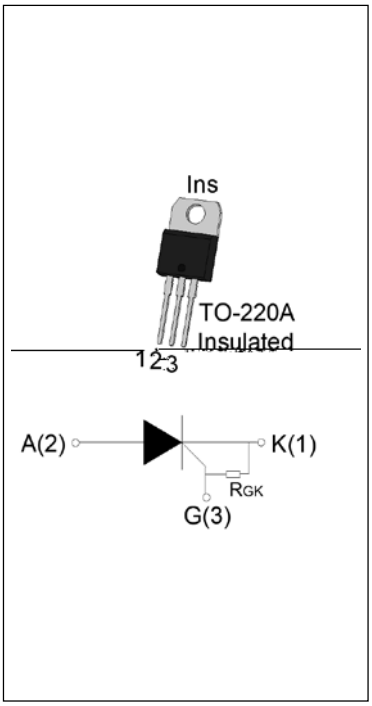
JR0805A 8A SCR

Rev.A.1.0

The JR0805A SCR with the parallel resistor between Gate and Cathode, R_{GK}=10~80kΩ is especially recommended for use on straight hair, igniter, anion generator, etc. From all three terminals to external heatsink, JR0805A provides a rated insulation voltage of 2500 V_{RMS} ,complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



Symbol	Value	Unit
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	600	V
I_{GT}	≤200	μA

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)	V_{DRM}	600	V
Repetitive peak reverse voltage (T_j=25)	V_{RRM}	600	V
Average on-state current (T_C 95)	$I_{T(AV)}$	5	A
RMS on-state current (T_C 95)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (t_p=10ms , T_j=25)	I_{TSM}	80	A
Non repetitive surge peak on-state current (t_p=8.3ms , T_j=25)		88	
I^2t value for fusing (t_p=10ms , T_j=25)	I^2t	32	A^2s
Critical rate of rise of on-state current (I_G=2 I_{GT} , f=100Hz , T_j=125)	dI/dt	50	A/μs
Peak gate current (t_p=20μs, T_j=125)	I_{GM}	4	A
Average gate power dissipation (T_j=125)	$P_{G(AV)}$	1	W

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

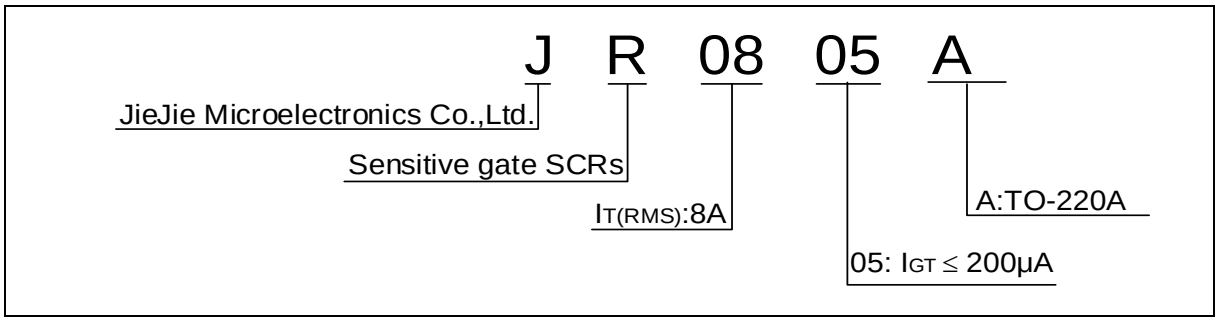
NOTE 1: When we parallel connect a 1K resistor between Gate and Cathode, the T_j can reach 125 ; if without this resistor, the T_j only can reach 110 .

(T_j=25 unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{GT}	V_D=12V R_L=33Ω	-	-	200	μA
V_{GT}		-	-	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=0.1A	-	-	5	mA
dV/dt	V_D=400V T_j=125 R_{GK}=1KΩ	50	-	-	V/μs
	V_D=400V T_j=125 R_{GK}=220Ω	250	-	-	
t_{on}	I_G=10mA I_A=20mA I_R=2mA T_j=25	-	2	-	μs
t_{off}		-	50	-	

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=16A t_p=380μs	T_j=25	1.55	V
V_{TO}	Threshold voltage	T_j=125	0.79	V
R_D	Dynamic resistance	T_j=125	0.02	Ω
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25	5	μA
I_{RRM}		T_j=125	0.5	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	2.8	/W
$R_{th(j-a)}$	junction to ambient (DC)	55	/W


J R 08 05 A
JieJie Microelectronics Co.,Ltd.
Sensitive gate SCRs
IT(RMS):8A
A:TO-220A
05: IGT ≤ 200μA

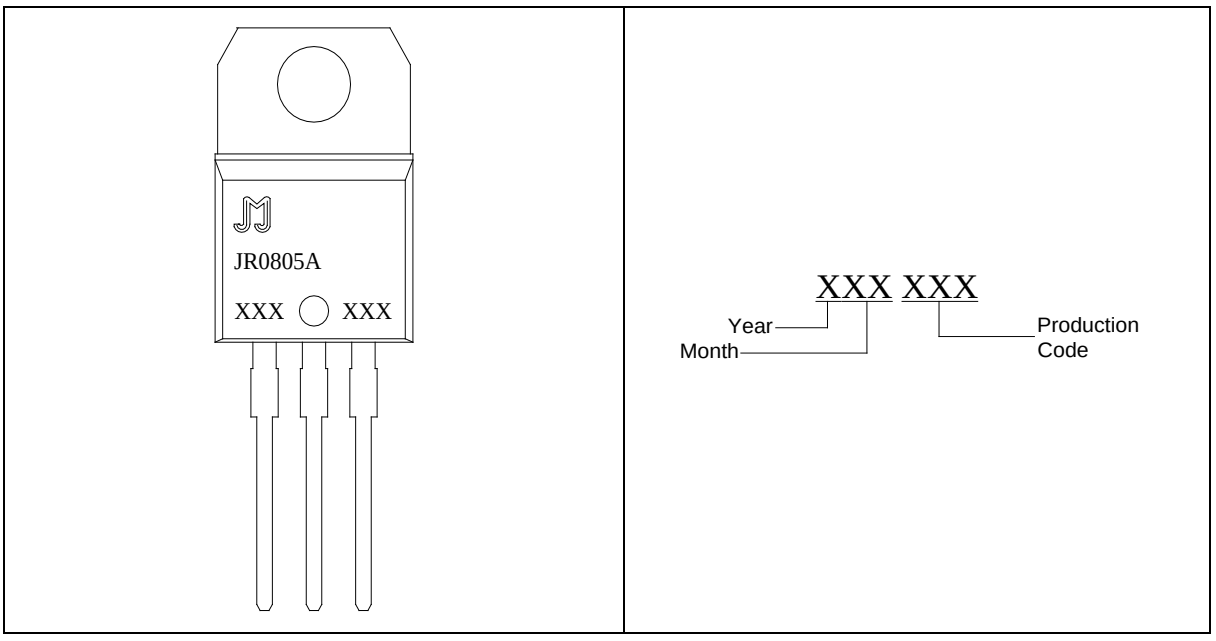

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FIG.1 Maximum power dissipation versus RMS on-state current

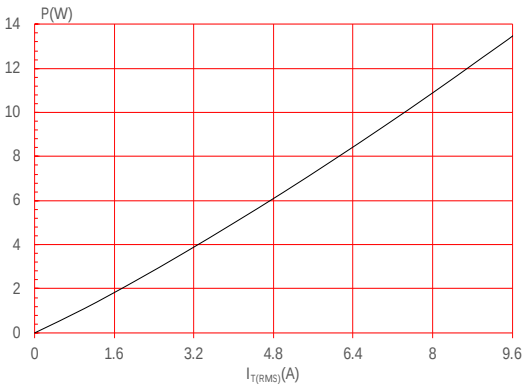


FIG.2: RMS on-state current versus case temperature

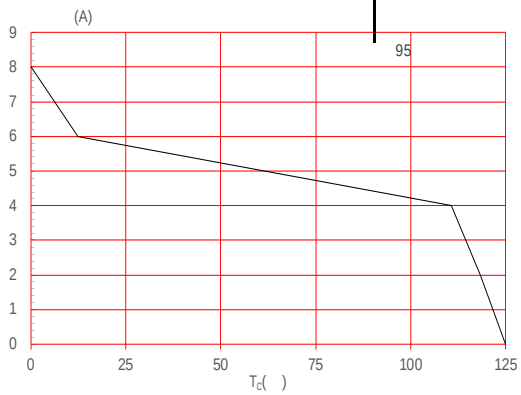
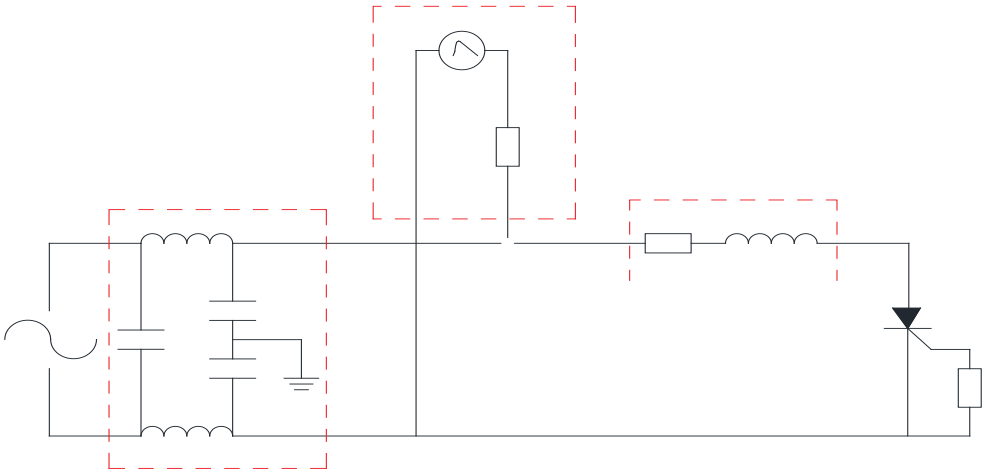


FIG.3: Surge peak on-state current versus number of cycles

FIG.4: On-state characteristics

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



Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT)	Package	Base qty. (pcs)	Delivery mode
JR0805A	600	200	TO-220A	50	Tube

Document Revision History

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