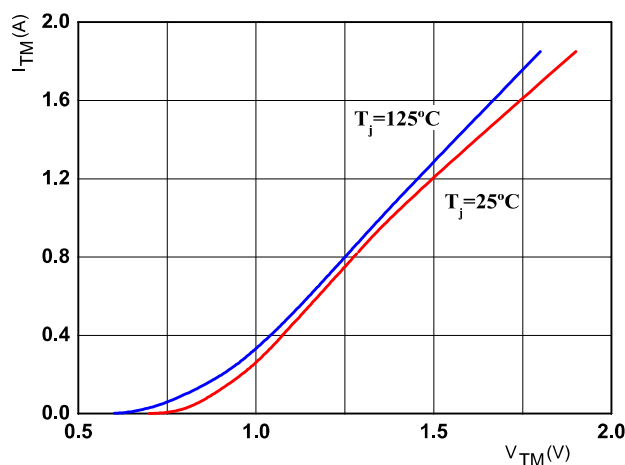


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$

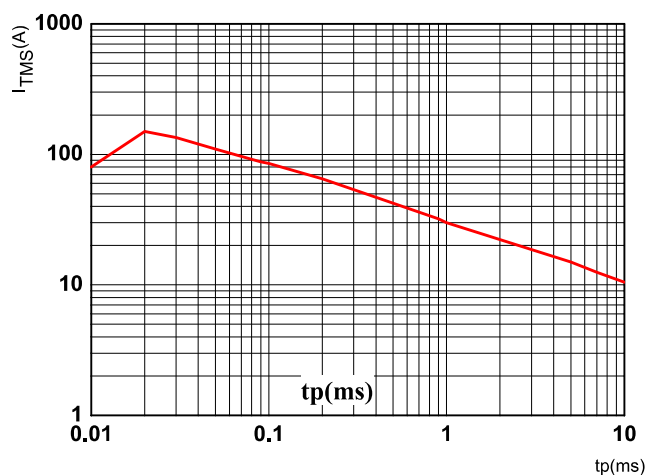


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)

