

### Features:

- Isolated mounting base 2500V~
- Pressure contact technology with Increased power cycling capability
- Space and weight savings

### Typical Applications

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$       **55A**  
 $V_{DRM}/V_{RRM}$     **600~1800V**  
 $I_{TSM}$              **$1.50A \times 10^3$**   
 $I^2t$                  **$11.3A^2 \cdot S \cdot 10^3$**



| SYMBOL                               | CHARACTERISTIC   | TEST CONDITIONS   | T <sub>J</sub> (°C) | VALUE |      |       | UNIT |
|--------------------------------------|--|---|---------------------|-------|------|-------|------|
|                                      |  |   |                     | Min   | Type | Max   |      |
| I <sub>T(AV)</sub>                   | Mean on-state current  | 180° half sine wave 50Hz<br>Single side cooled, T <sub>c</sub> =85°C  | 125                 |       |      | 55    | A    |
| I <sub>T(RMS)</sub>                  | RMS on-state current   |   | 125                 |       |      | 86    | A    |
| V <sub>DRM</sub><br>V <sub>RRM</sub> | Repetitive peak off-state voltage<br>Repetitive peak reverse voltage | V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms<br>V <sub>DSM</sub> &V <sub>RSM</sub> = V <sub>DRM</sub> &V <sub>RRM</sub> +100V<br>respectively | 125                 | 600   |      | 1800  | V    |
| I <sub>DRM</sub><br>I <sub>RRM</sub> | Repetitive peak current  | at V <sub>DRM</sub><br>at V <sub>RRM</sub>  | 125                 |       |      | 8     | mA   |
| I <sub>TSM</sub>                     | Surge on-state current   | 10ms half sine wave   | 125                 |       |      | 1.50  | KA   |
| I <sup>2</sup> t                     | I <sup>2</sup> T for fusing coordination                             | V <sub>R</sub> =60%V <sub>RRM</sub>   |                     |       |      |       | 11.3 |
| V <sub>TO</sub>                      | Threshold voltage  |   | 125                 |       |      | 0.85  | V    |
| r <sub>T</sub>                       | On-state slop resistance   |   |                     |       |      |       | 3.47 |
| V <sub>TM</sub>                      | Peak on-state voltage  | I <sub>TM</sub> =170A   | 25                  |       |      | 1.50  | V    |
| dv/dt                                | Critical rate of rise of off-state voltage                           | V <sub>DM</sub> =67%V <sub>DRM</sub>  | 125                 |       |      | 800   | V/μs |
| di/dt                                | Critical rate of rise of on-state current                            | Gate source 1.5A<br>t <sub>r</sub> ≤0.5μs Repetitive  | 125                 |       |      | 50    | A/μs |
| I <sub>GT</sub>                      | Gate trigger current   | V <sub>A</sub> =12V, I <sub>A</sub> =1A   | 25                  | 30    |      | 100   | mA   |
| V <sub>GT</sub>                      | Gate trigger voltage   |   |                     | 0.8   |      | 2.5   | V    |
| I <sub>H</sub>                       | Holding current  |   |                     | 20    |      | 120   | mA   |
| V <sub>GD</sub>                      | Non-trigger gate voltage   | V <sub>DM</sub> =67%V <sub>DRM</sub>  | 125                 | 0.2   |      |       | V    |
| R <sub>th(j-c)</sub>                 | Thermal resistance<br>Junction to case                               | Single side cooled  |                     |       |      | 0.530 | °C/W |
| R <sub>th(c-h)</sub>                 | Thermal resistance<br>case to heatsink                               | Single side cooled  |                     |       |      | 0.2   | °C/W |
| V <sub>iso</sub>                     | Isolation voltage  | 50Hz, R.M.S, t=1min, liso:1mA(MAX)  |                     | 2500  |      |       | V    |
| F <sub>m</sub>                       | Thermal connection torque(M5)  |   |                     |       |      | 4.0   | N·m  |
|                                      | Mounting torque(M6)  |   |                     |       |      | 6.0   | N·m  |
| T <sub>stg</sub>                     | Stored temperature   |   |                     | -40   |      | 140   | °C   |
| W <sub>t</sub>                       | Weight   |   |                     |       |      | 115   | g    |
| Outline                              | 215F3/223F3  |   |                     |       |      |       |      |

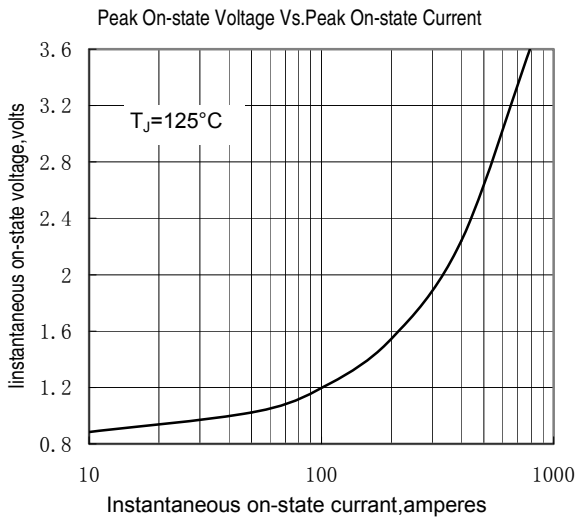


Fig.1

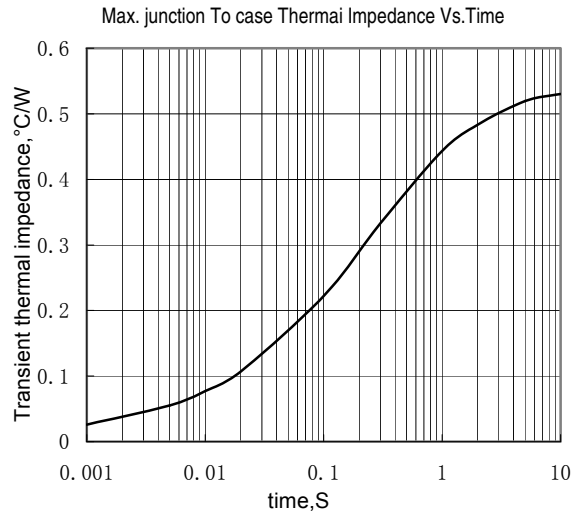


Fig.2

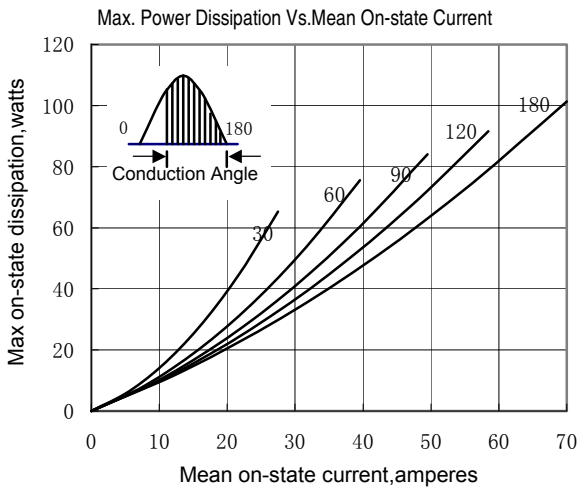


Fig.3

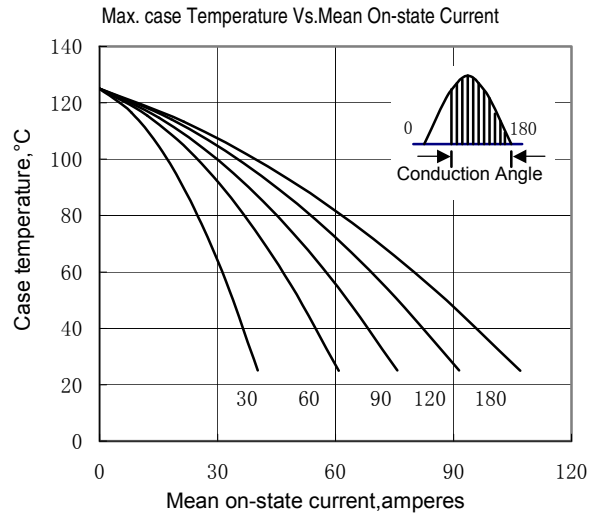


Fig.4

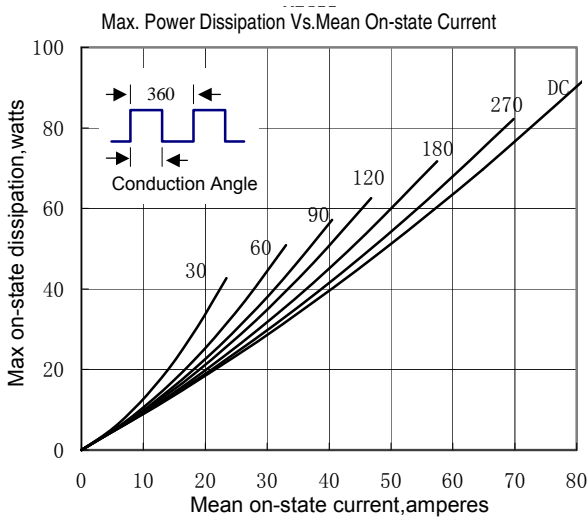


Fig.5

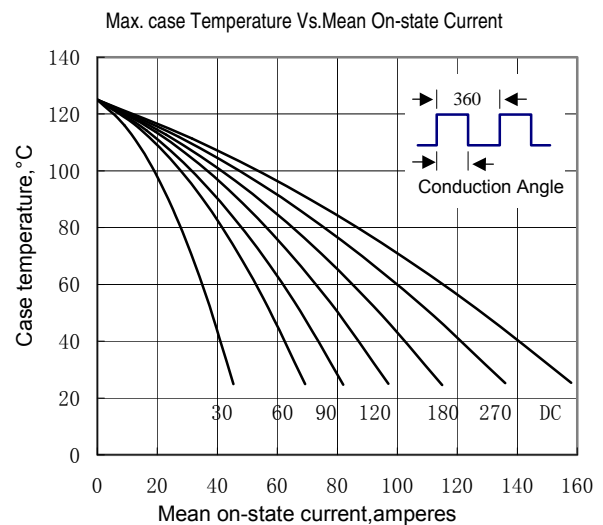


Fig.6

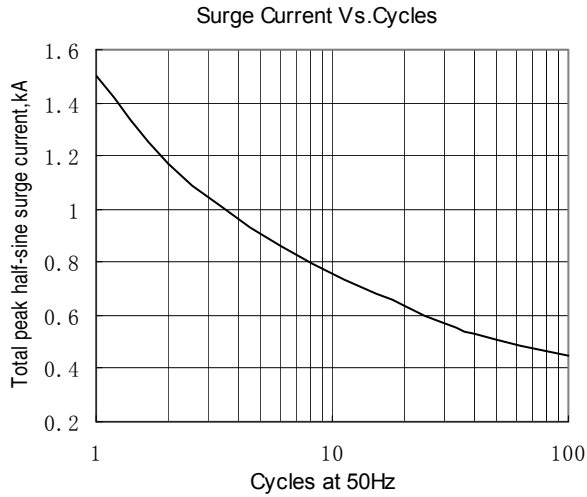


Fig.7

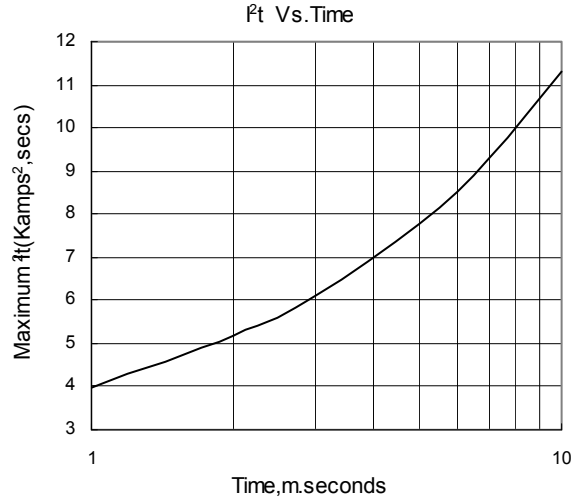


Fig.8

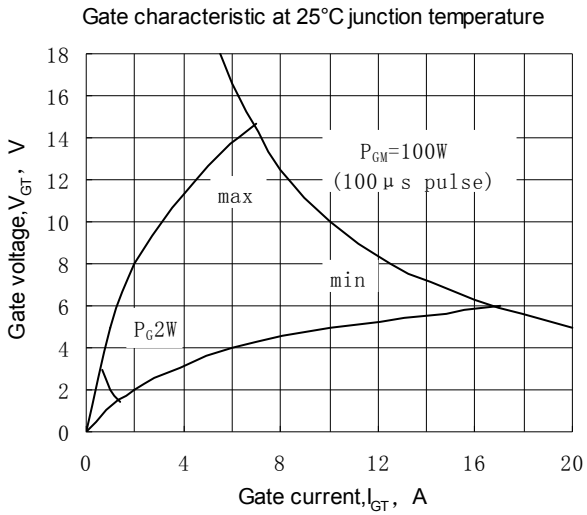


Fig.9

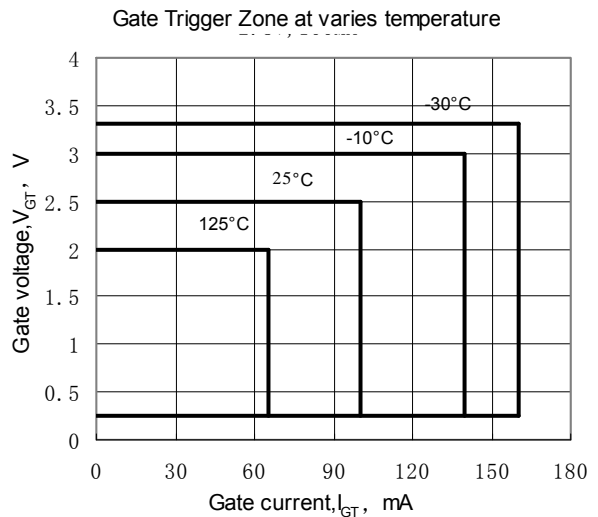


Fig.10

**Outline:**

