

Features :

- Isolated mounting base 3000V~
- 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 |
|--------------------|--------------------|-----------|
| 2100V | 2000V | Mx600T200 |
| 2300V | 2200V | Mx600T220 |
| 2600V | 2500V | Mx600T250 |

| 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 Single side cooled, $T_c=85^{\circ}C$ | 125 | | | 600 | A |
| $I_{T(RMS)}$ | RMS on-state current | | | | | 942 | A |
| I_{DRM} I_{RRM} | Repetitive peak current | at V_{DRM} at V_{RRM} | 125 | | | 50 | mA |
| I_{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 16 | kA |
| I^2t | I^2t for fusing coordination | $V_R=60\%V_{RRM}$ | | | | 1280 | A^2s*10^3 |
| V_{TO} | Threshold voltage | | 125 | | | 0.88 | V |
| r_T | On-state slope resistance | | | | | 0.24 | m Ω |
| V_{TM} | Peak on-state voltage | $I_{TM}=1800A$ | 25 | | | 1.65 | V |
| dv/dt | Critical rate of rise of off-state voltage | $V_{DM}=67\%V_{DRM}$ | 125 | | | 1000 | 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 | | | 200 | 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 per chip | | | | 0.054 | $^{\circ}C/W$ |
| $R_{th(c-h)}$ | Thermal resistance case to heat sink | Single side cooled per chip | | | | 0.030 | $^{\circ}C/W$ |
| V_{iso} | Isolation voltage | 50Hz, R.M.S, $t=1min, I_{iso}:1mA(MAX)$ | | 3000 | | | V |
| F_m | Terminal connection torque (M12) | | | | 14.0 | | N·m |
| | Mounting torque (M8) | | | | 12.0 | | N·m |
| T_{vj} | Junction temperature | | | -40 | | 125 | $^{\circ}C$ |
| T_{stg} | Stored temperature | | | -40 | | 125 | $^{\circ}C$ |
| W_t | Weight | | | | 3240 | | g |
| Outline | M07 | | | | | | |

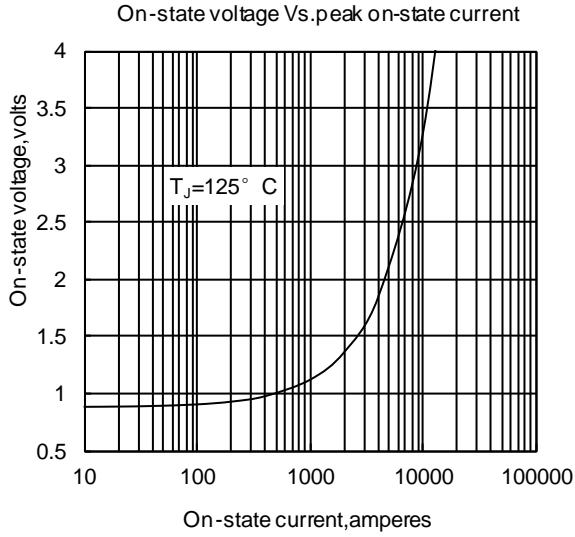


Fig. 1

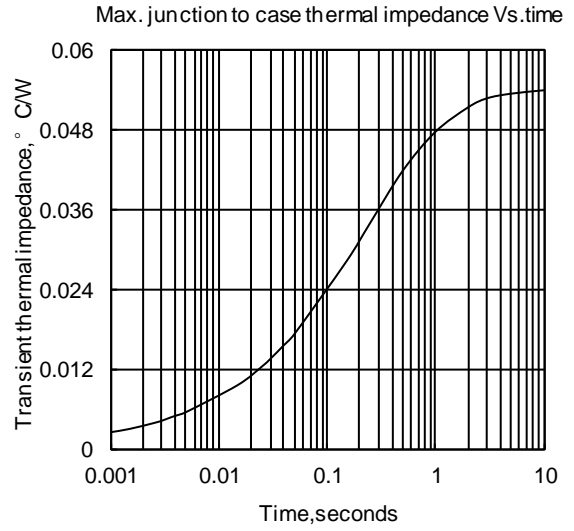


Fig. 2

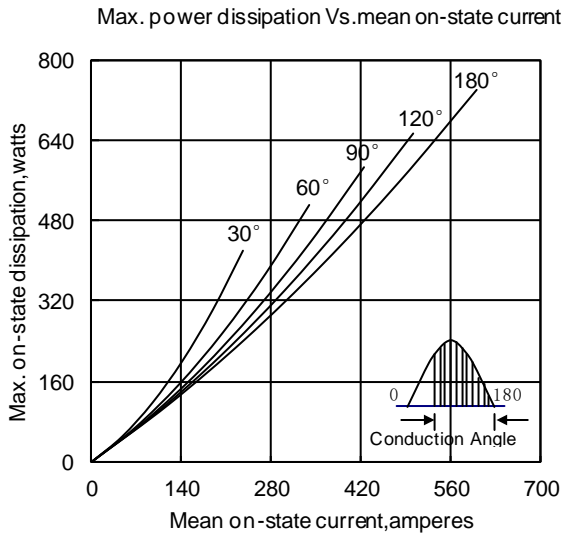


Fig. 3

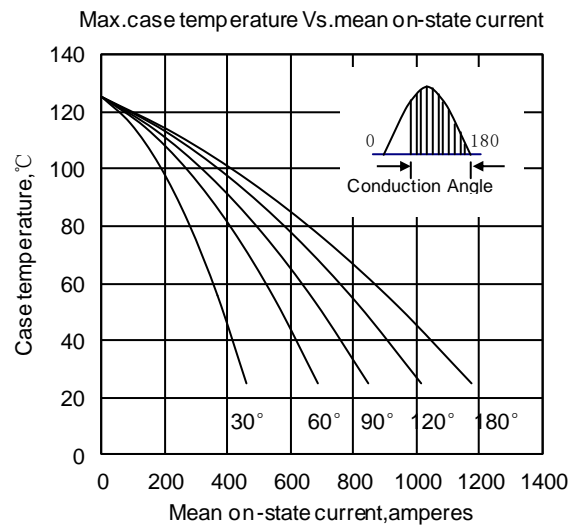


Fig. 4

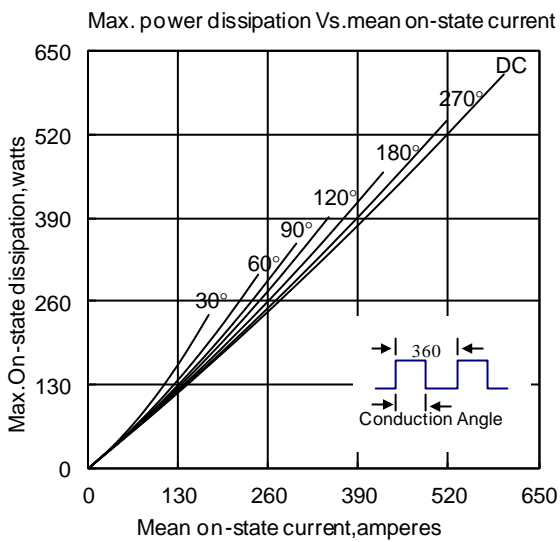


Fig. 5

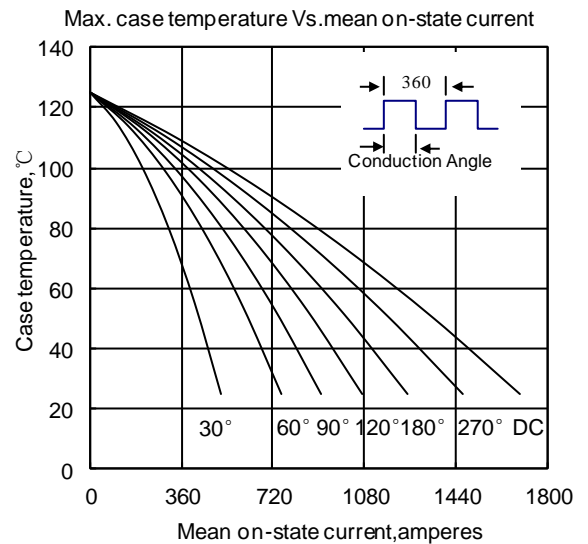


Fig. 6

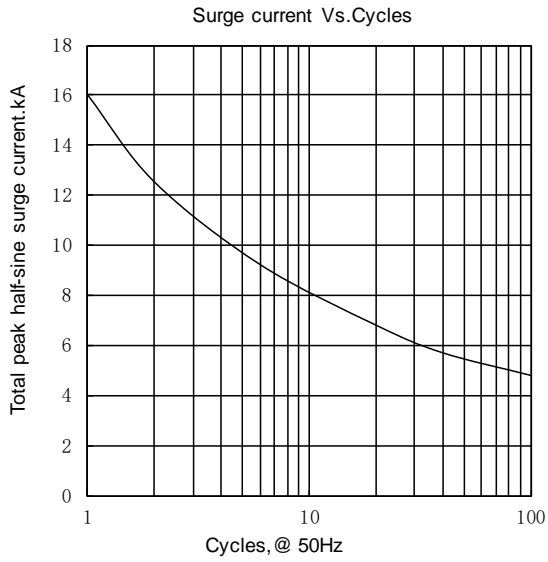


Fig.7

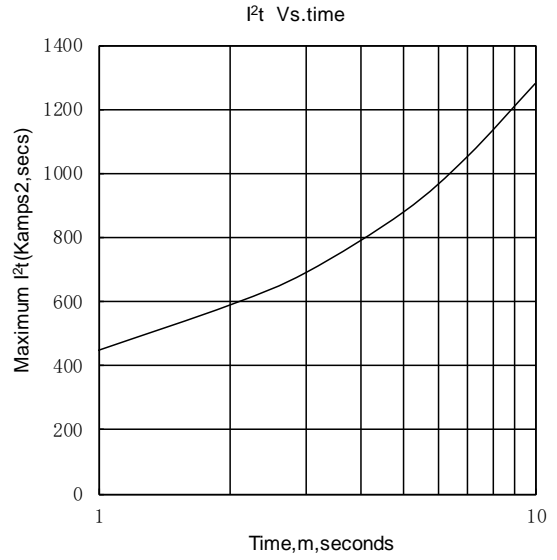


Fig.8

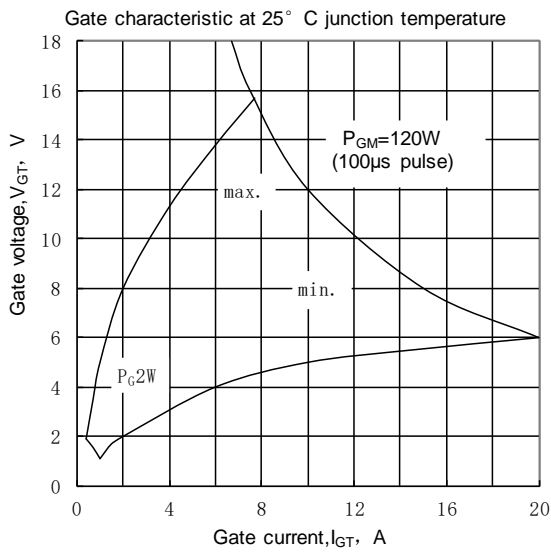


Fig.9

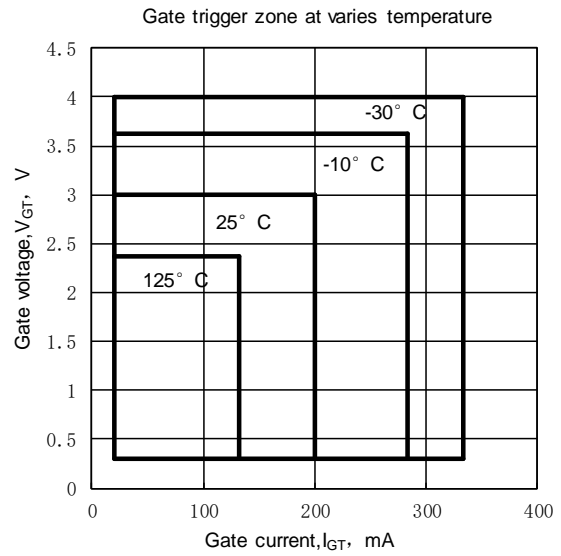
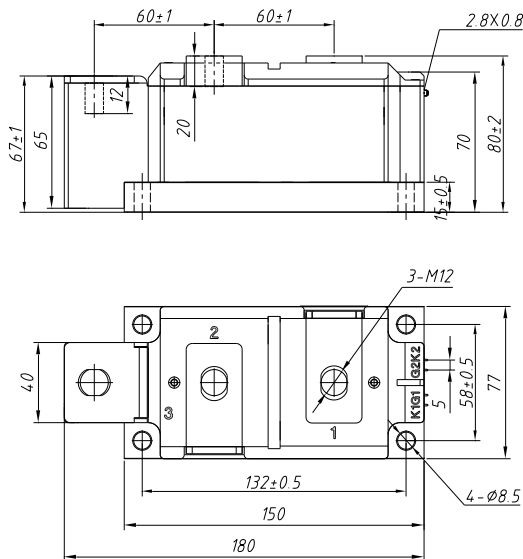
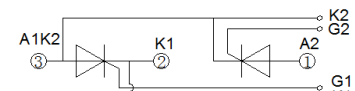


Fig.10

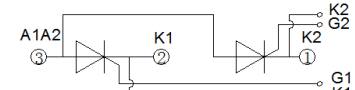
Outline:



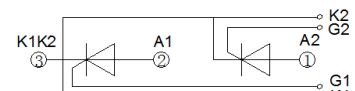
MD600T



MR600T



MC600T



MH600T

