



DESCRIPTION

With low holding and latching current, 97A8 Series triacs are especially recommended for use on middle and small resistance type power load.



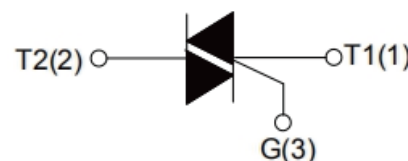
SOT-23-3L



SOT-89-3L

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
V_{DRM}/V_{RRM}	800	V
V_{TM}	≤ 1.5	V



Equivalent Circuit

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T _{stg}	-40~150	°C
Operating junction temperature range		T _j	-40~125	°C
Repetitive peak off-state voltage (T _j =25°C)		V _{DRM}	800	V
Repetitive peak reverse voltage (T _j =25°C)		V _{RRM}	800	V
RMS on-state current		I _{T(RMS)}	0.8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I _{TSM}	9	A
I ² t value for fusing (t _p =10ms)		I ² t	0.45	A ² s
Critical rate of rise of on-state current (I _G =2×I _{GT})	di/dt	I - II - III	50	A/μs
		IV	10	
Peak gate current		I _{GM}	1	A
Average gate power dissipation		P _{G(AV)}	0.1	W
Peak gate power		P _{GM}	5	W



Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
97A8	SOT23	97A8 产品名称 product name	97A8	3000
	SOT-89-3L			

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Condition	Quadrant		Value	Unit
I_{GT}	$V_D=12\text{V}, R_L=33\Omega$	I - II - III	MAX	5	mA
		IV		10	
V_{GT}		IV		1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125^{\circ}\text{C}$	I - II - III - IV	MIN	0.2	V
I_H	$I_T=100\text{mA}$		MAX	7	mA
I_L	$I_G=1.2I_{GT}$	I - III - IV	MAX	5	mA
		II		20	
dV/dt	$V_D=0.66 \times V_{DRM} T_j=125^{\circ}\text{C}$ Gate open		MIN	50	V/ μs

STATIC CHARACTERISTICS

Symbol	Test Condition			Value	Unit
V_{TM}	$I_{TM}=1.1\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	MAX	1.5	V
I_{DRM}	$V_{DRM}=V_{RRM}$	$T_j=25^{\circ}\text{C}$	MAX	5	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$		0.5	mA

STATIC CHARACTERISTICS

Symbol	Test Condition		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	SOT-23-3L	45	$^{\circ}\text{C/W}$
		SOT-89-3L	60	



Typical Characteristics

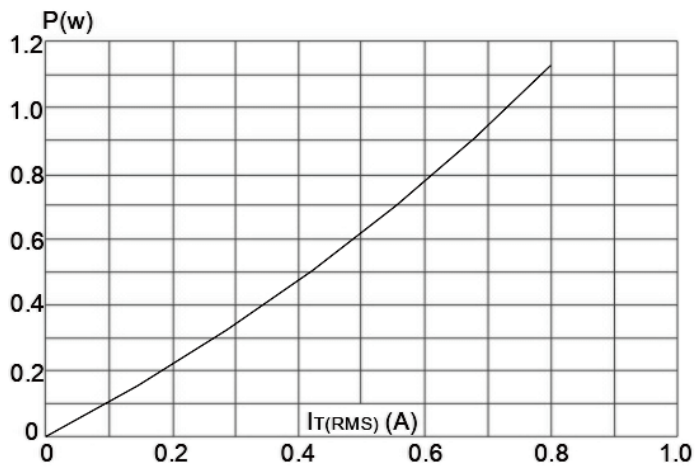


FIG.1: Maximum power dissipation versus RMS on-state current

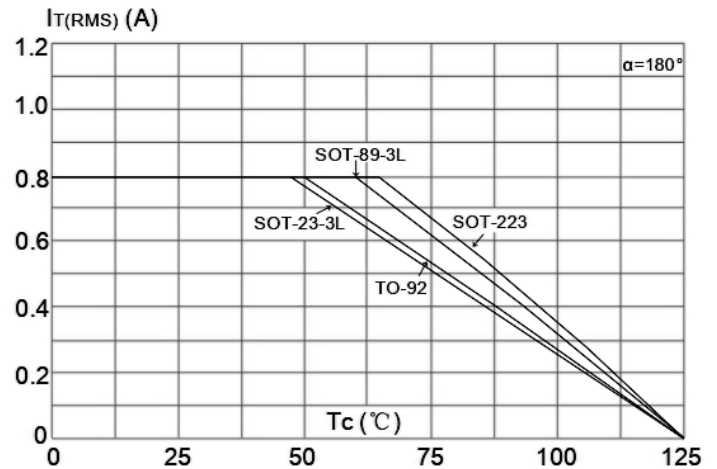


FIG.2: RMS on-state current versus case temperature

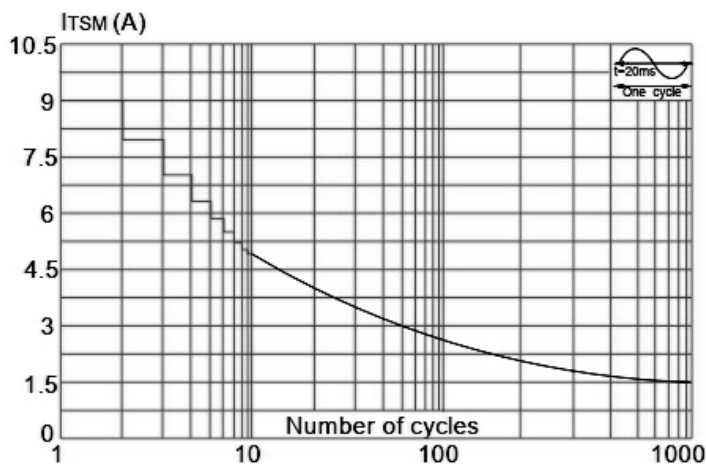


FIG.3: Surge peak on-state current versus number of cycles

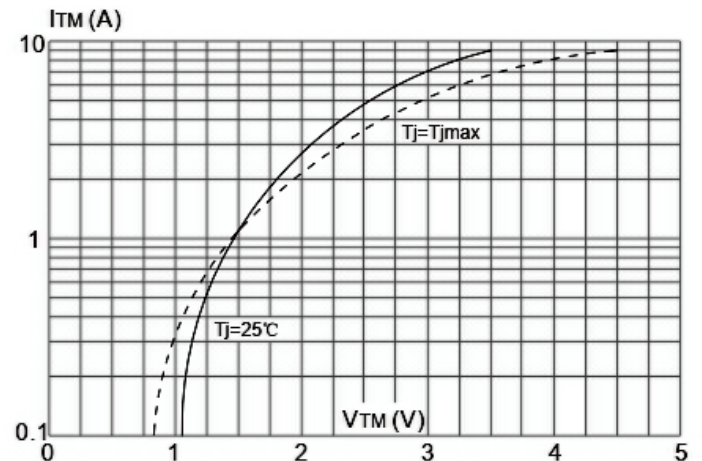


FIG.4: On-state characteristics (maximum values)

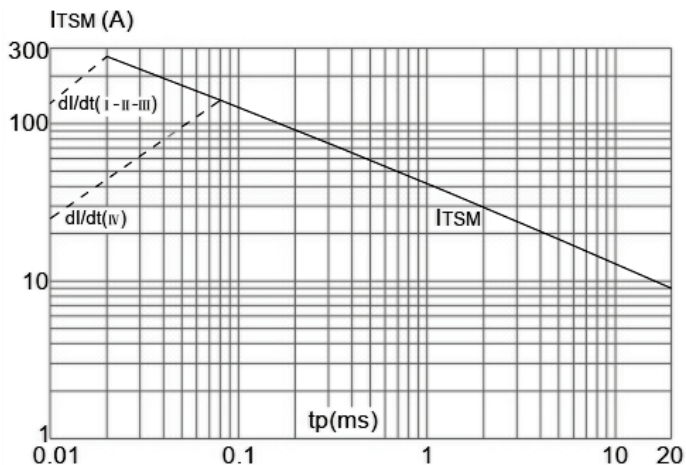
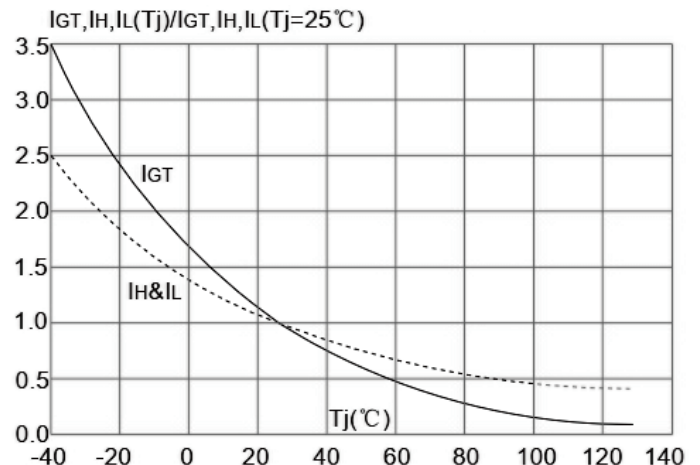
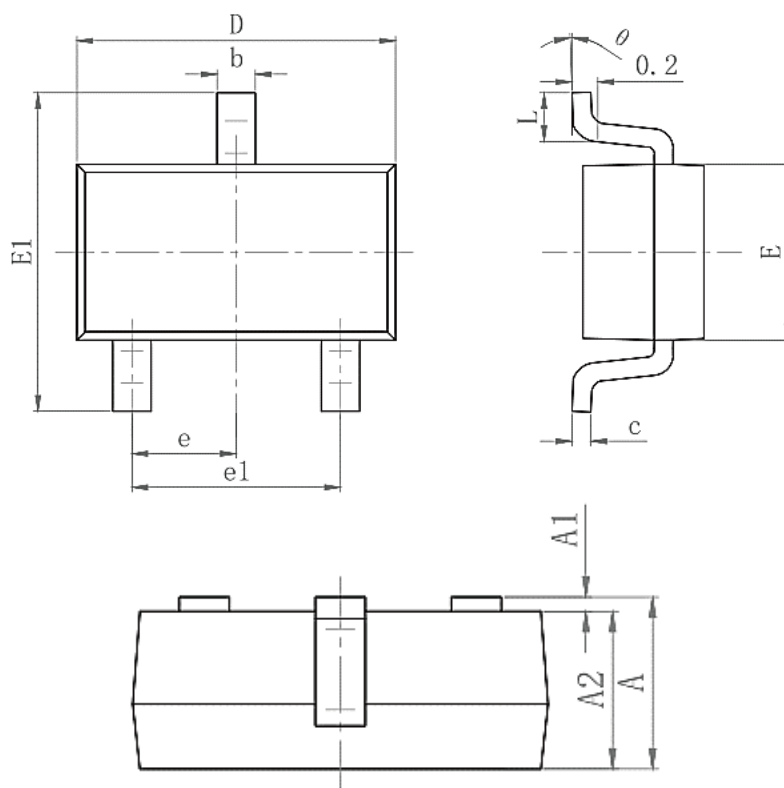
FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of $I_2 t$ ($di/dt < 50\text{A}/\mu\text{s}$)

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



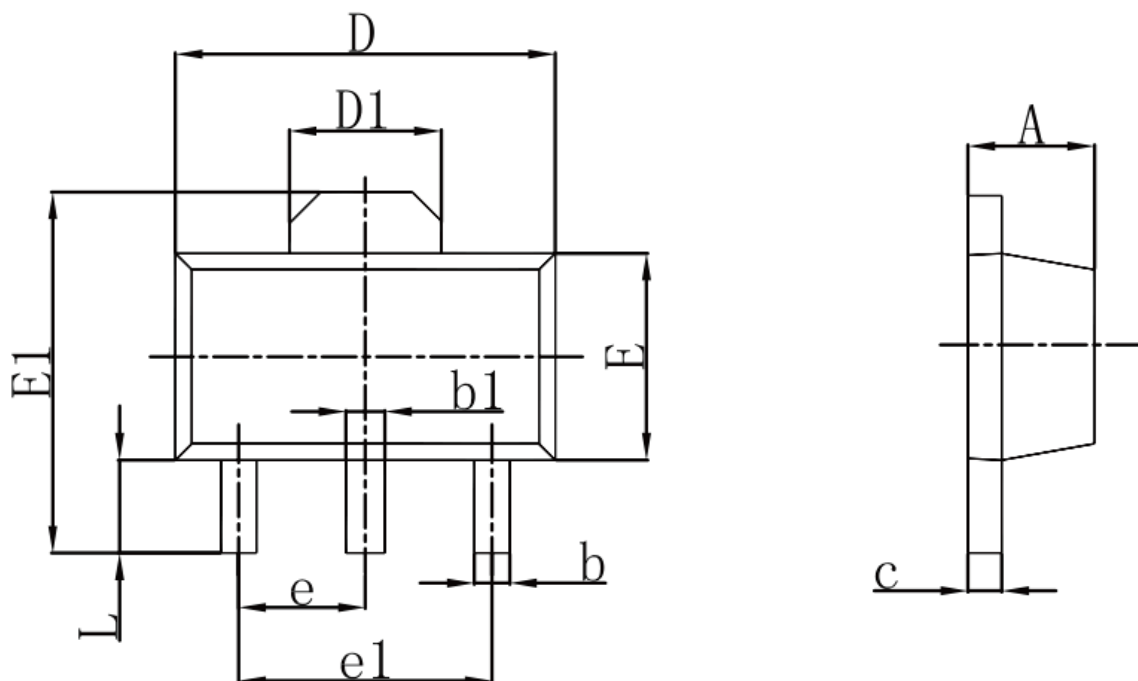
SOT23-3L Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	1.05	1.25
A1	0.000	0.100
A2	1.05	1.15
b	0.25	0.45
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.950 (BSC)	
e1	1.800	2.000
L	0.300	0.500
θ	0°	8°



SOT-89-3L Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047