

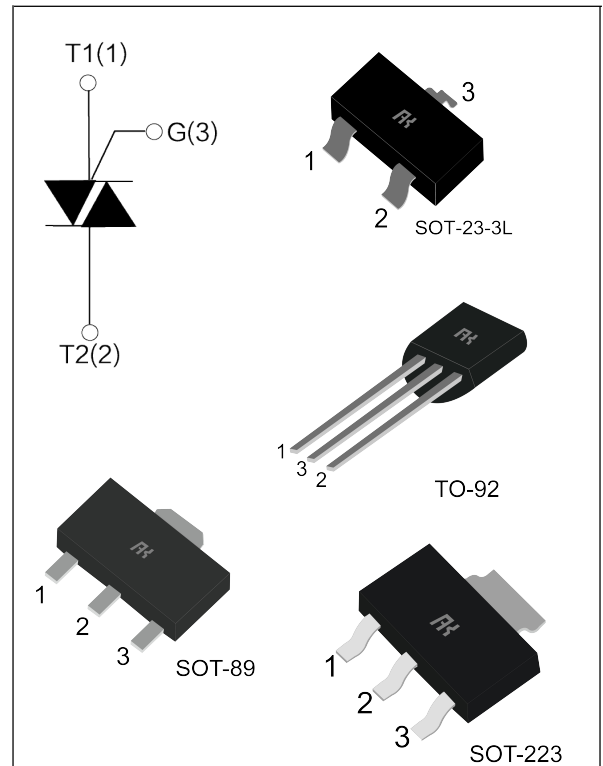
97A6 Serial Standard SCR

GENERAL DESCRIPTION :

97A6/8 SCR family are high performance glass passivated PNP devices. These parts are suitable for general purpose applications where gate high sensitivity is required. Application on 4Q such as phase control and static switching.

Main Features:

$I_{T(RMS)}$	V_{DRM}/V_{RRM}	V_{TM}
0.8A	600and700 V	$\leq 1.5V$



Absolute Ratings(limiting values) :

Symbol	Parameter	Value	Unit	
$I_{T(RMS)}$	RMS on-state current (360° conduction angle)	TO-92 (TC=50°C)	0.8	A
		SOT-23-3L/ SOT-223/ (TC=75°C)		
		SOT-89-2L(TC=60°C)		
I_{TSM}	Non repetitive surge peak on-state current (Tj initial = 25°C)	tp = 16.7 ms	10	A
		tp = 20 ms	9	
V_{DRM}	Repetitive peak off-state voltage	97A6	600	V
V_{RRM}	Tj = 125°C	97A8	700	
T_{stg}	Storage and operating junction temperature range	- 40 to + 150	°C	
T_j		- 40 to + 125	°C	
T_i	Maximum lead temperature for soldering during 10 s at 4.5 mm from case	260	°C	
I^2t	I^2t value tp = 10 ms	0.32	A ² s	
di/dt	Critical rate of rise of on-state current Gate supply : IG= 50mA diG/dt = 0.1A/μs	Repetitive F = 50 Hz	10	A/μs
		Non Repetitive	50	

Electrical Characteristics :

Symbol	Test Condition	Quadrant	MIN	Type	MAX	Unit
I_{GT}	V _D =12V (DC) I _{GT} =0.1A	I-II-III	-	-	5	mA
		IV	-	-	10	mA
V_{GT}		I-II-III-IV	-	0.7	1.3	V
t_{gt}	I _{TM} =1.0A, V _D =V _{DRM} (max), I _G =25mA, dI _G /dt=5A/μs	I-II-III	-	2	2	μs
I_L	V _D =12V (DC) I _{GT} =0.1A	I-II-III	-	-	10	mA
		IV	-	-	25	
I_H	I _T = 100mA gate open		-	7	25	mA
V_T	I _{TM} = 0.85A		-	1.4	1.5	V
I_{DRM} I_{RRM}	V _{DRM} Rated V _{RRM} Rated		-	-	100	uA
dVd/dt	Linear slope up to V _D =67%V _{DRM} gate open		30	-	-	V/μs
dVcom/dt	V _D =RATED V _{DRM} T _{case} =50 gate open I _{TM} = 0.85A		3	-	-	V/μs

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

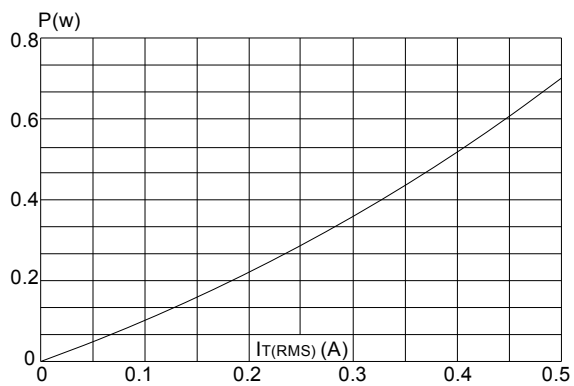


FIG.2: RMS on-state current versus case temperature

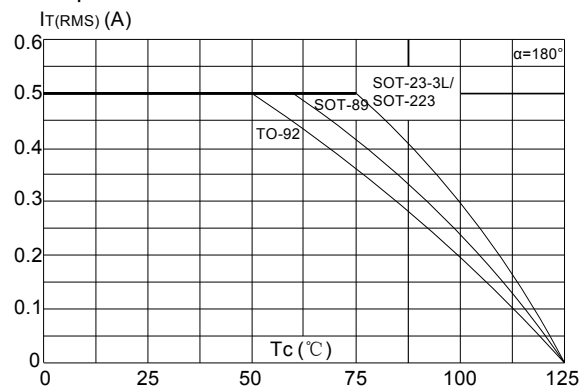


FIG.3: Surge peak on-state current versus number of cycles

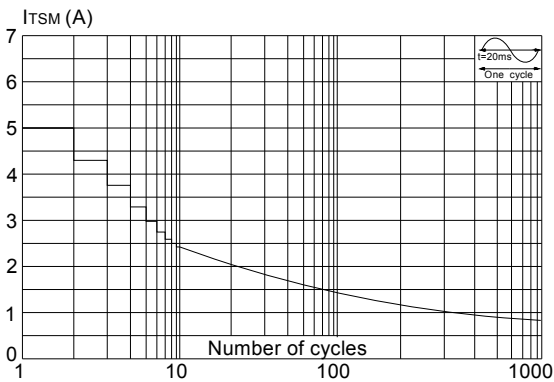


FIG.4: On-state characteristics (maximum values)

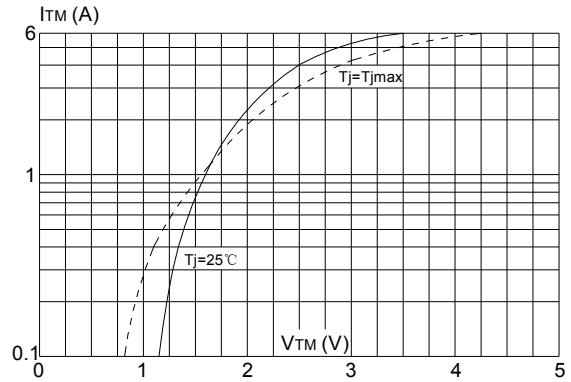


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$ ($di/dt < 10\text{A}/\mu\text{s}$)

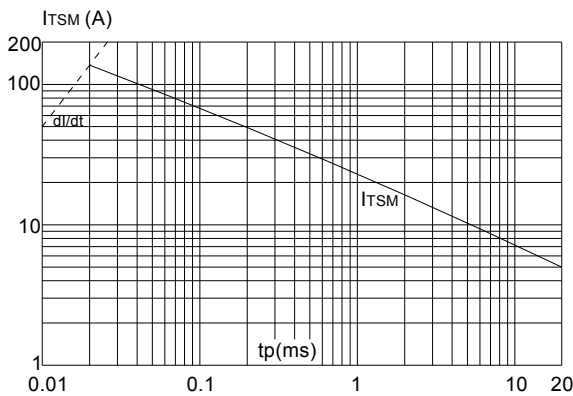
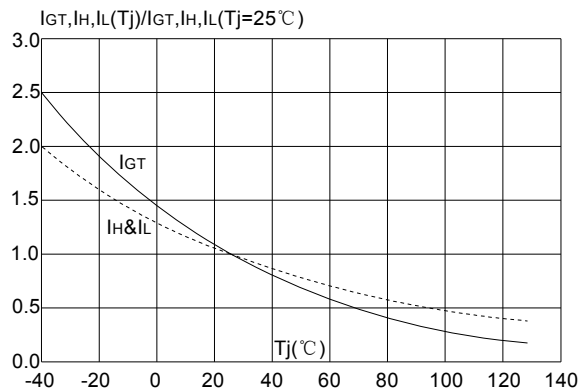
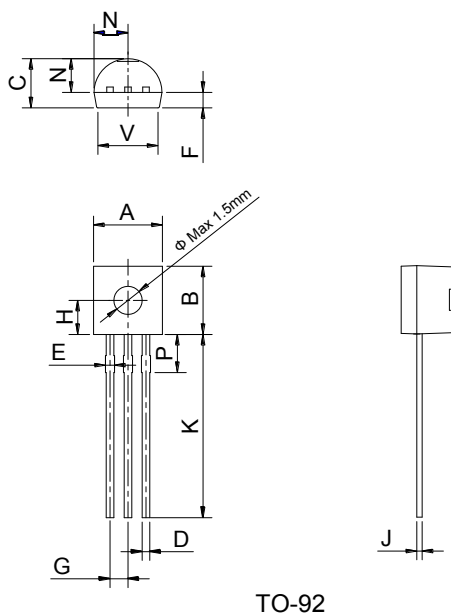


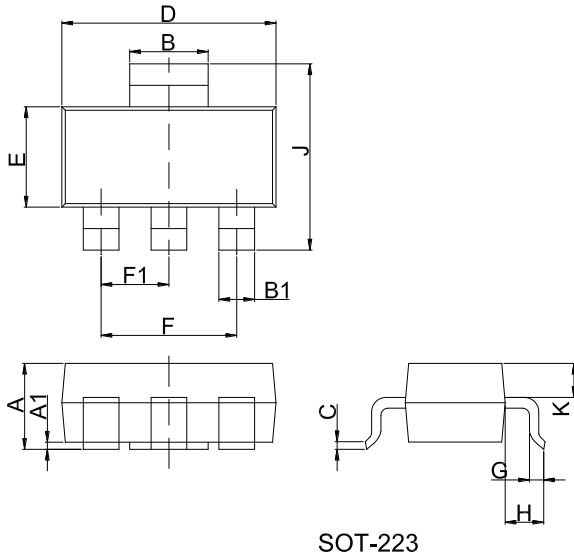
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



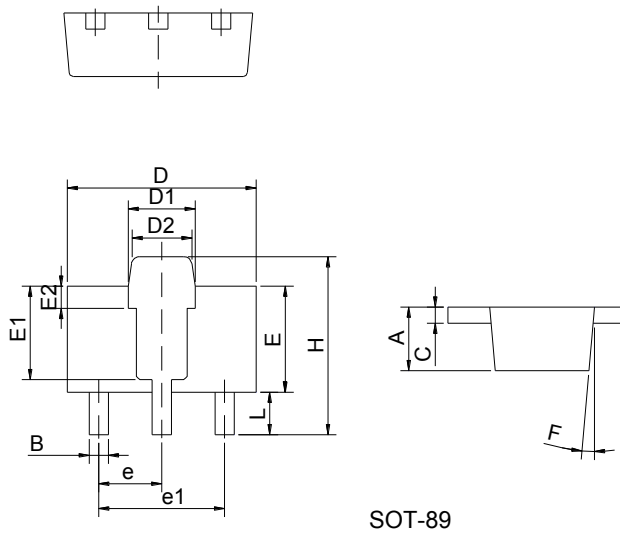
Package Mechanical Data :



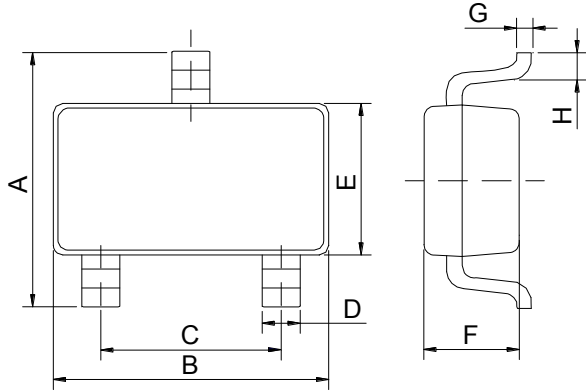
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.60		0.80	0.024		0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0	0.06	0.10	0	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6			0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.40		1.60	0.055		0.063
B	0.40		0.52	0.016		0.020
C	0.35		0.41	0.014		0.016
D	4.40		4.60	0.173		0.181
D1	1.50		1.70	0.059		0.067
D2	1.30		1.50	0.051		0.059
E	2.40		2.60	0.094		0.102
E1		2.20			0.087	
E2		0.52			0.020	
e		1.50			0.059	
e1		3.00			0.118	
F		5°			0.197°	
H	4.05		4.25	0.159		0.167
L	0.89		1.20	0.035		0.047



SOT-23-3L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.65		2.95	0.104		0.116
B		2.92			0.115	
C		1.90			0.075	
D	0.34		0.36	0.013		0.014
E		1.60			0.063	
F		1.17			0.046	
G		0.15			0.006	
H	0.25		0.55	0.010		0.022

Ordering Information:

