



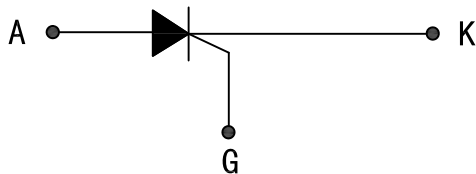
## JX008 Series 0.8A SENSITIVE SCRs

### DESCRIPTION:

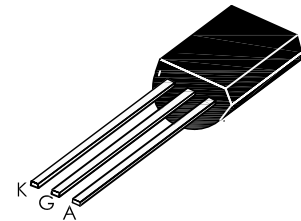
Highly sensitive triggering levels, the JX008 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

### MAIN FEATURES

| Symbol            | Value      | Unit    |
|-------------------|------------|---------|
| $I_T(AV)$         | 0.8        | A       |
| $V_{DRM}/V_{RRM}$ | 600        | V       |
| $I_{GT}$          | $\leq 200$ | $\mu A$ |



TO-92



### ABSOLUTE MAXIMUM RATINGS

| Parameter                                                        |                                 | Symbol      | Value        | Unit        |
|------------------------------------------------------------------|---------------------------------|-------------|--------------|-------------|
| Storage junction temperature range                               |                                 | $T_{stg}$   | - 40 to +150 | $^{\circ}C$ |
| Operating junction temperature range                             |                                 | $T_j$       | - 40 to +110 | $^{\circ}C$ |
| 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           |
| RMS on-state current (180 conduction angle)                      | $T_c=77^{\circ}C$               | $I_T(RMS)$  | 0.8          | A           |
| Average on-state current (180 conduction angle)                  | $T_c=77^{\circ}C$               | $I_T(AV)$   | 0.5          | A           |
| Non repetitive surge peak on-state current ( $T_j=25^{\circ}C$ ) | $t_p=10ms$                      | $I_{TSM}$   | 9            | A           |
|                                                                  | $t_p=8.3ms$                     |             | 10           | A           |
| $I^2t$ Value for fusing                                          | $t_p=10ms$                      | $I^2t$      | 0.415        | $A^2s$      |
| Peak gate current                                                | $t_p=20\mu s, T_j=110^{\circ}C$ | $I_{GM}$    | 0.2          | A           |
| Average gate power dissipation                                   | $T_j=110^{\circ}C$              | $P_{G(AV)}$ | 0.1          | W           |

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

| Symbol    | Test Condition                                                                         |                           | JX008 |      |      | Unit       |
|-----------|----------------------------------------------------------------------------------------|---------------------------|-------|------|------|------------|
|           |                                                                                        |                           | Min.  | Typ. | Max. |            |
| $I_{GT}$  | $V_D=6V \quad R_L=100\Omega$                                                           |                           | -     | 40   | 200  | $\mu A$    |
| $V_{GT}$  |                                                                                        |                           | -     | 0.6  | 0.8  | V          |
| $V_{GD}$  | $V_D=V_{DRM} \quad R_L=3.3K\Omega \quad R_{GK}=1K\Omega \quad T_j=110^{\circ}\text{C}$ |                           | 0.2   | -    | -    | V          |
| $I_L$     | $I_G=1mA \quad R_{GK}=1K\Omega$                                                        |                           | -     | -    | 6    | mA         |
| $I_H$     | $I_T=50mA \quad R_{GK}=1K\Omega$                                                       |                           | -     | -    | 5    | mA         |
| $V_{TM}$  | $I_T=1A \quad t_p=380\mu S$                                                            | $T_j=25^{\circ}\text{C}$  | -     | 1.3  | 1.7  | V          |
| $dV/dt$   | $V_D=67\%V_{DRM} \quad R_{GK}=1K\Omega$                                                | $T_j=110^{\circ}\text{C}$ | 10    | -    | -    | V/ $\mu s$ |
| $I_{DRM}$ | $V_D=V_{DRM} \quad R_{GK}=1K\Omega$                                                    |                           | -     | -    | 5    | $\mu A$    |
|           |                                                                                        |                           |       |      | 0.1  | mA         |
| $I_{RRM}$ | $V_R=V_{RRM} \quad R_{GK}=1K\Omega$                                                    |                           | -     | -    | 5    | $\mu A$    |
|           |                                                                                        |                           |       |      | 0.1  | mA         |

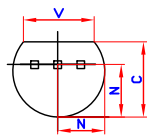
## THERMAL RESISTANCES

| Symbol        | Parameter        |       | Value | Unit                 |
|---------------|------------------|-------|-------|----------------------|
| $R_{th}(J-C)$ | Junction to Case | TO-92 | 75    | $^{\circ}\text{C}/W$ |

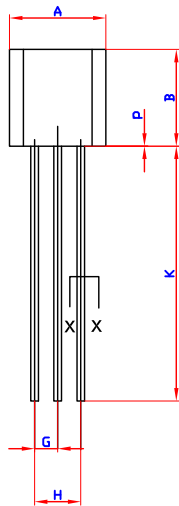
## ORDERING INFORMATION

|                                                                                  |  |                                                                                               |                                                                                                                                                                                                |
|----------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div>J</div> <div>X</div> <div>008</div> <div>-</div> <div>05</div> </div> |  | <div> <div>Jie Jie Microelectronics<br/>CO.,Ltd</div> <div>Highly Sensitive SCRs</div> </div> | <div> <div>IGT Class:<br/>03:10-30<math>\mu A</math> 05:20-50<math>\mu A</math><br/>06:30-60<math>\mu A</math> 08:50-80<math>\mu A</math></div> <div><math>I_{T(RMS)}=0.8A</math></div> </div> |
|----------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

PACKAGE MECHANICAL DATA



SECTION X-X



TO-92(TO-226AA)

| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 4.45        | 5.2   | 0.175  | 0.205 |
| B    | 4.32        | 5.33  | 0.170  | 0.210 |
| C    | 3.18        | 4.19  | 0.125  | 0.165 |
| D    | 0.407       | 0.533 | 0.016  | 0.021 |
| G    | 1.15        | 1.39  | 0.045  | 0.055 |
| H    | 2.42        | 2.66  | 0.095  | 0.105 |
| J    | 0.39        | 0.50  | 0.015  | 0.020 |
| K    | 12.70       | -     | 0.500  | -     |
| N    | 2.04        | 2.66  | 0.080  | 0.105 |
| P    | -           | 2.54  | -      | 0.100 |
| V    | 3.43        | -     | 0.135  | -     |

FIG.1: Maximum power dissipation versus RMS on-state current(full cycle)

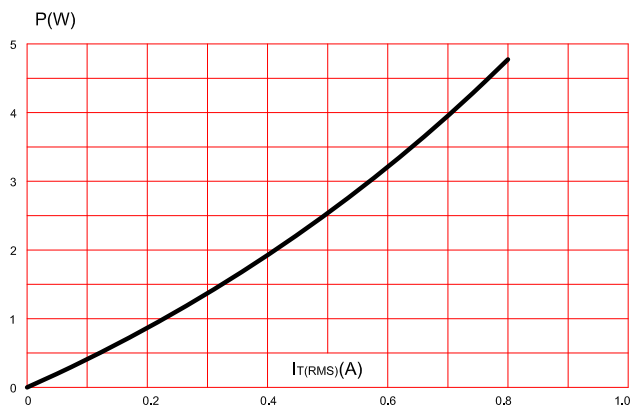


FIG.2: RMS on-state current versus case temperature(full cycle)

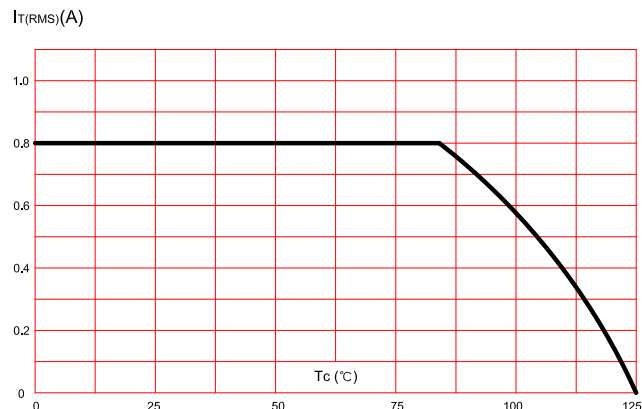


FIG.3: On-state characteristics (maximum values)

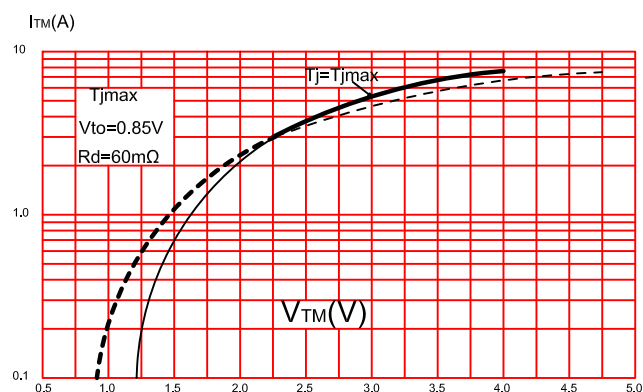


FIG.4: Surge peak on-state current versus number of cycles.

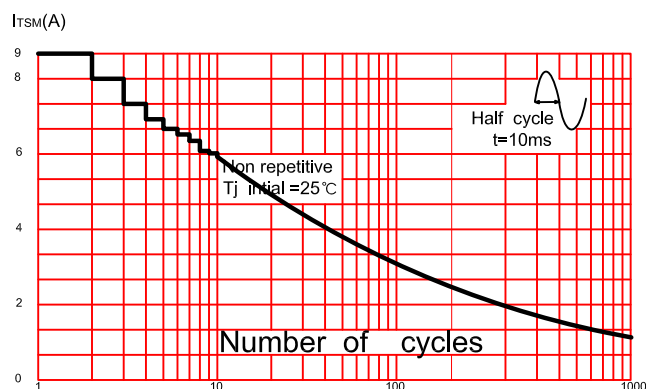
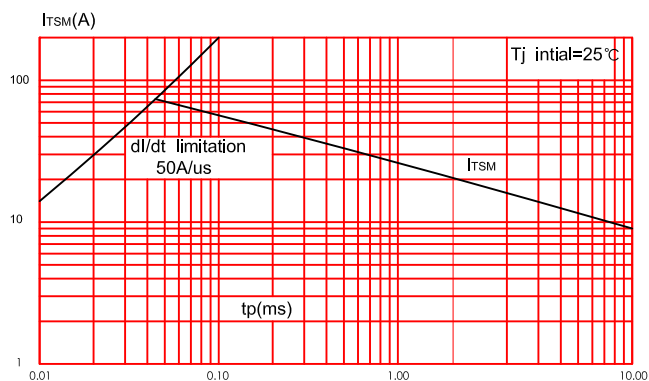
FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10ms$ .

FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).

