

### Features:

- Non-Isolated.Mounting base as common
- Pressure contact technology with increased power cycling capability
- Low on-state voltage drop

### Typical Applications

- Welding Power Supply
- Various DC Power supplies
- DC supply for PWM inverter

$I_{T(AV)}$  200 A  
 $V_{DRM}/V_{RRM}$  800~1800 V  
 $I_{TSM}$  5.2A  $\times 10^3$   
 $I^2t$  135 A<sup>2</sup> S  $\times 10^3$



| SYMBOL                 | CHARACTERISTIC   | TEST CONDITIONS  | $T_J(^{\circ}C)$ | VALUE |      |       | UNIT                             |
|------------------------|--|--|------------------|-------|------|-------|----------------------------------|
|                        |  |  |                  | Min   | Type | Max   |                                  |
| $I_{T(AV)}$            | Mean on-state current  | 180° half sine wave 50Hz<br>Single side cooled, $T_c=90^{\circ}C$                                | 125              |       |      | 200   | A                                |
| $I_{T(RMS)}$           | RMS on-state current   |  | 125              |       |      | 314   | A                                |
| $V_{DRM}$<br>$V_{RRM}$ | Repetitive peak off-state voltage<br>Repetitive peak reverse voltage | $V_{DRM} \& V_{RRM}$ tp=10ms<br>$V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$<br>respectively | 125              | 800   |      | 1800  | V                                |
| $I_{DRM}$<br>$I_{RRM}$ | Repetitive peak current  | at $V_{DRM}$<br>at $V_{RRM}$   | 125              |       |      | 20    | mA                               |
| $I_{TSM}$              | Surge on-state current   | 10ms half sine wave<br>$V_R=60\%V_{RRM}$   | 125              |       |      | 5.2   | KA                               |
| $I^2t$                 | $I^2T$ for fusing coordination                                       |  |                  |       |      | 135   | A <sup>2</sup> s*10 <sup>3</sup> |
| $V_{TO}$               | Threshold voltage  |  | 125              |       |      | 0.80  | V                                |
| $r_T$                  | On-state slop resistance   |  |                  |       |      | 1.15  | mΩ                               |
| $V_{TM}$               | Peak on-state voltage  | $I_{TM}=600A$  | 25               |       |      | 1.62  | V                                |
| $dv/dt$                | Critical rate of rise of off-state voltage                           | $V_{DM}=67\%V_{DRM}$   | 125              |       |      | 800   | V/μs                             |
| $di/dt$                | Critical rate of rise of on-state current                            | Gate source 1.5A<br>$t_r \leq 0.5\mu s$ Repetitive   | 125              |       |      | 100   | A/μs                             |
| $I_{GT}$               | Gate trigger current   | $V_A=12V$ , $I_A=1A$   | 25               | 30    |      | 150   | mA                               |
| $V_{GT}$               | Gate trigger voltage   |  |                  | 0.8   |      | 2.5   | V                                |
| $I_H$                  | Holding current  |  |                  | 20    |      | 100   | mA                               |
| $V_{GD}$               | Non-trigger gate voltage   | At 67% $V_{DRM}$   | 125              | 0.2   |      |       | V                                |
| $R_{th(j-c)}$          | Thermal resistance<br>Junction to case                               | Single side cooled   |                  |       |      | 0.130 | °C/W                             |
| $R_{th(c-h)}$          | Thermal resistance<br>case to heatsink                               | Single side cooled   |                  |       |      | 0.1   | °C/W                             |
| $F_m$                  | Thermal connection torque(M6)  |  |                  |       | 6.0  |       | N·m                              |
|                        | Mounting torque(M6)  |  |                  |       | 6.0  |       | N·m                              |
| $T_{stg}$              | Stored temperature   |  |                  | -40   |      | 125   | °C                               |
| $W_t$                  | Weight   |  |                  |       | 380  |       | g                                |
| Outline                |  | 213F4/210F2  |                  |       |      |       |                                  |

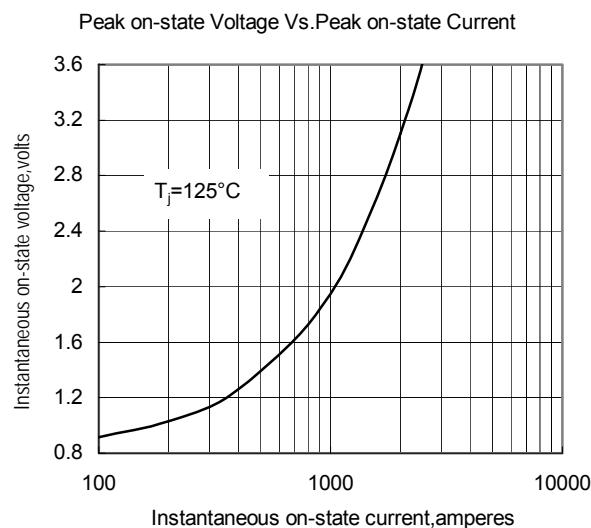


Fig.1

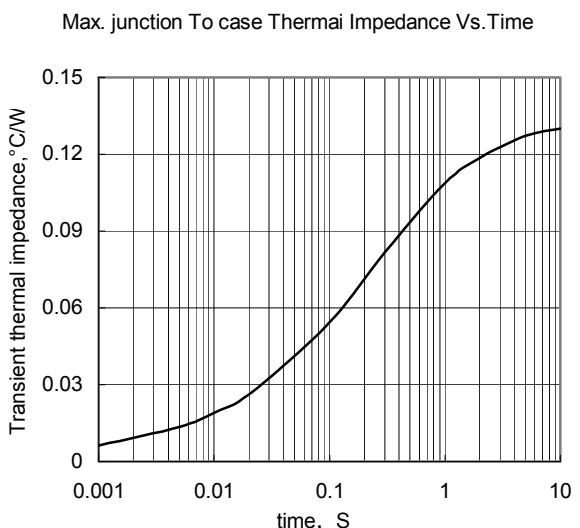


Fig.2

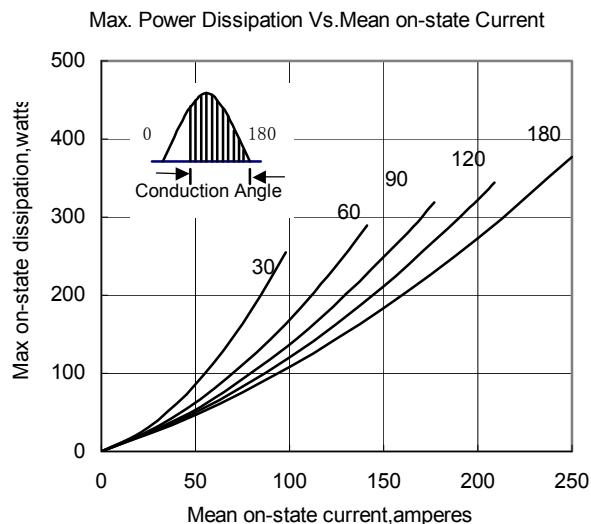


Fig.3

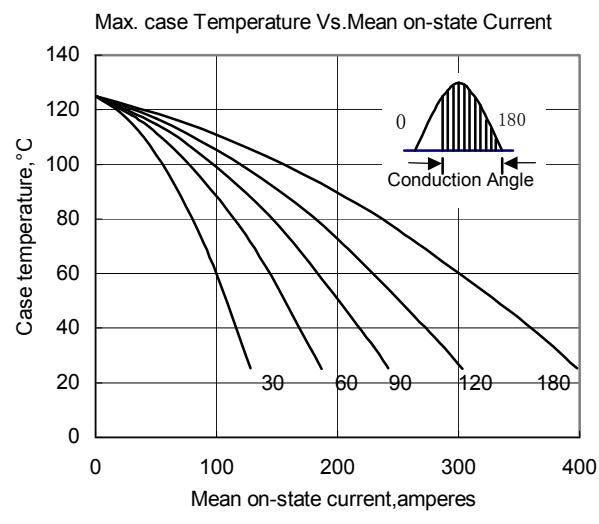


Fig.4

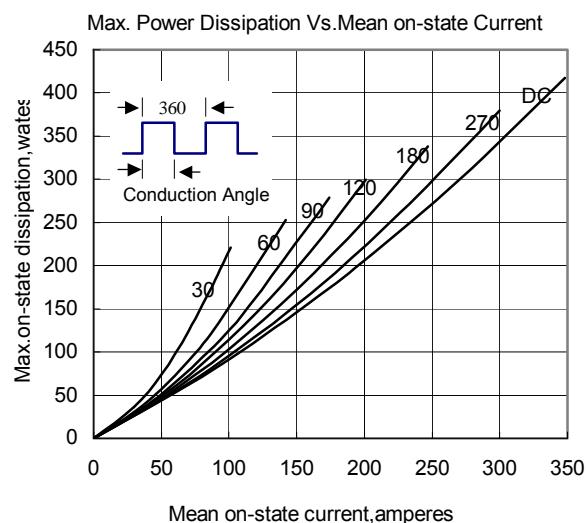


Fig.5

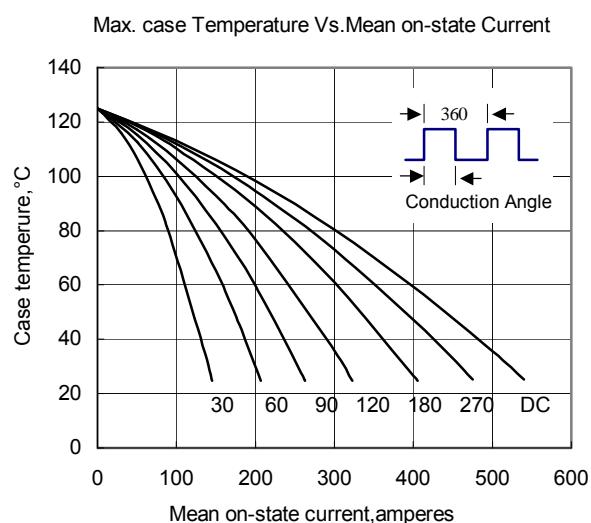


Fig.6

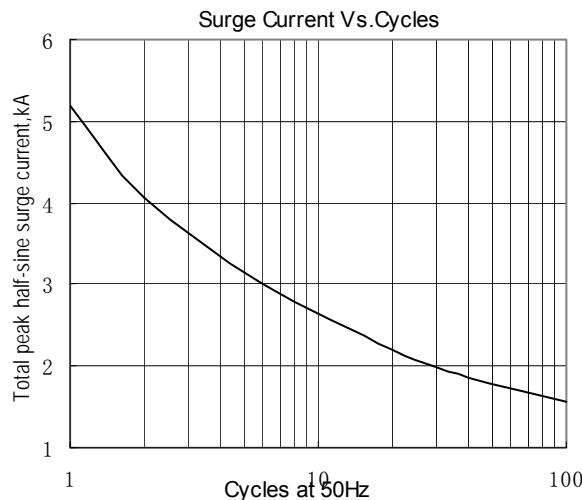


Fig.7

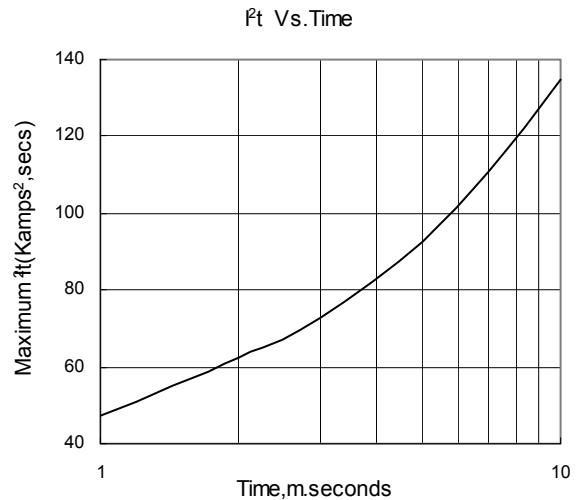


Fig.8

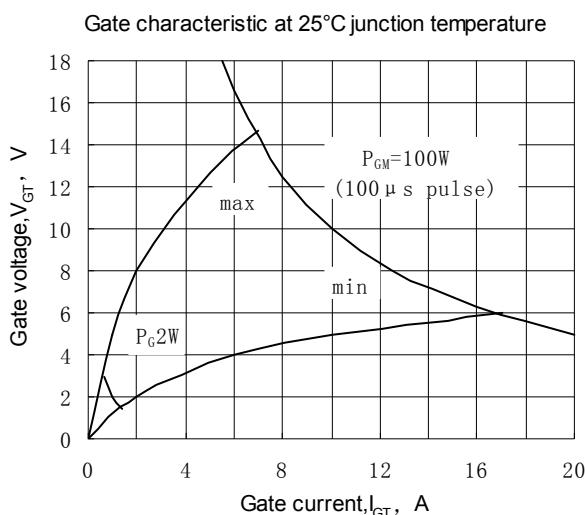


Fig.9

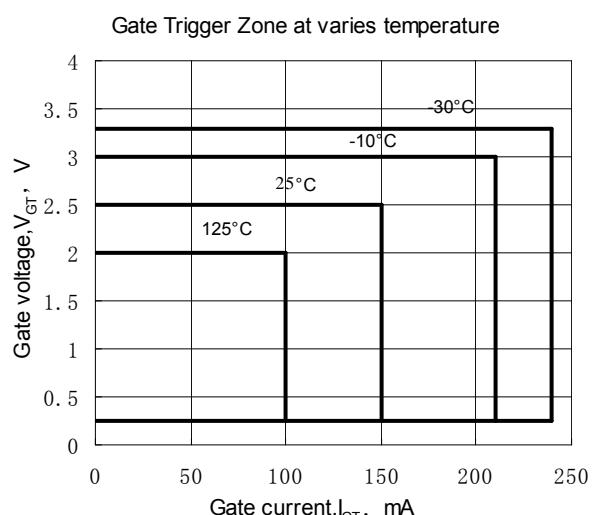
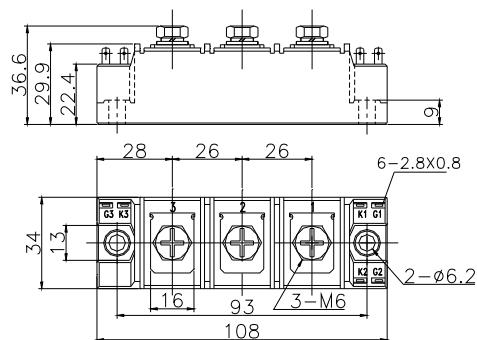


Fig.10

## Outline:



213F4

