



## JX020H 2A Sensitive SCR

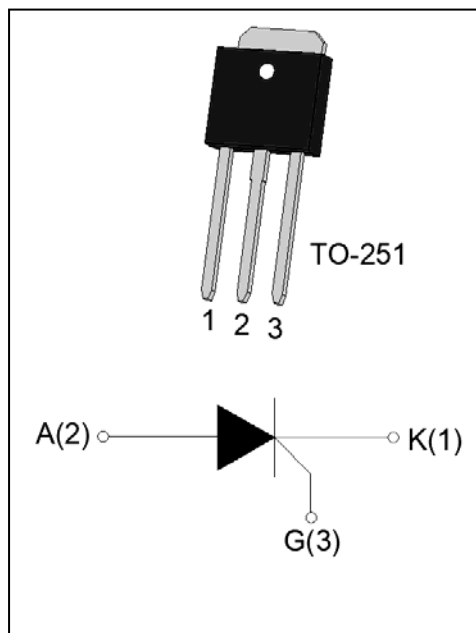
Rev.A.1.1

### DESCRIPTION:

The JX020H 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-251 is RoHS compliant.

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	2	A
$V_{DRM} / V_{RRM}$	600	V
$I_{GT}$	200	$\mu A$




### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-125	
Repetitive peak off-state voltage ( $T_j=25^\circ C$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	600	V
Average on-state current ( $T_c = 104^\circ C$ )	$I_{T(AV)}$	1.3	A
RMS on-state current ( $T_c = 104^\circ C$ )	$I_{T(RMS)}$	2	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$	20	A
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		22	
$I^2t$ value for fusing ( $t_p=10ms, T_j=25^\circ C$ )	$I^2t$	2	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}, f=100Hz, T_j=125^\circ C$ )	di/dt	50	$A/\mu s$
Peak gate current ( $t_p=20\mu s, T_j=125^\circ C$ )	$I_{GM}$	1.2	A
Average gate power dissipation ( $T_j=125^\circ C$ )	$P_{G(AV)}$	0.2	W

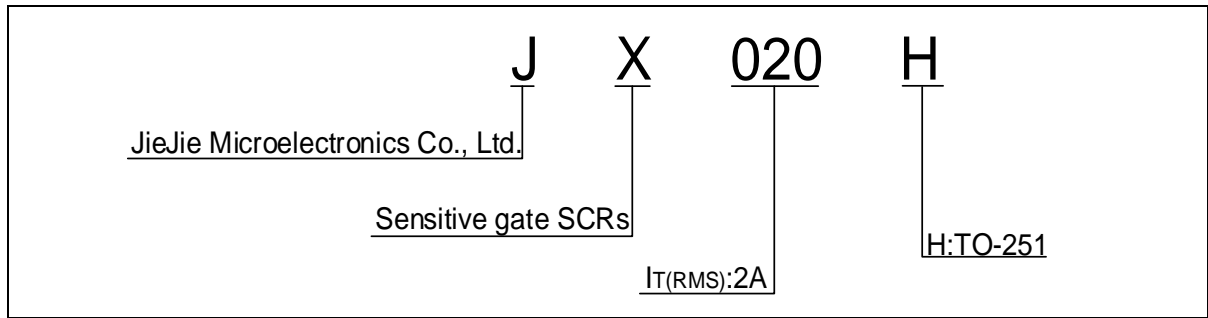
Peak gate power	$P_{GM}$	2	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive,off-state;FIG.7)	$V_{pp}$	0.5	kV

**NOTE 1:** Operating junction temperature  $T_j$  is up to 125 when a resistor 1k is connected between Gate and Cathode. Without this resistor, the  $T_j$  is up to 110 only.

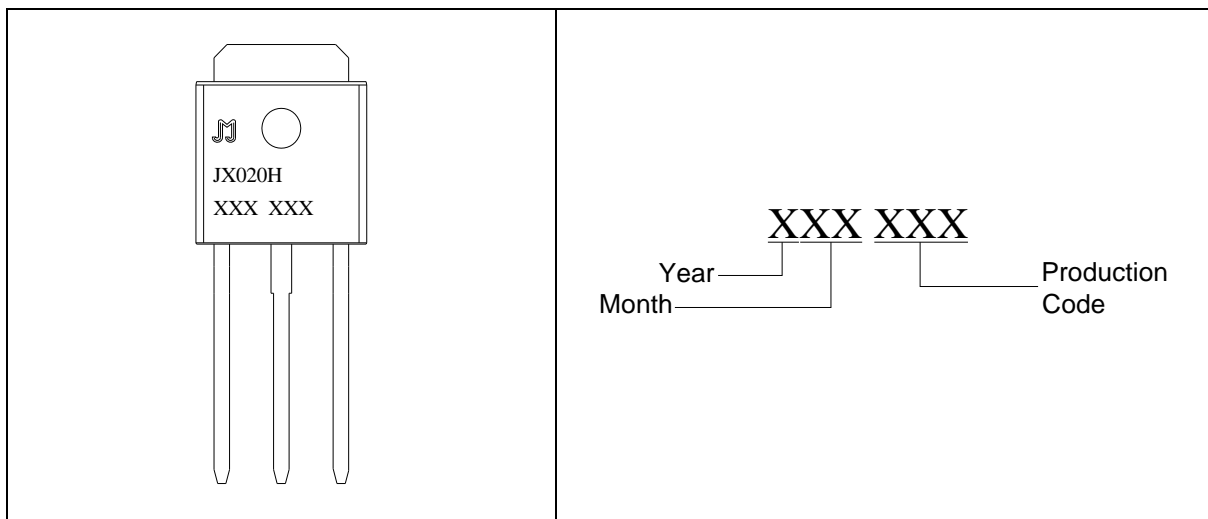
**ELECTRICAL CHARACTERISTICS** ( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V R_L=33$	-	50	200	$\mu A$
$V_{GT}$		-	0.6	0.8	V
$V_{GD}$	$V_D=V_{DRM} T_j=125$	0.2	-	-	V
 $I_L$	$I_G=1.2 I_{GT}$	-	-	6	mA
$I_H$	$I_T=0.05A$	-	-	5	mA
$dV/dt$	$V_D=400V T_j=125 R_k=1k$ $V_D$	20	-	-	V/ $\mu s$

ORDERING INFORMATION



MARKING

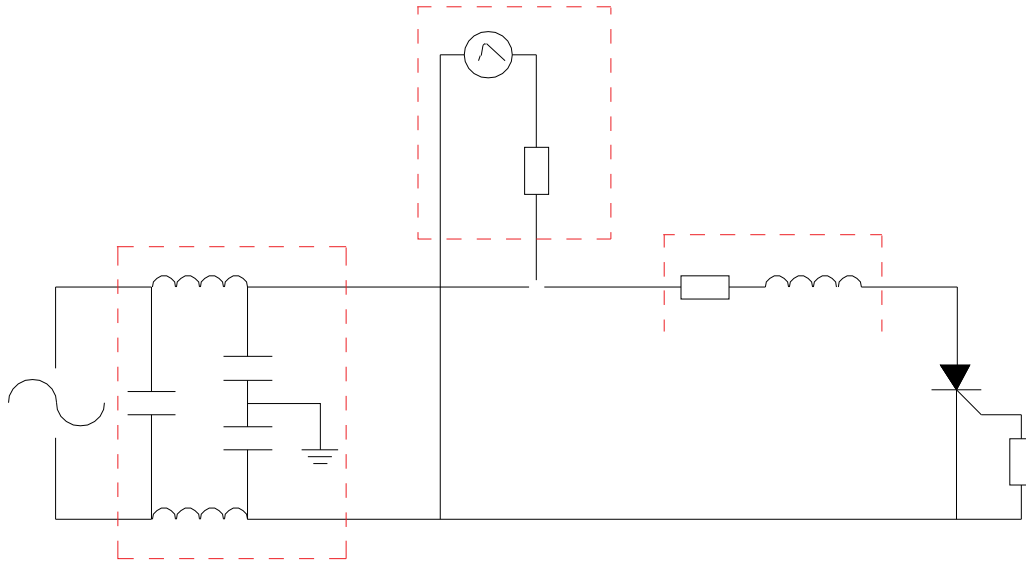


**FIG.1:** Maximum power dissipation versus RMS on-state current



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

FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.





**JX020H**

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