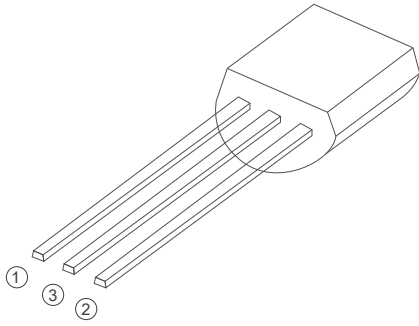
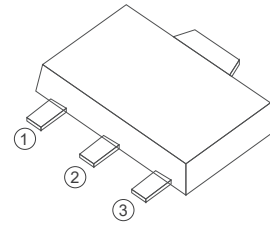


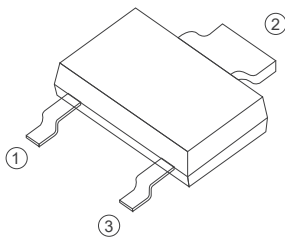
Mcr100 Series  
0.8A SCRs  
Sensitive Gate SCRs



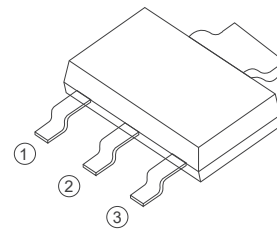
TO-92



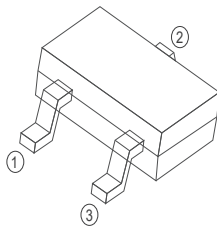
SOT-89



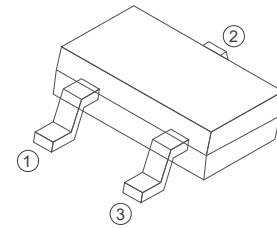
SOT-89-2L



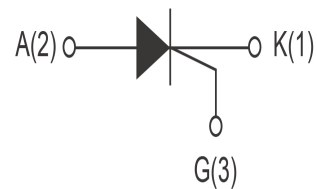
SOT-223



SOT-23



SOT-23-3L



## FEATURES

>  $I_T(RMS):0.8A$  >  $V_{GT}: 0.8V$  >  $V_{DRM} V_{RRM}:600V$  and  $800V$

## APPLICATIONS

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on.

### Absolute Maximum Ratings (T<sub>j</sub>=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	MCR100-6 MCR100-8	600/800	V
I <sub>T(AV)</sub>	Average On-State Current		0.7	A
I <sub>T(RMS)</sub>	R.M.S On-State Current		0.8	A
I <sub>TSM</sub>	Surge On-State Current	F=50Hz T <sub>p</sub> =10ms	11	A
I <sup>2</sup> t	I <sup>2</sup> t for fusing	T <sub>p</sub> =10ms	0.45	A <sup>2</sup> s
PG(AV)	Average Gate Power Dissipation	T <sub>j</sub> =125°C	0.1	W
PGM	Peak Gate Power Dissipation	t <sub>p</sub> =20us T <sub>j</sub> =125°C	0.5	W
T <sub>j</sub>	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	°C

### Electrical Characteristics (T<sub>j</sub>=25°C unless otherwise specified)

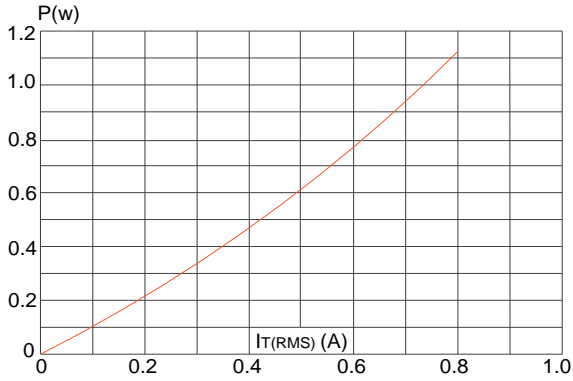
Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	T <sub>c</sub> =25°C	≤5	uA
		T <sub>c</sub> =110°C	≤100	uA
IRRM	Repetitive Peak Reverse Current	T <sub>c</sub> =25°C	≤5	uA
		T <sub>c</sub> =110°C	≤100	uA
VTM	Forward "on" voltage	I <sub>T</sub> =1.2A t <sub>p</sub> =380us	≤1.7	V
VGD	Gate non-trigger voltage	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>j</sub> =110°C, R <sub>GK</sub> =1kΩ, R <sub>L</sub> =3.3KΩ	≥0.1	V
VGT	Gate trigger voltage	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A	≤0.8	V
I <sub>H</sub>	Holding current	I <sub>T</sub> =50mA	≤4	mA
I <sub>L</sub>	Latching current	I <sub>G</sub> =1.2 I <sub>GT</sub>	≤6	mA
I <sub>GT</sub>	Gate trigger current	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A	≤200	uA
dv/dt	Critical-rate of rise of commutation voltage	T <sub>j</sub> =110°C, V <sub>D</sub> =2/3V <sub>DRM</sub> , R <sub>GK</sub> =1KΩ	≥10	V/us

### THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R <sub>th(j-c)</sub>	junction to case	TO-92/ SOT-23/ SOT-23-3L	75	°C/W
		SOT-89 SOT-89-2L	45	
		SOT-223	31	

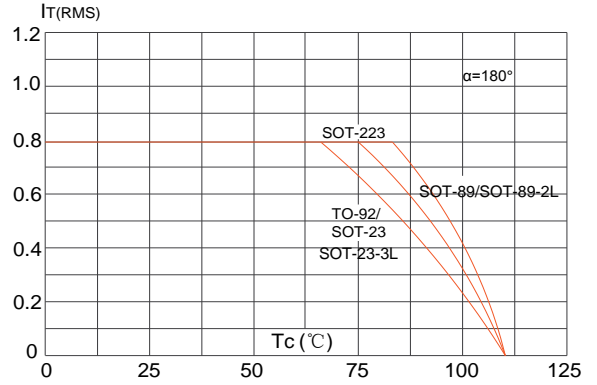
**FIG1**

Maximum power dissipation versus RMS on-state current



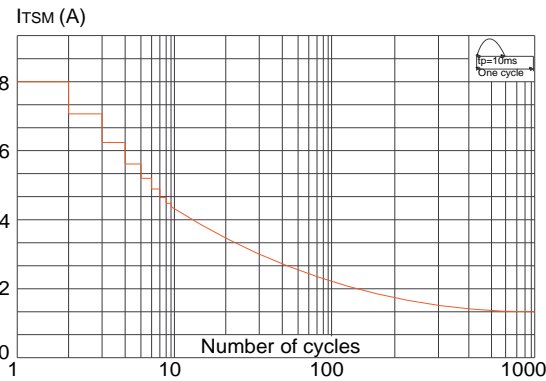
**FIG2**

RMS on-state current versus case temperature



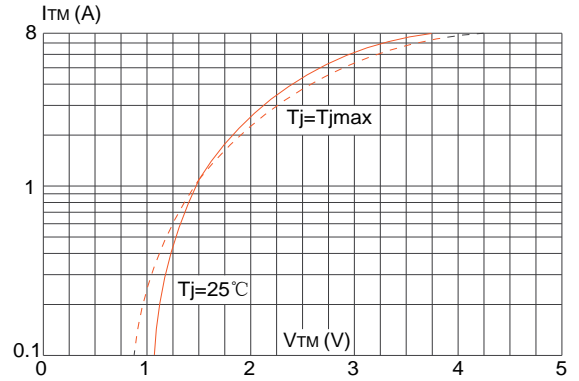
**FIG3**

Surge peak on-state current versus number of cycles



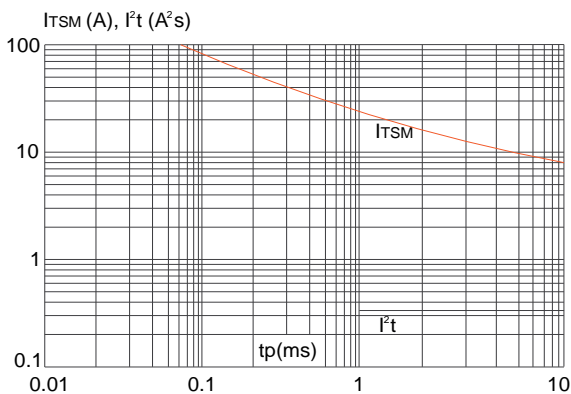
**FIG4**

On-state characteristics (maximum values)



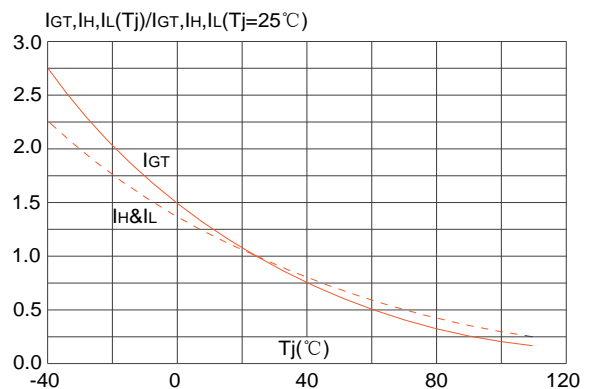
**FIG5**

Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20ms$ , and corresponding value of  $I^2t$  ( $dI/dt < 100A/\mu s$ )

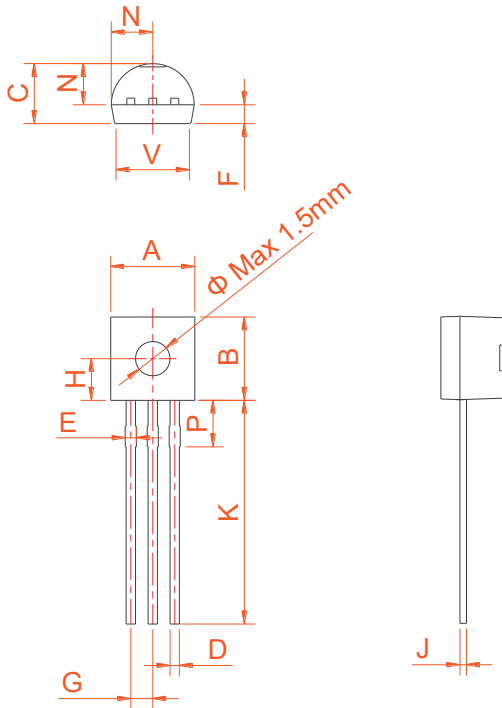


**FIG6**

Relative variations of gate trigger current, holding current and latching current versus junction temperature



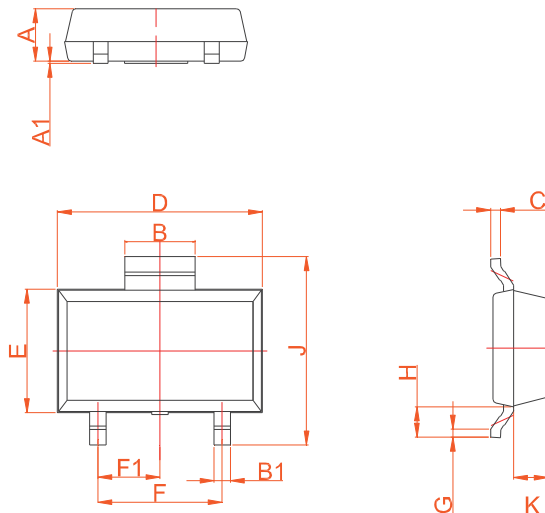
**PACKAGE MECHANICAL DATA**



TO-92

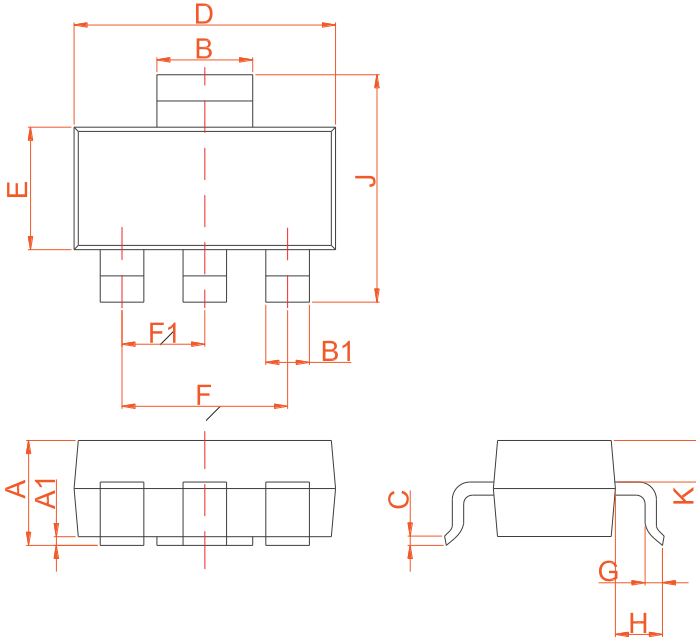
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.60		0.80	0.024		0.031
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		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	1.3	1.4	1.5	0.051	0.055	0.059
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	1.6	1.7	1.8	0.063	0.067	0.071
B1	0.3	0.4	0.5	0.012	0.016	0.020
C	0.22	0.254	0.32	0.009	0.010	0.013
D	4.75	4.95	5.15	0.187	0.195	0.203
E	2.75	2.95	3.15	0.108	0.116	0.124
F		3.0			0.118	
F1		1.5			0.059	
G	0.2	0.3	0.4	0.008	0.012	0.016
H	0.58	0.78	0.98	0.023	0.031	0.039
J	4.3	4.5	4.7	0.169	0.177	0.185
K		0.88			0.035	



SOT-89-2L

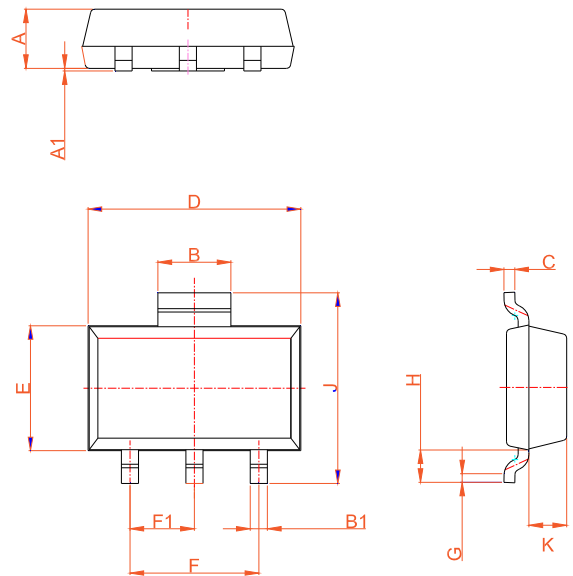
**PACKAGE MECHANICAL DATA**



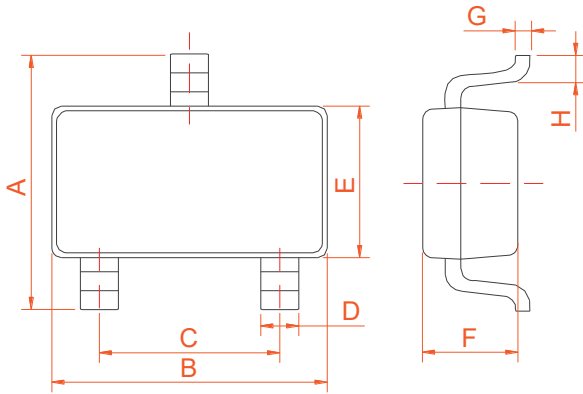
**SOT-223**

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	1.3	1.4	1.5	0.051	0.055	0.059
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	1.6	1.7	1.8	0.063	0.067	0.071
B1	0.3	0.4	0.5	0.012	0.016	0.020
C	0.22	0.254	0.32	0.009	0.010	0.013
D	4.75	4.95	5.15	0.187	0.195	0.203
E	2.75	2.95	3.15	0.108	0.116	0.124
F		3.0			0.118	
F1		1.5			0.059	
G	0.2	0.3	0.4	0.008	0.012	0.016
H	0.58	0.78	0.98	0.023	0.031	0.039
J	4.3	4.5	4.7	0.169	0.177	0.185
K		0.88			0.035	



**SOT-89**



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

Information furnished is believed to be accurate and reliable. However, Shenzhen HanKingyuan Electronic assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied.

The KY logo is a registered trademark of Shenzhen HanKingyuan Electronic.

©2013 Shenzhen HanKingyuan Electronic - Printed in Shenzhen - All Rights Reserved

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Triacs](#) category:*

*Click to view products by [Kang Yang](#) manufacturer:*

Other Similar products are found below :

[BT137-600-0Q](#) [OT415Q](#) [2N6075A](#) [NTE5688](#) [BTA2008W-800D,135](#) [D31410](#) [QJ8006NH4TP](#) [QJ8010NH5TP](#) [QJ8008NH4TP](#)  
[QJ8006NH4RP](#) [QJ8010RH5TP](#) [QJ8010NH4TP](#) [QJ8006LH4TP](#) [BT136-600,127](#) [BT137B-800,118](#) [BT138-800E,127](#) [BTA140-600,127](#)  
[BTA208-800B,127](#) [BTA225-800B,127](#) [MAC97A6,116](#) [BTA420-800BT,127](#) [BTA201W-800E,115](#) [BTA212B-800B,118](#) [MCR100-8](#) [100-8](#)  
[BT131S](#) [MCR100-6](#) [MCR100-8](#) [BT136S-800E](#) [BT151-650R](#) [BTA12-800B](#) [MAC97A8](#) [BT169-23](#) [MAC97A6-23-3L](#) [BT169-89-2L](#)  
[MCR100-8](#) [MCR100-6](#) [BTA408X-1000C0T,127](#) [ACT108-800EQP](#) [T810](#) [2P4M](#) [BT137-600E](#) [BT137-800D](#) [BT136-800E](#) [BT151](#) [BT137-](#)  
[800E](#) [BTB08-600CW](#) [BTB06-600CW](#) [BTA20](#) [MCR100-6](#) [BT138-800E](#)