

Features :

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

Typical Applications

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

| V_{DSM}, V_{RSM} | V_{DRM}, V_{RRM} | Type |
|--------------------|--------------------|--------------|
| 900V | 800V | Mx1000TH80W |
| 1100V | 1000V | Mx1000TH100W |
| 1300V | 1200V | Mx1000TH120W |
| 1500V | 1400V | Mx1000TH140W |
| 1700V | 1600V | Mx1000TH160W |
| 1900V | 1800V | Mx1000TH180W |

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | $T_j(^{\circ}\text{C})$ | VALUE | | | UNIT |
|------------------------|--|--|-------------------------|-------|------|-------|----------------------------------|
| | | | | Min | Type | Max | |
| $I_{T(AV)}$ | Mean on-state current | 180° half sine wave 50Hz Single side cooled, $T_c=55^{\circ}\text{C}$ | 125 | | | 1000 | A |
| $I_{T(RMS)}$ | RMS on-state current | | | | | 1570 | A |
| I_{DRM} I_{RRM} | Repetitive peak current | at V_{DRM} at V_{RRM} | 125 | | | 55 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave, | 125 | | | 26.0 | kA |
| I^2t | I^2t for fusing coordination | $V_R=0.6V_{RRM}$ | | | | 3380 | $\text{A}^2\text{s} \times 10^3$ |
| V_{TO} | Threshold voltage | | 125 | | | 0.81 | V |
| r_T | On-state slope resistance | | | | | 0.21 | m Ω |
| V_{TM} | Peak on-state voltage | $I_{TM}=3000\text{A}$ | 25 | | | 2.05 | 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 $t_r \leq 0.5\mu\text{s}$ Repetitive | 125 | | | 100 | A/ μs |
| I_{GT} | Gate trigger current | $V_A=12\text{V}, I_A=1\text{A}$ | 25 | 30 | | 200 | mA |
| V_{GT} | Gate trigger voltage | | | 0.8 | | 3.0 | V |
| I_H | Holding current | | | 10 | | 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 per chip | | | | 0.052 | $^{\circ}\text{C}/\text{W}$ |
| $R_{th(c-h)}$ | Thermal resistance case to heat sink | Single side cooled per chip | | | | 0.018 | $^{\circ}\text{C}/\text{W}$ |
| V_{iso} | Isolation voltage | 50Hz, R.M.S, $t=1\text{min}, I_{iso}: 1\text{mA}(\text{MAX})$ | | 2500 | | | V |
| F_m | Terminal connection torque(M12) | | | | 14.0 | | N·m |
| | Mounting torque(M8) | | | | 12.0 | | N·m |
| T_{vj} | Junction temperature | | | -40 | | 125 | $^{\circ}\text{C}$ |
| T_{stg} | Stored temperature | | | -40 | | 125 | $^{\circ}\text{C}$ |
| W_t | Weight | | | | 3460 | | g |
| Outline | M15 | | | | | | |

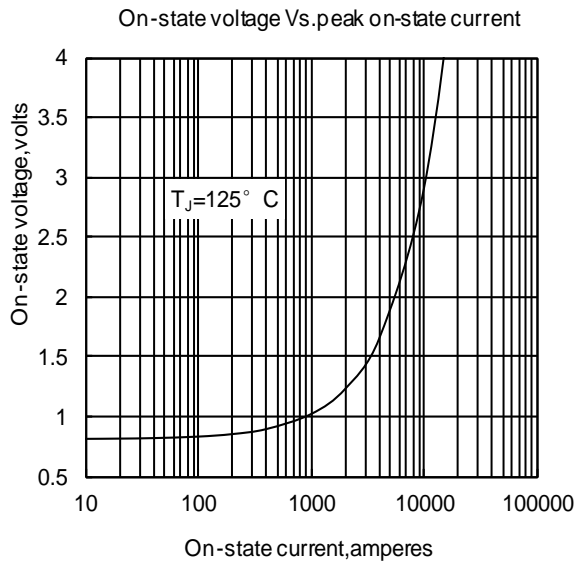


Fig1

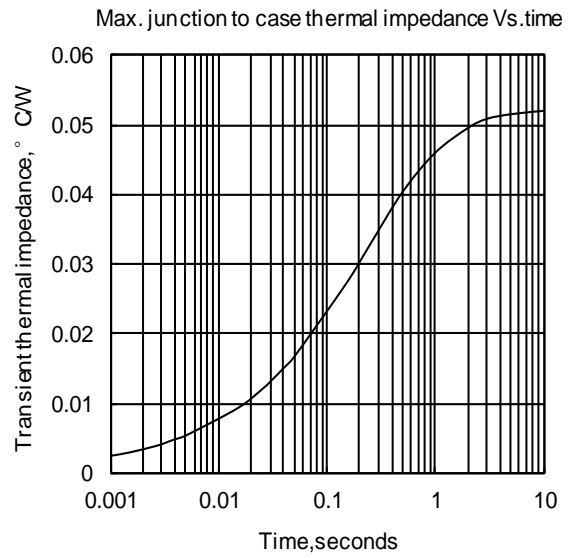


Fig2

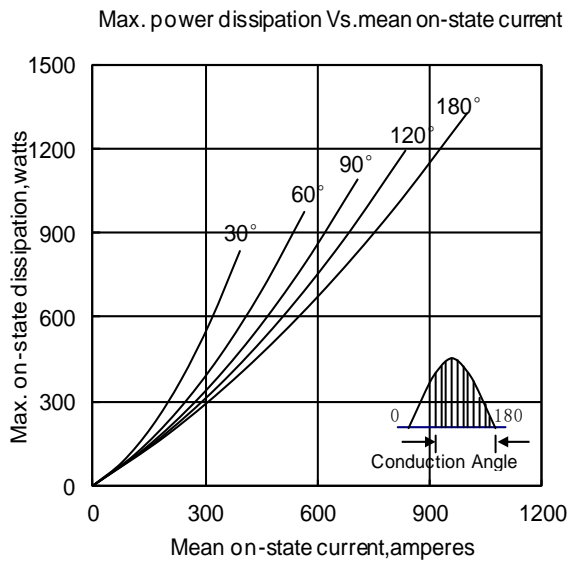


Fig3

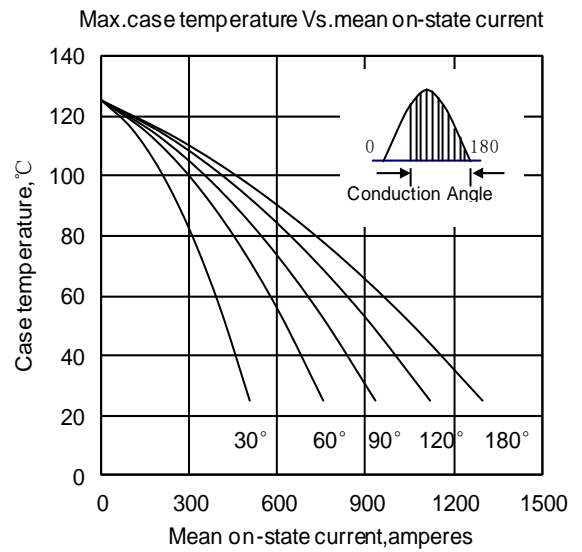


Fig4

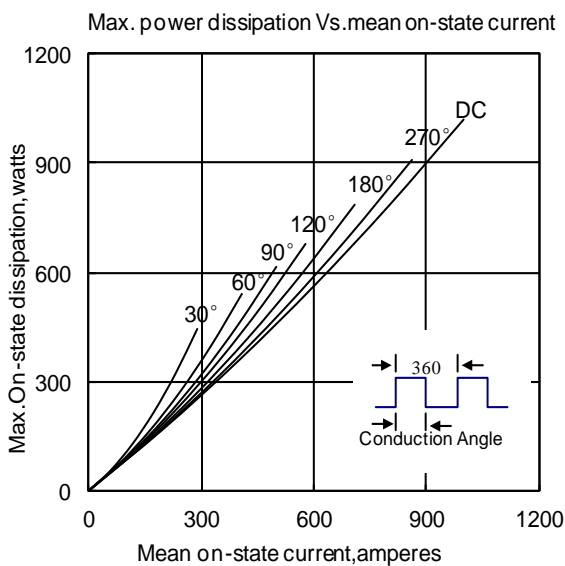


Fig5

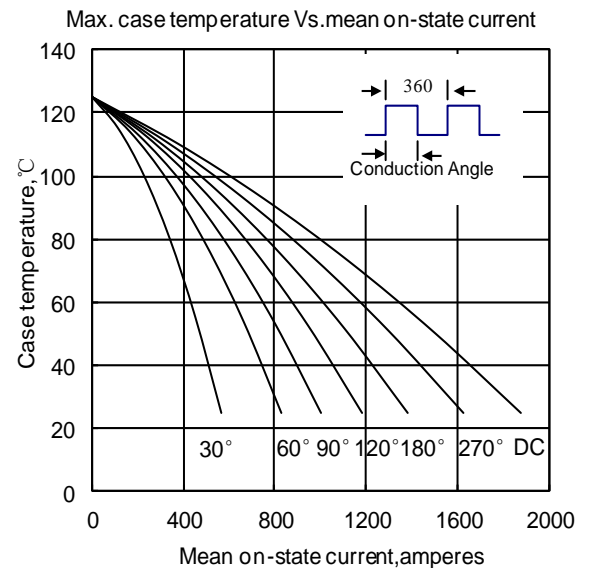


Fig6

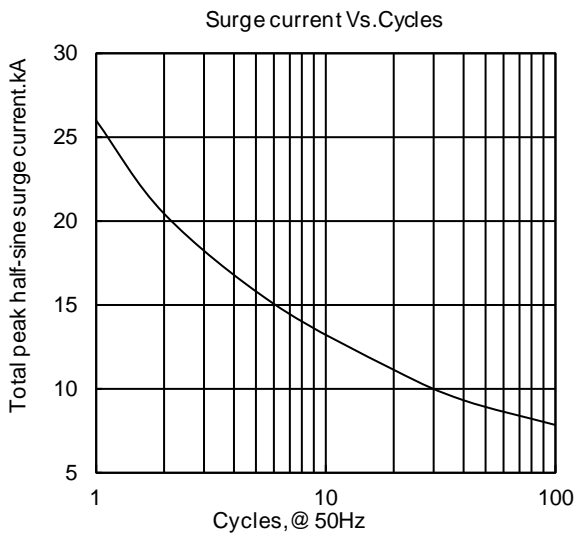


Fig7

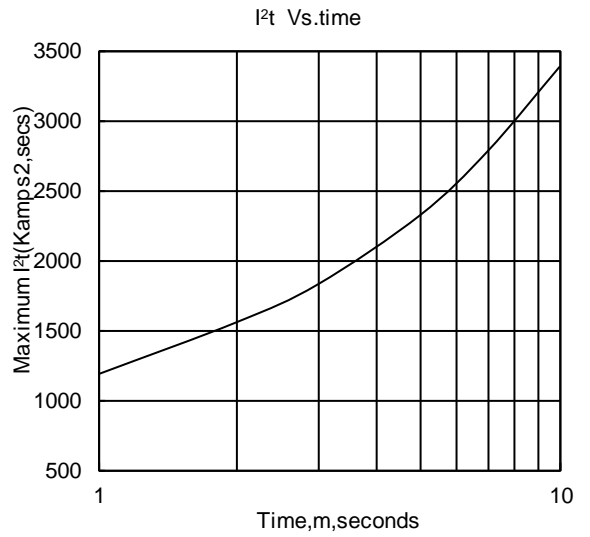


Fig8

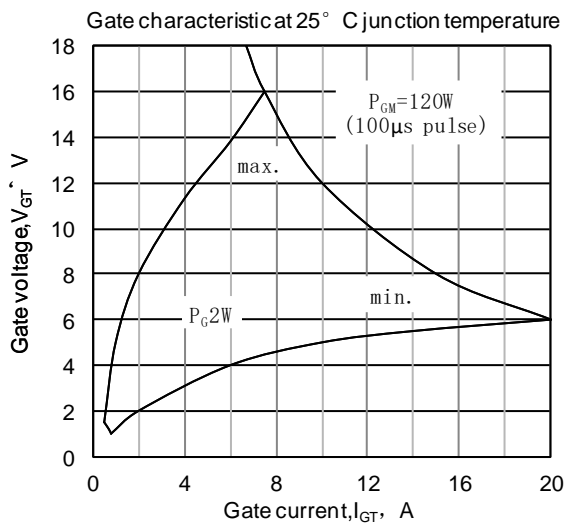


Fig9

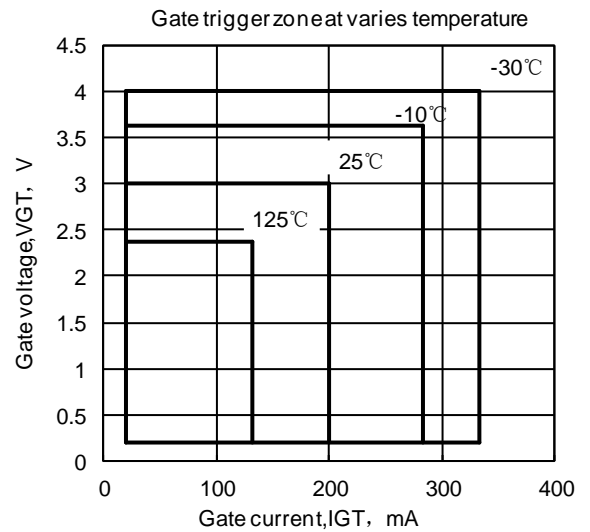


Fig10

Outline:

