

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

$I_{T(AV)}$ **500A**
 V_{DRM}/V_{RRM} **600~1800V**
 I_{TSM} **$14.5A \times 10^3$**
 I^2t **$1051A^2 S \times 10^3$**



| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | T _J (°C) | VALUE | | | UNIT |
|------------------------|--|---|---------------------|-------|------|-------|------|
| | | | | Min | Type | Max | |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Single side cooled, T _c =85°C | 125 | | | 500 | A |
| $I_{T(RMS)}$ | RMS on-state current | | 125 | | | 785 | A |
| V_{DRM} V_{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | V_{DRM} & V_{RRM} tp=10ms V_{DSM} & $V_{RSM} = V_{DRM}$ & $V_{RRM} + 100V$ respectively | 125 | 600 | | 1800 | V |
| I_{DRM} I_{RRM} | Repetitive peak current | at V_{DRM} at V_{RRM} | 125 | | | 35 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 14.5 | KA |
| I^2t | I^2t for fusing coordination | $V_R = 60\% V_{RRM}$ | | | | | 1051 |
| V_{TO} | Threshold voltage | | 125 | | | 0.80 | V |
| r_T | On-state slop resistance | | | | | | 0.34 |
| V_{TM} | Peak on-state voltage | $I_{TM} = 1500A$ | 25 | | | 1.44 | 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 $t_r \leq 0.5\mu s$ Repetitive | 125 | | | 100 | A/μs |
| I_{GT} | Gate trigger current | $V_A = 12V, I_A = 1A$ | 25 | 30 | | 200 | mA |
| V_{GT} | Gate trigger voltage | | | 1.0 | | 3.0 | V |
| I_H | Holding current | | | 20 | | 200 | mA |
| V_{GD} | Non-trigger gate voltage | $V_{DM} = 67\% V_{DRM}$ | 125 | 0.2 | | | V |
| $R_{th(j-c)}$ | Thermal resistance Junction to case | Single side cooled | | | | 0.065 | °C/W |
| $R_{th(c-h)}$ | Thermal resistance case to heatsink | Single side cooled | | | | 0.024 | °C/W |
| V_{iso} | Isolation voltage | 50Hz, R.M.S, t=1min, I _{iso} :1mA(MAX) | | 2500 | | | V |
| F_m | Thermal connection torque(M10) | | | | | 12.0 | N·m |
| | Mounting torque(M6) | | | | | 6.0 | N·m |
| T_{stg} | Stored temperature | | | -40 | | 125 | °C |
| W_t | Weight | | | | | 2040 | g |
| Outline | 414F3/416F3/408F3/410F3/417F2 | | | | | | |

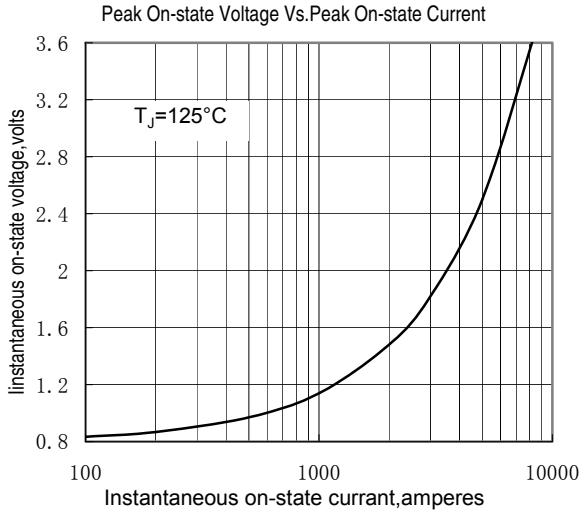


Fig.1

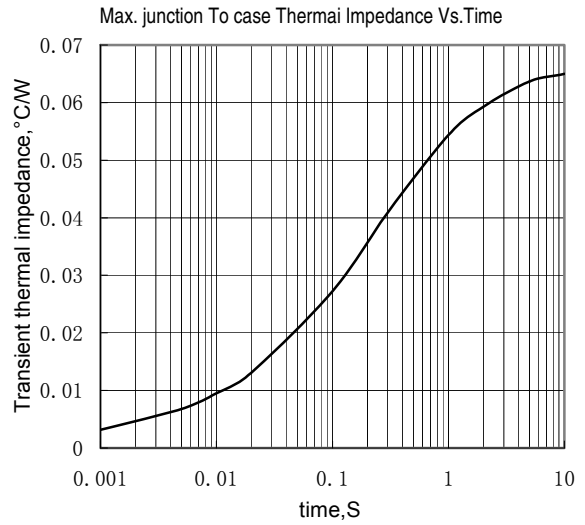


Fig.2

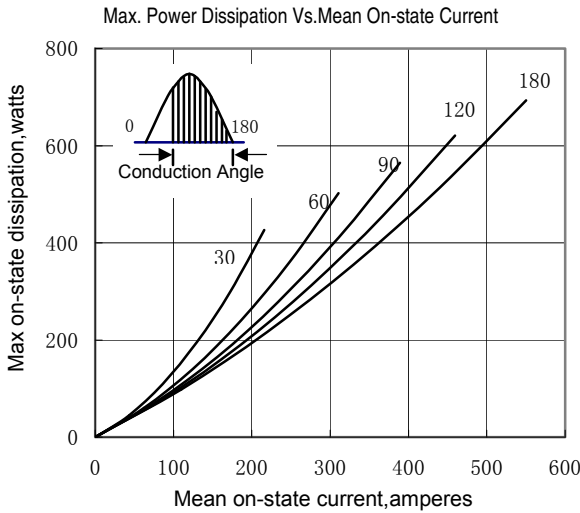


Fig.3

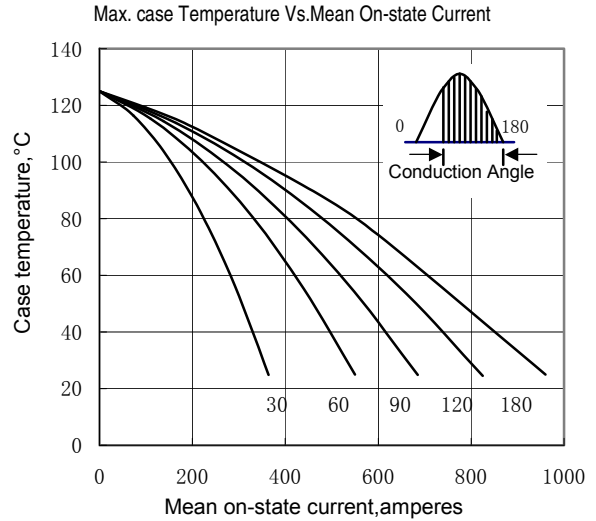


Fig.4

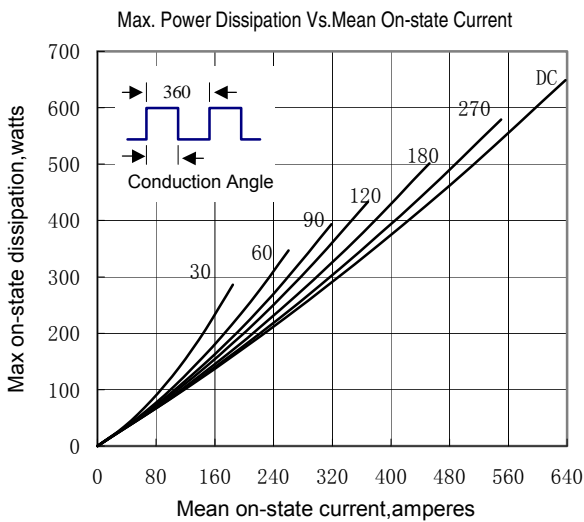


Fig.5

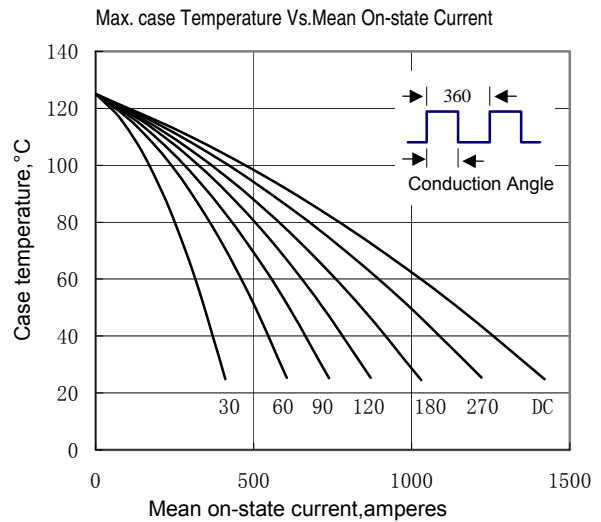


Fig.6

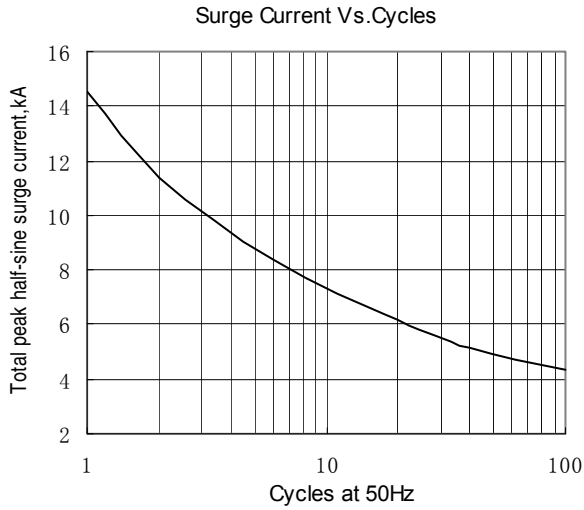


Fig.7

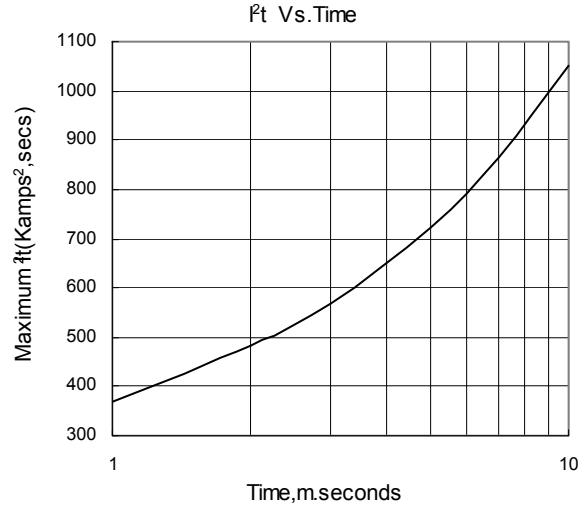


Fig.8

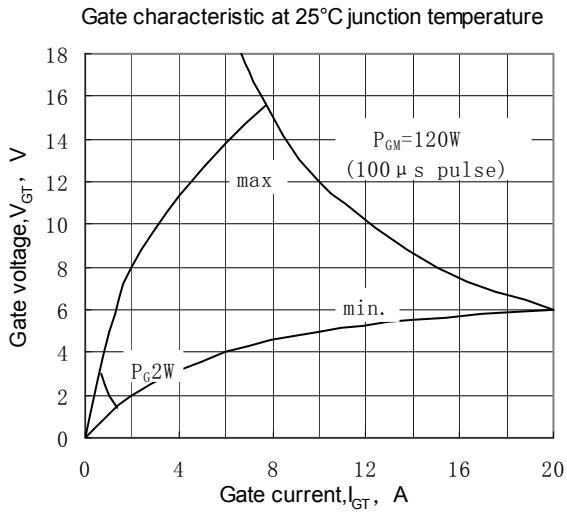


Fig.9

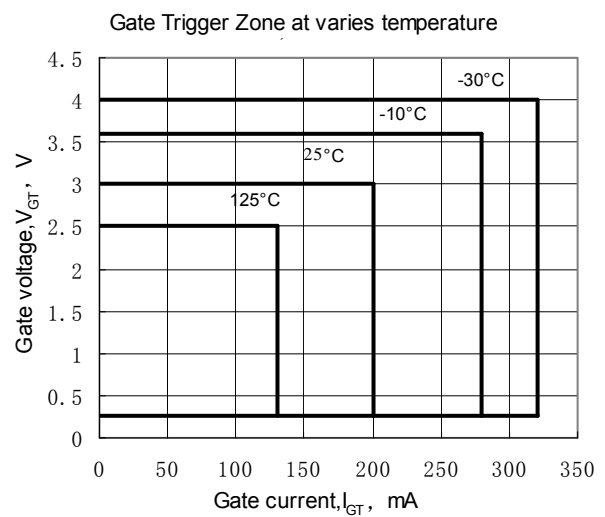


Fig.10

Outline:

