



**DESCRIPTION:**

The JX012K SCR provides high dV/dt rate with strong resistance to electromagnetic interface. It is especially recommended for use on residual current circuit breaker, straight hair, igniter etc. Package TO-252 is RoHS compliant.

**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	1.25	A
$V_{DRM} / V_{RRM}$	1200	V
$I_{GT}$	200	A

**ABSOLUTE MAXIMUM RATINGS**

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 ( $T_j=25^\circ C$ )	$V_{DRM}$	1200	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	1200	V
Average on-state current ( $T_c = 94^\circ C$ )	$I_{T(AV)}$	0.8	A
RMS on-state current ( $T_c = 94^\circ C$ )	$I_{T(RMS)}$	1.25	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$		
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		A	

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Peak gate power	$P_{GM}$	2	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	1	kV

## ELECTRICAL CHARACTERISTICS (T<sub>j</sub>=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V R_L=33$	-	50	200	A
$V_{GT}$		-	0.6	0.8	V
$V_{GD}$	$V_D=V_{DRM} T_j=110$	0.2	-	-	V
$I_L$	$I_G=1.2 I_{GT}$	-	-	4	mA
$I_H$	$I_T=0.05A$	-	-	3	mA
dV/dt	$V_D=800V T_j=110 R_{GK}=1K$	1000	-	-	V/s
	$V_D=800V T_j=110 R_{GK}=\phantom{1K}$	1500	-	-	
$t_{on}$	$I_G=10mA I_A=20mA I_R=2mA$	-	2	-	s
$t_{off}$	$T_j=25$	-	50	-	s

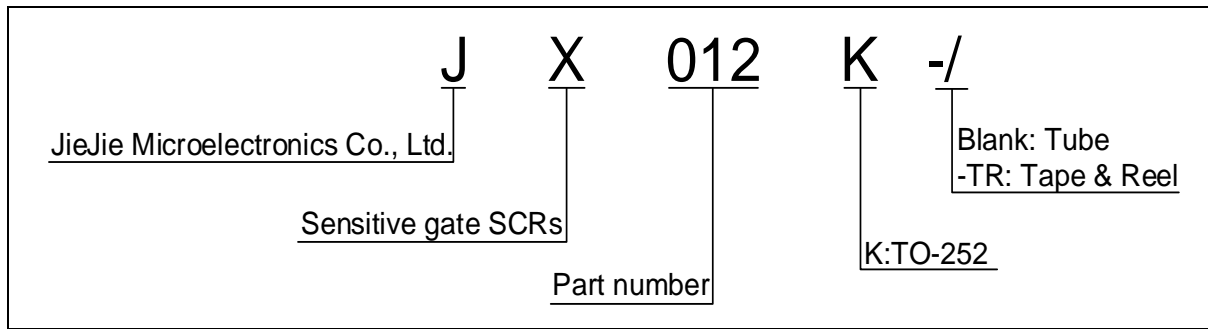
## STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_T=1.5A t_p=380 \mu s$	$T_j=25$	1.45	V
$V_{TO}$	Threshold voltage	$T_j=110$	0.85	V
$R_D$	Dynamic Resistance	$T_j=110$	0.16	
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	A
$I_{RRM}$		$T_j=110$	0.15	mA

## THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	9	/W
$R_{th(j-a)}$	junction to ambient (DC)	120	/W

ORDERING INFORMATION



MARKING

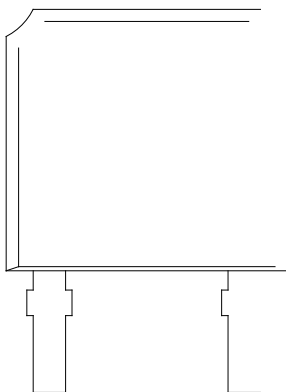


FIG.1 Maximum power dissipation versus RMS on-state current

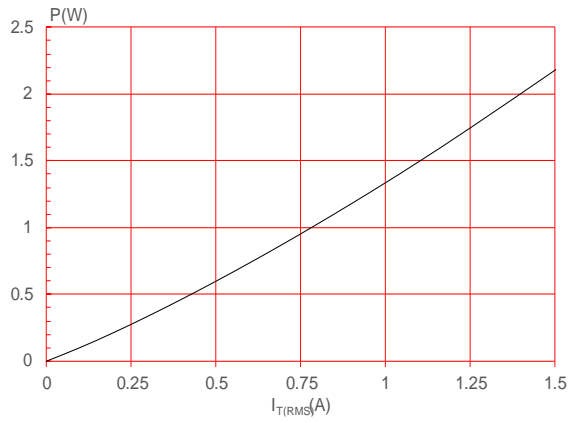
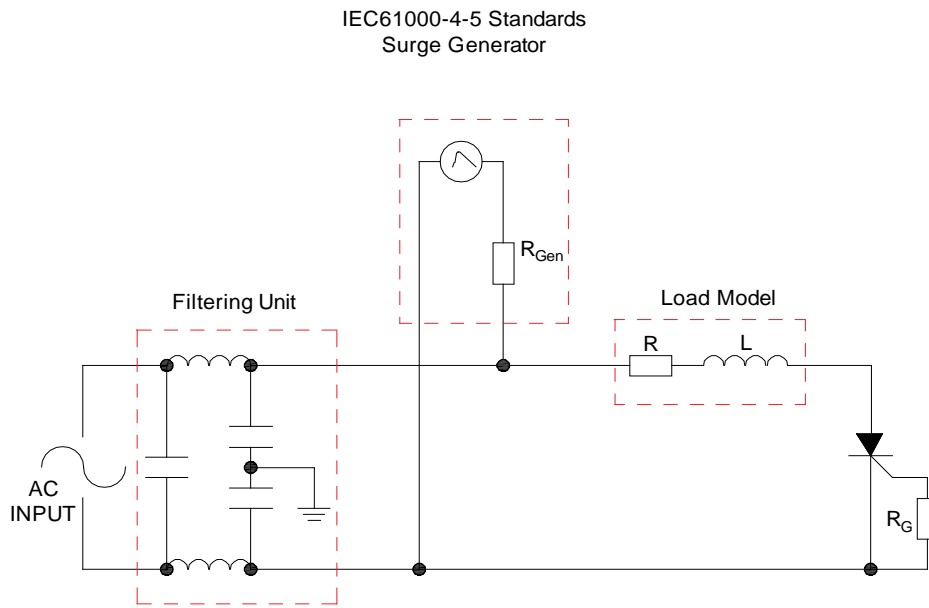


FIG.2: RMS on-state current versus case temperature





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



## SOLDERING PARAMETERS

Reflow Condition

Pb-Free assembly  
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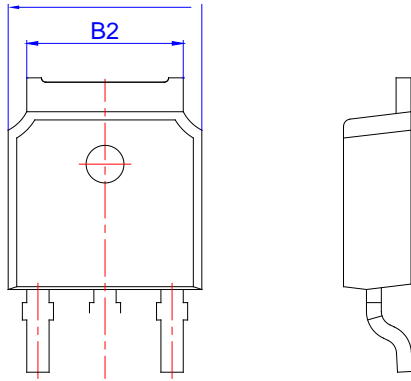
## ORDERING INFORMATION

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT( $\mu$ A)	Package	Base qty. (pcs)	Delivery mode
JX012K	1200	<b><math>\leq 200</math></b>	TO-252	80	Tube
JX012K-TR				2,500	Tape & Reel

## Document Revision History

Date	Revision	Changes
Apr. 12, 2023	A.1.0	Last update

PACKAGE MECHANICAL DATA




Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.15	0		0.006
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1						
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2	0°		6°	0°		6°



DELIVERY MODE



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