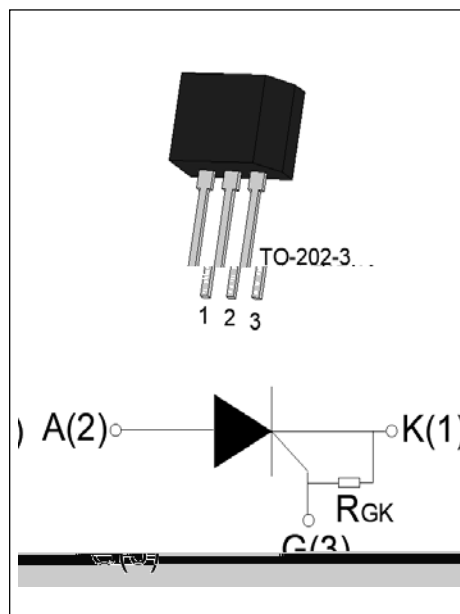




The JR0405S3 SCR with the parallel resistor between Gate and Cathode,  $R_{GK}$ , is especially recommended for use on straight hair, igniter, anion generator, etc. Package TO-202-3 is RoHS compliant.

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT}$	200	A



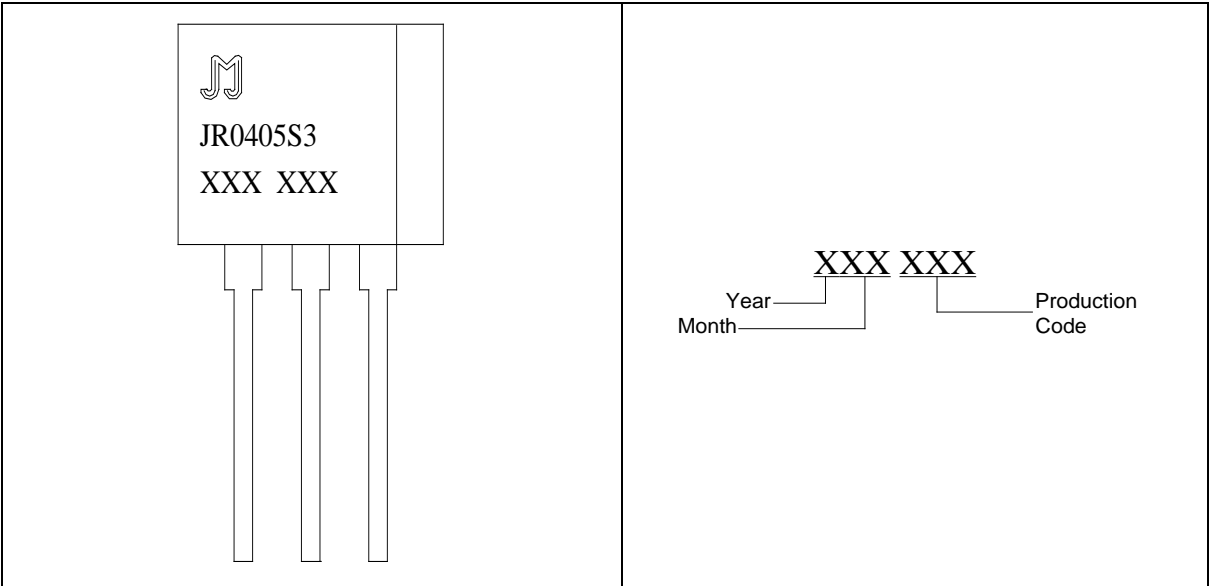
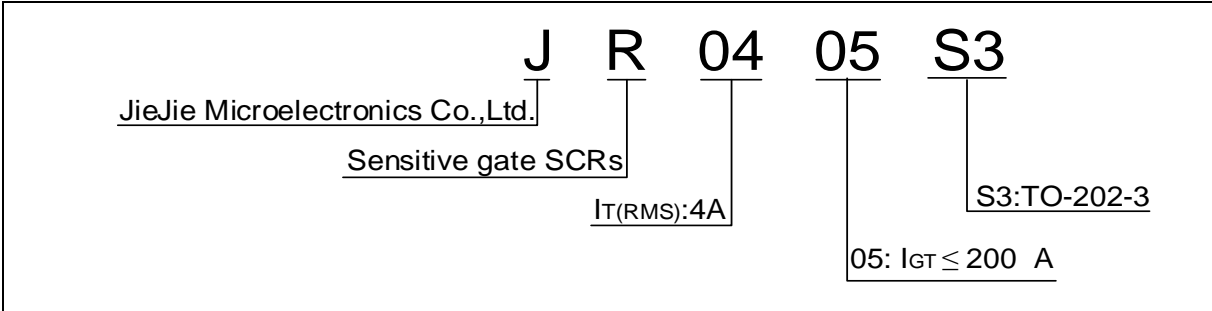
Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	°C
Operating junction temperature range	$T_j$	-40-125 <sup>①</sup>	°C
Repetitive peak off-state voltage ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	600	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	600	V
Average on-state current ( $T_c \leq 83^\circ\text{C}$ )	$I_{T(AV)}$	2.5	A
RMS on-state current ( $T_c \leq 83^\circ\text{C}$ )	$I_{T(RMS)}$	4	A
Non repetitive surge peak on-state current ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	40	A
Non repetitive surge peak on-state current ( $t_p=8.3\text{ms}$ , $T_j=25^\circ\text{C}$ )		44	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	8	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ )	$di/dt$	50	A/s
Peak gate current ( $t_p=20 \mu\text{s}$ , $T_j=125^\circ\text{C}$ )	$I_{GM}$	2	A
Average gate power dissipation ( $T_j=125^\circ\text{C}$ )	$P_{G(AV)}$	0.5	W

Peak gate power	$P_{GM}$	5	W
Peak pulse voltage ( $T_j=25^{\circ}C$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	0.5	kV

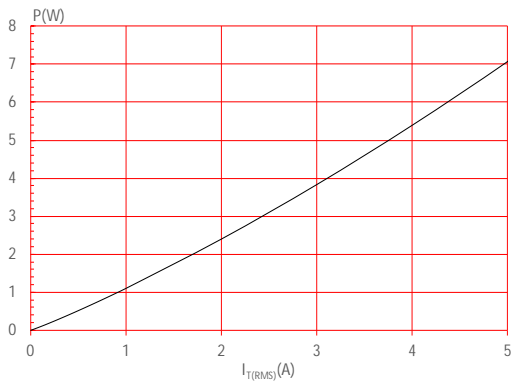
**NOTE 1:** When we parallel connect a 1K resistor between Gate and Cathode, the  $T_j$  can reach  $125^{\circ}C$ ; if without this resistor, the  $T_j$  only can reach  $110^{\circ}C$ .

( $T_j=25^{\circ}C$  unless otherwise specified)

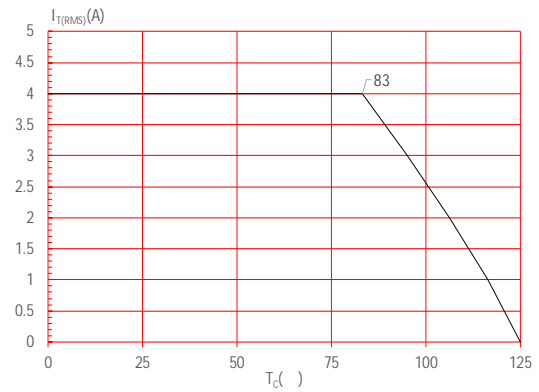
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V R_L=33$	-	50	200	A
$V_{GT}$		-	0.6	0.8	V
$V_{GD}$	$V_D=V_{DRM} T_j=125^{\circ}C$	0.2	-	-	V 21.87 0MCID j



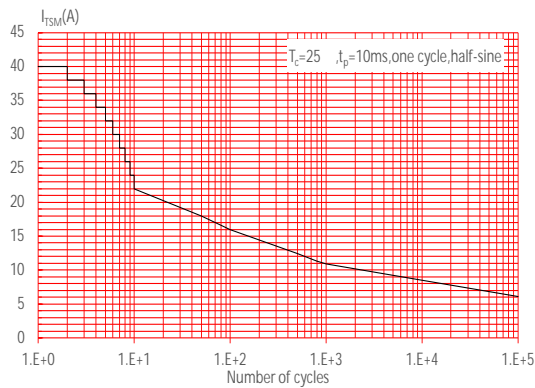
**FIG.1** Maximum power dissipation versus RMS on-state current



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



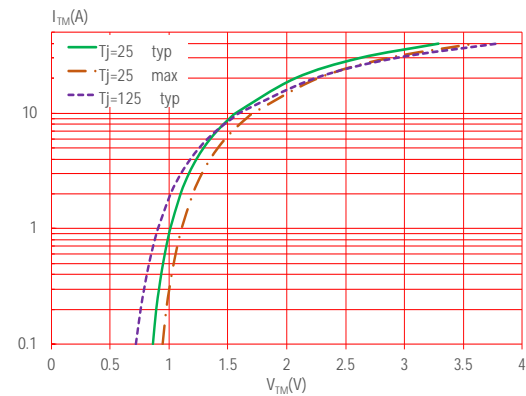
**FIG.3:** Surge peak on-state current versus number of cycles



**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10ms$ , and corresponding value of  $I^2t$  ( $dl/dt < 5$ )

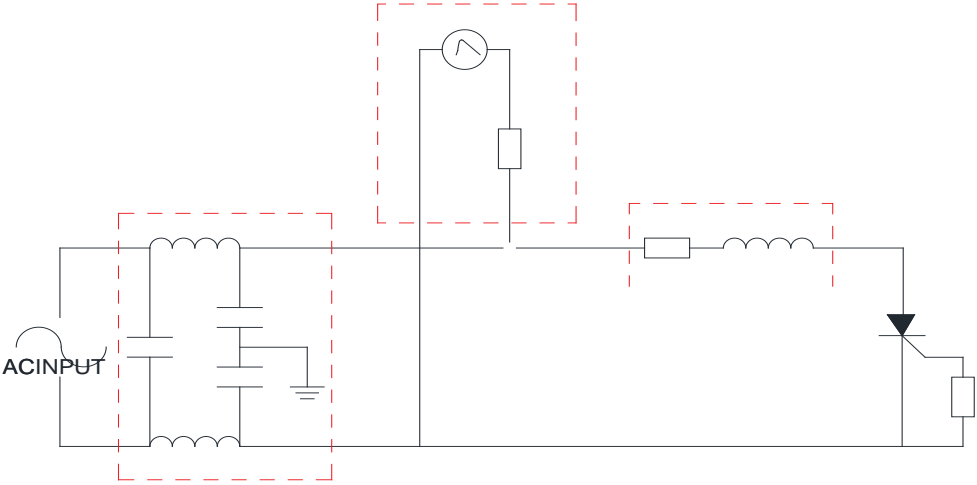


**FIG.4:** On-state characteristics



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

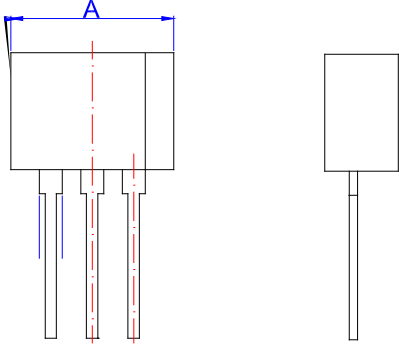
FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT( $\mu$ A)	Package	Base qty. (pcs)	Delivery mode
JR0405S3	600	$\leq 200$	TO-202-3	250	Bulk Pack

#### Document Revision History

Date	Revision	Changes
Apr.10, 2023	A.1.0	Last update



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			10.0			0.394
C						
D						
F			1.50			0.059
H						
J						
M						

Information furnished in this document is believed to be accurate and reliable.  
However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the