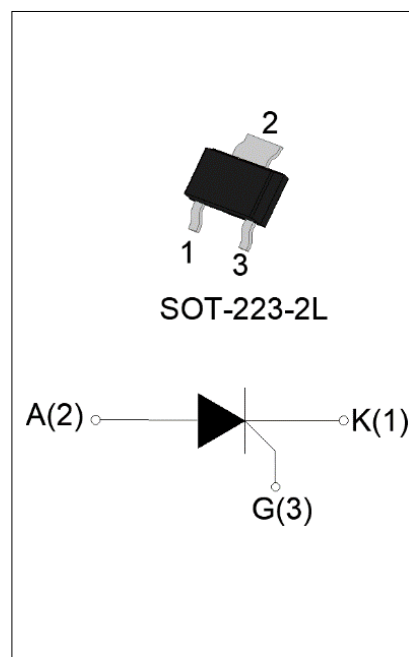




With high ability to withstand the shock loading of large current, JHX015W SCR provides high  $dV/dt$  rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package SOT-223-2L is RoHS compliant.

Symbol	Value	Unit
$I_{T(RMS)}$	1.5	A
$V_{DRM}/V_{RRM}$	1600	V
$I_{GT}$	$\leq 3$	mA



Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-110	
Repetitive peak off-state voltage ( $T_j=25^\circ C$ )	$V_{DRM}$	1600	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	1600	V
Average on-state current ( $T_c = 57^\circ C$ )	$I_{T(AV)}$	1	A
RMS on-state current ( $T_c = 57^\circ C$ )	$I_{T(RMS)}$	1.5	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$	15	A
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		17	
$I^2t$ value for fusing ( $t_p=10ms, T_j=25^\circ C$ )	$I^2t$	1.1	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}, f=100Hz, T_j=110^\circ C$ )	$di/dt$	100	$A/\mu s$
Peak gate current ( $t_p=20\mu s, T_j=110^\circ C$ )	$I_{GM}$	1.2	A
Average gate power dissipation ( $T_j=110^\circ C$ )	$P_{G(AV)}$	0.2	W

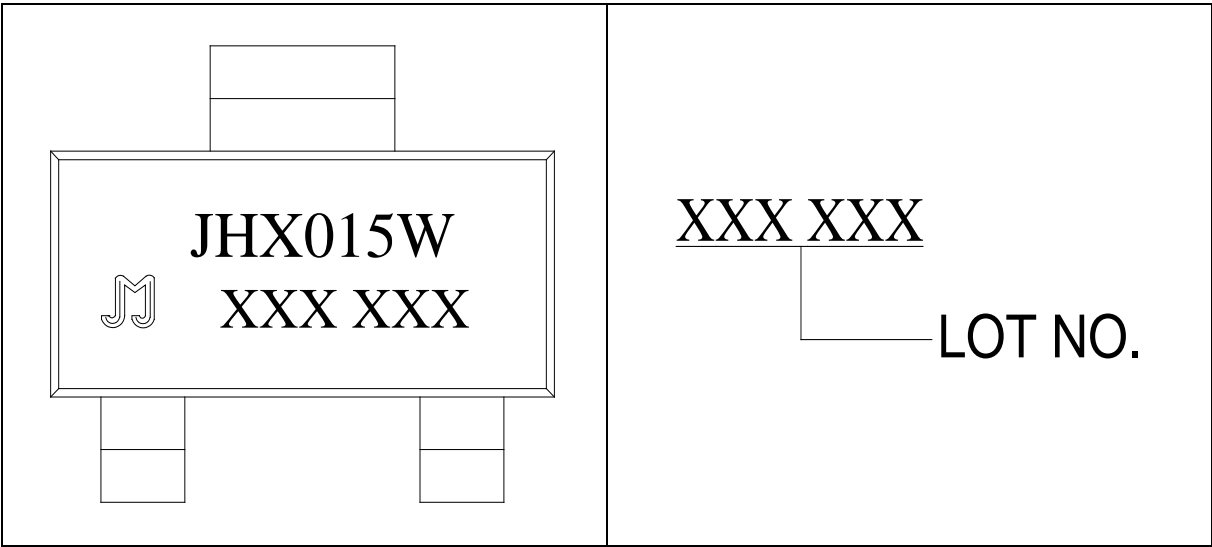
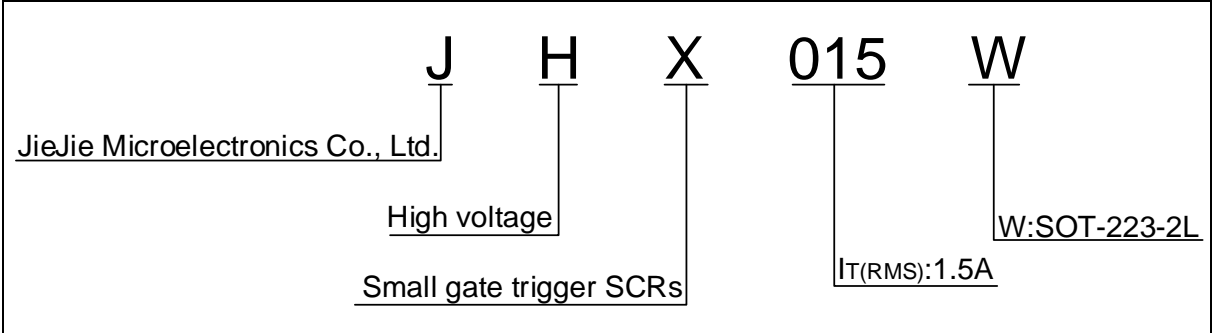
Peak gate power	$P_{GM}$	2	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive,off-state;FIG.8)	$V_{pp}$	1.5	kV

( $T_j=25$  unless otherwise specified)

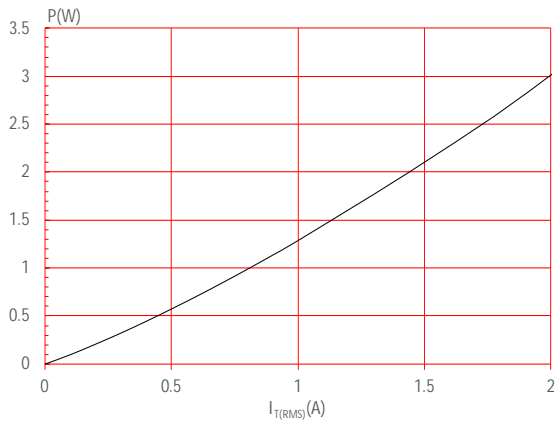
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V R_L=33\Omega$	-	-	3	mA
$V_{GT}$		-	-	1.3	V
$V_{GD}$	$V_D=V_{DRM} T_j=110 R_L=3.3K\Omega$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	15	mA
$I_H$	$I_T=500mA$	-	-	10	mA
dV/dt	$V_D=1070V T_j=110 R_{GK}=1K\Omega$	100	-	-	V/ $\mu s$
	$V_D=1070V T_j=110 R_{GK}=220\Omega$	500	-	-	
$t_{on}$	$I_G=10mA I_A=40mA I_R=4mA$	-	2	-	$\mu s$
$t_{off}$	$T_j=25$	-	50	-	$\mu s$

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=3A t_p=380\mu s$	$T_j=25$	1.7	V
$V_{TO}$	Threshold voltage	$T_j=110$	0.91	V
$R_D$	Dynamic resistance	$T_j=110$	167	m $\Omega$
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	$\mu A$
$I_{RRM}$		$T_j=110$	0.2	mA

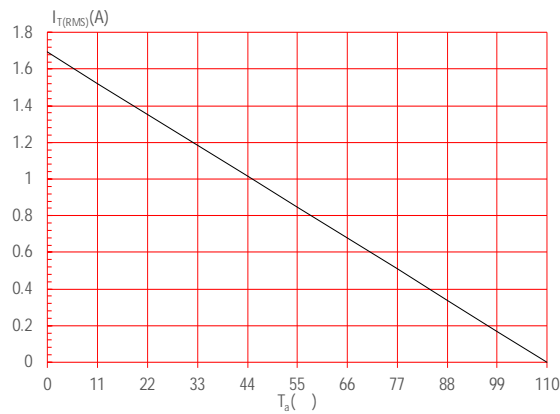
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	25	$\text{/W}$
$R_{th(j-a)}$	junction to ambient (DC)	65	$\text{/W}$



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

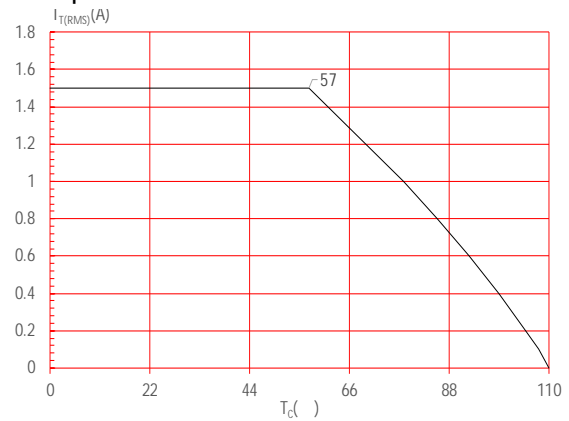


**FIG.3:** RMS on-state current versus ambient temperature (printed circuit board FR4,copper thickness:35 $\mu$ m)(full cycle)

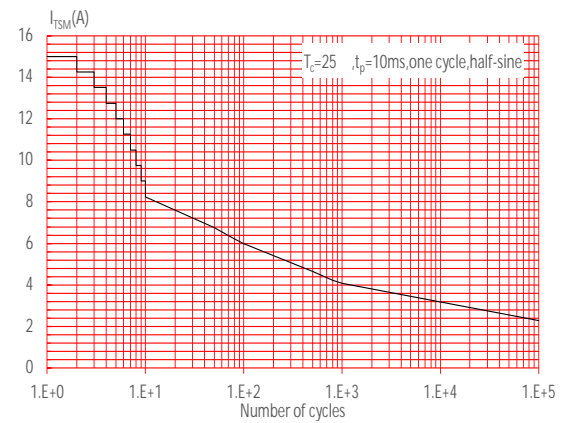


**FIG.5:** On-state characteristics

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



**FIG.4:** Surge peak on-state current versus number of cycles



**FIG.6:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p \leq 10ms$ . and corresponding value of  $I^2t$

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

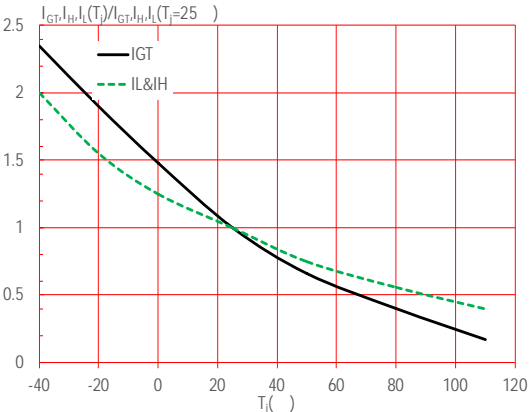
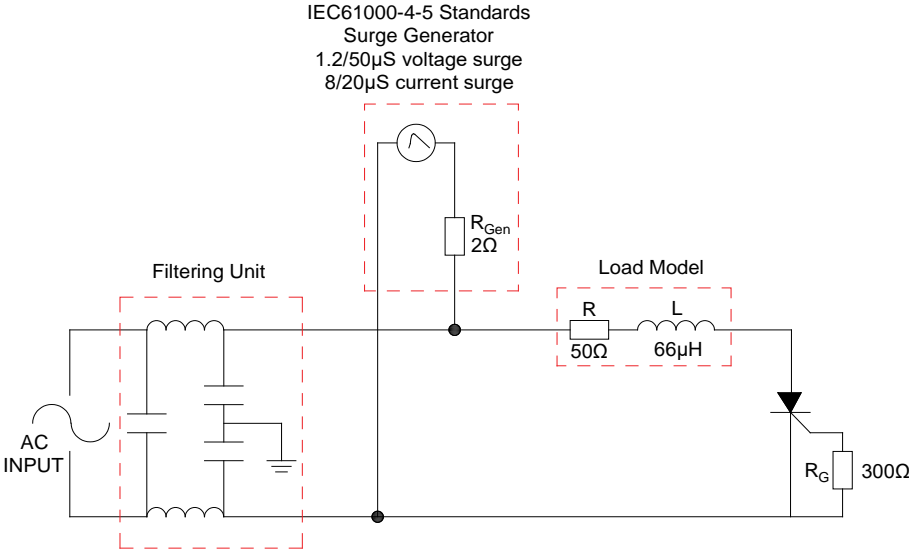
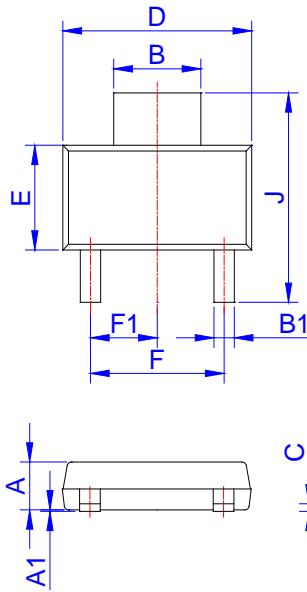


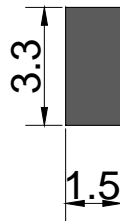
FIG.8 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



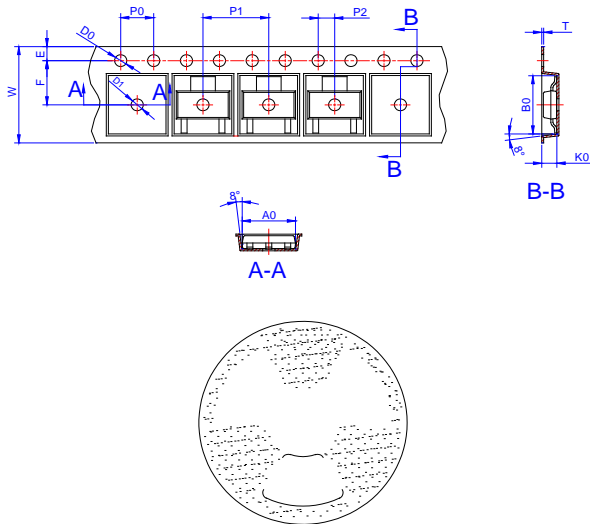
Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JHX015W	1600	3	SOT-223-2L	4,000	Tape & Reel



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.50	1.60	1.80	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.90	3.00	3.10	0.114	0.118	0.122
B1	0.60	0.70	0.80	0.024	0.028	0.031
C	0.22	0.254	0.32	0.009	0.010	0.013
D	6.30	6.50	6.70	0.248	0.256	0.264
E	3.30	3.50	3.70	0.130	0.138	0.146
F	4.40		4.80	0.173		0.189
F1	2.20		2.40	0.087		0.094
G	0.50		1.00	0.020		0.039
H	1.50	1.75	2.00	0.059	0.069	0.079
J	6.70	7.00	7.30	0.264	0.276	0.287
K	0.80		1.00	0.031		0.039







Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	-	-	12.30	-	-	0.482
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.215	0.217	0.219
D0	1.50	1.55	1.60	0.059	0.061	0.063
D1	1.50	-	-	0.059	-	-
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.85	6.95	7.05	0.269	0.273	0.276
B0	7.15	7.25	7.35	0.280	0.284	0.288
K0	1.95	2.05	2.15	0.076	0.080	0.084
T	0.20	0.25	0.30	0.008	0.010	0.012

Information furnished in this document is believed to be accurate and reliable.

However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the

c10 (n)10 (d)14 (b77 ( ))TJ1( t)12 (he s( f)-8.1 (or)7 ( t)12 (he ))T]T7 Td8 53C 0 i)6 (i.)8TJ 0 tr (