

## APPLICATIONS

Mesa glass passivation technology; Multilayer metal electrode on the back; Have high blocking voltage and high temperature stability

cleaner、Electric tools such as motor speed controller;

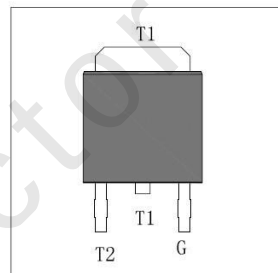
Solid state relay;

Heating controller (temperature);

Other phase control circuit

## ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

| SYMBOL             | PARAMETER                                                                              | MIN             | UNIT                 |
|--------------------|----------------------------------------------------------------------------------------|-----------------|----------------------|
| $V_{\text{DRM}}$   | Repetitive peak off-state voltage                                                      | 650             | V                    |
| $V_{\text{RRM}}$   | Repetitive peak reverse voltage                                                        | 650             | V                    |
| $I_{\text{T(AV)}}$ | On-state current $T_c=80^{\circ}\text{C}$                                              | 7.5             | A                    |
| $I_{\text{TSM}}$   | Surge non-repetitive on-state current<br>$T_P=10\text{ms}$                             | 80              | A                    |
| $P_{\text{G(AV)}}$ | Average gate power                                                                     | 1               | W                    |
| $di/dt$            | Repetitive rate of rise of on-state current after triggering $T_j=125^{\circ}\text{C}$ | 50              | A/us                 |
| $I^2t$             | $I^2t$ for fusing $t = 10 \text{ ms}$                                                  | 64              | $\text{A}^2\text{S}$ |
| $I_{\text{GM}}$    | Peak gate current $t_p=20\mu\text{s}$ , $T_j=125^{\circ}\text{C}$                      | 4               | A                    |
| $T_j$              | Operating Junction temperature                                                         | $-40 \sim +125$ | $^{\circ}\text{C}$   |
| $T_{\text{stg}}$   | Storage temperature                                                                    | $-40 \sim +150$ | $^{\circ}\text{C}$   |



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

| SYMBOL               | PARAMETER                                    | CONDITIONS                                                 | MIN | TYP. | MAX | UNIT                 |
|----------------------|----------------------------------------------|------------------------------------------------------------|-----|------|-----|----------------------|
| $I_{\text{RRM}}$     | Repetitive peak reverse current              | $V_{\text{RR}}=500\text{V}$ , $T_j=125^{\circ}\text{C}$    |     |      | 1   | mA                   |
|                      |                                              | $V_{\text{RR}}=500\text{V}$ , $T_j=25^{\circ}\text{C}$     |     |      | 5   | $\mu\text{A}$        |
| $I_{\text{DRM}}$     | Repetitive peak off-state current            | $V_{\text{DR}}=500\text{V}$ , $T_j=125^{\circ}\text{C}$    |     |      | 1   | mA                   |
|                      |                                              | $V_{\text{DR}}=500\text{V}$ , $T_j=25^{\circ}\text{C}$     |     |      | 5   | $\mu\text{A}$        |
| $V_{\text{TM}}$      | On-state voltage                             | $I_{\text{TM}}=24\text{A}$                                 |     |      | 1.5 | V                    |
| $I_{\text{GT}}$      | Gate-trigger current                         | $V_{\text{D}}=12\text{V}$ ; $R_{\text{L}}=100\Omega$       |     |      | 6   | mA                   |
| $V_{\text{GT}}$      | Gate-trigger voltage                         | $V_{\text{D}}=12\text{V}$ ; $R_{\text{L}}=100\Omega$       |     |      | 1.5 | V                    |
| $I_{\text{H}}$       | Holding current                              | $I_{\text{T}}=0.5\text{A}$                                 |     |      | 30  | mA                   |
| $I_{\text{L}}$       | Latching current                             | $I_{\text{G}}=1.2I_{\text{GT}}$                            |     | 60   | 100 | mA                   |
| $dv/dt$              | Critical rate of rise of off-state voltage   | $V_{\text{D}}=2/3V_{\text{DRM}}$ $T_j=125^{\circ}\text{C}$ | 200 | 1000 |     | V/us                 |
| $R_{\text{th(j-c)}}$ | Thermal resistance junction to mounting base | in free air                                                |     | 1.75 |     | $^{\circ}\text{C/W}$ |

外形尺寸图 / Package Dimensions

